UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**
OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2024.
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Date of event requiring this shell company report
For the transition period from to

Commission file number: 001-33107

CANADIAN SOLAR INC.
(Exact name of Registrant as specified in its charter)

N/A
(Translation of Registrant's name into English)

Ontario
(Jurisdiction of incorporation or organization)

4273 King Street East, Suite 102
Kitchener, Ontario,N2P 2E9
Canada
(Address of principal executive offices)

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Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common shares with no par value	CSIQ	The NASDAQ Stock Market LLC (The NASDAQ Global Select Market)

Securities registered or to be registered pursuant to Section 12(g) of the Act:
None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.
66,954,634 common shares issued and outstanding which were not subject to restrictions on voting, dividend rights and transferability, as of December 31, 2024.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer	☐
		Emerging growth company	☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing: U.S. GAAP ☒

International Financial Reporting Standards as issued by the International Accounting Standards Board ☐ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes ☐ No ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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INTRODUCTION

Unless the context otherwise requires, references in this annual report on Form 20-F to:

- "AC" and "DC" refer to alternating current and direct current, respectively;
- "BESS" refers to battery energy storage system;
- "BRL" and "Brazilian reals" refer to the legal currency of Brazil;
- "Canadian Solar Inc." refers to Canadian Solar Inc., an Ontario, Canada corporation;
- "CfD" refers to Contracts for Difference;
- "China" and the "PRC" refer to the People's Republic of China, excluding, for the purposes of this annual report on Form 20-F, Taiwan and the special administrative regions of Hong Kong and Macau;
- "CSI", "we", "us", "our company" and "our" refer to Canadian Solar Inc. and its consolidated subsidiaries;
- "CSI Solar" refers to CSI Solar Co., Ltd., our majority-owned principal operating subsidiary incorporated in the PRC, in which we hold approximately 63% of the equity interests;
- "C$" and "Canadian dollars" refer to the legal currency of Canada;
- "EPC" refers to engineering, procurement and construction;
- "e-STORAGE" refers to CSI Solar's e-STORAGE branded battery energy storage business;
- "ESG" refers to environmental, social and governance;
- "EU" refers to the European Union;
- "FIP" refers to feed-in premium;
- "FIT" refers to feed-in tariff;
- "GAAP" refers to generally accepted accounting principles;
- "GHG" refers to greenhouse gases;
- "Korea" refers to the Republic of Korea, also commonly known as "South Korea";
- "MWh" and "GWh" refer to megawatt hours and gigawatt hours, respectively;
- "OBCA" refers to the *Business Corporation* Act (Ontario);
- "O&M" refers to operation and maintenance;
- "PPA" refers to power purchase agreement;
- "PV" refers to photovoltaic. The photovoltaic effect is a process by which sunlight is converted into electricity;
- "Recurrent Energy" refers to our Company's solar power and battery energy storage project operating and development segment operated through our subsidiaries including Canadian Solar Energy Group B.V. and CSI Energy Project Technology (SuZhou) Co., Ltd., and unless the context suggests otherwise, include Recurrent Energy B.V.;
- "RMB" and "Renminbi" refer to the legal currency of China;
- "U.S." and "USA" refer to the United States of America;
- "SEC" refers to the U.S. Securities and Exchange Commission;
- "shares" and "common shares" refer to common shares, with no par value, of Canadian Solar Inc.;
- "THB" and "Thai baht" refer to the legal currency of Thailand;
- "U.K." refers to the United Kingdom;

- “VPPA” refers to virtual power purchase agreement;
- “W”, “kW”, “MW” and “GW” refer to watts, kilowatts, megawatts and gigawatts, respectively;
- “ZAR” and “South African rand” refer to the legal currency of South Africa;
- “$”, “US$” and “U.S. dollars” refer to the legal currency of U.S.;
- “€” and “Euros” refer to the legal currency of the Economic and Monetary Union of the European Union;
- “£”, “GBP” and “British pounds” refer to the legal currency of the United Kingdom; and
- “¥”, “JPY” and “Japanese yen” refer to the legal currency of Japan.

This annual report on Form 20-F includes our audited consolidated financial statements for the years ended December 31, 2022, 2023 and 2024 and as of December 31, 2023 and 2024.

Our reporting currency is the U.S. dollar. We use exchange rates set forth in the H.10 statistical release of the Federal Reserve Board to translate Renminbi, Euros, British pounds, Japanese yen, Canadian dollars, Australian dollars, Thai baht, Brazilian reals and South African rand to U.S. dollars not otherwise recorded in our consolidated financial statements and included elsewhere in this annual report on Form 20-F. Unless otherwise stated, the translation of Renminbi, Euros, British pounds, Japanese yen, Canadian dollars, Australian dollars, Thai baht, Brazilian reals and South African rand into U.S. dollars was made at the rate in effect on December 31, 2024, which was RMB 7.2993 to $1.00, €0.9661 to $1.00, £0.7987 to $1.00, ¥157.3700 to $1.00, C$1.4400 to $1.00, AUD 1.6168 to $1.00, THB 34.3200 to $1.00, BRL 6.1840 to $1.00 and ZAR 18.8792 to $1.00. We make no representation that any Renminbi, Euros, British pounds, Japanese yen, Canadian dollars, Australian dollars, Thai baht, Brazilian reals, South African rand or U.S. dollars amounts referred to in this annual report on Form 20-F could have been or could be converted into U.S. dollars, Euros, British pounds, Japanese yen, Canadian dollars, Australian dollars, Thai baht, Brazilian reals South African rand or Renminbi, as the case may be, at any particular rate or at all.

FORWARD-LOOKING INFORMATION

This annual report on Form 20-F contains forward-looking statements that relate to future events, including our future operating results, our prospects and our future financial performance and condition, results of operations, business strategy and financial needs, all of which are largely based on our current expectations and projections. These forward-looking statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. You can identify these statements by terminology such as "may", "will", "expect", "anticipate", "future", "ongoing", "continue", "intend", "plan", "potential", "prospect", "guidance", "believe", "estimate", "is/are likely to" or similar expressions. Forward-looking statements involve inherent risks and uncertainties. These forward-looking statements include, among other things, statements relating to:

- our expectations regarding global electricity demand and the markets for solar power and battery energy storage;
- our beliefs regarding the rate of adopting solar power and battery energy storage technologies and the continued growth of these markets and industries;
- our growth strategies and business plans;
- our future business prospects, results of operations, financial condition, and cash flows;
- our ability to execute our ongoing transition to a long-term owner and operator of solar and battery energy storage assets, and to expand our project development pipelines in key markets;
- our beliefs regarding our ability to monetize our portfolio of solar power and battery energy storage projects;
- our ability to manage significant fluctuations in the supply and pricing of polysilicon, solar wafers, cells and modules;
- our expectations regarding governmental incentives and policy support schemes for solar power and battery energy storage;
- the impact of global economic factors, including inflationary pressures and higher interest rates, on our business operations and financing costs;
- our expectations regarding the timing, costs and returns on investment for our project construction and development activities;
- our expectations regarding offtake contracts obligations, defaults and related contingencies;
- the effects of complex and evolving laws, regulations, policies and geopolitical uncertainties across multiple jurisdictions, including tariffs, duties and safeguard measures;
- our assessment of competitive pressures, including industry-wide capacity, pricing dynamics within the solar and battery energy storage sectors, and competition from other solar power and battery energy storage manufacturers;
- our expectations regarding the benefits of our supply chain management, vertical integration, manufacturing capacity expansion and operational initiatives;
- our ability to secure cash to fund manufacturing expansion, project development and construction;
- our debt obligations and the extent to which our level of indebtedness may affect our financial flexibility and competitive position;
- our expectations regarding liquidity and our ability to comply with financial and other covenants in our debt instruments;
- our beliefs regarding our dependence on a limited number of key suppliers and customers, and the continuity of our supply chain;
- our expectations regarding our ability to develop higher conversion efficiency cells and maintain product quality;
- our ability to protect and enforce our intellectual property rights, and the risks associated with intellectual property disputes;
- our ability to comply with environmental, health and safety laws, as well as regulatory actions related to climate change, greenhouse gas emissions, and sustainability; and
- our beliefs with respect to the outcome of the investigations and litigation to which we are a party.

Known and unknown risks, uncertainties and other factors may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by forward-looking statements. See "Item 3. Key Information—D. Risk Factors" for a discussion of some of the risk factors that may affect our business and results of operations. These risks are not exhaustive. Other sections of this annual report may include additional factors that could adversely influence our business and financial performance. Moreover, because we operate in an evolving industry, new risk factors may emerge from time to time. We cannot predict all risk factors, nor can we assess the impact of all or any of these factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those expressed or implied in any forward-looking statement. We do not undertake any obligation to update or revise the forward-looking statements except as required under applicable law.

PART I

Our Corporate Structure and Operations in China

Canadian Solar Inc. is a corporation governed by the laws of the province of Ontario, Canada, with operations in North America, Asia Pacific, Europe, Australia, South America, the Middle East and Africa through our operating subsidiaries in which we have equity ownership. Through the equity ownership in our subsidiaries, we primarily conduct our manufacturing operations in China, Southeast Asia and the U.S., and have made certain investments in solar power system and project assets in China. See "Item 4. Information on the Company—C. Organizational Structure" for additional information on our corporate structure, including a list of our significant subsidiaries. Investors in our common shares thus are not purchasing equity interests in our operating subsidiaries, but instead are purchasing equity interests solely in our Canadian parent company. As used in this annual report, references to "CSI", "we", "us", "our company" or "our" are made as to Canadian Solar Inc. and its consolidated subsidiaries; references to "Canadian Solar Inc." are made as to the Canadian parent company only.

We are exposed to legal and operational risks associated with having a significant portion of our manufacturing operations in China. We are subject to risks arising from the PRC legal system, including the uncertainty in the interpretation and enforcement of the evolving PRC policies, laws and regulations. In recent years, the Chinese government has implemented a series of regulatory actions and issued statements to regulate business operations in China with little advance notice. These include measures related to regulatory approvals on offerings conducted overseas, anti-monopoly regulatory actions, and oversight on cybersecurity and data privacy. Such actions could limit or completely hinder our ability to offer or continue to offer securities to investors. Implementation of industry-wide regulations in this nature may cause the value of such securities to significantly decline or be worthless. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China" for additional information of the risks associated with our operations in China.

For example, the promulgated Data Security Law and the Personal Information Protection Law, the Cybersecurity Review Measures issued by the Cyberspace Administration of China ("CAC"), and several other PRC governmental authorities, as well as the Regulations on Critical Information Infrastructure promulgated by the State Council in 2021 and the Regulations on Network Data Security Administration promulgated by the State Council in 2024, expose uncertainties and potential additional restrictions on China-based overseas-listed companies. Although we have not been informed that we are identified as a critical information infrastructure operator by any governmental authorities, we face uncertainties as to whether we will be subject to the oversight of the CAC and how such oversight may impact us. Measures for the Security Assessment of Outbound Data Transfers promulgated by the CAC took effect on September 1, 2022, and the provisions in the Guide to Applications for Security Assessment of Outbound Data Transfers (Second Edition) took effect on March 22, 2024. According to the rule, a data processor is required to apply to the national cyberspace administration for security assessment of outbound data transfer through local provincial cyberspace administration, if the data processor provides important data abroad. The rule is recently adopted, and it is not certain how the CAC will interpret and enforce it. If we are required to go through a security assessment of outbound data transfer, we will receive a notice on assessment result after completion of the assessment, and we may be notified to terminate the outbound data transfer or make rectification as required. In addition, we have to regulate our outbound data transfer activities in accordance with the applicable laws and regulations on the security management of outbound data transfer and the relevant requirements specified in the notice on assessment result. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business."

On February 17, 2023, the China Securities Regulatory Commission ("CSRC") issued the Trial Administrative Measures of Overseas Securities Offering and Listing by Domestic Companies ("Trial Administrative Measures") and relevant supporting guidelines (collectively, the "Filing Measures"), which became effective on March 31, 2023. According to the Filing Measures, a PRC domestic company that seeks to offer and list securities in overseas markets shall fulfill the filing procedure with the CSRC as per requirement of the Filing Measures. When a PRC domestic company seeks to directly offer and list securities in overseas markets, the issuer shall file with the CSRC. When a PRC domestic company seeks to indirectly offer and list securities in overseas markets, the issuer shall designate a major PRC domestic operating entity, which shall, as the domestic responsible entity, file with the CSRC. Initial public offerings or listings in overseas markets, including issuance of shares, convertible notes and other similar securities, shall be filed with the CSRC within three working days after the relevant application is submitted overseas. If an issuer offers securities in the same overseas market where it has previously offered and listed securities, subsequent filings shall be made with the CSRC within three working days after the offering is completed. In addition, upon the occurrence of any material event, such as change of control, investigations or sanctions imposed by overseas securities regulatory agencies or other relevant competent authorities, change of listing status or transfer of listing segment, or voluntary or mandatory delisting, after an issuer has offered and listed securities in an overseas market, the issuer shall submit a report to CSRC within three working days after the occurrence and public disclosure of such event. Therefore, we will be required to submit filings to the CSRC in the event that we conduct any subsequent offerings, including issuance of shares, convertible notes and other similar securities.

On February 24, 2023, the CSRC, the Ministry of Finance, the National Administration of State Secrets Protection and the National Archives Administration of China jointly issued the Provisions on Strengthening Confidentiality and Archives Administration of Overseas Securities Offering and Listing by Domestic Enterprises which took effect on March 31, 2023. These provisions extend the scope of application to overseas indirectly listed enterprises. To provide or publicly disclose to the relevant individuals or entities, including securities companies, securities service providers and overseas regulators, or to provide or publicly disclose, through its overseas listing entities, any documents or materials that contain state secrets or working secrets of government agencies, a PRC domestic enterprise shall strictly fulfill relevant procedures stipulated by applicable national regulations, and when providing documents and materials to the relevant securities companies and securities service providers, a PRC domestic enterprise shall first obtain approval from competent authorities according to the law, file with the secrecy administrative department at the same level, and provide the relevant securities companies and securities service providers with a written statement on the implementation of the relevant requirements of this provision. A PRC domestic enterprise shall fulfill due procedures in compliance with applicable national regulations, if it provides accounting archives or copies of accounting archives to any relevant individuals and entities, including securities companies, securities service providers and overseas regulators.

It is uncertain whether we will be required to obtain permission from the PRC government to maintain our listing status on U.S. exchanges or continue to offer our securities to investors in the future, and even when such permission is obtained, whether it will be later denied or rescinded. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of our securities to significantly decline or be worthless."

Furthermore, with the trend of strengthening anti-monopoly supervision around the world, the PRC government has promulgated new anti-monopoly and competition laws and regulations and strengthened the enforcement under these laws and regulations, paying more attention to corporate compliance. On February 7, 2021, the Anti-monopoly Commission of the State Council issued the Guidelines for Anti-monopoly in the field of Platform Economy, which require anti-monopoly review for concentrations of undertakings involving variable interest entities in internet industry. On November 15, 2021, the State Administration for Market Regulation issued the Guidelines for the Overseas Anti-monopoly Compliance of Enterprises. Although we believe these regulations have little impact on our business, there remain uncertainties regarding their interpretation and enforcement. We cannot guarantee that regulators will agree with us or that our business operations comply with such regulations and authorities' requirements in all respects. If any non-compliance is raised by relevant authorities and determined against us, we may be subject to fines and other penalties. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The rules and regulations in China can change quickly with little advance notice. Uncertainties with respect to the PRC legal system, as well as changes in any government policies, laws and regulations, could affect our industry and our ability to conduct our operations in China, which could harm our business."

Risks and uncertainties arising from the Chinese legal system, including risks and uncertainties that the rules and regulations may be inconsistent and change quickly with little advance notice and that the Chinese government may intervene or influence the operations of our PRC subsidiaries at any time, could result in a material change in our operations and the value of our securities. In addition, implementation of industry-wide regulations directly targeting our operations could cause the value of our securities to significantly decline. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The rules and regulations in China can change quickly with little advance notice. Uncertainties with respect to the PRC legal system, as well as changes in any government policies, laws and regulations, could affect our industry and our ability to conduct our operations in China, which could harm our business." and "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The PRC government has exercised and continues to exercise substantial control over the economy. It may intervene in or influence the operations of our PRC subsidiaries at any time, which could result in material changes to our operations and the value of our securities."

The Holding Foreign Companies Accountable Act

Pursuant to the Holding Foreign Companies Accountable Act, or the HFCAA, which was enacted on December 18, 2020 and further amended by the Consolidated Appropriations Act, 2023 signed into law on December 29, 2022, if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspection by the Public Company Accounting Oversight Board, or the PCAOB, and that we are a Commission-Identified Issuer under the HFCAA for two consecutive years, the SEC will prohibit our common shares from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. In the event of such determination, the Nasdaq is expected to delist our common shares.

On December 16, 2021, the PCAOB issued a report to notify the SEC its determinations that it was unable to inspect or investigate completely PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong. Our auditor, Deloitte Touche Tohmatsu Certified Public Accountants LLP, an independent registered public accounting firm located in China, was subject to that determination. On May 26, 2022, we were conclusively identified as a "Commission-Identified Issuer" under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB issued a report that vacated its previous determinations issued on December 16, 2021 and removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. Therefore, our auditor is currently able to be fully inspected and investigated by the PCAOB. For this reason, we were not identified as a Commission-Identified Issuer under the HFCAA after we filed our annual report on Form 20-F for the fiscal year ended December 31, 2022, and do not expect to be so identified when we file this annual report on Form 20-F for the fiscal year ended December 31, 2024. Until such time as the PCAOB issues any new determination, we do not expect our securities to be subject to a trading prohibition under the HFCAA. On February 21, 2025, the U.S. administration undertakes, among other things, to determine if adequate financial auditing standards are upheld for companies covered by the HFCAA.

However, it is uncertain whether the PCAOB will continue to be able to satisfactorily inspect and investigate registered public accounting firms in mainland China and Hong Kong, among other jurisdictions. If in the future, the PCAOB finds that it is unable to completely inspect and investigate registered public accounting firms in mainland China and Hong Kong, the PCAOB may act immediately to consider the need to issue a new determination, and we may be identified as a Commission-Identified Issuer again. In accordance with the HFCAA as amended by the Consolidated Appropriations Act, 2023, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. if we are identified as a Commission-Identified Issuer for two consecutive years. Furthermore, we cannot assure you whether Nasdaq or regulatory authorities would apply additional and more stringent criteria to us after considering the effectiveness of our auditor's audit procedures and quality control procedures, adequacy of personnel and training, or sufficiency of resources, geographic reach or experience as it relates to the audit of our financial statements. In addition, any additional actions, proceedings, or new rules resulting from these efforts to increase U.S. regulatory access to audit information could create some uncertainty for investors, adversely affect the market price of our ordinary shares, and we could be delisted if we and our auditor are unable to meet the PCAOB inspection requirement or are required to engage a new audit firm, which would require significant expense and management time. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our common shares may be prohibited from trading in the United States under the HFCAA in the future if it is later determined that the PCAOB is unable to inspect or investigate completely our auditor. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment."

ITEM 1 ***IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS***

Not applicable.

ITEM 2 ***OFFER STATISTICS AND EXPECTED TIMETABLE***

Not applicable.

ITEM 3 ***KEY INFORMATION***

Risks Related to Doing Business in China

Canadian Solar Inc. is a corporation governed by the laws of the province of Ontario, Canada with operations in North America, Asia Pacific, Europe, Australia, South America, the Middle East and Africa through our operating subsidiaries in which we have equity ownership. Through the equity ownership in our subsidiaries, we primarily conduct our manufacturing operations in China, Southeast Asia and the U.S., and have made certain investments in solar power system and project assets in China. As a result, we are subject to significant regulatory, liquidity, and enforcement risks relating to doing business in China, including, but not limited to, the following:

- The rules and regulations in China can change quickly with little advance notice. Uncertainties with respect to the PRC legal system, as well as changes in any government policies, laws and regulations, could affect our industry and our ability to conduct our operations in China, which could harm our business;

- The PRC government has exercised and continues to exercise substantial control over the economy. It may intervene or influence the operations of our PRC subsidiaries at any time, which could result in a material change in our operations and the value of our securities;

- Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of our securities to significantly decline or be worthless;

- Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business;

- Changes in PRC tax benefits may increase our effective tax rate and adversely affect our results of operations;

- There are significant uncertainties regarding our tax liabilities with respect to our income under the EIT Law;

- Dividends paid by us to and gains on the sale of our securities by our non-PRC shareholders may be subject to PRC enterprise or individual income tax liabilities;

- Renminbi currency exchange restrictions may limit our ability to utilize our revenues and cash effectively; and

- You may have difficulty enforcing judgments obtained against us.

For further details, see "—D. Risk Factors—Risks Related to Doing Business in China" and "—D. Risk Factors—Risks Related to Our Common Shares."

Permissions Required from the PRC Authorities for Our Operations

We conduct our business in the PRC through our PRC subsidiaries. Our operations in the PRC are governed by PRC laws and regulations. We are required to obtain or complete construction enterprise and engineering qualifications, electric power business permit, work safety license, registration of foreign trade operator operators, and registration certificates of customs declaration entity to operate our business in China. As of the date of this annual report, we believe that our PRC subsidiaries have obtained and completed all requisite permissions and registrations for our operations in all material aspects from relevant PRC authorities and none of the requisite permission or registrations for our operations in all material aspects have been denied by relevant PRC authorities. However, given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practice by government authorities, we cannot assure you that we have obtained all the permits or licenses required for conducting our business in the PRC.

If we or our PRC subsidiaries (i) do not receive or maintain any permission or approval required of us or our PRC subsidiaries, (ii) inadvertently conclude that certain permissions or approvals have been acquired or are not required, or (iii) are required to obtain permissions or approvals in the future in the event of a change to the applicable laws, regulations, or interpretations, but we fail to obtain such permissions or approvals in a timely manner, or at all, we may face adverse actions or sanctions by PRC regulatory authorities, which may include fines and penalties on our operations in China, order to suspend our PRC subsidiaries' businesses, and other actions that could have an adverse effect on our business. Furthermore, our ability to offer or continue to offer securities to investors may be significantly limited or completely hindered, and the value of our securities may significantly decline or be worthless.

In addition, the PRC government has promulgated certain regulations and rules to exert more oversight and control over offerings that are conducted overseas and/or foreign investment. According to the Filing Measures which came into effect on March 31, 2023, a PRC domestic company that seeks to directly or indirectly offer and list securities in overseas markets are required to file with the CSRC. In addition, follow-on offerings or listings in overseas markets, including issuance of shares, convertible notes and other similar securities, shall be filed with the CSRC within a specified time frame under the Filing Measures. Therefore, we will be required to submit filings to the CSRC in the event that we conduct any subsequent offerings, including issuance of shares, convertible notes and other similar securities.

For a detailed discussion of the related risks, see "—D. Risk Factors—Risks Related to Doing Business in China—Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of our securities to significantly decline or be worthless." and "—D. Risk Factors—Risks Related to Doing Business in China—Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business."

Cash and Asset Flows through Our Organization

We conduct operations in North America, Asia Pacific, Europe, Australia, South America, the Middle East and Africa through our operating subsidiaries in which we have equity ownership. Our manufacturing operations are conducted through our subsidiaries primarily in China, Southeast Asia and the U.S. in which we have equity ownership and a significant portion of our revenues and cash flow is generated by our PRC subsidiaries, and a substantial part of our expenses, cash and cash equivalent, and restricted cash are denominated in Renminbi.

Cash may be transferred within our consolidated group by way of funds to our subsidiaries, either in the form of capital contributions, working capital cash advances or working capital payable, directly or through intermediate holding companies. Canadian Solar Inc. may provide loans to its subsidiaries and vice versa, and our subsidiaries may make dividends or other distributions to Canadian Solar Inc., directly or through intermediate holding companies. These cash transfers factor the capital and liquidity needs of our subsidiaries, and are subject to our internal approval processes and funding arrangements, taking into account local regulations and tax laws. We have not faced restrictions or limitations in our ability to transfer cash between subsidiaries in countries where we earn and hold significant cash, or continue to make significant investments.

Canadian Solar Inc. transferred an aggregate of $187.5 million, $84.4 million and $16.5 million, of cash in the form of capital contributions and loans to our subsidiaries in 2022, 2023 and 2024, respectively. Canadian Solar Inc. received an aggregate $11.0 million, $245.0 million and $46.7 million in 2022, 2023 and 2024 of cash related to net working capital advances to subsidiaries, respectively. These transfers were made to our Recurrent Energy subsidiaries primarily for solar power and battery energy storage projects. There were no transfers made to the PRC subsidiaries. Our PRC operations are generally funded through the revenue cash flows from the sales of solar modules, solar system kits and battery energy storage solutions, and domestic borrowings.

Canadian Solar Inc. received an aggregate of $172.6 million, $69.2 million and $32.3 million of cash in 2022, 2023 and 2024, respectively, from repayment of loans by our Recurrent Energy subsidiaries. Canadian Solar Inc. transferred an aggregate of $49.6 million in cash to repay a loan from a Recurrent Energy subsidiary in 2022. Canadian Solar Inc. further received an aggregate $38.6 million in 2022, and transferred an aggregate $232.7 million and $44.6 million in 2023 and 2024 of cash related to net working capital payable to our Recurrent Energy subsidiaries, respectively. There were no cash proceeds nor distribution received from PRC subsidiaries in 2022 and 2023. Canadian Solar Inc. received an aggregate of $34.7 million in cash, net of $3.9 million in withholding tax, from dividends distributed by CSI Solar, its PRC subsidiary, in 2024.

In addition, we conduct regular procurement transactions with CSI Solar's subsidiaries related to purchase of modules and battery energy storage solutions for our Recurrent Energy projects.

Our ability to pay dividends, if any, to our shareholders and to service any debt we may incur will depend upon dividends paid by and loan repayment or distributions by our subsidiaries. Under PRC laws and regulations, our PRC subsidiaries are subject to certain restrictions with respect to paying dividends or otherwise transferring any of their net assets offshore to us. In particular, our PRC subsidiaries are required to set aside no less than 10% of profit after tax as appropriations to the general reserve and other statutory reserves. These reserves, together with the registered capital, are not distributable as cash dividends except in the event of liquidation and with approval from the local PRC government. As of December 31, 2024, these restricted net assets in the PRC amounted to $1,593.3 million. Furthermore, our PRC subsidiaries are subject to restrictions on currency exchange. Under existing PRC foreign exchange regulations, payments of current account items, including profit distributions, interest payments and expenditures from trade-related transactions, can be made in foreign currencies without prior approval from the People's Bank of China and State Administration of Foreign Exchange, or SAFE, by complying with certain procedural requirements. However, the relevant PRC governmental authorities may limit or eliminate our PRC subsidiaries' ability to purchase foreign currencies in the future for current account transactions. Since a significant portion of our future revenues and cash flow will be generated by our PRC subsidiaries, and a substantial part of our expense, cash and cash equivalents, and restricted cash are denominated in Renminbi, any existing and future restrictions on dividend or currency exchange may limit our ability to utilize cash generated by our PRC subsidiaries to fund our business activities outside of the PRC or pay dividends in foreign currencies.

In other countries where we earn and hold significant cash, or continue to make significant investments, we believe there are no significant restrictions or limitations on foreign exchange, our ability to transfer cash between entities across borders or to U.S. investors, or our ability to distribute earnings from our subsidiaries. Changes in business environments, debt instruments entered into by our subsidiaries, regulatory changes, and limitations under PRC laws and regulations and other developments outside of our control may prevent some or all of our subsidiaries from making distributions or payments to us in the future.

The Holding Foreign Companies Accountable Act

Pursuant to the HFCAA, which was enacted on December 18, 2020 and further amended by the Consolidated Appropriations Act, 2023 signed into law on December 29, 2022, if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspection by the PCAOB, and that we are a Commission-Identified Issuer under the HFCAA for two consecutive years, the SEC will prohibit our common shares from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. In the event of such determination, the Nasdaq is expected to delist our common shares.

On December 16, 2021, the PCAOB issued a report to notify the SEC its determinations that it was unable to inspect or investigate completely PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong. Our auditor, Deloitte Touche Tohmatsu Certified Public Accountants LLP, an independent registered public accounting firm located in China, was subject to that determination. On May 26, 2022, we were conclusively identified as a "Commission-Identified Issuer" under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB issued a report that vacated its previous determinations issued on December 16, 2021 and removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. Therefore, our auditor is currently able to be fully inspected and investigated by the PCAOB. For this reason, we were not identified as a Commission-Identified Issuer under the HFCAA after we filed our annual report on Form 20-F for the fiscal year ended December 31, 2022, and do not expect to be so identified when we file this annual report on Form 20-F for the fiscal year ended December 31, 2024. Until such time as the PCAOB issues any new determination, we do not expect our securities to be subject to a trading prohibition under the HFCAA. On February 21, 2025, the U.S. administration undertakes, among other things, to determine if adequate financial auditing standards are upheld for companies covered by the HFCAA.

However, it is uncertain whether the PCAOB will continue to be able to satisfactorily inspect and investigate registered public accounting firms in mainland China and Hong Kong, among other jurisdictions. If in the future, the PCAOB finds that it is unable to completely inspect and investigate registered public accounting firms in mainland China and Hong Kong, the PCAOB may act immediately to consider the need to issue a new determination, and we may be identified as a Commission-Identified Issuer again. In accordance with the HFCAA as amended by the Consolidated Appropriations Act, 2023, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. if we are identified as a Commission-Identified Issuer for two consecutive years. Furthermore, we cannot assure you whether Nasdaq or regulatory authorities would apply additional and more stringent criteria to us after considering the effectiveness of our auditor's audit procedures and quality control procedures, adequacy of personnel and training, or sufficiency of resources, geographic reach or experience as it relates to the audit of our financial statements. In addition, any additional actions, proceedings, or new rules resulting from these efforts to increase U.S. regulatory access to audit information could create some uncertainty for investors, adversely affect the market price of our ordinary shares, and we could be delisted if we and our auditor are unable to meet the PCAOB inspection requirement or are required to engage a new audit firm, which would require significant expense and management time. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment. For a detailed discussion of the related risks, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our common shares may be prohibited from trading in the United States under the HFCAA in the future if it is later determined that the PCAOB is unable to inspect or investigate completely our auditor. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment."

A [Reserved]

B Capitalization and Indebtedness

Not applicable.

C Reasons for the Offer and Use of Proceeds

Not applicable.

D Risk Factors

Summary of Risk Factors

An investment in our common shares involves significant risks. Below is a summary of material risks we face, organized under relevant headings. These risks are discussed more fully in "Item 3. Key Information—D. Risk Factors."

Risks Related to Our Company and Our Industry

Risks and uncertainties related to our company and industry include, but are not limited to, the following:

- We may be adversely affected by volatility in the solar power and battery energy storage market and industry conditions; in particular, the demand for our solar power and battery energy storage products and services may not grow as expected or may decline;
- Our future success depends on our ability to execute our ongoing transition to a long-term owner and operator of solar and battery energy storage assets and expand our project development pipelines in key markets, which exposes us to various risks and uncertainties;
- Our sale of solar power and battery energy storage projects depends heavily on our ability to find third-party buyers for our projects in a timely manner and on favorable terms and conditions;
- Oversupply of polysilicon, solar wafers, cells and modules may cause substantial downward pressure on the prices of our products and reduce our revenues and earnings;

- Governments may revise, reduce or eliminate incentives and policy support schemes for solar power and battery energy storage;
- Global economic conditions, including inflationary pressures and higher interest rates, may have an adverse impact on our business prospects, results of operations and cash flows;
- Our project construction activities may not complete on time, and our development and construction costs could increase to levels that cause the return on our investment in the projects to be lower than expected;
- We face a number of risks involving offtake contracts, including failure or delay in entering into contracts, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration and other clauses;
- Our global operations are subject to complex and evolving laws, regulations, policies, trade restrictions and geopolitical risks, which could increase compliance costs, disrupt operations, delay project execution and adversely affect our business, financial condition and results of operations;
- Our industry is highly competitive and many of our competitors have greater resources than we do or are more adaptive;
- We face economic and operational risks associated with maintaining and expanding our international business;
- We may experience issues with our manufacturing capacity expansion and operational initiatives;
- The antidumping and countervailing duty circumvention determinations and the extended safeguard measures in the United States could adversely affect us;
- The antidumping and countervailing duty investigations on active anode materials from China and tariff measures on battery imports from China into the United States could adversely affect us;
- Reciprocal tariffs under the International Emergency Economic Powers Act on imports into the United States could adversely affect us;
- Our revenues and results of operations are subject to significant fluctuations, which make our financial performance difficult to predict;
- We need a significant amount of cash to fund manufacturing expansion, project development and construction;
- Our substantial indebtedness and reliance on short-term financing could limit our financial flexibility and competitive position;
- Failure to comply with financial and other covenants in our debt instruments could adversely affect our liquidity;
- Supply chain disruptions, cost increases or performance issues could adversely affect our business and relationship with customers, particularly given our dependence on a limited number of key suppliers;
- We are developing and commercializing higher conversion efficiency cells, but we may not be able to mass-produce these cells in a cost-effective way, if at all;
- Defects or performance issues in our products could result in warranty claims that could impose significant costs on us;
- Our dependence on a limited number of customers may cause significant fluctuations or declines in our revenues;
- Our founder, Dr. Shawn Qu, has substantial influence over our company and his interests may not be aligned with the interests of our other shareholders;

- Our inability to protect our intellectual property rights or defend against patent infringement or other intellectual property claims, could undermine our competitive position, adversely affect our business and impose significant costs;

- Our failure to comply with environmental, health and safety laws could result in significant costs, adverse publicity, fines and business disruption;

- Laws, regulations and government actions on sustainability and greenhouse gas emissions could result in significant additional costs and expose us to additional liabilities;

- Corporate sustainability may impose additional costs and create new compliance challenges;

- Interruption, security breaches or failures of information technology, control and communication systems could disrupt our business and expose us to liability;

- Weaknesses in our internal control over financial reporting could undermine investor confidence and adversely affect the value of our common shares;

- Although we completed the STAR Listing, we may not achieve the results contemplated by our business strategy. In addition, it is difficult to predict the effect of the STAR Listing on our common shares;

- CSI Solar's status as a publicly traded company that is controlled, but less than wholly owned, may create complexities and adversely affect our financial results;

- We have granted, and may continue to grant, various share-based incentive awards which may increase our share-based compensation expenses;

- We may encounter difficulties with acquisitions and divestitures, which could harm our business;

- We face risks related to private securities litigation; and

- Our common shares may be prohibited from trading in the United States under the HFCAA in the future if it is later determined that the PCAOB is unable to inspect or investigate completely our auditor. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment.

Risks Related to Doing Business in China

We are also subject to risks and uncertainties related to doing business in China, including, but are not limited to, the following:

- The rules and regulations in China can change quickly with little advance notice. Uncertainties with respect to the PRC legal system, as well as changes in any government policies, laws and regulations, could affect our industry and our ability to conduct our operations in China, which could harm our business;

- The PRC government has exercised and continues to exercise substantial control over the economy. It may intervene in or influence the operations of our PRC subsidiaries at any time, which could result in material changes to our operations and the value of our securities;

- Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of our securities to significantly decline or be worthless; and

- Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business.

Risks Related to Our Common Shares

In addition to the risks described above, we are subject to risks related to our common shares:

- The issuance by us of additional common shares or equity linked securities may cause existing shareholders to experience dilution and could adversely affect the market price of our common shares;
- The market price of our common shares is highly volatile;
- Your right to participate in any future rights offerings may be limited, which may cause dilution of your holdings;
- Our articles contain certain provisions that may adversely affect the rights of holders of our common shares;
- You may have difficulty enforcing judgments obtained against us;
- If a United States person owns at least 10% of our shares, such person may be subject to adverse United States federal income tax consequences; and
- We may be classified as a passive foreign investment company, which could result in adverse United States federal income tax consequences to United States Holders of our common shares.

Risks Related to Our Company and Our Industry

We may be adversely affected by volatility in the solar power and battery energy storage market and industry conditions; in particular, the demand for our solar power and battery energy storage products and services may not grow as expected or may decline.

Our business is affected by conditions in the solar power and battery energy storage markets and industries. While we expect continued growth in global electricity demand and increasing adoption of solar and battery energy storage technologies, these markets may experience periods of volatility or grow more slowly than anticipated. For example, the solar power sector may from time to time experience oversupply, which can negatively impact our pricing and profitability. In such instances, project developers, system installers and product distributors that purchase solar power products and services from manufacturers like us, may be adversely affected, thereby reducing demand for our offerings. Our shipments of solar modules experienced continuous growth in 2022 and 2023, followed by a marginal increase in 2024. The average selling prices for our solar modules increased in 2022, then decreased in 2023 and 2024. When certain distributed generation markets experience higher than anticipated inventory levels, we may face heightened price competition, which could materially and adversely affect our financial results. In addition, if the supply of solar modules grows faster than demand and if governments reduce financial support for the industry or impose trade barriers for solar power products, demand and pricing for our products could be adversely affected.

The battery energy storage market continues to evolve, and future demand for battery energy storage products and services is uncertain. Market data for the battery energy storage industry is not as readily available as for more established industries, where trends are more reliably assessed from data gathered over a longer period of time. In addition, demand for battery energy storage products and services in our largest end markets, including the U.S., Europe, China, the U.K. and Australia, may not materialize to the extent or on the timeline we anticipate. We are actively pursuing growth opportunities in battery energy storage, given its importance in enhancing the reliability and resiliency of energy grid infrastructure, and integrating intermittent renewable energy power systems. If demand in our key markets slows, competition intensifies, or we fail to capitalize on growth opportunities, our battery energy storage business may not grow as anticipated. Furthermore, while we are working to improve the cost-efficiency and performance of our battery energy storage systems, there can be no assurance that we will achieve our desired outcomes.

The viability of solar power and battery energy storage technologies depend on several factors, including:

- the cost-effectiveness, performance and reliability of our products compared to conventional and other renewable energy sources;
- the availability of government incentives and policy support;

- the availability and cost of capital, including long-term debt and tax equity financing for solar power and battery energy storage projects;
- competition from other renewable technologies, such as wind, hydro, hydrogen, geothermal and biomass;
- fluctuations in economic and market conditions that affect the viability of conventional and other renewable energy sources, including price trends of oil, gas and other fossil fuels;
- capital investment patterns of end users, which tend to decrease during economic slowdowns; and
- the existence of favorable regulatory framework for solar power and battery energy storage within the broader energy sector.

If solar power and battery energy storage technologies are not adopted as broadly or as quickly as we expect, or if demand weakens or becomes more volatile, our revenues, profitability and growth prospects may be materially and adversely affected.

Our future success depends on our ability to execute our ongoing transition to a long-term owner and operator of solar and battery energy storage assets and expand our project development pipelines in key markets, which exposes us to various risks and uncertainties.

Historically, our project development business has primarily consisted of developing solar and battery energy storage assets for sale to third parties. As part of our ongoing transition to a long-term owner and operator of solar and battery energy storage assets, we are shifting towards retaining longer-term ownership in select markets. While this transition may reduce revenue from project sales, it is expected to increase recurring revenues from the sale of electricity, capacity and ancillary services from operational projects. Revenues from our sale of electricity, battery energy storage operations and others increased by $26.0 million and $33.5 million, or 81.3% and 7.8%, to $57.9 million and $91.4 million in 2023 and 2024, respectively.

Project ownership, operations and development involve risks and uncertainties, including:

- delays and cost overruns as a result of a number of factors, many of which are beyond our control, including construction and procurement price inflation, regulatory approval delays, grid connection challenges, supply chain disruptions or component availability, trade restrictions, construction, installation, and performance acceptance testing issues;
- delays or denials of required regulatory approvals by relevant government authorities;
- the need to raise significant additional funds, which we may be unable to obtain on commercially reasonable terms or at all;
- failure to effectively execute our project development pipeline expansion plan;
- with respect to projects being operated under our ownership, the uncertainty of energy production as a result of a number of factors, many of which are beyond our control, including weather, grid congestion, and curtailment; and
- diversion of significant management attention and other resources.

Many solar power and battery energy storage projects, including our own, depend on a mix of equity capital, tax equity and project financing to fund development and construction. A higher cost of capital may materially reduce the internal rate of return for these projects. Furthermore, there is no guarantee that tax equity investors will be available or willing to provide funding on acceptable terms, or that the tax incentives and benefits that are needed to make tax equity funding available will remain in place. Moreover, as a result of the effects of inflation in the global economy, certain governmental authorities responsible for administering monetary policy have sustained a higher central bank interest rates, which could increase the costs to obtain debt financing in the future or refinance current indebtedness. In addition, higher bond yields could result in increased return expectations for solar power and battery energy storage projects, which would result in lower valuation for these assets.

The availability and cost of funding of these projects are determined in part based on the perceived counterparty creditworthiness or sovereign credit risk of the country where a particular project is located. We cannot make assurances that financial institutions will continue to offer funding to solar power and battery energy storage project developers and owners at reasonable costs. An increase in cost of capital and interest rates or a decrease in available funding within the global financial market could make it more difficult to fund solar power and battery energy storage systems. This could hamper our transition to a long-term owner and operator of solar and battery energy storage assets, which may materially and adversely affect our business, results of operations, financial condition and prospects.

Our sale of solar power and battery energy storage projects depends heavily on our ability to find third-party buyers for our projects in a timely manner and on favorable terms and conditions.

Our project development activities have significantly expanded to North America, Europe, Latin America, Japan, Australia, and other countries of the Asia-Pacific region over the past several years. Upon completion of development, we either operate our solar power or battery energy storage projects, with a majority of our aggregate capacity contracted under power purchase agreements, virtual power purchase agreements, tolling agreements, or other contractual arrangements with offtakers, or sell them to third-party buyers. As we shift towards retaining longer-term ownership in select markets in order to create greater asset value and increase recurring revenues generated through the sale of electricity and related products, as well as the sale of power services (operations and maintenance), revenues from our sale of solar power and battery energy storage projects decreased by $362.6 million, or 47.6%, to $399.1 million in 2023, and then decreased by $242.4 million, or 60.7%, to $156.7 million in 2024.

For solar power and battery energy storage projects that we decide to sell, there is no assurance whether or when we will be able to realize their estimated resale value. From time to time, we may reclassify project assets as solar power systems if our intention transitions to holding these projects on our balance sheet for the purpose of generating long-term electricity income.

Our sale of solar power and battery energy storage projects may be subject to significant period-over-period fluctuations for a variety of reasons, including but not limited to the unpredictability of the timing of development and construction of our projects, changes in market conditions after we have committed to projects, availability of financing for our projects, changes in government regulations and policies, changes in the creditworthiness of our contractual counterparties, equipment damage or failures, and weather events, all of which may result in the cancellation of or delays in the development of projects, inability to monetize or delays in monetizing projects or changes in amounts realized on monetization of projects. If a project is canceled, abandoned or deemed unlikely to occur, we will charge all prior capital costs as an operating expense in the period in which such determination is made, which could materially and adversely affect our operating results.

Some classes of investors compare the returns of solar power and battery energy storage projects to bond yields and expect a similar or higher internal rate of return, adjusted for risk and liquidity. Higher bond yields could result in increased return expectations for solar power and battery energy storage projects, which would result in lower sale prices for these assets, which may materially and adversely affect our business, results of operations, financial condition and prospects.

Oversupply of polysilicon, solar wafers, cells and modules may cause substantial downward pressure on the prices of our products and reduce our revenues and earnings.

The solar industry has been experiencing significant fluctuations in the supply and pricing of polysilicon, solar wafers, cells and modules. Recently, global silicon production capacity has expanded rapidly, leading to an oversupply and subsequent decline in polysilicon prices. This oversupply has exerted substantial downward pressure on prices of solar wafers, cells and modules throughout the value chain. The average selling prices of our solar modules decreased from $0.30 per watt in 2022 to $0.23 per watt in 2023, and further decreased to $0.16 per watt in 2024. While the persistent oversupply and price reductions have benefited customers through lower prices, they have intensified competition among manufacturers. Although we believe that balancing our production capacity with demand has helped protect our margins, a prolonged supply of polysilicon, solar wafers, cells, and modules in excess of market demand may result in further downward price pressure, including on our products. Increasing competition could also result in us losing sales or market share. In addition, we are exposed to inventory risk that may adversely affect our earnings as a result of unfavorable product pricing changes.

On the other hand, demand for solar products remains strong and may continue to increase, driven by various factors such as the global efforts toward clean, renewable energy sources and decarbonization, which could result in increased costs of and difficulties in sourcing raw materials to support the increased production levels due to capacity limitations. As a result, we may not be able to keep up with rapid growth in the future demand for our solar products. Due to fluctuations in the supply and pricing of solar power products throughout the value chain, we may not be able to consistently procure silicon, solar wafers and cells at reasonable costs if any of the above factors materialize. If we are unable to obtain these materials at reasonable prices or increase the price of our solar modules to cover our manufacturing and operating costs, our revenues and margins may be adversely impacted due to higher costs compared to our competitors. In addition, our market share could decline if our competitors are able to price their products more competitively.

Governments may revise, reduce or eliminate incentives and policy support schemes for solar power and battery energy storage.

Historically, the renewable power and clean energy industries, and the overall growth of the solar power and battery energy storage market, have generally benefited from government subsidy programs and economic incentives. Government incentives vary by geographic market. These governments provided incentives in the form of tax credits, renewable portfolio standards, auctions for CfD, FIP, FIT, rebates and other forms of support. Governments in many countries have implemented mandates to promote the use of renewable power and clean energy, encouraging end-users, power producers and utilities to adopt the use of solar energy solutions and to reduce dependency on other forms of energy. However, many of these government mandates and incentives have been or are scheduled to be reduced or eliminated altogether, and it is likely that incentives for solar and alternative energy technologies will eventually be phased out completely. Changes in energy laws or policies could also undermine the economic returns of new and existing projects.

While the cost of solar power and battery energy storage products has generally declined in recent years and the industry has become less dependent on government incentives, continued support remains important for market growth. For example, governments in some of our largest markets, including the U.S. and a number of the states of the European Union have continuing incentives and policy support schemes for various forms of “green” energies, including solar power and battery energy storage.

In the U.S., renewable energy projects benefit from various federal, state and local governmental incentives, such as Investment Tax Credit (“ITC”), Production Tax Credit (“PTC”) and Renewable Portfolio Standards (“RPS”) programs, accelerated tax depreciation, and other incentives provided for under the Inflation Reduction Act of 2022 (“IRA”), signed into law on August 16, 2022. The provisions of the IRA are intended to, among other things, incentivize domestic clean energy investment, manufacturing and production. The IRA enhances the ITC program, allows solar energy projects to utilize the PTC program, and provides a refundable or transferable advanced manufacturing tax production credit pursuant to Section 45X of the Internal Revenue Code for solar modules and solar module components manufactured in the United States and sold to third parties. The IRA also offers additional credits for projects located in energy communities and projects satisfying domestic content requirements. In June 2023, the United States Internal Revenue Service (“IRS”) issued temporary and proposed regulations related to tax credit transferability and direct pay provisions of the IRA. The final regulations became effective, and prior temporary regulations were replaced, beginning in May 2024.

In Europe, a number of member countries (including, Italy, France, Germany and Spain) continue to support realization of solar projects through incentive schemes and auctions, with additional limitations and regulations on agricultural land as compared to industrial and commercial zones, and the enactment of new laws in order to simplify the permitting process and enhance administrative resources to promote renewable energy sources. The European Union revised the Renewable Energy Directive, which entered into force on November 20, 2023, that may provide additional support for solar and battery energy storage development. As part of the revised directive, EU member states are required to implement permitting reforms by mid-2024 and to designate renewables acceleration areas by February 2026 to streamline project approvals and facilitate faster deployment.

We believe that the demand for solar power and battery energy storage products, services and projects is heavily affected by the availability and size of such government incentives, as well as, changes in energy laws and policies. The revision, reduction or elimination of these incentives and negative changes in energy laws and policies could therefore materially and adversely affect the growth of one or more of our markets, deter investment in clean energy, reduce customer demand, or result in increased price competition, either of which could cause our revenues to decline and harm our financial results.

Global economic conditions, including inflationary pressures and higher interest rates, may have an adverse impact on our business prospects, results of operations and cash flows.

Our operations are subject to the effects of global economic conditions, including inflation, interest rates, and foreign exchange rates, which consequently may affect demand for electricity and the supply and prices of other energy products, such as oil, natural gas and coal. Economic downturn could result in a decrease in global energy prices and demand for electricity, which could place downward pressure on the price of solar power and battery energy storage systems, and weaken demand.

Inflationary pressures may increase supplier costs, wages, operating costs and financing costs, which could reduce our profitability and cash flows if we are unable to pass along these costs to our customers. Inflation may also adversely affect foreign exchange rates, further affecting our results of operations. In addition, higher interest rates could have a dampening effect on overall economic activity and weaken our customers' financial condition, reducing demand for our products and services. These factors, alone or in combination, could materially and adversely affect our business prospects, financial condition, results of operations and cash flows.

Our project construction activities may not complete on time, and our development and construction costs could increase to levels that cause the return on our investment in the projects to be lower than expected.

The development and construction of solar power and battery energy storage projects can take many months or years to complete and may be delayed for reasons beyond our control. There can be no assurance that the projects can be completed on time or within projected costs. Furthermore, we may become constrained in our ability to simultaneously fund our other business operations and invest in other projects. In contrast to producing and selling solar modules and battery energy storage products, developing solar power and battery energy storage projects requires more management attention to negotiate the terms of our engagement and monitor the progress of the projects which may divert management's attention from other matters.

The development and construction of solar power and battery energy storage projects involve known and unknown risks, many of which are not under our sole control. For example, we may be required to invest significant upfront investments in land and interconnection rights, permitting and engineering, and may incur legal and other expenses before we can determine whether a project is feasible. Additionally, in certain cases, we may need to order equipment with lengthy lead time, such as substation transformers. Success in developing a particular project is contingent upon, among other things:

- securing land rights and related permits, including satisfactory environmental assessments;
- receiving required land use, construction and operational permits and approvals;
- receiving rights to interconnect to the electric grid;
- obtaining transmission capacity, accurately estimating, and where possible mitigating, upgrade costs to the transmission grid and other system constraints;
- securing economically feasible cost of interconnection and other deposits (some of which are non-refundable);
- avoiding or mitigating impacts to archaeological, historical or cultural resources, and/or protected or endangered species or habitats, migratory birds, wetlands or other water resources;
- negotiating tax incentives and property tax abatement, whenever applicable;
- negotiating satisfactory EPC or balance of plant agreements, and mitigating the solvency or financial conditions of our EPC contractors, suppliers or other third parties that we engage;
- obtaining equity, tax equity and project financing; and
- timely and satisfactory execution and performance by the third parties that we engage.

In addition, successful completion of a particular project may be adversely affected by numerous factors, including:

- changes in laws, regulations and policies and shifts in trade barriers and remedies, especially tariffs;
- failure in obtaining and complying with required governmental permits and approvals and the inability to renew or replace permits and approvals that expire or are terminated in a timely manner and on reasonable terms;
- compliance with domestic content and labor requirements;
- disputes and potential challenges from local residents, environmental organizations, and others who may not support the project;
- unforeseen engineering problems, subsurface land conditions, construction delays, cost over-runs, labor strikes, equipment and materials supply shortages or disruptions;
- shortage of skilled and licensed labor on the part of our contractors;
- failure to enter into offtake contracts or capacity and ancillary services contracts, on terms favorable to us, or at all;
- additional complexities when conducting project development or construction activities in foreign jurisdictions, including compliance with local laws and customs; and
- force majeure events, including adverse weather conditions, pandemics, supply chain disruptions, hostilities and other events beyond our control.

Any of these factors could lead to construction delays and construction costs in excess of our expectations. These circumstances could prevent our solar power and battery energy storage projects from commencing operations on time or achieving our anticipated return on our investments. In addition, failure to meet agreed-upon system level capacity, energy output guarantees, warranties or other contract terms, could lead to contract terminations, grid interferences or project related damages. Depending on the specified terms of the EPC agreements, the offtake, capacity and ancillary service contracts or other agreements related to the project, we may be subject to significant damages, penalties, and other obligations, including obligations to repair, replace or supplement materials for the project. If a third-party EPC contractor is terminated or resigns, we may be forced to take on additional risks, such as cost inflation and construction responsibilities that would otherwise be covered by the contractor. There is no assurance that disputes with third-party EPC contractors will not arise in the future. Any of these events could materially and adversely affect our business, results of operations and financial conditions.

We face a number of risks involving offtake contracts, including failure or delay in entering into contracts, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration and other clauses.

In our solar power and battery energy storage project development business, we enter into a wide range of offtake contracts, including but not limited to PPAs, VPPAs, and other contracts for capacity and ancillary services. There is a limited, but growing, pool of potential buyers for electricity generated and services provided by our solar power and battery energy storage projects since the transmission and distribution of electricity is often regulated or highly concentrated in many jurisdictions. The willingness of buyers to enter into contracts with independent power producers such as us depends on a number of factors beyond pricing and supply reliability. Failure to enter into offtake contracts on favorable terms, or at all, could negatively impact our revenue and our decisions regarding the development of future projects. Delays in entering into offtake contracts, or an inability to renew or replace expiring contracts with comparable terms and conditions, may adversely affect our ability to finance project construction and realize cash flows from our projects, and the affected site may temporarily or permanently cease operations, or face exposure to more uncertain merchant electricity pricing, which could materially and adversely affect our financial condition, results of operations and cash flows.

We are exposed to the creditworthiness of the purchasers of power under these contracts, and there is no guarantee that our counterparties will be able or willing to fulfill their related contractual obligations. If they refuse to accept delivery of the power or services delivered thereunder or they otherwise terminate them prior to their expiration, our results of operations and cash flows could be materially and adversely affected. Further, to the extent any of our power purchasers are, or are controlled by, governmental entities, our facilities may be subject to legislative or other political action that may impair their contractual performance or contain contractual remedies that do not provide adequate compensation in the event of a counterparty default.

Some of our offtake contracts are subject to price adjustments over time. If the price under a contract falls below a level that makes a project economically viable, our results of operations and cash flows could be materially and adversely affected. In addition, certain inflation-based price adjustments are made only yearly, which may not allow us to pass on additional costs in a timely manner. Certain offtake contracts may contain provisions that allow the counterparty to terminate or buy out the project, or require us to pay liquidated damages upon the occurrence of specific events. If these provisions are exercised, our financial condition, results of operations and cash flows could be materially and adversely affected. To the extent the output of a project is not fully subject to offtake contracts, the electricity generated will be exposed to merchant price risk. Additionally, some project-level financing arrangements include provisions that allow the lenders or investors to accelerate repayment in the event that a related offtake contract is terminated or if certain operating thresholds or performance measures are not achieved within specified time periods. Certain of our offtake contracts and financing arrangements include, and in the future may include, provisions that would permit the counterparty to terminate the contract or accelerate maturity in the event we own, directly or indirectly, less than 50% of the combined voting power or, in some cases, if we cease to be the majority owner, directly or indirectly, of the applicable project subsidiary. The termination of any offtake contracts or acceleration of financing maturity as a result of a change-in-control event could materially and adversely affect our financial condition, results of operations and cash flows.

Our global operations are subject to complex and evolving laws, regulations, policies, trade restrictions and geopolitical risks, which could increase compliance costs, disrupt operations, delay project execution and adversely affect our business, financial condition and results of operations.

We are subject to a wide range of national, regional and local laws, regulations and policies across the markets where we do business, including energy regulations, export and import restrictions, customs rules, tariffs, antidumping and countervailing duties, tax laws, labor laws, supply chain requirements, construction and interconnection regulations, safety standards and environmental standards. These may conflict across jurisdictions and are frequently subject to change, which may increase compliance costs, disrupt operations, delay project execution, or adversely impact our ability to compete globally. We also face trade barriers and trade remedies, such as tariffs and antidumping and countervailing duties, which could increase our product costs and impact our competitiveness. See "—The antidumping and countervailing duty circumvention determinations and the extended safeguard measures in the United States could adversely affect us."

New regulations governing safety, interconnection, environmental standards and construction may result in significant additional costs to us and our customers, which could cause a significant reduction in demand for our solar power and battery energy storage products. In addition, we face regulatory risks from transmission providers and operators, including regional transmission organizations and independent system operators. These entities may adopt or amend rules that limit transmission grid access or allocate capacity in ways that curtail the ability of solar power and battery energy storage projects to deliver power.

As we expand internationally, we face increasing exposure to diverse regulatory environments and government policies, including those that may favor domestically manufactured products or restrict international trade. Shifts in government attitudes towards free trade, tariffs, or international cooperation could adversely affect the demand for our products, increase our costs or tax liabilities, or hinder our market access.

Sustained geopolitical tensions could significantly undermine global economy stability. Hostilities and political conflicts, such as the Russia-Ukraine conflict that began in February 2022, and tensions affecting Israel, the Gaza Strip, and the Red Sea since October 2023, create global security concerns and impact international business. The duration and outcome of these factors remain highly unpredictable.

Despite our zero tolerance towards forced labor in our own manufacturing facilities and throughout our supply chain, we may be subject to risks related to forced labor allegations. We monitor our manufacturing facilities, enforce an equal opportunity policy, prohibit discrimination of any kind, and adhere to the employment laws and regulations of the jurisdictions in which we operate. In June 2021, the U.S. Customs and Border Protection issued a Withhold Release Order pursuant to Section 307 of the Tariff Act of 1930 on products whose upstream silica-based products (such as polysilicon) are sourced, or are suspected of being sourced, from Hoshine Silicon Industry Co. Ltd. and its subsidiaries. This restriction was further expanded by the Uyghur Forced Labor Prevention Act, which took effect on June 21, 2022, which imposes broader forced labor-related import restrictions. There can be no assurance that we will not experience adverse consequences arising from the impact of such restrictions on our products and supply chain.

In addition, we are subject to anti-corruption laws such as the Foreign Corrupt Practices Act of 1977 ("FCPA"), which prohibits improper payments or benefits to government officials, political parties and private-sector recipients. Although investigations and enforcement actions under the FCPA were temporarily paused for 180 days by an executive order on February 10, 2025, the FCPA law remains in effect. We may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities in the course of our business (for example, to obtain approvals, permits and licenses from applicable government authorities and to sell power to government-owned entities).

If any new legislation, executive orders, tariffs, laws and/or regulations are implemented, or if existing trade agreements are renegotiated, such changes could have an adverse effect on our business, financial condition and results of operations. If we fail to comply with applicable laws, face challenges in regulations and enforcement practices, or are unable to manage associated risks effectively, our business, financial condition and results of operations could be materially and adversely affected.

Our industry is highly competitive and many of our competitors have greater resources than we do or are more adaptive.

We face intense competition from a large number of module competitors, such as First Solar, Inc., LONGi Green Energy Technology Co. Ltd., Trina Solar Limited, JinkoSolar Holding Co., Limited, JA Solar Co., Limited and Tongwei Solar Co., Ltd., and battery energy storage companies such as Tesla, Inc., Fluence Energy, Inc. and Sungrow Power Supply Co., Ltd. Some module competitors are developing or are currently producing products based on new technologies that may ultimately offer lower costs or better performance than our products. These include products based on Interdigited Back Contact ("IBC") PV technology, which reduces shading by locating metal contacts at the cell to the rear side and increasing power density through larger area for photo absorption. To effectively compete, our products and production capacity are undergoing continuous transformation. For example, while crystalline silicon cell modules have become the market mainstream, we have significantly upgraded our production to N-type and Tunnel Oxide Passivated Contact ("TOPCon") technologies, which is focused on further improving the photoelectric conversion efficiency and reducing the manufacturing cost. Our judgment of the development trend of technologies and products may prove inaccurate, and we may fail to invest sufficiently in research and development in the technology with the most market potential. Consequently, we may be exposed to the risk of lagging in technological advancements.

The competitiveness of our battery energy storage solutions is dependent on a number of factors, including safety and reliability, cost and performance. If we cannot effectively manage growth, take advantage of market opportunities, or respond to competitive pressures, we may face increased costs, difficulties in introducing new products, or other operating challenges.

In our project development business, we compete with international and domestic developers and operators of solar power and battery energy storage projects, including infrastructure funds, power companies focused on renewable energy generation and other renewable energy companies. Some of our competitors may have advantages over us in terms of greater experience or resources in the operation, capital, financing, technical support and management of solar power and battery energy storage projects, in any particular markets or in general.

As the solar power, battery energy storage and renewable energy industry grows and evolves, we will also face new competitors who are not currently in the market. Our failure to adapt to changing market conditions and to compete successfully with existing or new competitors would limit our growth and could have a material adverse effect on our business and prospects.

We face economic and operational risks associated with maintaining and expanding our international business.

Operating in international markets requires significant resources and exposes us to a range of risks that could adversely affect our business, including:

- fluctuating sources of revenue;
- difficulty managing our sales channels effectively as we expand beyond distributors to include direct sales to systems integrators, end users and installers;
- difficulty managing the development, construction and sale of our solar power and battery energy storage projects on a timely and profitable basis as a result of technical difficulties, commercial disputes and regulatory changes;
- challenges and costs of complying with the different commercial, legal and regulatory requirements;
- increased cost of understanding local markets and establishing effective customer service, marketing and distribution network;
- difficulties and costs associated with staffing and managing overseas operations;
- failure to develop appropriate risk management and internal control structures tailored to overseas operations;
- inability to obtain, maintain or enforce intellectual property rights;
- exposure to fluctuations in foreign currency exchange rates;
- differing tax regimes across various markets; and
- unanticipated changes in prevailing economic conditions.

Our failure to manage these risks effectively could harm our international operations, overall business and results of operations.

Our revenue sources have fluctuated significantly over recent years. For example, in 2022, the Americas contributed 37.4%, Asia contributed 36.7%, and Europe and other regions contributed 25.9% of our revenues, respectively. In 2023, these regions contributed 34.4%, 41.0%, and 24.6%, respectively, and in 2024, these regions contributed 51.8%, 30.0%, and 18.2%, respectively. As we shift the focus of our operations between different regions, we have limited time to address the related risks. Furthermore, some of these risks, such as currency fluctuations, will increase as our revenue contribution from certain regions becomes more prominent. This may potentially and adversely affect our financial performance.

We may experience issues with our manufacturing capacity expansion and operational initiatives.

We have undertaken several operational initiatives to align our manufacturing capacity with market demand. Our solar module, cell, wafer and ingot annual production capacities were 60.2 GW, 48.4 GW, 31.0 GW and 25.0 GW, respectively, as of December 31, 2024. We target to adjust these capacities to 61.0 GW, 36.2 GW, 37.0 GW and 33.0 GW, respectively, by December 31, 2025, subject to market conditions. Our annual battery energy storage system manufacturing capacity was 20.0 GWh, and we had no dedicated battery cell manufacturing capacity as of December 31, 2024. We target increasing these capacities to 30.0 GWh and 3.0 GWh, respectively, by December 31, 2025.

As part of our commitment to expanding our manufacturing capabilities and supporting domestic production in the U.S., we have undertaken significant investments in new manufacturing facilities across several states. For example, in June 2023, we announced the construction of a solar module production facility in Mesquite, Texas, with an annual output capacity of 5 GW. This facility commenced production in late 2023 and is expected to serve as a key component of our U.S. supply chain. In October 2023, we announced a substantial investment in a solar photovoltaic cell manufacturing facility in Jeffersonville, Indiana. This facility will provide cells to support our U.S.-based module production and is anticipated to create a significant number of high-tech jobs. We also plan to invest in a new manufacturing and R&D hub for our utility-scale battery energy storage business in Shelbyville, Kentucky.

Even if we expand our manufacturing capacity as planned, there is no guarantee that we will be able to manage our growth effectively, generate sufficient customer demand for our products, or successfully integrate our overall manufacturing capacity to achieve operational efficiency, which could adversely affect our business, financial condition and results of operations.

The antidumping and countervailing duty circumvention determinations and the extended safeguard measures in the United States could adversely affect us.

Canadian Solar's exports to the U.S. could be adversely impacted by (i) the U.S. Department of Commerce's (the "USDOC") affirmative final determinations in its circumvention investigations of crystalline silicon photovoltaic ("CSPV") cells and modules products from Thailand and Vietnam; and/or (ii) the U.S. Government's extension of safeguard measures on imports of CSPV cells and modules. These risks are mitigated by the Group's compliance with USDOC's various certification regimes.

On August 17, 2023, USDOC issued affirmative final determinations of circumvention with respect to CSPV products from Cambodia, Thailand, Malaysia, and Vietnam. USDOC also made company-specific affirmative determinations with respect to several companies, including Canadian Solar International Limited ("CSIL"). The Group defended its interests in these proceedings.

While the determination under the USDOC's regulations typically imposes antidumping duty ("AD") and countervailing duty ("CVD") liability from the date of initiation (here, April 1, 2022), the USDOC published a final rule that delayed AD/CVD liability for CSIL's exports from Thailand (and also Vietnam) in these solar circumvention proceedings (the "Solar Moratorium") in response to Proclamation 10414 issued by the U.S. government on June 6, 2022, which suspended AD/CVD requirements on eligible product imports through June 6, 2024. To qualify for the Solar Moratorium, imports must have entered the U.S. by June 6, 2024, and be utilized in solar energy projects within 180 days of that date. USDOC also implemented a certification mechanism for exporters and importers to demonstrate that merchandise is not subject to circumvention requirements in light of (i) the Solar Moratorium, or (ii) limited reliance on Chinese-origin components (including wafers).

Accordingly, the Group's exports from Thailand and Vietnam to the U.S. market could be treated as Chinese-origin and be subjected to significant AD/CVD deposit rates, adversely affecting our competitiveness in the U.S., and harming our financial condition and results of operations. However, the Group's compliance with USDOC certification requirements reduces this risk.

The circumvention final determinations and Solar Moratorium are both on appeal before the U.S. Court of International Trade ("CIT"). The Group is defending its interests in these ongoing appeals. For additional details, please refer to "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal and Administrative Proceedings."

In addition, the U.S. government extended the solar safeguard measure for four years until February 6, 2026. The extended solar safeguard measure applies to nearly all U.S. imports of CSPV cells and modules, including imports from Thailand and Vietnam, and doubles the volume of the tariff-rate quota ("TRQ") on imported CSPV cells to 5.0 GW and maintains a tariff on imports of CSPV modules and above-quota CSPV cells, beginning at a rate of 14.75% ad valorem and declining annually by 0.25 percentage points to 14.50% in the sixth year, 14.25% in the seventh year, and 14.0% in the eighth year. The extended safeguard measure excluded bifacial panels. In addition, the extended safeguard measure no longer applies to imports of CSPV cells and modules from Canada, as a result of a memorandum of understanding between the U.S. and Canada. On June 21, 2024, the U.S. government issued Proclamation 10779, revoking the exclusion of bifacial panels from safeguard relief previously proclaimed in Proclamation 10339. Proclamation 10779 instead reinstated tariffs on bifacial panels under the Section 201 Safeguard Action, subject to certain qualifications. In addition, on August 12, 2024, the U.S. government issued a Proclamation expanding the TRQ for imported solar cells from 5 GW to 12.5 GW annually. While the extended safeguard measure are scheduled to end on February 6, 2026, any further revisions could impact our ability to compete in the U.S. market and materially affect our financial condition and results of operations.

The antidumping and countervailing duty investigations on active anode materials from China and tariff measures on battery imports from China into the United States could adversely affect us.

On December 18, 2024, the American Active Anode Material Producers ("Petitioner") filed petitions for AD/CVD orders on imports of active anode materials from China. Certain Canadian Solar entities entered an appearance in these proceedings before the USDOC and the U.S. International Trade Commission (the "USITC"). On January 15, 2025, the USDOC initiated the Active Anode Materials AD/CVD investigations, and the USITC preliminarily voted to continue its investigations on February 7, 2025. The USDOC's AD/CVD preliminary determinations are expected in mid-2025, and if affirmative, the USITC's final determinations are expected in late 2025. This case has the potential to adversely impact our exports of lithium batteries from China, including batteries for energy storage projects. The Group is defending its interests in these proceedings.

Additionally, on September 18, 2024, the U.S. Trade Representative (the "USTR") announced its decision to increase the rate of existing section 301 duties on U.S. imports of lithium-ion non-electrical vehicle batteries from 7.5% ad valorem to 25% effective January 1, 2026.

These ongoing investigations and tariff measures may result in higher costs, reduced competitiveness, or limitations on our battery imports from China into the U.S., which could materially and adversely affect our business, financial condition, and results of operations.

Reciprocal tariffs under the International Emergency Economic Powers Act on imports into the United States could adversely affect us.

On February 1, 2025, the U.S. government issued an Executive Order pursuant to the International Emergency Economic Powers Act (the "IEEPA") imposing a 10% tariff on all imports from China, effective February 4, 2025. On March 3, 2025, the U.S. government amended the Executive Order increasing the tariff to 20%, effective March 4, 2025. The 20% tariff applies in addition to any other duties, fees, exactions, and charges applicable to the covered imports from China.

On April 2, 2025, the U.S. government issued an Executive Order pursuant to IEEPA imposing an indefinite reciprocal 10% tariff on almost all goods imported into the U.S., effective April 5, 2025, and individualized higher IEEPA tariffs (11% to 50%) starting April 9, 2025 on goods originating from 57 countries with trade surpluses with the U.S., including China, Thailand, and Vietnam, among other countries. On April 9, 2025, the U.S. government issued a further Executive Order increasing the IEEPA reciprocal tariff on China to 125% effective April 10, 2025. Concurrently, the U.S. government announced a temporary suspension of the country-specific reciprocal tariff measures targeting most U.S. trading partners for a 90-day period, or until July 9, 2025. This sequence of actions underscored a strategic recalibration of the U.S. trade policy, emphasizing heightened pressure on international trade.

We are closely monitoring potential changes in international trade policy, as it remains unclear what additional actions, if any, will be taken by the U.S. or other governments with respect to international trade agreements, the imposition of tariffs on goods imported into the U.S., tax policy related to international commerce, or other trade matters. If any new tariffs, legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or, in particular, if the U.S. government takes retaliatory trade actions due to the recent U.S.-China trade tension, such changes could have an adverse effect on our business, financial condition and results of operations.

Our revenues and results of operations are subject to significant fluctuations, which make our financial performance difficult to predict.

Our revenues and results of operations have historically fluctuated and are likely to continue fluctuating from quarter to quarter and year to year due to a number of factors, many of which are beyond our control. Factors contributing to these variations include, among others, changes in the average selling prices of our solar modules, fluctuations in shipment volume and customer demand, timing of revenue recognition for battery energy storage products and services, timing and pricing of project sales, loss or addition of significant customers, availability of government incentives, regulatory changes, and variations in manufacturing and material costs, including high-purity silicon, lithium cells, solar cells and wafers. We also experience seasonality in demand linked to construction cycles and weather conditions. Moreover, besides seasonality, there are many other factors that may affect our customers' order patterns, including expectations of future price movements, inventory adjustments, grid-connection and offtaker deadlines, government policy changes and tariff adjustments. These factors may reduce or strengthen the impact of seasonality on our products and services.

As we scale our battery energy storage business, we may enter into turnkey EPC contracts and commit to a fixed project price based on preliminary cost estimates. If actual costs exceed our estimates due to unforeseen factors such as material price increases, supply chain shortages or labor constraints, we may be unable to recover those costs, which could negatively impact profitability. Delays or performance issues involving third parties may also result in penalties or additional obligations. These factors contribute to fluctuations in our revenues and results of operations.

We are exposed to fluctuations in foreign currency exchange rates. While the majority of our sales and cash are denominated in U.S. dollars, Renminbi and Euros, we also transact in various other currencies. A significant portion of our manufacturing costs are denominated in Renminbi, making us particularly sensitive to its appreciation against the U.S. dollars and other currencies. Such appreciation could increase our operating expenses and impact our cost competitiveness. In addition, we maintain loans in multiple currencies, including Renminbi, U.S. dollars, Japanese yen, Brazilian reals and Euros, further exposing us to exchange rate volatility. Although we engage in hedging activities to mitigate near term foreign exchange risk, these hedges may not fully offset the longer-term impact of foreign currency fluctuations.

In addition, we base our operating expenses in part based on expected future revenues, and a significant portion of those expenses are fixed in the short-term. If actual revenues are lower than we expected, we may not be able to adjust our operating expenses proportionately. As a result, our financial performance may continue to fluctuate significantly, and historical results should not be relied upon as an indicator of future performance.

Furthermore, our financial results and effective tax rates could change due to shifts in the mix of profits earned in countries with different tax rates, changes in the valuation of our deferred tax assets and liabilities, adjustments to provisional taxes upon finalization of various tax returns, adjustments to the interpretation of transfer pricing standards, the availability of tax credits, or changes in tax laws or interpretations, including tax holidays or tax incentives. Recent developments include international tax reforms proposed by the Organization for Economic Co-operation and Development ("OECD") as part of its Base Erosion and Profit Shifting ("BEPS") project. These include the allocation of profits among tax jurisdictions in which companies do business and the implementation of a global minimum tax rate of 15%, referred to as Pillar One and Pillar Two, respectively. Several countries have enacted or are in the process of implementing Pillar Two legislation, including Canada, which enacted such legislation on June 20, 2024, implementing a 15% global minimum tax on profits, effective January 1, 2024. The OECD and participating countries continue to issue administrative guidance on its applications, which may impact our tax obligations. In the U.S., the IRA included provisions that will impose, among others, a minimum tax on the book income of certain large corporations. Pending further regulatory guidance, these changes could increase our future tax liabilities.

We need a significant amount of cash to fund manufacturing expansion, project development and construction.

Our manufacturing and project development businesses are capital intensive, and we anticipate that our capital requirements will continue to increase. To develop new products, support growth, improve production cost efficiencies, and maintain product quality, we need to invest in manufacturing capacity, facilities, equipment, product and process technology. In addition, significant cash resources are required for the development and construction of our solar power and battery energy storage projects. In 2020, CSI Solar raised RMB 1.78 billion ($261.3 million) from institutional investors and strategic partners. In 2023, it raised RMB 6.91 billion ($966.9 million) from public investors in connection with its STAR Listing on the Shanghai Stock Exchange. In 2024, an entity managed by BlackRock invested $500.0 million in Series A Preferred Shares of Recurrent Energy B.V., providing additional capital for our project development business.

If we are unable to generate sufficient cash flows, obtain adequate funding, or find alternative sources of capital on commercially acceptable terms, our ability to expand manufacturing operations and project development business would be significantly impaired. This could have a material and adverse effect on our business prospects, financial condition, liquidity and results of operations.

Our substantial indebtedness and reliance on short-term financing could limit our financial flexibility and competitive position.

As of December 31, 2024, our total debt was approximately $5.1 billion. Our substantial indebtedness increases our vulnerability to adverse economic and industry conditions, and requires significant cash flow for debt service, thereby reducing funds available for working capital, capital expenditures and other general corporate purposes. These obligations could limit our financial flexibility to respond to business changes, pursue business opportunities we believe to be desirable, or compete effectively against competitors that have less debt. In addition, restrictive covenants in our debt agreements may constrain our ability to incur additional debt, further constraining financial flexibility.

Our ability to generate sufficient cash to satisfy our outstanding and future debt obligations depends on future operating performance, which is affected by economic conditions and other factors beyond our control. If we are unable to generate sufficient cash flow from operations to service our indebtedness, we may need to take alternative measures that may include actions such as reducing or delaying capital expenditures, selling assets, restructuring or refinancing our debt, or seeking equity capital. There is no assurance that these measures could be instituted on satisfactory terms, if at all. Any of these events could materially and adversely affect our ability to manage our debt obligations, which could materially and adversely affect our business, financial condition and results of operations.

We also rely on short-term borrowings, letters of credit and short-term notes payable to provide working capital for our daily manufacturing operations. Since a significant portion of these financings come from PRC banks, we are exposed to lending policy changes by the PRC banks. As of December 31, 2024, we had outstanding short-term borrowings of $1,389.7 million, letters of credit of $184.5 million and short-term notes payable of $637.5 million with PRC banks. If PRC government policies shift or PRC banks tighten lending practices, particularly in the solar sector, we may not be able to roll-over our bank credit facilities or obtain additional short-term financing. This could constrain our ability to fund operations to the same extent as in previous years, which may materially and adversely affect our operations.

Failure to comply with financial and other covenants in our debt instruments could adversely affect our liquidity.

Many of our debt instruments contain financial covenants and broad default provisions, including interest and debt coverage ratios, loan to equity value of designated projects and debt to asset ratios, and minimum equity requirements. These covenants could restrict our ability to respond to market conditions, meet capital needs and pursue growth plans. Adverse economic conditions or industry changes may cause us to incur significant losses or force us to assume considerable liabilities, which could impair our ability to comply with these covenants. If we fail to comply and our lenders refuse to grant waivers, an event of default could be triggered, which may accelerate repayment obligations under the applicable debt instruments.

Some of our debt agreements also contain cross-default clauses that enable lenders to declare an event of default if we breach covenants under other debt agreements. Our ability to meet these restrictive financial ratios and covenants can be impacted by events beyond our control and we may be unable to do so. If we are unable to cure violations or obtain waivers of non-compliance in a timely manner, we may face significant liquidity constraints, which could materially and adversely affect our financial condition and results of operations.

Supply chain disruptions, cost increases or performance issues could adversely affect our business and relationship with customers, particularly given our dependence on a limited number of key suppliers.

We rely on third-party suppliers for key materials, components and equipment, including high-purity polysilicon, ingots, wafers, cells, metallic pastes, glass, aluminum frames, ethylene vinyl acetate, junction boxes, polymer back sheets, lithium iron phosphate battery cells, inverters, trackers, mounting hardware, and grid interconnection equipment. Given our dependence on a limited number of suppliers, we are vulnerable to supply chain disruptions. If suppliers fail to meet our quantity, quality or cost requirements, we may face increased costs, production delays, or non-compliance with customer agreements, potentially leading to order cancellations, contractual liabilities, and revenue shortfalls.

Supply chain risks are further exacerbated by inflationary pressures, rising input costs, and production delays, which could impact our ability to remain price-competitive. Although we may build buffer inventories, there is no assurance that these buffer inventories will fully mitigate disruptions. In addition, a significant portion of our manufacturing and suppliers' manufacturing and supply chain are based in China, and may be subject to government-mandated facility closure as a consequence of energy shortage or other causes. Supply interruptions may also result from accidents, natural disasters or other unforeseen events beyond our control.

If we are unable to secure alternative suppliers on commercially reasonable terms, or if increased costs cannot be passed on to our customers, our market position, customer relationships and results of operations could be materially and adversely affected.

We are developing and commercializing higher conversion efficiency cells, but we may not be able to mass-produce these cells in a cost-effective way, if at all.

Higher efficiency cell structures are increasingly vital for cost competitiveness and brand recognition in the solar power industry, as they can yield higher power outputs at the similar production costs, thereby lowering the cost per watt. Manufacturing and selling modules made from such cells offer a competitive advantage, enabling system owners to generate more electricity without additional infrastructure or systems.

We have focused our research on advanced technologies, including N-type Heterojunction ("HJT") and TOPCon cells, and other technologies such as interdigitated back contact ("IBC") cell. In mid-2022, we launched HJT module products for high-end roof-top application. In early 2023, we began mass production of TOPCon modules. While we are investing in the development of higher conversion efficiency solar modules, there is no assurance that we will be able to commercialize these technologies cost-effectively, if at all. In the near term, products with such technologies may command a modest premium. In the longer term, if competitors are able to manufacture these products more cost-effectively, we may experience a competitive disadvantage, which could affect our product pricing and our financial performance.

Defects or performance issues in our products could result in warranty claims that could impose significant costs on us.

We may incur significant costs due to warranty claims if our products fail to perform as expected or are alleged to have defects. Our standard warranties cover defects in materials and workmanship for periods ranging from 1 to 30 years, depending on the product type. Additionally, we provide performance warranties ensuring a specified power output over time. Given these extended warranty periods, we are exposed to the risk of substantial claims long after product shipment and revenue recognition.

While we conduct rigorous quality testing, our products have not been operational for their full warranty durations, and unforeseen issues may arise over time, potentially harming our reputation and financial results. Furthermore, as we expand and diversify our product offerings, our exposure to warranty and product liability may increase. Although we maintain reserves for warranty expenses based on various factors, actual costs may differ significantly from our estimates, leading to unexpected volatility in our results of operations.

We have historically entered into agreements with a group of insurance companies to cover a portion of our solar module warranty obligations. The insurance policies were designed to match our solar module product warranty terms, and the insurance companies were obliged to reimburse us for actual product warranty costs, subject to claim limits and deductibles. However, warranty claims may exceed coverage limits, and the claims process can be lengthy and uncertain, with outcomes that may not align with our expectations. If claims are delayed, disputed, or denied, our results of operations could materially and adversely affected.

Our dependence on a limited number of customers may cause significant fluctuations or declines in our revenues.

We sell a substantial portion of our solar module and battery energy storage products to a limited number of customers. Our top five customers by revenues accounted for approximately 15.9%, 15.8% and 17.8% of our net revenues in 2022, 2023 and 2024, respectively. We expect our dependence on a limited number of customers to continue for the foreseeable future.

The loss or reduction in sales to any major customer, if not replaced in a timely manner, could materially reduce our revenue and affect our results of operations. As we expand our business and product offerings, our customer base may shift, and there is no assurance that we will establish a stable or diversified customer base.

Our founder, Dr. Shawn Qu, has substantial influence over our company and his interests may not be aligned with the interests of our other shareholders.

As of January 31, 2025, Dr. Shawn Qu, our founder, Chairman, President and Chief Executive Officer, beneficially owned 13,973,893 common shares, representing 20.9% of our outstanding shares. Dr. Qu also serves as the chairman of CSI Solar. As a result, Dr. Shawn Qu has substantial influence over our business, including decisions regarding mergers and acquisitions, consolidations, asset sales, the election of directors and other significant corporate actions. This concentration of ownership may discourage, delay, or prevent a change in control of our company, which could deprive our other shareholders of an opportunity to receive a premium for their shares in the sale of our company and might reduce the price of our common shares.

Our inability to protect our intellectual property rights or defend against patent infringement or other intellectual property claims, could undermine our competitive position, adversely affect our business and impose significant costs.

We retain intellectual property rights to some of the technologies that we develop in solar power and battery energy storage products, As of December 31, 2024, we held 2,215 patents and had 560 patent applications pending in China, 19 U.S. patents (including 7 design patent), and 16 European patents (including 12 design patents). We have registered the "Canadian Solar" trademark in multiple jurisdictions, with pending application in additional countries. As of December 31, 2024, we had 138 registered trademarks and 4 trademark applications pending in China, and 162 registered trademarks and 34 trademark applications pending outside of China. While we take measures to protect our intellectual property, these rights afford only limited protection and may not prevent third-party infringement.

Additionally, our success depends on our ability to develop and use our technology and know-how without infringing third-party intellectual property rights. Patent and intellectual property disputes are inherently uncertain and often involve complex legal, scientific, and factual issues. Defending such claims can be costly, time-consuming and may divert management and technical resources. Furthermore, we use third-party equipment in our production lines, sometimes without sufficient supplier guarantees that our use of such equipment does not infringe third-party intellectual property rights. This creates a potential source of litigation or infringement claims. An adverse determination in any such litigation or proceedings to which we may become a party could subject us to significant liability, require us to seek licenses, pay ongoing royalties, redesign products or comply with injunctions prohibiting the manufacture, sale or use of our technologies. Protracted litigation could deter customers from purchasing our products until disputes are resolved. While we have resolved claims and disputes in the past without material impact on our financial position, we cannot guarantee that future disputes will not have a material adverse effect on our business and results of operations.

Our failure to comply with environmental, health and safety laws could result in significant costs, adverse publicity, fines and business disruption.

We are subject to national and local laws governing environmental protection, health and safety. We believe we comply with all applicable regulations, including those related to noise, wastewater, air emissions, hazardous substances and industrial waste. Beyond what is required by environmental laws, we have implemented measures to reduce our environmental impact, including promoting a circular economy to maximize material and energy efficiency and minimize waste generation, and setting rolling five-year targets to lower manufacturing GHG emissions, energy and water consumption, and waste generation. We have also strengthened supplier scrutiny on ESG requirements and implemented ESG compliance audits across our supply chain. If we fail to comply with current or future environmental regulations, we may incur substantial fines, production suspensions or operation closures. Stricter regulations in the future could significantly increase compliance costs. Our solar power and battery energy storage products must meet environmental standards in the jurisdictions in which they are installed, and compliant-related design and manufacturing costs could impact our competitiveness.

The ownership, construction and operation of our solar power and battery energy storage projects are subject to environmental, health and safety laws in each jurisdiction where our projects operate or plan to operate. Some projects may require environmental impact assessments and programs to identify and understand the potential environmental impacts of our operations, allowing us to plan and design projects that minimize harm to ecosystems and communities. If such programs are unsuccessful, our projects could face increased mitigation requirements, operational curtailments, penalties or permit revocation.

Our costs of complying with current and future environmental, health and safety laws, regulations and permit requirements (or other similar requirements), and any liabilities, fines or other sanctions resulting from violations, could have a material adverse effect on our business and results of operations.

Laws, regulations and government actions on sustainability and greenhouse gas emissions could result in significant additional costs and expose us to additional liabilities.

Our operations emit greenhouse gases, and evolving laws and regulations may require us to obtain permits, undergo environmental review, and implement monitoring programs. For instance, the SEC adopted rules on March 6, 2024, mandating public companies to disclose climate-related risks and GHG emissions in their annual reports starting in the fiscal year 2025. However, the implementation of these rules has been stayed due to legal challenges, and as of March 27, 2025, the SEC ceased defending the rules in court, creating uncertainty regarding their future applicability. The European Corporate Sustainability Reporting Directive (“CSRD”) requires companies to report on a broad range of ESG factors. A central feature of the CSRD is the concept of double materiality, which mandates companies to identify sustainability matters that are most material to the organization and its stakeholders. Recent legislative developments have led to proposed amendments that may delay the implementation of the CSRD’s reporting requirements. On April 3, 2025, the European Parliament voted to postpone the application of certain sustainability reporting rules, allowing lawmakers additional time to renegotiate exemptions. As a result, reporting requirements for certain companies are postponed until 2027, with first reports due in 2028. Given these developments, we are closely monitoring the evolving regulatory landscape to determine the specific impact on Recurrent Energy’s reporting obligations under the CSRD. In China, regulatory authorities have recently introduced ESG disclosure guidelines requiring public companies to report on material ESG topics, including the integration of double materiality assessments. CSI Solar, our majority-owned subsidiary listed on the STAR Market, will be required to comply with these guidelines by April 30, 2026, for disclosures covering the fiscal year 2025.

Since 2020, we have been measuring GHG emissions from our operations, including manufacturing. We have also set rolling five-year targets to reduce GHG emissions, energy and water consumption, and waste intensity, which are updated annually. Our commitment includes the goal of powering all our operations with renewable energy by 2030. In addition, we are committed to setting science-based near-term and net-zero targets and decarbonizing our operations and value chain. These initiatives will meaningfully reduce our GHG emissions in the future, and may be subject to policy, market or cost barriers in the locations where we operate.

Our business model supports global decarbonization by enabling customers to reduce their carbon footprint through solar energy and battery energy storage solutions. However, evolving carbon pricing mechanisms, emission regulations, and government decarbonization targets could increase our compliance costs, impact operations, or require additional investments in emission reduction equipment and technologies. The financial and operational impact of such regulatory developments remains uncertain and cannot yet be determined.

Corporate sustainability may impose additional costs and create new compliance challenges.

Public ESG and sustainability reporting has become more broadly expected by investors, shareholders, customers and other stakeholders. Investors and customers may consider a company's sustainability performance as a reputational or other factor in making an investment or purchase decision. Our failure to meet established ESG standards or achieve acceptable ratings could lead to reputational damage, increased costs, and potential disadvantage relative to our competitors.

We actively monitor sustainability-related key performance indicators, and have set meaningful targets to ensure that we manage our business in a responsible way and maintain a responsible supply chain. See "Item 4. Information on the Company—B. Business Overview—Environmental, Social and Governance Initiatives." However, implementing our sustainability strategy may result in increased costs and could have a material adverse effect on our business and results of operations. In addition, evolving sustainability standards may impose more stringent requirements on us and our suppliers. As such, there is no certainty that we will be able to meet our sustainability or other objectives efficiently and in a timely manner, if at all.

Interruption, security breaches or failures of information technology, control and communication systems could disrupt our business and expose us to liability.

We rely on our information technology systems and network infrastructure, some of which are managed by third parties, to process, store and transmit electronic information. Our information technology systems and those of critical third-party providers are vulnerable to cybersecurity incidents, including power outages, system failures, unauthorized access, malware, ransomware, data breaches and other cyber threats. Despite security measures, we have experienced cyber-attacks in the past and we expect attacks and security incidents to increase in the future. In addition, cyber treats targeting the energy and infrastructure sectors continue to increase in frequency and sophistication. We cannot guarantee that our defenses and those of critical third-party providers will prevent cybersecurity incidents, detect intrusions in a timely manner or enable full recovery. Cybersecurity breaches may lead to data theft, loss or misuse of proprietary and personal information, exposing us to legal claims, regulatory penalties, compliance costs and significant financial and reputational damage. Our cybersecurity costs may increase as regulatory requirements evolve and the threat landscape expands. If we fail to adequately prevent, detect, or mitigate cybersecurity threats, our business, operations, and financial results could be materially and adversely affected.

In addition, evolving global data protection laws impose compliance burdens. Regulations such as the EU GDPR and Canada's Québec Privacy Act require companies handling personal data to meet stringent security and privacy standards. Noncompliance may result in fines, operational restrictions, legal claims and heightened regulatory scrutiny.

Given the growing complexity of cybersecurity threats and regulatory obligations, we may need to allocate significant financial and operational resources to enhance data protection and ensure compliance. If we fail to prevent or mitigate cybersecurity incidents, or comply with evolving data protection laws, our business, reputation and financial condition may be materially and adversely affected.

Weaknesses in our internal control over financial reporting could undermine investor confidence and adversely affect the value of our common shares.

As a public company, we are required by Section 404 of the Sarbanes-Oxley Act to include a management report on, among other things, the effectiveness of our internal control over financial reporting in our annual report. As of December 31, 2024, management concluded that our internal control over financial reporting was effective. Our independent registered public accounting firm will also evaluate and report on the effectiveness of our internal control over financial reporting. However, we cannot guarantee that material weaknesses will not emerge in the future. Any such weaknesses could lead to delays in our periodic reporting, material misstatements in our financial statements, and a loss of investor confidence, leading to an adverse effect in the value of our common shares.

Although we completed the STAR Listing, we may not achieve the results contemplated by our business strategy. In addition, it is difficult to predict the effect of the STAR Listing on our common shares.

Although we completed the initial public offering and listing of CSI Solar (the "STAR Listing") on the Science and Technology Innovation Board (the "STAR Market") of the Shanghai Stock Exchange on June 9, 2023, we may not realize the anticipated benefits. Our completion of the STAR Listing may not have the anticipated effects of strengthening CSI Solar and our market leadership position. CSI Solar has broad discretion over the use of the proceeds from the STAR Listing, and it may not spend or invest those proceeds in a manner that results in our operating success or with which holders of our common shares agree. Our failure to leverage the STAR Listing could adversely impact our results of operations and market value of our common shares.

In addition, CSI Solar is currently subject to the listing and securities law regime of the PRC, resulting in increased legal, accounting and other compliance costs that it did not incur as a private company. The stock exchanges in China and Nasdaq have different trading hours, trading characteristics (including trading volume and liquidity), trading and listing rules, and investor bases, including different levels of retail and institutional participation. As a result of these differences and given the fact that CSI Solar will remain one of our significant subsidiaries, fluctuations in the price of the shares of CSI Solar due to circumstances peculiar to the STAR Market or otherwise could in turn affect the price of our common shares. Furthermore, investors may choose to invest directly in CSI Solar rather than our shares listed on the Nasdaq Global Select Market, which could result in reduced demand and market value for our common shares.

CSI Solar's status as a publicly traded company that is controlled, but less than wholly owned, may create complexities and adversely affect our financial results.

As of December 31, 2024, we owned 63.14% of CSI Solar's outstanding shares. While we retain majority ownership, CSI Solar operates under a separate board of directors and officers whose fiduciary duties extend to all of its shareholders. In fulfilling these duties, they may take actions that may be contrary to our best interests. CSI Solar and our company are independently listed on the Shanghai Stock Exchange and the Nasdaq Global Select Market, respectively, and are subject to differing regulatory, accounting standards (PRC GAAP for CSI Solar and U.S. GAAP for our company) and disclosure requirements. These differences may create inconsistencies in financial reporting, timing of disclosures and investor communications, which may lead to potential confusion or uncertainty among investors.

In addition, CSI Solar may undertake capital raises, share repurchases and share-based compensation for its directors, officers and employees, which could dilute or increase our ownership interest, affect cash flows, and increase share-based compensation expenses in the future. For example, on February 27, 2024, CSI Solar announced a share repurchase program of up to RMB 1 billion ($140.8 million), primarily for employee stock ownership plans and equity incentives. According to CSI Solar's announcement on November 30, 2024, CSI Solar plans to implement a share repurchase program with an amount not exceeding RMB 1 billion ($140.8 million). The repurchased shares will be canceled to reduce the company's registered capital. In 2024, CSI Solar repurchased 52.7 million shares, representing 1.43% of its total shares, for RMB 566.2 million ($79.6 million). In the first quarter of 2025, it repurchased an additional 14.3 million shares for RMB 153.5 million ($21.6 million).

We have granted, and may continue to grant, various share-based incentive awards which may increase our share-based compensation expenses.

Under our 2006 share incentive plan, we grant restricted shares, options and restricted share units to eligible employees, directors and consultants. In connection with the STAR Listing, we granted performance-based restricted share units to directors and key employees, with vesting tied to the IPO date and subsequent anniversaries. See "Item 6 Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers" for more details. CSI Solar adopted a restricted share incentive plan in 2024, granting options to its officers, directors and employees to purchase shares of CSI Solar, subject to service and performance vesting conditions. We recognized $21.4 million in share-based compensation expenses in 2024.

We consider share-based compensation critical for attracting, retaining and motivating key personnel and expect to continue issuing such share-based incentive awards. However, these grants may increase our share-based compensation expenses. In addition, performance-based awards may cause greater period over period fluctuations compared to time-based awards.

We may encounter difficulties with acquisitions and divestitures, which could harm our business.

We have completed several acquisitions in the past and may continue to acquire additional business in the future to improve our market position, expand our products and services, or achieve other business objectives. However, these activities could subject us to a number of risks, including challenges associated with integrating the acquired operations, personnel, services, internal controls and financial reporting into our existing operations. If we fail to successfully integrate acquisitions, it could result in disruptions to our business operations, loss of key personnel, or failure to realize anticipated synergies or other benefits. Divestitures also involve significant risks, such as difficulties in finding buyers on acceptable terms and within a reasonable timeframe, and agreed terms could be renegotiated due to changes in business or market conditions. Divestitures could adversely affect our profitability and may require us to record impairment charges or losses as a result of the transaction.

There can be no assurance that we will be able to make acquisitions and investments and successfully integrate them into our operations, or establish strategic relationships with third parties that will prove to be effective for our business or make divestitures. Our inability to do so could materially and adversely affect our market penetration, our revenue growth and our profitability.

We face risks related to private securities litigation.

There is no guarantee that we will not become party to lawsuits from time to time. If we were involved in a class action suit, it could divert significant attention and resources from our business and operations, and require us to incur significant expenses to defend the suit. In addition, we are generally obligated, to the extent permitted by law, to indemnify our directors and officers in such matters. Adverse outcomes in such litigation could lead to significant judgments or settlements that materially and adversely affect our financial condition or results of operations.

Our common shares may be prohibited from trading in the United States under the HFCAA in the future if it is later determined that the PCAOB is unable to inspect or investigate completely our auditor. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment.

Pursuant to the HFCAA as amended by the Consolidated Appropriations Act, 2023, if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspection by the Public Company Accounting Oversight Board, or the PCAOB, and that we are a Commission-Identified Issuer under the HFCAA for two consecutive years, the SEC will prohibit our common shares from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. In the event of such determination, the Nasdaq is expected to delist our common shares.

On December 16, 2021, the PCAOB issued a report to notify the SEC its determinations that it was unable to inspect or investigate completely PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong. Our auditor, Deloitte Touche Tohmatsu Certified Public Accountants LLP, an independent registered public accounting firm located in China, was subject to that determination.

On May 26, 2022, we were conclusively identified as a "Commission-Identified Issuer" under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB issued a report that vacated its previous determinations issued on December 16, 2021 and removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. Therefore, our auditor is currently able to be fully inspected and investigated by the PCAOB. For this reason, we were not identified as a Commission-Identified Issuer under the HFCAA after we filed our annual report on Form 20-F for the fiscal year ended December 31, 2022, and do not expect to be so identified when we file this annual report on Form 20-F for the fiscal year ended December 31, 2024. Until such time as the PCAOB issues any new determination, we do not expect our securities to be subject to a trading prohibition under the HFCAA. On February 21, 2025, the U.S. administration undertakes, among other things, to determine if adequate financial auditing standards are upheld for companies covered by the HFCAA.

However, it is uncertain whether the PCAOB will continue to be able to satisfactorily inspect and investigate registered public accounting firms in mainland China and Hong Kong, among other jurisdictions. If in the future, PCAOB finds that it is unable to completely inspect and investigate registered public accounting firms in mainland China and Hong Kong, the PCAOB may act immediately to consider the need to issue a new determination, and we may be identified as a Commission-Identified Issuer again. In accordance with the HFCAA as amended by the Consolidated Appropriations Act, 2023, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. if we are identified as a Commission-Identified Issuer for two consecutive years. Furthermore, we cannot assure you whether Nasdaq or regulatory authorities would apply additional and more stringent criteria to us after considering the effectiveness of our auditor's audit procedures and quality control procedures, adequacy of personnel and training, or sufficiency of resources, geographic reach or experience as it relates to the audit of our financial statements. In addition, any additional actions, proceedings, or new rules resulting from these efforts to increase U.S. regulatory access to audit information could create some uncertainty for investors, adversely affect the market price of our ordinary shares, and we could be delisted if we and our auditor are unable to meet the PCAOB inspection requirement or are required to engage a new audit firm, which would require significant expense and management time. The delisting or prohibition of trading of our common shares, or the threat of their being delisted or prohibited from trading, may materially and adversely affect the value of your investment. If our common shares are prohibited from trading in the United States, there is no certainty that we will be able to list on a non-U.S. exchange or that a market for our shares will develop outside of the United States. A prohibition of being able to trade in the United States would substantially impair your ability to sell or purchase our common shares when you wish to do so, and the risk and uncertainty associated with delisting would have a negative impact on the price of our common shares. Also, such a prohibition would significantly affect our ability to raise capital on terms acceptable to us, or at all, which could have a material adverse impact on our business prospects and financial condition.

Risks Related to Doing Business in China

The rules and regulations in China can change quickly with little advance notice. Uncertainties with respect to the PRC legal system, as well as changes in any government policies, laws and regulations, could affect our industry and our ability to conduct our operations in China, which could harm our business.

We conduct a significant portion of our operations through our subsidiaries in China, which are governed by PRC laws and regulations. The rules and regulations in China can change quickly with little advance notice.

The PRC legal system, based on written statutes, differs from common law systems, as prior court decisions may be cited for reference but have limited precedential value. The PRC legal system continues to rapidly evolve and the implementation, interpretation and enforcement of its laws, regulations and rules may be inconsistent and change quickly with little advance notice, which may limit legal protections available to us. In addition, any litigation in China may be protracted and may result in substantial costs and divert our resources and the attention of our management. Moreover, because these laws and regulations are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available.

The new Company Law, which came into effect on July 1, 2024, introduces substantial changes affecting various aspects of corporate operations in China, including capitalization, corporate governance and shareholder rights. This law also defines the duties of directors, supervisors and senior management, and imposes greater liabilities on them. If we fail to address and comply with these regulations and any subsequent changes, we may be subject to penalties and our business may be harmed.

On March 15, 2019, the National People's Congress issued the Foreign Investment Law, which replaced most of the laws and regulations previously governing foreign investment in China. On December 26, 2019, the State Council issued the Implementation Rules of Foreign Investment Law. The Foreign Investment Law and its Implementation Rules both took effect on January 1, 2020, unifying the regulatory framework for both foreign and domestic investments. According to these regulations, foreign investments shall be conducted in line with the "negative list" and obtain relevant approvals issued by the State Council from time to time. The "negative list" sets special administrative measures for foreign investment access in specific industries. Foreign investors are not allowed to invest in prohibited industries as specified in the "negative list." Foreign investors must comply with certain conditions when investing in the restricted industries as specified in the "negative list." The National Development and Reform Commission ("NDRC") and the Ministry of Commerce ("MOFCOM") jointly issued the Catalogue of Encouraged Industries for Foreign Investment (2022 Edition), which includes photovoltaic power generation equipment manufacturing as an encouraged industry. However, it is uncertain whether our PRC subsidiaries will be subject to future foreign investment restrictions or prohibitions, although they are not currently subject to such restrictions under the existing "negative list." We cannot assure you that future interpretation or implementation of the Foreign Investment Law by relevant authorities will not materially impact our corporate structure, governance, industry or business operations.

Furthermore, with the trend of strengthening anti-monopoly supervision around the world, the PRC government has promulgated new anti-monopoly and competition laws and regulations and strengthened the enforcement under these laws and regulations, paying more attention to corporate compliance. On February 7, 2021, the Anti-monopoly Commission of the State Council issued the Guidelines for Anti-monopoly in the field of Platform Economy, which require anti-monopoly review for concentrations of undertakings involving variable interest entities in internet industry. On November 15, 2021, the State Administration for Market Regulation issued the Guidelines for the Overseas Anti-monopoly Compliance of Enterprises. Although we believe these regulations have little impact on our business, there remain uncertainties regarding their interpretation and enforcement. We cannot guarantee that regulators will agree with us or that our business operations comply with such regulations and authorities' requirements in all respects. If any non-compliance is raised by relevant authorities and determined against us, we may be subject to fines and other penalties.

The PRC government has exercised and continues to exercise substantial control over the economy. It may intervene in or influence the operations of our PRC subsidiaries at any time, which could result in material changes to our operations and the value of our securities.

We conduct our business in China through PRC subsidiaries in which we hold equity ownership interests. The PRC government has exercised and continues to exercise substantial control over the economy through regulation and state ownership. Our subsidiaries' ability to operate in China may be impaired by changes in its laws and regulations, including those governing our industry, taxation, land use rights and foreign investment restrictions. The PRC government may intervene in or influence the operations of our PRC subsidiaries at any time, which could result in a material adverse change in our operations and the value of our securities.

The central or local governments may impose new or stricter regulations or reinterpret existing regulations that would require additional compliance measures and costs. As such, our PRC subsidiaries may be subject to various government actions and regulatory interference at the national, provincial and municipal levels, leading to increased operational costs or penalties for non-compliance.

Future government actions, including intervention or regulatory changes, may require significant changes to the operations of our PRC subsidiaries, which could result in a material change in the value of our securities. Consequently, our business and investors face ongoing uncertainties related to PRC government policies and actions.

Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of our securities to significantly decline or be worthless.

The PRC government has recently indicated an intent to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers. Any such action could significantly limit or completely hinder our ability to offer or continue to offer securities to investors, and cause the value of such securities to significantly decline or be worthless.

According to the Filing Measures which came into effect on March 31, 2023, a PRC domestic company that seeks to directly or indirectly offer and list securities in overseas markets are required to file with the CSRC. In addition, follow-on offerings or listings in overseas markets, including issuance of shares, convertible notes and other similar securities, shall be filed with the CSRC within a specified time frame under the Filing Measures. In addition, upon the occurrence of any material event, such as change of control, investigations or sanctions imposed by overseas securities regulatory agencies or other relevant competent authorities, change of listing status or transfer of listing segment, or voluntary or mandatory delisting, after an issuer has offered and listed securities in an overseas market, the issuer shall submit a report thereof to CSRC within three working days after the occurrence and public disclosure of such event. Therefore, we will be required to submit filings to the CSRC in the event that we conduct any subsequent securities offerings, including issuance of shares, convertible notes and other similar securities.

On February 24, 2023, the CSRC, the Ministry of Finance, the National Administration of State Secrets Protection and the National Archives Administration of China jointly issued the Provisions on Strengthening Confidentiality and Archives Administration of Overseas Securities Offering and Listing by Domestic Enterprises which took effect on March 31, 2023. These provisions extend the scope of application to overseas indirectly listed enterprises. To provide or publicly disclose to the relevant individuals or entities, including securities companies, securities service providers and overseas regulators, or to provide or publicly disclose, through its overseas listing entities, any documents or materials that contain state secrets or working secrets of government agencies, a PRC domestic enterprise shall strictly fulfill relevant procedures stipulated by applicable national regulations, and when providing documents and materials to the relevant securities companies and securities service providers, a PRC domestic enterprise shall first obtain approval from the competent authorities according to the law, file with the secrecy administrative department at the same level and provide the relevant securities companies and securities service providers with a written statement on the implementation of the relevant requirements of this provision. A PRC domestic enterprise shall fulfill due procedures in compliance with applicable national regulations, if it provides accounting archives or copies of accounting archives to any relevant individuals and entities, including securities companies, securities service providers and overseas regulators.

If PRC regulatory authorities, including the CSRC, determine that future approvals or filings are required for our securities offerings, there is uncertainty whether we can, or how long it may take to, obtain such approval or complete such filing procedures. Any failure or delay in obtaining such approval or completing the required filings for our future offerings may subject us to sanctions by the CSRC or other PRC regulatory authorities, which could include fines and penalties on our operations in China, limitations on our operating privileges in China, delays or restrictions on repatriating offering proceeds into China, and limitations on or prohibition of dividend payments by our subsidiaries in China. The CSRC or other PRC regulatory authorities may also take actions requiring us, or making it advisable for us, to halt an offering before the settlement and delivery of our common shares. Consequently, investors engaging in market trading or other activities in anticipation of settlement and delivery would do so at the risk that such settlement and delivery may not occur. If the CSRC or other regulatory agencies promulgate new rules or guidelines requiring that we obtain their approvals or complete additional filing or regulatory procedures for future offerings, we may be unable to obtain waivers for these new requirements. Any regulatory action, uncertainty or negative publicity regarding approval, filing or other compliance requirements could materially and adversely affect our business, reputation, prospects, financial condition, results of operations, and the trading price of our common shares.

Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business.

We routinely collect, store and use data during our operations including but not limited to the demand and pricing of solar and battery energy storage products, electricity prices and forecasts, location and capacity of our production facilities, operational and performance data of solar and battery projects that we provide services to or own, and the information related to our employees, customers and suppliers, both within and outside China. We are subject to PRC laws and regulations governing the collecting, storing, sharing, using, processing, disclosure and protection of data on the internet, mobile platforms and cybersecurity. These PRC laws apply not only to third-party transactions, but also to transfers of information between us and our PRC subsidiaries and other parties in China with which we have commercial relations.

The State Council issued the Regulations on Protection of Critical Information Infrastructure, which became effective on September 1, 2021. Pursuant to the regulations, critical information infrastructure shall mean any important network facilities or information systems of an important industry or field, such as public communication and information service, energy, communications, water conservation, finance, public services, e-government affairs and national defense science, which may endanger national security, peoples' livelihoods and public interest in the event of damage, function loss or data leakage. In addition, relevant administration departments of each critical industry and sector shall be responsible to formulate eligibility criteria and determine the critical information infrastructure operator in the respective industry or sector. The operators shall be informed about the final determination as to whether they are categorized as critical information infrastructure operators. Among these industries, the energy and telecommunications industries ae mandated to take measures to provide key assurances for the safe operation of critical information infrastructure in other industries and fields.

In addition, the Standing Committee of the National People's Congress issued the Personal Information Protection Law, which became effective from November 1, 2021 and requires personal information processing operators, among other regulatory requirements, to obtain a personal information protection certification issued by recognized institutions in accordance with the CAC regulation before such personal information can be transferred out of China.

The CAC issued the Cybersecurity Review Measures, which became effective on February 15, 2022. Under these measures, online platforms and network providers possessing personal information of more than one million individual user must undergo a cybersecurity review by the CAC when they seek listing in foreign markets. The Measures provide that critical information infrastructure operators purchasing network products and services and data processors carrying out data processing activities, which affect or may affect national security, shall apply for cybersecurity review to the cyberspace administrations in accordance with the provisions thereunder.

On January 3, 2025, the CAC issued the Measures for the Certification of Personal Information Protection for Cross-Border Data Transfers (Draft for Comments). The draft measures apply to activities related to the certification of personal information protection for cross-border data transfers conducted within China. The draft measures outline provisions regarding the definition, scope of application, certification procedures, and filing requirements for professional certification bodies involved in personal information protection certification for outbound personal information transfer.

On September 24, 2024, the State Council promulgated the Regulations on Network Data Security Administration, which came into effect on January 1, 2025. These regulations provide more detailed guidance on how to implement the general legal requirements under legislations such as the Cybersecurity Law, Data Security Law and the Personal Information Protection Law. The Regulations on Network Data Security Administration requires that network data processors conducting data processing activities that affect or may affect national security shall undergo a national security review in accordance with relevant national regulations. Measures for the Security Assessment of Outbound Data Transfers promulgated by the CAC took effect on September 1, 2022 and the provisions in the Guide to Applications for Security Assessment of Outbound Data Transfers (Second Edition) took effect on March 22, 2024. According to the rule, a data processor is required to apply to the national cyberspace administration for security assessment of outbound data transfer through local provincial cyberspace administration, if the data processor provides important data abroad. The rule is recently adopted, and it is not certain how the CAC will interpret and enforce it. If we are required to go through a security assessment of outbound data transfer, we will receive a notice on assessment result after completion of the assessment, and we may be notified to terminate the outbound data transfer or make rectification as required. In addition, we have to regulate our outbound data transfer activities in accordance with the applicable laws and regulations on the security management of outbound data transfer and the relevant requirements specified in the notice on assessment result.

As of the date of this annual report, we have not been informed that we are identified as a critical information infrastructure operator by any governmental authorities. We will closely monitor the relevant regulatory environment and will assess and determine whether we are required to apply for the cybersecurity review with the advice of our PRC counsel.

Changes in PRC tax benefits may increase our effective tax rate and adversely affect our results of operations.

The Enterprise Income Tax Law ("EIT Law"), which took effect on January 1, 2008, and was further amended on February 24, 2017 and December 29, 2018, stipulates that both foreign-invested enterprises and domestic enterprises are subject to a statutory enterprise income tax rate of 25%. The EIT Law provides preferential tax treatment for certain categories of industries and projects supported and encouraged by the government. For example, enterprises qualified as a "High and New Technology Enterprise" ("HNTE") are entitled to a 15% enterprise income tax rate, provided they satisfy applicable statutory requirements. In addition, under the Catalogue of Encouraged Industries in Western Regions ("Western Catalogue") promulgated by the NDRC, Enterprises in the Encouraged Industry that are established in the western region are entitled to a 15% enterprise income tax rate, subject to satisfying applicable statutory requirements.

In 2024, certain of our PRC subsidiaries, including Suzhou Sanysolar Materials Technology Co., Ltd, Changshu Tegu New Material Technology Co., Ltd, CSI New Energy Development (Suzhou) Co., Ltd, CSI Solar Technologies (JiaXing) Co., Ltd, Canadian Solar Photovoltaic Technology (Luoyang) Co., Ltd. and CSI Energy Storage Co., Ltd. were recognized as HNTEs. In addition, CSI Solar Technology (Xining) Co., Ltd and Canadian Solar Sunenergy (Baotou) Co., Ltd. were qualified as Enterprises in the Encourage Industry.

Our effective tax rate depends on the relative contribution of each of subsidiary to our consolidated taxable income. The future income tax liability of our PRC subsidiaries will depend on various factors such as the results of their operations, taxable income and applicable statutory or preferential enterprise tax rate. If our PRC subsidiaries that have enjoyed preferential tax treatment lose their eligibility, we will explore options under applicable law to qualify for alternative preferential tax treatment. To the extent we are unable to offset the impact of the expiration of existing tax benefits through new tax exemptions, incentives or other benefits, our effective tax rate may increase.

There are significant uncertainties regarding our tax liabilities with respect to our income under the EIT Law.

Under the EIT Law and its implementation regulations, enterprises established outside China whose “de facto management body” is located in China are considered PRC tax resident enterprises and will be subject to a 25% enterprise income tax rate on their global income. The implementation regulations define the term “de facto management body” as the body that exercises full and substantial control and overall management over business, productions, personnel, accounts and properties of an enterprise. The Circular on Certain Issues Relating to the Identification of China-controlled Overseas-registered Enterprises as Resident Enterprises on the Basis of Actual Management Organization, or Circular 82, effective from January 1, 2008, further provides certain specific criteria for determining whether the “de facto management body” of a PRC-controlled offshore incorporated enterprise is located in the PRC. The criteria include whether (a) the location where senior management and senior management bodies responsible for the routine production and business management of the enterprise is located in the PRC, (b) decisions relating to the enterprise’s financial and human resource matters are made or are subject to approval by organizations or personnel in the PRC, (c) the enterprise’s primary assets, accounting books and records, company seals, and board and shareholder resolutions are located or maintained in the PRC and (d) 50% or more of voting board members or senior executives of the enterprise habitually reside in the PRC. Although Circular 82 only applies to offshore enterprises controlled by enterprises or enterprise groups located within the PRC, the determining criteria set forth in Circular 82 may reflect the tax authorities’ general position on how the “de facto management body” test may be applied in determining the tax resident status of offshore enterprises. As of the date of this annual report, we have not been notified or informed by the PRC tax authorities that we are considered a PRC resident enterprise under the EIT Law.

However, it remains unclear as to whether our “de facto management body” is located in China for PRC tax purposes. As a result, we and our non-PRC subsidiaries may be treated as tax residents in the PRC, which could increase our tax liabilities.

Dividends paid by us to and gains on the sale of our securities by our non-PRC shareholders may be subject to PRC enterprise or individual income tax liabilities.

The EIT Law and its implementation regulations provide that if the enterprise distributing dividends is domiciled in the PRC, or if gains are realized from transferring equity interests of enterprises domiciled in the PRC, such dividends or capital gains shall be treated as China-sourced income. However, there are no detailed rules for determining the criteria or procedures for an enterprise to be considered “domiciled” in the PRC. Domicile may be interpreted as either the jurisdiction where the enterprise is incorporated or where the enterprise is a tax resident. If we are considered a PRC “resident enterprise” for tax purposes, dividends we pay to our non-PRC shareholders and gain realized by such shareholders from the transfer of our securities could be considered as income derived from sources within China and be subject to a PRC tax at a rate of 10% (withheld at source for dividends), unless reduced or eliminated under an applicable tax treaty.

Under the Individual Income Tax (“IIT Law”), individual income tax is payable on PRC-sourced dividend income. The IIT Law and its implementation regulations provide that dividend income derived from companies, enterprises and other economic organizations in China, as well as income from transfer of properties in China, is considered derived from sources inside China, regardless of whether the place of payment was inside China. Therefore, if we are classified as a PRC tax resident enterprise for purposes of the IIT Law, any dividends we pay to our non-PRC individual shareholders and gains realized by our non-PRC individual securities holders on the transfer of our securities may be regarded as PRC-sourced income and, consequently, be subject to PRC tax at a rate of up to 20% (withheld at source for dividends). While applicable tax treaties may reduce such PRC taxes, it remains unclear whether non-PRC security holders would be able to obtain tax treaty benefits in practice.

As a result, PRC taxation on dividends and capital gains may materially and adversely affect investment returns for our non-PRC security holders.

Renminbi currency exchange restrictions may limit our ability to utilize our revenues and cash effectively.

The PRC government regulates Renminbi convertibility into other currencies and, in certain cases, restricts the remittance of currency out of China in cross-border transactions and capital flows. Certain of our revenues and expenses are denominated in Renminbi. If our revenues denominated in Renminbi increase or our expenses denominated in Renminbi decrease, we may need to convert a portion of our revenues into other currencies to meet foreign currency obligations.

Under the relevant foreign exchange regulations, conversion of Renminbi for current account transactions, which includes dividends, interest, trade and service-related foreign exchange transactions, is permitted without prior approval from SAFE by complying with certain procedural requirements.

Conversion of Renminbi for capital account transactions, including foreign direct investments and loans, is subject to significant foreign exchange controls and requires approval of or registration with PRC authorities. If we finance our PRC subsidiaries through capital contributions, approval of or the record-filing with PRC authorities, including the Ministry of Commerce or its local counterparts, is required. If our PRC subsidiaries obtain foreign debt through medium and long-term loans or bonds issuance, approval may be required from the NDRC. Foreign exchange controls on capital account transactions could limit our PRC subsidiaries' ability to obtain foreign exchange, pay capital expenses in currencies other than in Renminbi or use Renminbi capital converted from foreign registered capital, including through loans or capital contributions from us.

The PRC government may impose stricter foreign exchange policies and increase scrutiny of cross-border capital movements. If these restrictions prevent us from utilizing our revenues generated in Renminbi or cash held in China to meet cash or financing requirements outside China or to pay future dividends, our business could be harmed.

Risks Related to Our Common Shares

The issuance by us of additional common shares or equity-linked securities may cause existing shareholders to experience dilution and could adversely affect the market price of our common shares.

From time to time, we may issue additional common shares or equity-linked securities for a number of reasons, including to finance our operations and business strategy (including in connection with acquisitions, strategic collaborations or other transactions), to satisfy our obligations for the repayment of existing indebtedness, to adjust our ratio of debt to equity, or for other reasons. For example, in August 2024, we entered into an agreement with PAG for a private placement of $200.0 million in secured convertible notes, subject to closing conditions, pursuant to which a $50.0 million tranche was issued in early 2025. These notes are convertible into common shares at an initial conversion price of $18.20. Future issuances of such securities may cause existing shareholders to experience dilution of their ownership interest and may adversely affect the market price of our common shares. We cannot predict the timing, size or terms of any future issuances or sales of common shares or equity-linked securities, nor their effects on the market price of our common shares. In additional, market conditions could require us to accept less favorable terms in future offerings.

The market price of our common shares is highly volatile.

The market price for our common shares is highly volatile and has been subject to wide fluctuations, which could result in substantial losses to investors. In 2024, our share price fluctuated between a high of $25.74 and a low of $10.76. The stock market in recent years has experienced significant price and volume fluctuations that have affected the market prices of companies, including solar companies. These fluctuations have often been unrelated to or disproportionately impacted by the operating performance of these companies. The market for our common shares has been and may in the future be subject to similar volatility. Factors such as fluctuations in our operating results, announcements of technological innovations or events affecting other companies in the solar industry, currency fluctuations, general market fluctuations, and macro-economic conditions may cause the market price of our common shares to decline.

Your right to participate in any future rights offerings may be limited, which may cause dilution of your holdings.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make these rights available in the U.S. unless we register the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings.

Our articles contain certain provisions that may adversely affect the rights of holders of our common shares.

Certain provisions in Canadian Solar Inc.'s articles may deprive our shareholders of the opportunity to sell their common shares at a premium over the prevailing market price by delaying or preventing a change of control of our company:

- Our board of directors has the authority to issue an unlimited number of preferred shares, in one or more series, without approval from the shareholders. Our board of directors may determine the number of preferred shares issued and set the designation, rights, privileges, restrictions and conditions of each series of preferred shares. See "Item 10. Additional Information—B. Articles" for a more detailed description of the attributes of the preferred shares.

- Our board of directors may fix or change the number of directors within the minimum of three and maximum of ten allowed under our articles. Our board of directors may appoint additional directors, who shall hold office for a term expiring not later than the close of the next annual meeting of shareholders, but such appointments may not exceed one-third of the elected directors from the previous annual meeting of shareholders.

You may have difficulty enforcing judgments obtained against us.

Canadian Solar Inc. is a corporation governed by the laws of the province of Ontario, Canada, with operations in North America, Asia Pacific, Europe, Australia, South America, the Middle East and Africa. We primarily conduct our manufacturing operations in China, Southeast Asia and the United States. A majority of our directors and officers are nationals and residents of countries other than the United States (principally Canada, mainland China and Hong Kong) and a substantial portion of the assets of these persons are located outside the United States. As a result, it may not be possible for you to effect service of process within the United States upon those persons. Furthermore, it may not be possible for you to enforce against us or them, in the United States, judgments obtained in United States courts, because all or a substantial portion of our assets and the assets of those persons are located outside the United States.

In addition, there is uncertainty as to whether courts of Canada or the PRC would recognize or enforce United States court judgments against us or such persons predicated upon the civil liability provisions of the securities laws of the United States or any state. In addition, it is uncertain whether such courts of Canada or the PRC would be competent to hear original actions brought in Canada or the PRC against us or such persons predicated upon the securities laws of the United States or any state.

If a United States person owns at least 10% of our shares, such person may be subject to adverse United States federal income tax consequences.

If a United States person is treated as owning (directly, indirectly or constructively) at least 10% of the value or voting power of our shares, such person may be considered as a "United States shareholder" with respect to each "controlled foreign corporation," or CFC, in our group. Where our group includes one or more United States subsidiaries that are corporations for United States federal income tax purposes, in certain circumstances we could be treated as a CFC and certain of our non-United States subsidiaries could be treated as CFCs (regardless of whether or not we are treated as a CFC).

A United States shareholder of a CFC may be required to annually report and include in its United States taxable income its pro rata share of "Subpart F income," "global intangible low-taxed income" and investments in United States property by CFCs, whether or not we make any distributions. An individual who is a United States shareholder with respect to a CFC generally would not be allowed certain tax deductions or foreign tax credits that would be allowed to a corporation that is a United States shareholder. A failure to comply with these reporting obligations may subject a United States shareholder to significant monetary penalties and may prevent starting of the statute of limitations with respect to such shareholder's United States federal income tax return for the year for which reporting was due. We do not intend to monitor whether we are or any of our non-United States subsidiaries is treated as a CFC or whether any investor is treated as a United States shareholder with respect to us or any of our CFC subsidiaries, or to furnish to any United States shareholders information that may be necessary to comply with the aforementioned reporting and tax obligations. An investor who is a United States person should consult its tax advisor regarding the potential application of these rules to its particular circumstances.

We may be classified as a passive foreign investment company, which could result in adverse United States federal income tax consequences to United States Holders of our common shares.

We will be a passive foreign investment company, or PFIC, for United States federal income tax purposes in any taxable year if, applying applicable look-through rules, either (a) at least 75% of our gross income for such year is passive income or (b) at least 50% of the value of our assets (generally determined based on an average of the quarterly asset values for such year) is attributable to assets that produce or are held for the production of passive income. Based on the value of our assets and the nature and composition of our income and assets, we do not believe we were a PFIC for the taxable year ended December 31, 2024, though there can be no assurances in this regard. PFIC status is determined annually, involves extensive factual analysis, including ascertaining the quarterly fair market value of all of our assets and the characterization of each item of income that we earn, and is subject to various uncertainties. Moreover, we cannot guarantee that the IRS will agree with any positions that we take. Accordingly, we cannot assure you that we will not be treated as a PFIC in any taxable year or that the IRS will not take a position contrary to any position that we take.

Changes in the value of our assets and/or the nature or composition of our income or assets may cause us to be more likely to be a PFIC. The determination of whether we are a PFIC for any taxable year may also depend in part upon the value of our goodwill and other unbooked intangibles not reflected on our balance sheet (which may depend upon the market value of our common shares from time to time, which may be volatile) and also may be affected by how, and how quickly, we spend our liquid assets and cash generated from our operations. Among other matters, if our market capitalization declines, we may be more likely to be a PFIC because our liquid assets and cash (which are for this purpose considered assets that produce passive income) may then represent a greater percentage of the value of our overall assets. Further, while we believe our classification methodology and valuation approach are reasonable, it is possible that the IRS may challenge our classification or valuation of our goodwill and other unbooked intangibles, which may result in our being or becoming a PFIC for the current taxable year or one or more future taxable years.

If we are classified as a PFIC in any taxable year during which a United States Holder (as defined in "Item 10. Additional Information—E. Taxation—United States Federal Income Taxation") holds our common shares, that holder could be subject to adverse United States federal income tax consequences. See "Item 10. Additional Information—E. Taxation—United States Federal Income Taxation—Passive Foreign Investment Company."

ITEM 4 *INFORMATION ON THE COMPANY*

A History and Development of the Company

Canadian Solar Inc. was incorporated under the laws of the Province of Ontario, Canada in October 2001. We became a publicly traded company on the Nasdaq under the ticker symbol "CSIQ" following our initial public offering ("IPO") on November 9, 2006. Since incorporation, we have undergone several jurisdictional changes, as approved by shareholders:

- June 1, 2006: continuance from Province of Ontario jurisdiction to Canadian federal jurisdiction;
- July 23, 2020: continuance from Canadian federal jurisdiction to Province of British Columbia jurisdiction; and
- July 29, 2022: continuance from Province of British Columbia jurisdiction back to Province of Ontario jurisdiction.

Canadian Solar Inc. is now governed by the *Business Corporation Act* (Ontario), or the OBCA.

In 2020, we raised RMB 1.78 billion ($261.3 million) to position CSI Solar for its planned carve-out IPO in China and bring in leading institutional investors and strategic partners. In 2021, we conducted an "at-the-market" (ATM) offering program, through which we sold 3,639,918 common shares, raising $150.0 million in gross proceeds.

In June 2023, CSI Solar completed its STAR Listing on the Shanghai Stock Exchange, raising gross proceeds of RMB 6.01 billion ($842.6 million). In July 2023, the full over-allotment option was exercised, raising an additional gross proceeds of RMB 0.9 billion ($124.3 million). All U.S. dollar equivalents are based on the exchange rate on the respective transaction dates. CSI Solar issued 622,217,324, representing approximately 17% of its outstanding shares post-IPO. As of the date of this annual report, we own a 63.1% equity interest in CSI Solar.

In January 2024, Canadian Solar Energy Group B.V. and Recurrent Energy B.V., our subsidiaries, entered into a purchase and sale agreement with GRP IV UK Holdco Limited ("GRP IV"), which is managed by BlackRock, Inc.'s climate infrastructure business ("BlackRock") to issue Series A preferred shares of Recurrent Energy B.V. ("Series A Preferred Shares") to GRP IV. GRP IV subsequently assigned its rights, liabilities and obligations under the agreement to GRP IV Rose Bidco Ltd. ("Investor"), an affiliated entity that is also managed by BlackRock. Following initial and subsequent closings in May and September 2024, respectively, BlackRock's total investment reached $500.0 million, representing 20% of Recurrent Energy B.V.'s fully diluted shares on an as-converted basis as determined immediately upon closing. See "Item 4. Information on the Company—B. Business Overview—Recurrent Energy Key Development."

For details on our corporate structure and significant subsidiaries, see "—C. Organizational Structure."

Our principal executive office and principal place of business is located at 4273 King Street East, Suite 102, Kitchener, Ontario, N2P 2E9, Canada. Our telephone number at this address is 1-519-837-1881 and our fax number is 1-519-837-2550. Our agent for service of process in the United States is CT Corporation System, located at 111 Eighth Avenue, New York, New York 10011.

All inquiries to us should be directed to the address and telephone number of our principal executive office set forth above. Our website is www.canadiansolar.com. The information contained on or accessible through our website does not form part of this annual report.

B Business Overview

Overview

We are one of the world's largest solar technology and renewable energy companies, a leading manufacturer of solar photovoltaic modules, a provider of battery energy storage solutions, and a developer of utility-scale solar power and battery energy storage projects. Our global footprint spans North America, Asia Pacific, Europe, Australia, South America, the Middle East and Africa. Our business is divided into two segments: CSI Solar, which focuses on solar module and battery energy storage product manufacturing, and Recurrent Energy, which focuses on solar power and battery storage project development, asset sales, power services, and electricity revenue from its operating portfolio.

CSI Solar

CSI Solar primarily designs, develops and manufactures solar ingots, wafers, cells, modules and battery energy storage products. We operate manufacturing facilities in China, Southeast Asia and the United States.

We employ a flexible vertically integrated business model that combines internal manufacturing capacity with direct material purchases of ingots, wafers and cells. We believe this approach has benefited us by allowing us to grow in a capital-light manner, while giving us significant flexibility to respond to short-term demand changes. Our solar module, cell, wafer and ingot annual production capacities were 60.2 GW, 48.4 GW, 31.0 GW and 25.0 GW, respectively, as of December 31, 2024. We target to adjust these capacities to 61.0 GW, 36.2 GW, 37.0 GW and 33.0 GW, respectively, by December 31, 2025, subject to market conditions. Our annual battery energy storage system manufacturing capacity was 20.0 GWh, and we had no dedicated battery cell manufacturing capacity as of December 31, 2024. We target increasing these capacities to 30.0 GWh and 3.0 GWh, respectively, by December 31, 2025.

We believe that we offer one of the most comprehensive crystalline silicon solar power product lines in the industry, encompassing modules with medium to high power outputs. Our products include advanced N-type TOPCon modules. These modules are designed for use across residential, commercial, industrial, and utility-scale solar power generation systems. We market our solar modules under the "Canadian Solar" brand to distributors, system integrators, project developers, and EPC companies worldwide.

Our e-STORAGE provides integrated utility-scale battery energy storage solutions, including turnkey and bankable system solutions across various applications, long-term service agreements, and future battery capacity augmentation services. As of December 31, 2024, e-STORAGE had a total project turnkey pipeline of approximately 79 GWh, comprising contracted projects, projects under construction, and those at various stages of negotiation, and 4.9 GWh of contracted battery energy storage projects under long-term service agreements. The contracted backlog, including long-term service agreements, was approximately $3.2 billion as of December 31, 2024.

In 2022, we introduced SolBank, our propriety lithium iron phosphate ("LiFePO4") battery system designed for utility-scale applications. In 2023, we introduced SolBank 3.0, featuring a 5 MWh capacity, an active balancing battery management system ("BMS"), advanced liquid cooling and humidity control, and compliance with the latest international safety and compliance standards.

In 2022, we also introduced EP Cube, our residential battery energy storage product in the U.S., and have since expanded to new markets, including Europe and Japan.

Recurrent Energy

Recurrent Energy primarily develops, builds, sells, and operates solar power and battery energy storage projects, while also providing power services (O&M) and asset management. Prior to the rebranding of the Recurrent Energy segment, we referred to this segment as Global Energy until April 2023.

Recurrent Energy develops solar power and battery energy storage projects globally, including in North America, Europe, Latin America, Japan, Australia, and other countries of the Asia-Pacific region. As of December 31, 2024, our total global solar development pipeline stands at 24.9 GWp, including 1.9 GWp under construction, 4.2 GWp of backlog, and 18.8 GWp of projects in advanced and early-stage development stages. Our battery storage development pipeline stands at 75.1 GWh, including 9.9 GWh under construction and in backlog, and 65.2 GWh of projects in advanced and early-stage development stages. As of December 31, 2024, our operating portfolio had a total net capacity of approximately 2,120 MWp of solar power and 1,809 MWh of battery energy storage. In 2024, we managed approximately 13 GW of projects under O&M contracts.

We focus on capturing greater asset value and retaining ownership of projects in select markets to increase long-term revenues through recurring income, primarily from the sale of electricity and other related services generated by our operating portfolio.

Recurrent Energy Key Development

In January 2024, Canadian Solar Energy Group B.V. and Recurrent Energy B.V., our subsidiaries, entered into a purchase and sale agreement with GRP IV UK Holdco Limited ("GRP IV"), which is managed by BlackRock, Inc.'s climate infrastructure business ("BlackRock") to issue Series A preferred shares of Recurrent Energy B.V. ("Series A Preferred Shares") to GRP IV. GRP IV subsequently assigned its rights, liabilities and obligations under the agreement to GRP IV Rose Bidco Ltd. ("Investor"), an affiliated entity that is also managed by BlackRock. The expected purchase and sale transaction has been completed following an initial closing in May 2024 and a subsequent closing in September 2024. As agreed between the parties, with these closings, BlackRock's total investment has reached $500.0 million, representing 20% of the outstanding fully diluted shares of Recurrent Energy B.V.'s fully diluted shares on an as-converted basis as determined immediately upon closing.

Dividends

Pursuant to the transaction documents, either (a) Recurrent Energy shall, to the extent permitted by law and specifically authorized and declared by Recurrent Energy's board of directors in respect of a given calendar quarter, pay in cash to the holders of Series A Preferred Shares dividends in respect of each outstanding Series A Preferred Share at a per annum rate equal to 9% of the Stated Value of such share or (b) to the extent of any portion of the dividend not paid in cash, such amount will automatically be added to the Stated Value of the Series A Preferred Shares. Amounts added to the Stated Value as described above ("Accretion Amounts") will continue to accrue at the same 9% annual rate and compound on a quarterly basis, subject to certain adjustments. The "Stated Value" referred to above generally represents the original purchase price of the Series A Preferred Shares plus the compounded Accretion Amounts plus any accumulated preferred return that has not been paid in cash or added to the Stated Value as an Accretion Amount and is determined as of each calendar quarter. Subject to the foregoing, the transaction documents place limitations on the payment of dividends absent the unanimous approval of the shareholders.

Voting Rights

The holders of the Series A Preferred Shares are generally entitled to vote, on an as-converted basis, on all matters upon which holders of ordinary shares have the right to vote in the general meeting of Recurrent Energy (voting together as a single class with the holders of the ordinary shares of Recurrent Energy). Holders of the Series A Preferred Shares are entitled to appoint one director to the board of Recurrent Energy. So long as any Series A Preferred Shares are outstanding, the prior written consent of any holders of at least 60% of the Series A Preferred Shares will be required before Recurrent Energy or its subsidiaries take certain actions.

Liquidation Events

The Series A Preferred Shares rank senior to Recurrent Energy's ordinary shares with respect to rights upon the voluntary or involuntary liquidation, dissolution or winding up of Recurrent Energy or upon a deemed liquidation event (collectively, a "Liquidation Event"). Deemed liquidation events include, among other events, a sale of 50% or more of the assets of Recurrent Energy or a merger, consolidation, equity sale or similar transaction involving the transfer of beneficial ownership of 50% or more of the voting power or economic interest of the outstanding capital stock of Recurrent Energy, subject to certain limitations (a "Company Sale"), and the occurrence of an Exit Demand (as defined below).

Upon a Liquidation Event, the holders of Series A Preferred Shares then outstanding shall be entitled to be paid out of the assets of Recurrent Energy available for distribution to its shareholders, or otherwise received by shareholders in connection with such Liquidation Event, before any payment shall be made to the other shareholders, an amount per Series A Preferred Share equal to the greater of (i) 1.3 times the Stated Value, and (ii) such amount distributable per ordinary share had all Series A Preferred Shares been converted into ordinary shares immediately prior to such Liquidation Event (the "Preferred Liquidation Amount"). If the assets of Recurrent Energy available for distribution to its shareholders shall be insufficient to pay the full Preferred Liquidation Amount, the holders of Series A Preferred Shares shall share ratably in any distribution of the assets available for distribution.

Exit Rights

At any time on or after the fifth anniversary of the first closing (i.e., May 31, 2024), Investor shall be entitled to cause Recurrent Energy to use commercially reasonable efforts to effect (1) a Company Sale resulting in proceeds in respect of the Series A Preferred Shares equal to at least the Preferred Liquidation Amount (an "Investor Exit") or (2) a qualified primary public offering of the ordinary shares of Recurrent Energy (an "IPO"), by delivering a written notice (an "Exit Request") to Recurrent Energy. If an Investor Exit or qualified IPO is not consummated within two years of the delivery of an Exit Request, Investor shall have the right to cause Recurrent Energy and its affiliates to effect an Investor Exit or qualified IPO (an "Exit Demand"). In the event of the closing of an IPO, all outstanding Series A Preferred Shares shall automatically be converted into a number of ordinary shares of Recurrent Energy equal to the greater of (i) the original liquidation preference of the Series A Preferred Shares divided by the conversion price in effect at such time and (ii) 1.3 times the Stated Value divided by the fair market value of such shares, with such fair market value being deemed to be equal to the public offering price per share disclosed in the final prospectus for such IPO.

The original liquidation preference shall initially be equal to the purchase price, subject to adjustment for share splits, share dividends or returns, reverse splits, combinations, recapitalizations and similar transactions. The conversion price shall initially be equal to the purchase price, subject to anti-dilution adjustment as provided in the terms of the Series A Preferred Shares.

Redemption and Conversion Rights

On and after the five-year anniversary of the first closing (or an earlier Exit Demand pursuant to an ESG Default in accordance with the shareholders' agreement), the Series A Preferred Shares may be redeemed, in whole or in part, at the option of Recurrent Energy upon 30 days' prior written notice delivered to all holders of Series A Preferred Shares (an "Optional Redemption Notice").

Following receipt of the Optional Redemption Notice, any holder of Series A Preferred Shares may elect, in its sole discretion, to convert all or any number of the shares subject to redemption into ordinary shares at the then effective conversion price, in which case Recurrent Energy shall not redeem such Series A Preferred Shares (i.e., the number of Series A Preferred Shares to be redeemed by Recurrent Energy shall be reduced by the number of Series A Preferred Shares so converted). In addition, each holder of Series A Preferred Shares shall have the option to convert all or any of its Series A Preferred Shares upon the occurrence of a Company Sale and certain other monetization events, into a number of ordinary shares of Recurrent Energy equal to the greater of (i) the original liquidation preference of the Series A Preferred Shares divided by the conversion price in effect at such time and (ii) 1.3 times the Stated Value divided by the fair market value of such shares.

Our Products and Services

We market our products primarily under our own brand names, including "Canadian Solar", "CSI", "CSI Solar", "Recurrent Energy", "e-STORAGE", "SolBank", "KuBank" and "EP Cube".

CSI Solar

Solar Modules

We offer high-efficiency solar modules with power outputs ranging from 400W to over 700W, using mono-crystalline cells in various configurations. Our mainstream solar modules, include CS7N (132 half-cells, 210 mm wafer, mono facial and bifacial), CS7L (120 half-cells, 210 mm wafer, mono facial and bifacial), CS6W (144 half-cells, 182 mm wafer, mono facial and bifacial), CS6L (120 half-cells, 182 mm wafer, mono facial) and CS6R (108 half-cells, 182 mm wafer, mono facial). These are designed for residential, commercial and utility-scale applications. Among other innovations, we were pioneers in introducing module product with 166 mm wafers compared with the conventional 156.75 mm wafers, and mass producing 665W modules using 210 mm wafers.

In 2021, we expanded manufacturing capacity for the HiKu6 (182 mm wafers) and HiKu7 (210 mm wafers) series modules and invested in a pilot line for Heterojunction ("HJT") solar cells and modules, using in-house developed N-type mono-silicon ingots and wafers. Based on our high-efficiency HJT cells, we introduced the 6R-H-AG (108 half-cells, 182 mm wafer) with module power up to 440W for the residential market. To enhance wind resistance, we introduced a mechanically enhanced version of CS3N (132 half-cells, 166 mm wafer) in 2021. With the adoption of larger wafers, we launched CS6R (108 half-cells, 182 mm wafers) in 2021, with module power reaching 420W in 2022.

We further developed N-type wafer-based TOPCon modules, integrating ingot growth, wafering, cell production, and module assembly in-house. Our TOPCon modules reinforce our technology and product leadership, enhancing system efficiency and delivering greater returns on investment for customers. Firstly, the low temperature coefficient of our TOPCon modules allows them to perform better in hot environments compared to mainstream module products. Secondly, they are not susceptible to boron-oxygen related LID ("Light Induced Degradation"), resulting in less power degradation. Thirdly, the power degradation of TOPCon modules is lower than that of PERC modules under comparable test conditions. Furthermore, TOPCon bifacial modules achieve bifaciality of up to 85%, delivering an estimated 2% power gain over PERC bifacial modules under similar field conditions.

In 2022, our TOPCon pilot cell line produced its first cells with an average cell efficiency of up to 24% and a yield over 98%. In 2023, we began delivering 182 mm and 210 mm cell based TOPCon modules. Mass production and cell efficiency later reached 25%, 1.3% higher than the average efficiency of PERC cells in the market. Our TOP(Bi)HiKu6 and TOP(Bi)HiKu7 module series include the 182 mm cell based bifacial TOPBiHiKu6, with power outputs ranging from 565W to 585W, and monofacial TOPHiKu6, with power outputs ranging from 440W to 590W, and the 210 mm cell based bifacial TOPBiHiKu7, with power outputs ranging from 630W to 705W.

In 2022, we introduced steel frame modules for our monofacial and bifacial CS6W and CS7N for utility-scale applications, reducing carbon footprint compared to aluminum frame modules. Our in-house steel frame design contains special cross-section structure to improve cost-performance efficiency.

In 2023, to meet the growing demand in commercial and industrial rooftop solar, we launched BIPV ("Building Integrated Photovoltaic") products. Our BIPV system includes a system of components, including a customized tin roof, PV module and specially designed clamp, that offer improved aesthetics and reliability.

In 2023, we launched the TOP(Bi)HiKu6 series with 182 mm rectangular wafers ("182R"), increasing power output by approximately 5% compared with the original TOP(Bi)HiKu6 series modules. This module series improves loading capacity by approximately 8% per container, reducing logistics costs and lowering Levelized Cost of Electricity ("LCOE"). The 182R TOPCon offers cost advantages over both 182 mm PERC and 182 mm TOPCon modules. The 182R series includes four versions designed for different applications, with power outputs up to 515W and efficiency up to 22.8% for residential and small commercial and industrial ("C&I") projects, and 620W with 23% efficiency for large-scale C&I projects and utility-scale projects.

Battery Energy Storage

Our battery energy storage solutions provide proprietary high-performance, safe and reliable energy storage for utilities, independent power producers, and commercial and industrial business. These solutions provide the balance of energy delivery with energy consumed, including absorption of excess energy in the systems and release for when it is needed, and enhance power resilience across multiple applications.

Battery energy storage demand is growing for various utility and grid opportunities and applications including energy arbitrage, reserve capacity, flexible peaking, resource adequacy, grid frequency regulation and voltage control. We have successfully introduced our high-energy and high-power storage power block with integrated LiFePO4 battery system designed to meet market demand for 1 to 4 hours of energy storage duration. We offer turn-key solution, integrating battery storage, power conversion system and energy management system, complemented by long-term service agreements, including operation and maintenance, capacity augmentation, system performance optimization, warranty, and other services throughout the system operational life. We also offer comprehensive services and capabilities with project installations, including consulting and project engineering, procurement, and construction ("EPC") management.

To drive growth and innovation in battery energy storage, we have invested significantly into developing proprietary products, technologies, and manufacturing processes. In 2021, we began designing DC battery storage systems, including battery modules and packs, under the "SolBank" brand. In 2022, we launched the SolBank 1.0, featuring a LiFePO4 battery system for utility-scale applications, with capacity of up to 2.967 MWh. In 2023, we launched SolBank 3.0, with power up to 2.35 MW and capacity of 5 MWh. SolBank 3.0 integrates high energy density cells, advanced safety system, smart liquid cooling and active balance system controls. Housed in a 20-ft container, SolBank 3.0 provides up to 45% increase in product-level capacity and up to 40% decrease in commissioning time compared to its previous generation. SolBank 3.0 is equipped with a pack and electrical redundancy protection system, smart abnormal performance detection, multi-level fire alarm, and suppression protection, ensuring product safety. Its optimized thermal management lowers auxiliary power consumption by up to 30% compared to its previous generation. Its flexible, modular design ensures compatibility with various power conversion systems ("PCS").

In 2022, we launched our residential battery energy storage product, EP Cube, an all-in-one residential battery energy storage solution designed to optimize solar self-consumption. Initially introduced in the U.S., it has since expanded to Europe and Japan. The EP Cube system offers scalable capacities ranging from 9.9 kWh to 19.9 kWh per unit, with full system capacity up to 119.9 kWh.

Solar System Kits

Our solar system kit is a ready-to-install package consisting of solar modules produced by us and third-party components, such as inverters, racking system and accessories. These kits cater to various applications, including residential and commercial rooftops.

Power Electronic

We began developing residential inverters in 2017 and launched our first inverter products in 2019. Our power electronic products cover a comprehensive range of inverters tailored for residential, commercial, industrial and utility-scale solar and energy storage applications. Our product lineup include the 3-5 kW and 7-9 kW residential inverter models, the 15-25 kW, 40-60 kW and 75-125 kW C&I inverter models, the 320kW, 333kW and 350kW utility-scale inverter models, and 200kW and 215 kW models power conversion system ("PCS") for energy storage. In 2022, we introduced our first internally developed and manufactured 3-phase string inverter for commercial and small utility-scale applications. In 2023, we launched our 1500Vdc 320 kW string inverter and 1500Vdc 200 kW string PCS products, which further enhance our offerings in the utility-scale and energy storage markets.

EPC Services

We provide turnkey EPC services in China for ground-mounted solar power and battery energy storage projects, as well as large-scale distributed systems for C&I customers. Our services encompass system design, procurement, installation, testing and commissioning.

Long-term Service Agreements (LTSA)

The LTSA, all previously executed by our e-STORAGE platform, support the long-term operation and maintenance of the battery energy storage systems, contributing to grid reliability and stability.

Recurrent Energy

Solar Power and Battery Energy Storage Asset Sales

We develop, build and sell solar power and battery energy storage projects. Our project development activities encompass site selection, land acquisition, securing interconnection, structuring PPA or similar offtake contract, obtaining permits, and managing procurement and construction. We actively pursue suitable buyers for our projects. See "—Sales, Marketing and Customers—Recurrent Energy."

Revenue from Electricity and Battery Energy Storage Operations

We operate select solar power and battery energy storage projects, generating revenue through electricity sale and related services. The majority of electric power generated by our solar power projects is contracted under long-term PPA, VPPA, or contracts for capacity and ancillary services, with public utilities, licensed suppliers, corporate offtakers and commercial, industrial or government end users.

Power Services (O&M)

Our power services include monitoring, inspections, repair and replacement of project equipment, site management and administrative support services for projects in operation. We leverage advanced technologies such as semi-automated module washing, autonomous vegetation management, machine-learning predictive maintenance and drone inspections. We continue to enhance our service offerings with ongoing technological investments.

Supply Chain Management

CSI Solar

Our manufacturing operations depends on a stable and cost-effective supply of polysilicon, solar ingots, wafers, cells and lithium battery cells. We have entered into long-term agreements with various silicon raw material and wafer suppliers, particularly during periods of tight upstream supply. These agreements specify price, quantity, delivery terms and technical specifications. While they usually include specific price terms, most of them also incorporate upward or downward price adjustment mechanisms based on market conditions. In line with industry practice, we make advance payments without collateral for scheduled deliveries, which are credited against purchase prices. We sourced all silicon raw materials from third parties and continue to diversify our polysilicon, wafer, cell and lithium battery cell suppliers.

For risks related to the long-term supply agreements, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Oversupply of polysilicon, solar wafers, cells and modules may cause substantial downward pressure on the prices of our products and reduce our revenues and earnings” and “ —Supply chain disruptions, cost increases or performance issues could adversely affect our business and relationship with customers, particularly given our dependence on a limited number of key suppliers.”

Recurrent Energy

Recurrent Energy procures solar modules and battery energy storage products from CSI Solar. We have centralized procurement operations to optimize project construction costs and secure competitive terms with key suppliers, enhancing our ability to compete on cost given the large procurement quantities.

Manufacturing, Construction and Operation

CSI Solar

Our solar module manufacturing process integrates automation and quality control to enhance efficiency and product consistency. We assemble modules by interconnecting solar cells by tabbing and stringing them into a desired electrical configuration, laminate them under vacuum, cure them by heating, and package them within protective lightweight anodized aluminum or steel frames to withstand the environment. We seal and weatherproof our solar modules to withstand high levels of ultraviolet radiation, moisture and extreme temperatures. Key manufacturing equipment includes automatic laminators, simulators and solar cell testers. Our flexible production lines balance automation and skilled labor to optimize efficiency.

We primarily use in-house manufactured silicon ingots, wafers, solar cells, with a portion sourced from third parties, for our solar module production. Our solar module manufacturing costs in China, including purchased polysilicon and wafers, decreased from $0.236 per watt in 2022 to $0.169 per watt in 2023, and further to $0.106 per watt in 2024. We continue to focus on cost reduction through improvements in solar cell conversion technology and efficiency, manufacturing yields and material sourcing.

Recurrent Energy

We develop, build, sell and operate solar power and battery energy storage projects across North America, Europe, Latin America, Japan, Australia, and other countries of the Asia-Pacific region. We manage all aspects of project development and operations, including site selection, design, permitting, engineering, procurement, construction and operations, utilizing in-house teams or third-party contractors based on project requirements and resource availability.

The development process for our solar power and battery energy storage projects consists of the following key stages:

- *Market due diligence and site selection.* We actively identify global project opportunities to maintain a robust pipeline and geographically diversified portfolio. Our business team engages with developers and gathers market intelligence to identify project opportunities that leverages on our strengths and capabilities. Our development team conducts market analysis, financial modeling and feasibility studies to evaluate projects, considering location, electricity markets, political and regulatory landscape, financing costs and expected returns.
- *Permitting and approvals*. We obtain or acquire projects with the necessary permits and approvals, which vary across jurisdictions.
- *Interconnection analysis.* We assess grid connection feasibility and optimize interconnection plans to ensure cost efficiency and timely execution.
- *Financing*. We typically incorporate project financing plans in our financial models and feasibility studies. We fund projects through working capital, debt financing from local and international banks, and tax credit monetization in select markets. Financing structures may involve equity pledges, asset security interests over assets, and parent guarantees.

- *Project design, engineering, procurement and construction.* Our engineering team designs projects to optimize performance while minimizing construction and operational costs and risks. This includes site layout, electrical design, and selecting the appropriate technology and key components such as solar modules, inverters and battery energy storage systems. The projects primarily procure solar modules and battery energy storage products from CSI Solar, while other components are sourced from third parties.

Currently, we have owned and operated solar power and battery energy storage projects in the U.S., Europe, Latin America, Japan and other countries in the Asia-Pacific region. Once connected to the grid, our projects regularly undergo inspections, monitoring, and management to maximize utilization, power generation and system lifespan.

We operate a real-time monitoring center in Ontario, Canada, overseeing operational performance and managing power services (O&M). The system is designed to raise alerts for underperforming inverters or strings, ensuring timely interventions. Our cloud-based platform utilizes our proprietary systems and algorithms for predictive maintenance for both self-owned and third-party projects, tracking work orders, warranty claims, spare parts, health and safety incidents, and operational reports.

Quality Control and Certifications

We have registered our quality control system in compliance with ISO9001:2015 and IEC62941 standards. TÜV Rheinland Group, a leading international service provider for safety and quality certifications audits our quality systems. We inspect and test incoming raw materials, monitor our manufacturing processes, and conduct reliability and other tests on finished products to ensure quality control.

We maintain various international and domestic certifications for our solar modules. For example, we have obtained IEC61215/ IEC61730 certifications for sales in Europe, UL61730 certifications for North America, and other necessary certifications for China, Japan, Korea, India, Brazil, Australia, Colombia, Israel, Italy, the U.K. and Indonesia. IEC certifications are issued by Verband Deutscher Elektrotechniker, or VDE, while UL certifications are issued by the Canadian Standards Association, or CSA. Our module products comply with the latest standards, including IEC 61215:2021, IEC61730:2023 and UL61730 Ed.2-2022, and meet regional regulations. Our module products have achieved high California Energy Commission, or CEC, PVUSA test condition ratings. Further, our module products have passed extended stress program qualifications such as salt mist testing, ammonia testing, PID testing, as well as extra-standard or high-frequency testing programs on multiple quality factors with PVEL and VDE. We have continuously improved our silicon, ingot, wafer, cell and module production processes to maintain a competitive carbon footprint certification for the French solar tender requirements. Our TOPCon modules obtained certification under the French Programmation Pluriannuelle de l'énergie ("PPE2") solar tender program. In 2023, we obtained carbon footprint certification issued by Korea New & Renewable Energy Center, or KNREC, with competitive Grade 2 ranking, making us one of the first module manufacturers outside of Korea to achieve this certification.

Our PV test laboratory is accredited by the China National Accreditation Service for Conformity Assessment (the "CNAS") under ISO17025 quality management standard, and has been approved into various Data Acceptance Program, namely CSA, VDE, and China General Certification, or CGC. This allows us to conduct a portion of the product certification testing in-house, reducing time-to-market and certification costs, and performing exhaustive product and component reliability research to enhance product durability.

Our Power Conversion System ("PCS") has obtained GB/T34120 and GB/T34133 certifications in China. We also maintained various certifications according to local business requirements for our PV inverters, including IEC62109 and IEC62116 safety certifications and CQC certification in China, KSC 8565 and KSC 8567 in Korea, RS097 in South Africa, 140 and 515 in Brazil, and EN50549-1, EN50549-2, CEI0-21, CEI0-16, RD1699, NTS2.1, VDE4105 and PPDS in Europe.

Our proprietary SolBank DC battery storage system has obtained UL9540A (thermal runaway), UL1973 and UL9540 (safety) certifications in North America, GB/T36276 certification in China, and IEC62619 certification in Europe, Australia, Japan and South America. We are one of the first companies to complete modeling assessments under NFPA69 fire safety regulations in the U.S. SolBank is certified to meet rigorous global battery energy storage standards, ensuring safety, reliability and compliance across multiple markets.

Our remaining products are undergoing certification processes before entering relevant markets to ensure compliance with global regulatory and grid connection requirements.

Sales, Marketing and Customers

Our large and diversified customer base consists of active customers in more than 160 countries. In 2022, the Americas contributed 37.4%, Asia contributed 36.7%, and Europe and other regions contributed 25.9% of our revenues, respectively. In 2023, these regions contributed 34.4%, 41.0%, and 24.6%, respectively, and in 2024, these regions contributed 51.8%, 30.0%, and 18.2%, respectively.

CSI Solar

Our primary customers are distributors, system integrators, project developers, installers and EPC companies. Historically, a small number of customers have accounted for a significant portion of our net revenues. In 2022, 2023 and 2024, the top five CSI Solar customers accounted for 13.0%, 13.4% and 17.8% of our total net revenues, respectively, while the largest customer in these years accounted for 4.9%, 3.5% and 5.4%, respectively. We market and sell solar modules worldwide for residential, commercial and utility-scale solar applications. Sales are primarily executed through our direct sales team operating globally.

Our marketing initiatives include brand sponsorships, digital marketing, social media engagement, and channel marketing programs to support customers in promoting our products and business. We provide product training, sales training and new product briefings to enhance customer engagement. Our marketing team also focuses on public relations and crisis management to protect and strengthen our brand image. By collaborating closely with our sales teams and leading solar research firms, we are well positioned to deliver up-to-date market insights on a continuous basis to support sales strategies and decision-making.

Our strong brand reputation is reinforced by multiple industry awards and recognitions, reflecting our commitment to quality and innovation. In 2024, we were ranked first among Energy & Utility companies in Newsweek's World's Most Trustworthy Companies list. We also received the Top Brand PV Award USA 2024 from EUPD Research, recognizing our leadership in the photovoltaic sector. In 2024, we were also named a Top 10 Battery Energy Storage System Integrator by S&P. These accolades reinforce our market positioning and strengthen customer trust in our products and solutions globally.

As we expand our manufacturing capacity and enhance our brand with broader system solutions, we continue to develop new customer relationships across diverse geographic markets to reduce dependency on any single market. We continuously engage with a broad array of industry participants, including utilities, independent power producers, developers, EPCs, distributors, and corporate offtakers. We plan to further invest in research and development to introduce more compatible, reliable and cost-effective products and solutions, strengthening our competitive position in the global solar modules and battery energy storage market.

In addition, we target our sales and marketing efforts for specialty solar products at companies in selected industries, including automotive, telecommunications and LED lighting. As standard solar modules become increasingly commoditized and technology advancements enable broader off-grid solar applications, we intend to increase our sales and marketing efforts on specialty solar products. Our sales and marketing team collaborates with our specialty solar product development team to adapt to evolving customer preferences and market demands, ensuring our sales and marketing team's effective communication to customers of product developments and innovations. As the specialty solar market grows, we aim to expand into additional sectors and establish new relationships.

We are also expanding our direct sales channel to sell modules and other solar system components, both as system packages and stand-alone components, to EPCs, developers, contractors and installers. This expansion reduces customer concentration risk, while mitigating payment and demand fluctuations. To reach smaller contractors and installers which we do not directly serve, we maintain strong sales channels and relationships with key distribution partners. Concurrently, we have expanded our key account and utility-scale sales channels, selectively increasing our market share amid growing demand for mid-scale to large-scale solar power plants. This expansion is driven by our high-efficiency, large-format module portfolio, which optimizes LCOE for large commercial and utility-scale projects.

We leverage our extensive customer and supply chain network to provide competitive stand-alone battery energy storage solutions and integrated "Photovoltaic + Storage" hybrid solutions. Our ongoing investments in research and development and our advancements in battery energy storage products and technology, strengthen both our downstream product offerings and upstream integrated battery energy storage manufacturing capabilities. As part of this effort, we developed SolBank, our proprietary utility-scale battery energy storage system designed for grid-connected battery storage installations in stand-alone and hybrid projects that integrate seamlessly with renewable energy sources such as wind or solar. We also introduced EP Cube, a residential battery energy storage system. This solution enables solar power storage for use during peak electricity rate periods, support peak consumption shaving, and provide independent or resilient power supply in emergencies and grid outages.

As of December 31, 2024, e-STORAGE had a total project turnkey pipeline of approximately 79 GWh, comprising contracted projects, projects under construction, and those at various stages of negotiation, and 4.9 GWh of contracted battery energy storage projects under long-term service agreements. The contracted backlog, including long-term service agreements, was approximately $3.2 billion as of December 31, 2024.

Recurrent Energy

We develop, build, sell and operate solar power and battery energy storage plants across North America, Europe, Latin America, Japan, Australia and other countries of the Asia-Pacific region. Our customers include utilities, independent power producers and energy investors, while our power services (O&M) and asset management customers include other solar and battery storage project developers and owners. To expand market reach and strengthen project sales, we conduct market due diligence, engage regularly with industry operators and investors, and participate in industry conferences and events.

Our sales pipeline reflects our project development strategy, allowing us to capitalize on demand for renewable energy projects and enhance long-term revenue generation.

The following table presents our total solar pipeline:

Total Solar Pipeline by Region as of December 31, 2024 (in MWp)

Region	Under Construction	Backlog	Advanced Development	Early-Stage Development	Total
North America	286	565	637	4,443	5,931
EMEA	1,005	1,863	1,309	4,890	9,067
Latin America	128	860	—	4,628	5,616
Asia Pacific excluding China and Japan	171	2	708	1,282	2,163
China	300	900	—	860	2,060
Japan	59	53	—	—	112
Total	1,949	4,243	2,654	16,103	24,949

Note: Total project pipeline represents the gross MWp size of the projects owned by us (including through our investments in affiliates), and includes 74 MWp under construction and 943 MWp in backlog partially sold to third parties.

Backlog projects are late-stage projects that have passed their risk cliff date and are expected to start construction within the next 1-4 years. A project's risk cliff date is the date on which the project passes the last perceived high-risk development stage and varies depending on the country where it is located. Typically, this occurs after the project receives all required environmental and regulatory approvals and enters into interconnection agreements and offtake contracts, including FIT and PPA. A significant portion of backlog projects are contracted (i.e., have secured FIT or PPA), while the remaining projects have a reasonable assurance of securing PPAs.

Advanced development projects are mid-stage projects that have either secured or have more than 90% certainty of securing an interconnection agreement. Early-stage development projects are early-stage projects controlled by Recurrent Energy that are in the process of securing interconnection rights.

In addition to our project pipeline, we own and operate a portfolio of solar power and battery energy storage plants, generating recurring revenue through the sale of electricity and related services. While we prioritize long-term ownership and operations in select markets, such as the U.S. and Europe, we remain opportunistic in other markets, selling projects at different stages, including post commercial operation.

The following table summarizes our operational portfolio:

Projects in Operation as of December 31, 2024

	North America	EMEA	Latin America	Asia-Pacific excluding China and Japan	China	Japan	Total
Solar (MWp)	424	62	1,291	6	275	62	2,120
Battery Energy Storage (MWh)	280	—	—	28	1,501	—	1,809

Note: Projects in operation represents the proportionate net MWp and MWh owned by us.

We actively develop both stand-alone battery energy storage projects and hybrid solar-plus-storage projects. Most of our projects under development includes the co-hosting of battery energy storage systems with solar power facilities on shared land, improving efficiency through a single interconnection point for each project to serve the solar and battery energy storage energy load. This strategy enhances project economics for us and our investors.

In addition, our track record includes several storage tolling agreements with a variety of power purchasers, including community choice aggregators, investor-owned utilities, universities, public utility districts and development services agreements to retrofit operational solar projects with battery energy storage, many of which were previously developed by us.

The table below summarizes our battery energy storage pipeline:

Total Storage Pipeline by Region as of December 31, 2024 (in MWh)

Region	Under Construction	Backlog	Advanced Development	Early-Stage Development	Total
North America	1,400	800	760	21,250	24,210
EMEA	—	3,522	3,417	28,338	35,277
Latin America	—	1,765	—	—	1,765
Asia-Pacific excluding China and Japan	440	—	980	1,780	3,200
China	—	1,199	—	5,000	6,199
Japan	8	719	2,241	1,440	4,408
Total	1,848	8,005	7,398	57,808	75,059

Customer Support and Service

We are committed to delivering high-quality products through our comprehensive warranty coverage and customer support services. We typically offer a 15 or 25 years warranty against defects in materials and workmanship for our standard solar modules. We offer a 25 to 30 years linear power performance warranty that guarantees the actual power output of our modules.

Our battery energy storage products come with a warranty covering performance and manufacturing defects. The standard warranty typically ranges from 1 to 5 years from the date of installation and is structured as an assurance-type warranty, guaranteeing quality within specified usage parameters. Customers have the option to separately purchase extended warranties and performance guarantees for up to an additional 15 years. To support these warranties, we have obtained warranty backing from our suppliers.

For solar power and battery energy storage projects built under our EPC contracts, we provide major equipment warranties and limited workmanship or balance of system warranties against defects in engineering, design, installation and construction under normal use, operation and service conditions generally for a period of two to five years following project commissioning. To resolve warranty claims, we may repair, refurbish or replace equipment as needed. We have obtained similar warranty backing from our suppliers.

Our customer support and service function handles technical inquiries and warranty-related issues, ensuring that our customers receive timely and professional assistance. We have expanded our capacity in this area to enhance our responsiveness and efficiency in resolving warranty claims.

Historically, we have agreements with a group of insurance companies to reduce some of the risks associated with our warranties. See “—Insurance” below.

Competition

CSI Solar

The markets for solar power and battery energy storage products are highly competitive and continually evolving. We face intense competition from companies, such as First Solar, Inc., LONGi Green Energy Technology Co. Ltd., Trina Solar Limited, JinkoSolar Holding Co., Limited, JA Solar Co., Limited and Tongwei Solar Co., Ltd, and battery energy storage companies, such as Tesla, Inc., Fluence Energy, Inc. and Sungrow Power Supply Co., Ltd. Some module competitors are developing or are currently producing products based on new technologies that may ultimately offer lower costs or better performance than our products. These include products based on IBC PV technology, which reduces shading by locating metal contacts at the cell to the rear side and increasing power density through larger area for photo absorption. To effectively compete, our products and production capacity are undergoing continuous transformation. For example, while crystalline silicon cell modules have become the market mainstream, we have significantly upgraded our production to N-type and TOPCon technology, which is focused on further improving the photoelectric conversion efficiency and reducing the manufacturing cost. Some competitors operate vertically integrated models, spanning upstream polysilicon manufacturing to downstream solar system integration. The solar power market also competes with other sources of renewable and alternative energy as well as conventional power generation.

We believe key competitive factors in the market for solar power and battery energy storage products include:

- price;
- ability to deliver products to customers on time and in required volumes;
- product quality and customer service;
- nameplate power or capacity and other performance parameters such as power tolerances;
- value-added services such as system design and installation;
- value added features that make products easier or cheaper to install;
- additional system components such as mounting systems, delivered as a package or bundle;
- brand equity and reputation, including the willingness of banks to finance projects using products produced by a particular supplier;
- customer relationships and distribution channels; and
- aesthetic appearance of products.

In the immediate future, our competitiveness will depend on our ability to deliver cost-effective products in a timely manner and to develop and maintain a strong brand based on high-quality products and strong relationships with customers. Our competitiveness also depends on effectively managing our cash flow and balance sheet and maintaining relationships with financial institutions that fund solar power and battery energy storage projects. We believe that the solar industry is experiencing accelerated market concentration by large players. We believe that such industry concentration will benefit us in the long term. To compete successfully, we aim to produce innovative, high-quality products at competitive prices and develop an integrated sales approach that includes services, ancillary products, such as mounting systems and inverters, and value-added product features. Our goal is to offer our customers products that deliver the lowest LCOE or Levelized Cost of Storage ("LCOS"), focusing particularly on high-priced markets and segments, such as the distributed generation market, which includes commercial, industrial and residential applications. We also believe that a robust marketing program and strong relationships with customers and suppliers will support us in this competitive environment.

Recurrent Energy

Our primary competitors are local and international developers, operators of solar power and battery energy storage projects, financial investors and certain utility companies. Our business is capital-intensive with numerous participants. These competitors vary in size, geographic focus, financial resources and operating capabilities. The commercial and regulatory environments for solar power and battery energy storage project development, sale and operation vary significantly across regions and countries. We develop and build and, in some cases operate and maintain, solar power and battery energy storage projects in various regions including North America, Europe, Latin America, Japan, Australia and other countries of the Asia-Pacific region. While local policy frameworks on battery energy storage remain relatively new, many new entrants are seizing market opportunities.

We believe key competitive factors in the global solar power and battery energy storage project development include:

- greenfield development capabilities;
- sizeable portfolio of solar power and battery energy storage interconnections secured;
- globally diversified project portfolio;
- vertical integration with upstream manufacturing;
- reputation and track record;
- relationships with government authorities and local stakeholders, and knowledge of local policies;
- strong working capital and good relationships with local and international banks, and tax equity investors in select markets, that enhance access to external financing;
- experienced technicians and executives familiar with the industry and the implementation of our business plans; and
- expertise and experience in managing construction and operations.

We cannot, however, guarantee that some of our competitors do not or will not have advantages over us in terms of greater operational, financial, technical, management or other resources in particular markets or in general.

For further discussion of the competitive risks that we face, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our industry is highly competitive and many of our competitors have greater resources than we do or are more adaptive."

Insurance

We maintain insurance against some, but not all, potential risks and losses associated with our industry and operations. For some risks, we may not obtain insurance if we believe the cost of available insurance is excessive relative to the risks presented. In addition, pollution and environmental risks generally are not fully insurable. We maintain property insurance policies with reputable insurance companies to cover our equipment, facilities, buildings, inventories and buildings under construction. The coverage of these insurance policies includes losses due to natural hazards and losses arising from unforeseen accidents. Our manufacturing facilities are covered by business interruption insurance. However, any damage or interruption to any of our manufacturing facilities, whether as a result of fire or other causes, could still have a material and adverse effect on our results of operations. We also maintain commercial general liability (including product liability) coverage. We have been purchasing credit insurance from insurers, such as the China Export & Credit Insurance Corporation and PICC Property and Casualty Company Limited, for certain of our accounts receivable trade in order to reduce our exposure to credit loss. Risks related to marine and air for the export of our materials and products are covered under cargo transportation insurance. We also maintain directors and officers' liability insurance.

Environmental Matters

Our major manufacturing operations are certified under ISO14001 (Environmental Management) and ISO45001 (Occupational Health and Safety) standards, with select facilities also certified under ISO50001 (Energy Management). These certifications require adherence to waste reduction, energy conservation, injury reduction and other environmental, health and safety procedures and objectives. In addition, our solar power and battery energy storage project developments undergo environmental assessments to evaluate and mitigate potential impacts.

Our solar products comply with environmental regulations in the jurisdictions where they are installed. We ensure compliance with EU Regulation ("EC") No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH"). While solar modules are exempt from EU's Restriction of Hazardous Substances ("RoHS") Directive 2011/65/EU and its amendments, our solar system solutions including string inverters, are subject to and comply with RoHS. We also strictly adhere to Toxicity Characteristic Leaching Procedure ("TCLP") testing for our solar modules portfolio to monitor the presence of toxic metals, including arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver, according to TCLP Standard EPA Test Method 1311, as issued by the U.S. Environmental Protection Agency ("EPA") under the Toxic Substances Control Act ("TSCA") for landfill disposal of solar modules.

Our battery energy storage products are designed to comply with all applicable environmental regulations. We strictly require our suppliers to comply with corresponding regulations. For example, key components such as battery cells and air conditioning units conforms to RoHS and REACH requirements. Following the EU's Regulation 2023/1542 on batteries and waste batteries in July 2023, we are actively working with third-party experts to ensure compliance with latest requirements throughout our product life cycle.

Our manufacturing operations are subject to regulation and periodic monitoring by local environmental protection authorities. Our solar power and battery energy storage project developments require various environmental related licenses, permits and approvals. We proactively minimize the environmental and ecological impacts of our project development activities. We integrate environmental and ecological impact assessments, along with community engagement, into our internal approval process early in the project development cycle to enhance project sustainability and minimize project delays related to such factors. Non-compliance could result in fines, production suspensions or operational shutdowns. Except as disclosed in the "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China," we believe we have obtained the necessary environmental permits and passed relevant assessments to operate our manufacturing facilities.

Environmental, Social and Governance Initiatives

We integrate ESG principles into our business operations and strategic decision-making and continuously to improve our practices to ensure long-term sustainability. Our key focus areas include:

- *Environmental.* We are committed to providing a safe and enriching work environment for employees and contractors and strive to reduce the environmental impact of our business. We track GHG emissions and energy consumption, water usage and waste generation across our manufacturing facilities. We have meaningfully reduced GHG emissions and energy, water and waste resource intensity in manufacturing. We invest in research and development and have implemented new technologies to enhance product efficiency and minimize the environmental impact of our production processes. We have established rolling five-year targets aiming to reduce the intensities. These targets are integrated into the key performance indicators ("KPIs") of our operational teams.

- *Social Responsibility.* We are an equal opportunity employer, committed to treating all individuals with fairness and dignity. We closely monitor our hiring and internal promotion practices to ensure equal treatment and access to opportunities for all employees in our workforce. We care about our employees' training and development and have invested in extensive skills and leadership training programs, including our own education courses and programs, which aim to provide our employees with a broader understanding of our business, drive innovation and stimulate effective collaboration. Our education courses and programs further develop our employees' proficiency across multiple disciplines and provide them with learning resources for their key functions. See "Item 6. Directors, Senior Management and Employees—D. Employees." We respect and recognize employees' rights and freedom to associate and bargain collectively. Employee safety remains our top priority, and we have implemented ISO45001 (Occupational Health and Safety) and ISO14001 (Environmental Management) standards to systematically identify workplace hazards and evaluate that relevant control measures are put in place. Our stringent safety policies and procedures have resulted in a low rate of safety-related incidents. In addition, we strive to be a responsible corporate citizen in the communities where we operate by abiding to a strict code of business conduct and ethics and expecting no less from our business partners, including suppliers. We also cultivate long-term relationships with local organizations to ensure we are able to fully integrate solar power and battery energy storage projects into existing energy infrastructure and surrounding communities.

- *Corporate Governance.* Our board of directors oversees the business and affairs of our company, and has a broad range of skills and industry knowledge to ensure the success of our business and create long-term value for stakeholders. We are committed to upholding the highest standards of business ethics, supported by a framework of comprehensive governance documents and guidelines and regular business ethics awareness and compliance training for our employees. By implementing best practices globally across our business operations, spanning from manufacturing to sales and project development, we are committed to ensuring that all employees and business partners are treated fairly, respectfully, and with dignity.

In 2023, we joined the United Nations Global Compact ("UNGC"), the world's largest corporate sustainability initiative. Through this commitment, we support and adhere to the Ten Principles of the UNGC on human rights, labor, environment, and anti-corruption, and take actions to contribute to the United Nations Sustainable Development Goals ("SDGs"), particularly SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action).

In 2023, we submitted a commitment letter to Science Based Targets initiative ("SBTi"), pledging our intention to set near-term and net-zero science-based climate targets to decarbonize our operations and value chain. SBTi is a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science. The SBTi's goal is to accelerate companies across the world to support the global economy to halve emissions before 2030 and achieve net-zero before 2050.

We are committed to achieving the goal of powering all our operations with renewable energy by 2030. To achieve this goal, we will reduce our electricity and energy consumption on a per watt basis while increasing the use of renewable energy. These initiatives may be subject to policy, market or cost barriers in the locations where we operate. We intend to reduce our energy intensity by leveraging our expertise and strength in product technologies, manufacturing process know-how, and energy savings to minimize environmental impact as we grow our business. We will also install rooftop solar power on our manufacturing facilities for self-consumption, procure green energy from third parties and acquire green certificates.

We aim to establish a sustainable, efficient and responsible supply chain that meets our needs and the interests of our stakeholders. We maintain a procurement management strategy which follows a centralized procurement approach, managed at the group level and supported by each division. We require all suppliers to adhere to our Supplier Code of Conduct, which sets rigorous standards for human rights, environmental, health, safety responsibilities, and business ethics.

We are committed to proactively protecting biodiversity and minimizing environmental and ecological impact in our project development activities. We integrate environmental and ecological assessments, along with community engagement, early in the project development cycle. These efforts have helped us minimize project delays related to environmental and ecological impacts or community engagement.

In connection with our sustainability reporting, we align our disclosures with the Global Reporting Initiative ("GRI") and Sustainability Accounting Standards Board ("SASB") frameworks, with reference to the standards issued by the International Sustainability Standards Board ("ISSB"). We conducted a Double Materiality Analysis for Recurrent Energy in 2024 and CSI Solar in early 2025. The analysis was undertaken to identify the sustainability issues most relevant to both our organization and our stakeholders, considering both internal impacts (impact materiality) and external financial implications (financial materiality). By conducting the analysis, we aim to prioritize sustainability issues, impacts, risks and opportunities to develop an ESG program that effectively mitigates risks, seizes market opportunities, and meets stakeholder expectations.

Environmental, Social Responsibility and Corporate Governance Policies

We have adopted a comprehensive set of environmental, social responsibility and corporate governance policies that provides a framework for our sustainability commitments and responsible business practices. These policies are publicly available on our website. Our Environment, Occupational Health and Safety Policy outlines the principles and guidelines to environmental protection, workplace safety, and the well-being of employees and others who are affected by our business. To uphold social responsibilities, we have adopted our Labor and Human Rights Policy, Equal Employment Opportunity Policy, Anti-Modern Slavery Policy, Supplier Code of Conduct, and Conflict Minerals Policy. In addition, to maintain the highest ethical standards in the way we conduct our business, we have implemented the following: Corporate Governance Guidelines, Code of Business Conduct and Ethics, Whistleblower Policy, Insider Trading Policy, Clawback Policy, Policy on Related-Party Transactions, Prohibition Against Giving Bribes, and Prohibition Against Accepting Bribes.

Government Regulations

This section summarizes the key regulations and requirements that affect our business activities in China.

Renewable Energy Law and Other Government Directives

In February 2005, China enacted the Renewable Energy Law, which was revised in December 2009. The revised law sets forth policies to encourage the development and use of solar energy and other non-fossil energy sources, their on-grid generation, and authorizes the relevant pricing authorities to set favorable electricity purchase prices for solar and other renewable power generation systems. The law also encourages the installation and use of solar energy water-heating systems, solar energy heating and cooling systems, solar PV systems and other solar energy utilization systems. It provides financial incentives, such as national funding, preferential loans and tax preferences for the development of renewable energy projects, subject to applicable regulations.

On November 8, 2024, China enacted the Energy Law, which took effect on January 1, 2025. The Energy Law prioritizes the development and utilization of renewable energy, particularly wind and solar. The National Energy Administration ("NEA") and other authorities are tasked with setting and implementing minimum renewable energy consumption targets.

In addition, several national development plans have reinforced China's commitment to renewable energy industry, including solar, as follows: The Thirteenth Five-Year Plan for National Economic and Social Development (March 2016), the Thirteenth Five-Year Plan for Renewable Energy Development (December 2016), the Thirteenth Five-Year Plan for Solar Power Generation (December 2016), the Fourteenth Five-Year Plan for National Economic and Social Development and the Long-term Goals for 2035 (March 2021), and the Fourteenth Five-Year Plan Comprehensive Work Plan for Energy Conservation and Emission Reduction (December 2021) also demonstrate a commitment to promote the development of renewable energy to enhance the competitiveness of the renewable energy industry, including the solar energy industry. On July 21, 2024, the Central Committee issued the Resolution on Further Deepening Reform Comprehensively to Advance Chinese Modernization, strengthening policy and governance support for renewable energy and strategic industries.

In recent years, China has introduced several directives as follows:

Renewable Energy Industry and Pricing Mechanisms

In November 2005, the NDRC issued the Renewable Energy Industry Development Guidance Catalogue, identifying solar as a key sector.

In January 2006, the NDRC issued two implementation directives for the Renewable Energy Law.

In January 2007, the NDRC issued directives on electricity pricing for solar and other renewable power, cost sharing mechanisms, and regulatory responsibilities among different national and provincial government agencies.

In August 2007, the NDRC issued the Medium and Long-Term Development Plan for the Renewable Energy Industry, introducing financial support and preferential tax policies.

In November 2017, the NDRC issued the Opinions on Comprehensively Deepening the Reform of the Price Mechanism, to adjust the price mechanism of renewable energy and gradually reducing FIT for solar power.

In December 2023, the NDRC issued the Catalogue for Guiding Industry Restructuring (2024 Version), designating silicon energy (crystalline silicon PV) materials, PV building integration components, solar PV cells, and solar PV equipment, as encouraged industries.

On January 27, 2025, the NDRC and NEA issued the Notice on Deepening the Market-Oriented Reform of New Energy On-Grid Tariffs and Promoting High-quality Development of New Energy, requiring new renewable energy projects, including wind and solar, to be fully integrated into the electricity market, with pricing determined by market transactions through a price settlement mechanism to support the sustainable development of new energy.

Promoting Energy and Systems

In April 2016, the NDRC and NEA issued the Action Plan for Energy Technology Revolution and Innovation (2016-2030), outlining focus areas and a timeline for advancing energy technologies.

In January 2022, the NDRC and NEA issued the Fourteenth Five-Year Plan for a Modern Energy System, emphasizing climate commitments, energy security, energy transition, and renewables integration into the power market.

In May 2022, the State Council issued the Implementation Plan for Promoting the High-Quality Development of New Energy in the New Era, supporting large-scale photovoltaic projects, rural revitalization through new energy integration, and industrial photovoltaic applications.

In June 2022, the NDRC, NEA, Ministry of Finance and other authorities jointly issued the Fourteenth Five-Year Plan for Renewable Energy Development, promoting photovoltaic development in designated renewable energy bases and photovoltaic distributed generation.

In September 2022, the NDRC and NEA issued the Notice on Promoting the Healthy Development of the Photovoltaic Industry Chain, encouraging the photovoltaic manufacturers to increase direct consumption of renewable electricity.

In July 2023, the NDRC, NEA and other authorities jointly issued the Guiding Opinions on Promoting the Recycling of Decommissioned Wind Power and Photovoltaic Equipment, setting a 2030 target for establishing industrial recycling systems for recycling decommissioned wind and photovoltaic equipment.

Regional and National Energy Mix

In October 2023, the NDRC and other authorities issued the Measures for Power Demand-Side Management (2023 Edition), mandating an increase in renewable electricity consumption, particularly in key economic regions, and promoting renewable energy for new electricity generation projects.

On July 10, 2024, the NDRC and NEA issued the Weight of Renewable Energy Electricity Consumption Responsibility and Related Matters in 2024, setting provincial renewable electricity consumption targets for 2024 and indicative targets for 2025.

On May 23, 2024, the State Council issued the Action Plan for Energy Conservation and Carbon Reduction (2024-2025), prioritizing non-fossil energy consumption and accelerating large-scale solar and wind projects in desert regions.

On July 31, 2024, the Central Committee and State Council issued the Opinions on Accelerating the Comprehensive Green Transformation of Economic and Social Development, setting a 25% non-fossil energy target by 2030, accelerating renewable energy development in certain regions and promoting distributed generation.

On August 29, 2024, the State Council published a white paper, China's Energy Transition, setting a goal for non-fossil energy to be the dominant energy source by 2035.

Carbon

On July 14, 2024, the NDRC and other authorities issued the Action Plan for Further Enhancing the Standard Measurement System for Carbon Peaking and Carbon Neutrality (2024-2025), outlining key tasks and safeguard measures to establish and improve the technical standards to measure progress toward China's carbon peaking and carbon neutrality, collectively referred to as the "dual carbon," goals.

On October 24, 2024, the NDRC, NEA and other authorities jointly issued the Work Plan for Improving the Carbon Emission Statistical and Accounting System, targeting at enhanced carbon accounting methodologies for renewable energy consumption.

Environmental Regulations

At various stages of our manufacturing process, we generate noise, wastewater, gaseous waste and other industrial waste. Our production expansion heightens the risk of facility incidents that could negatively affect the environment. We are subjected to various PRC regulations related to the storage, use and disposal of hazardous materials. Key environmental laws and regulations applicable to our operations include, Environmental Protection Law, Law on the Prevention and Control of Noise Pollution, Law on the Prevention and Control of Air Pollution, Law on the Prevention and Control of Water Pollution, Law on the Prevention and Control of Solid Waste Pollution, Law on Environmental Impact Assessment, Law on Promotion of Clean Production, and Regulations on the Administration Environmental Protection in Construction Projects.

Some of our subsidiaries are located in Suzhou, China, adjacent to Taihu Lake, a nationally protected water body. These subsidiaries are subject to specific environmental protection regulations, including the Regulations on the Administration of Taihu Basin, the Regulation of Jiangsu Province on Preventing Water Pollution in Taihu Lake, and the Implementation Plan of Jiangsu Province on Comprehensive Treatment of Water Environment in Taihu Lake Basin.

Administration of Foreign Invested Enterprises

On March 15, 2019, China enacted the Foreign Investment Law, which replaced most of the laws and regulations previously governing foreign investment. On December 26, 2019, the State Council issued the Implementation Rules of Foreign Investment Law. The Foreign Investment Law and its Implementation Rules both took effect on January 1, 2020, unifying the regulatory framework for both foreign and domestic investments. According to these regulations, foreign investments shall be conducted in line with the "negative list" and obtain relevant approvals issued by the State Council from time to time. The "negative list" sets special administrative measures for foreign investment access in specific industries. Foreign investors are not allowed to invest in prohibited industries as specified in the "negative list." Foreign investors must comply with certain conditions when investing in the restricted industries as specified in the "negative list."

The NDRC and MOFCOM jointly issued the Catalogue of Encouraged Industries for Foreign Investment (2022 Edition), which includes photovoltaic power generation equipment manufacturing as an encouraged industry. Foreign-invested enterprises operating in these encouraged industries and satisfying applicable statutory requirements are eligible for preferential policies, such as exemption from customs duties of certain self-used equipment and priority consideration in obtaining land use rights.

Taxation

PRC enterprise income tax is calculated based on taxable income determined under PRC accounting principles. Under the EIT Law, both foreign-invested enterprises and domestic enterprises are subject to a statutory enterprise income tax rate of 25%. The EIT Law provides preferential tax treatment for certain categories of industries and projects supported and encouraged by the government. For example, enterprises qualified as HNTEs are entitled to a 15% enterprise income tax rate, provided they satisfy applicable statutory requirements. In addition, under the Western Catalogue promulgated by the NDRC, Enterprises in the Encouraged Industry that are established in the western region are entitled to a 15% enterprise income tax rate, subject to satisfying applicable statutory requirements.

In 2024, certain of our PRC subsidiaries, including Suzhou Sanysolar Materials Technology Co., Ltd, Changshu Tegu New Material Technology Co., Ltd, CSI New Energy Development (Suzhou) Co., Ltd, CSI Solar Technologies (JiaXing) Co., Ltd, Canadian Solar Photovoltaic Technology (Luoyang) Co., Ltd. and CSI Energy Storage Co., Ltd. were recognized as HNTEs. In addition, CSI Solar Technology (Xining) Co., Ltd and Canadian Solar Sunenergy (Baotou) Co., Ltd. were qualified as Enterprises in the Encouraged Industry.

Under the EIT Law and its implementation regulations, enterprises established outside China whose "de facto management body" is located in China are considered PRC tax resident enterprises and will be subject to a 25% enterprise income tax rate on their global income. The implementation regulations define the term "de facto management body" as the body that exercises full and substantial control and overall management over business, productions, personnel, accounts and properties of an enterprise. Circular 82 further provides certain specific criteria for determining whether the "de facto management body" of a PRC-controlled offshore incorporated enterprise is located in the PRC. The criteria include whether (a) the location where senior management and senior management bodies responsible for the routine production and business management is located in the PRC, (b) decisions related to the enterprise's financial and human resource matters are made or are subject to approval by organizations or personnel in the PRC, (c) the enterprise's primary assets, accounting books and records, company seals, and board and shareholders resolutions are located or maintained in the PRC, and (d) 50% or more of voting board members or senior executives of the enterprise habitually reside in the PRC. Although Circular 82 only applies to offshore enterprises controlled by enterprises or enterprise groups located within the PRC, the determining criteria set forth in Circular 82 may reflect the tax authorities' general position on how the "de facto management body" test may be applied in determining the tax resident status of offshore enterprises. As the tax resident status of an enterprise is subject to the determination by the PRC tax authorities, uncertainties remain with respect to the interpretation of the term "de facto management body" as applicable to our offshore entities.

Under the EIT Law and its implementing regulations, a withholding tax rate at the rate of 10% generally applies to interest and dividends paid to investors who are not "resident enterprises" in the PRC, to the extent such interest or dividends are derived from sources within the PRC. If our Canadian parent entity is deemed a PRC tax resident enterprise under the EIT Law based on the location of our "de facto management body," dividends distributed from our PRC subsidiaries to our Canadian parent entity may be exempt from withholding tax. However, in that case, dividends from us to our shareholders may be regarded as China-sourced income and, consequently, be subject to withholding tax at the rate of 10%, or at a lower treaty rate if applicable. Similarly, if we are classified as a PRC tax resident enterprise, any gain realized by our shareholders from the transfer of our common shares is may be subject to withholding tax at the rate of 10% if such gain is regarded as income derived from sources within the PRC. It remains unclear whether any dividends that we may pay on our common shares or any gains that our shareholders may realize from the transfer of our common shares would be treated as income derived from sources within the PRC and subject to PRC tax.

China's VAT system has undergone significant reforms, culminating in the enactment of the new Value-Added Tax Law on December 25, 2024, which will take effect on January 1, 2026. This law replaces the provisional regulations previously governing value-added tax, or VAT, in China. The new law maintains a three-tier tax rate structure: 13% rate applies to most goods and certain services, 9% rate applies to transportation services, construction services, and the sale of real estate, and 6% rate applies to other services and the transfer of intangible assets.

Under the Provisional Regulation on Value Added Tax and its implementation rules, entities and individuals engaged in the sale of goods, processing, repairs, replacement services, the sales of services, intangible assets, real estate, and the importation of goods are subject to VAT. Prior to 2018, VAT rates were 17% for most goods and labor services, 11% for certain categories of goods and real estate transactions, and 6% for services and intangible assets, with certain exceptions taxed at 17% or 11%. In May 2018, the original 17% or 11% VAT rates were reduced to 16% or 10%, respectively. In April 2019, the revised 16% or 10% VAT rates were reduced to 13% and 9%, respectively.

Foreign Currency Exchange

Foreign currency exchange regulation in China is primarily governed by the Foreign Currency Administration Rules, effective since 1996 and amended in 1997 and 2008, and the Settlement, Sale and Payment of Foreign Exchange Administration Rules (1996).

Under the relevant foreign exchange regulations, conversion of Renminbi for current account items, which includes dividend, interest, trade and service-related foreign exchange transactions, is permitted without prior approval from the SAFE by complying with certain procedural requirements. Conversion of Renminbi for capital account transactions, including foreign direct investments and loans, is subject to significant foreign exchange controls and requires approval by or registration with PRC authorities. If we finance our PRC subsidiaries through capital contributions, approval of or the record-filing with PRC authorities, including the Ministry of Commerce or its local counterparts, is required. If our PRC subsidiaries obtain foreign debt through medium and long-term loans or bonds issuance, approval may be required from the NDRC.

In February 2015, SAFE issued the Circular on Further Simplifying and Improving Policies for Foreign Exchange Administration of Direct Investment, or Circular 13, delegating the authority to enforce foreign exchange registration for inbound and outbound direct investments under relevant SAFE rules to certain banks, thereby streamlining the foreign exchange registration procedures. In March 2015, SAFE issued the Circular on Reforming the Administrative Approaches to Settlement of Foreign Exchange Capital of Foreign-invested Enterprises, or Circular 19, which allows foreign-invested enterprises to settle foreign exchange capital at their discretion based on business operation needs and permits foreign-invested enterprises engaged in investment activities to use converted RMB from foreign currency registered capital for equity investments in China. In June 2016, SAFE issued the Circular on Reforming and Standardizing Management of Foreign Exchange Settlement under the Capital Accounts, or Circular 16, which expands discretionary foreign exchange settlement to include foreign capital, foreign debt proceeds and foreign listing proceeds, under capital accounts allowed by the relevant laws and regulations, and eases restrictions on using RMB obtained from foreign exchange settlements for extending loans to related parties or repaying inter-company loans (including advances from third parties). In January 2017, SAFE issued the Notice on Further Promoting the Reform of Foreign Exchange Administration to Improve the Authenticity Audit and Compliance Audit, which sets out various measures to relax restrictions on foreign exchange inflows to further facilitate trade and investment, while tightening authenticity and compliance verification of cross-border transactions and capital flows.

On October 23, 2019, SAFE issued the Notice on Further Promoting Cross-border Trade and Investment Facilitation, which was subsequently amended on December 4, 2023. This notice allows foreign-invested enterprises whose business scope does not include investment, or non-investment foreign-invested enterprises, to use their capital funds for equity investments in China, provided that such investments comply with the laws and regulations.

On December 4, 2023, SAFE issued the Notice on Further Deepening Reforms and Facilitating Cross-border Trade and Investment, allowing domestic equity transferors (including institutions and individuals) to directly remit equity transfer consideration paid in foreign currency by domestic entities to a capital project settlement account. The circular also permits foreign exchange funds raised by domestic enterprises listed overseas to be deposited into a capital project settlement account, where they can be independently settled and utilized.

Dividend Distribution

The establishment, approval, registered capital requirements and operational matters of wholly foreign-owned enterprises were previously regulated by the Wholly Foreign-Owned Enterprise Law, effective in 1986 and amended in 2000 and 2016, along with its Implementation Rules, effective in 1990 and amended in 2001 and 2014. However, the Wholly Foreign-Owned Enterprise Law and its Implementation Rules were repealed and replaced by the Foreign Investment Law and its Implementation Rules, which came into effect on January 1, 2020, and now govern foreign investment, including the establishment and operation of wholly foreign-owned enterprises in China. The establishment, operation and governance of corporate entities in China are governed by the Company Law, which was first enacted in 1994 and has been amended from time to time. On December 29, 2023, the new Company Law was enacted which came into effect on July 1, 2024. The new Company Law is applicable to our PRC subsidiaries unless the laws on foreign investment stipulate otherwise. Under the new law, shareholders must fully contribute to their subscribed registered capital within five years of a company's establishment date. Companies established before July 1, 2024 shall gradually adjust their capital contribution to meet this new requirement.

The principal regulations governing distribution of dividends paid by our PRC subsidiaries include the Company Law and the Foreign Investment Law. Under these regulations, foreign-invested enterprises in China may pay dividends only out of their accumulated profits, if any, as determined in accordance with PRC accounting standards and regulations. In addition, a wholly foreign-invested enterprise in China is required to set aside at least 10% of its after-tax profits determined in accordance with PRC accounting standards each year to its general reserves until the cumulative total reserve funds reaches 50% of its registered capital. These reserve funds, however, may not distributable as cash dividends.

Employment

Employment relationships in China are governed by various laws and regulations covering wages, working hours, working and safety conditions, social insurance, housing funds and employee welfare. The Labor Law, effective in 1995 and amended in 2009 and 2018, and the Labor Contract Law, effective in 2008 and revised in 2012, along with its Implementing Regulations (effective in 2008 and amended in 2013), establish rights and obligations for employers and employees. These law permit collective bargaining in both state-owned and private enterprises, allowing labor unions (or worker representatives in the absence of a union) to negotiate contracts covering working conditions, wages and working hours. The Labor Contract Law and its Implementing Regulation impose certain human resources management requirements, including mandatory written labor contracts, regulated termination procedures, remuneration, severance compensation, and social insurance contributions. Employers are required to provide compensation packages that meet the local minimum wage standards and comply with restrictions on temporary labor use. Employees with fixed-term contracts are entitled to an indefinite-term contract if they have either renewed a fixed-term contract twice or worked for the employer for a consecutive ten-year period. Under the Interim Provisions on Labor Dispatching, effective in 2014, dispatched workers shall not exceed 10% of a company's total workforce.

Under social laws and regulations in the PRC, including the Social Insurance Law (effective in 2011 and amended in 2018), the Rules on Implementing the Social Insurance Law (effective in 2011), the Interim Regulations on the Collection and Payment of Social Security Funds (effective in 1999 and amended in 2019), the Interim Measures Concerning Maternity Insurance (effective in 1995), the Regulations on Occupational Injury Insurance (effective in 2004 and amended in 2010), and the Regulations on the Administration of Housing Accumulation Funds (effective in 1999 and amended in 2019), employers are required to contribute, on behalf of their employees, to various social security funds, including funds for basic pension insurance, unemployment insurance, basic medical insurance, occupational injury insurance, maternity leave insurance, and to housing accumulation funds. These contributions are made to local administrative authorities, and failure to comply may result in fines and orders to remediate unpaid contributions within a stipulated time period.

Enforceability of Civil Liabilities

Canadian Solar Inc. is a corporation governed by the laws of the province of Ontario, Canada with operations in North America, Asia-Pacific, Europe, South America, the Middle East and Africa. We primarily conduct our manufacturing operations in China, Southeast Asia and the U.S., and have made certain investments in solar power system and project assets in China.

A majority of our directors and officers are nationals and residents of countries other than the United States (principally Canada, mainland China and Hong Kong) and a substantial portion of the assets of these persons are located outside the United States. As a result, it may not be possible for you to effect service of process within the United States upon those persons. Furthermore, it may not be possible for you to enforce against us or them, in the United States, judgments obtained in United States courts, because all or a substantial portion of our assets and the assets of those persons are located outside the United States. In addition, our constituent documents do not contain provisions requiring that disputes, including those arising under the securities laws of the United States, between us, our officers, directors and shareholders, be arbitrated. As a result, it may be difficult for a shareholder to effect service of process within the United States upon us or such persons, or to enforce against us or them judgments obtained in United States courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state in the United States.

There are defenses that can be raised to the enforceability, in original actions in Canadian courts, of liabilities based upon the federal securities laws of the United States and to the enforceability in Canadian courts of judgments of United States courts obtained in actions based upon the civil liability provisions of federal securities laws of the United States, such that the enforcement in Canada of such liabilities and judgments is not certain. Therefore, it may not be possible to enforce in Canada those actions against us, our directors and officers.

There is uncertainty as to whether the courts of the PRC would:

- recognize or enforce judgments of United States courts obtained against us or our directors or officers predicated upon the civil liability provisions of the securities laws of the United States or any state in the United States; or
- entertain original actions brought in each respective jurisdiction against us or our directors or officers predicated upon the securities laws of the United States or any state in the United States.

The recognition and enforcement of foreign civil judgments are provided for under the Civil Procedures Law of the PRC. PRC courts may recognize and enforce foreign civil judgments in accordance with the requirements of the Civil Procedures Law based on treaties, arrangements or reciprocity between China and the country where the judgment is made. However, China has no treaties or reciprocal arrangements for the recognition and enforcement of foreign civil judgments within the United States or Canada. As a result, it is generally difficult to recognize and enforce in China, a civil judgment rendered by a court in these two jurisdictions.

In addition, foreign shareholders seeking enforcement of a foreign judgment in PRC courts may face substantial legal and other costs that may be material to the shareholders. Shareholders could potentially spend a considerable amount of time and other resources to go through the recognition and enforcement procedure, which may be a significant burden for the shareholders, with no assurance of success.

C Organizational Structure

The following table sets out our significant subsidiaries, including their place of incorporation and our ownership interest:

Name of entity	Place of incorporation	Ownership interest
Canadian Solar Solutions Inc.	Canada	100 %
Canadian Solar New Energy Holding Company Limited	Hong Kong	100 %
Recurrent Energy, LLC	USA	100 %
Recurrent Energy B.V.	Netherlands	100 %
Canadian Solar Brasil I Fundo de Investimento em Participacoes – Multiestrategia	Brazil	100 %
CSI Solar Co., Ltd.	PRC	63.14 %
CSI Cells Co., Ltd.	PRC	100 %*
Canadian Solar Manufacturing (Luoyang) Inc.	PRC	100 %*
Canadian Solar Sunenergy (Baotou) Co., Ltd.	PRC	100 %*
CSI Solar Technology (Xining) Co., Ltd	PRC	100 %*
Canadian Solar Manufacturing (Changshu) Inc.	PRC	100 %*
CSI Modules (DaFeng) Co., Ltd.	PRC	100 %*
Canadian Solar Sunenergy (Jiaxing) Co. Ltd	PRC	100 %*
CSI Cells (Yancheng) Co., Ltd.	PRC	100 %*
Canadian Solar Sunenergy (SuQian) Co., Ltd.	PRC	100 %*
CSI Cells (SuQian) Co., Ltd.	PRC	100 %*
CSI Wafer (FuNing) Co., Ltd.	PRC	100 %*
CSI Cells (Yangzhou) Co., Ltd.	PRC	100 %*
Canadian Solar (USA) Inc.	USA	100 %*
Canadian Solar US Module Manufacturing Corporation	USA	100 %*
Canadian Solar SSES (US) Inc.	USA	100 %*
Canadian Solar International Limited	Hong Kong	100 %*
Canadian Solar Manufacturing (Thailand) Co., Ltd.	Thailand	99.999996 %*
Canadian Solar EMEA GmbH	Germany	100 %*

* Significant subsidiaries (as defined in Rule 1-02(w) of Regulation S-X) held through CSI Solar Co., Ltd. in which CSI owned a 63.14% interest as of December 31, 2024.

D Property, Plant and Equipment

The following summarizes our material properties, including manufacturing facilities, solar power and battery energy storage systems, and office buildings as of the date of this annual report on Form 20-F:

- In the United States, Recurrent Energy, LLC and Canadian Solar (USA) Inc. lease a total of approximately 2,200 square meters of office space in Austin, Walnut Creek, New York City and Scottsdale.
- Canadian Solar Manufacturing (Luoyang) Inc. has obtained land use rights for approximately 80,000 square meters of land in Luoyang, Henan, in 2008, on which we have built wafer manufacturing facilities of approximately 30,000 square meters. Subsequently in 2016, we acquired land use rights for another piece of land of approximately 160,000 square meters, where we constructed manufacturing facilities covering approximately 39,000 square meters. The certificates for property ownership thereunder were granted between 2008 and 2018.
- Canadian Solar Sunenergy (Baotou) Co., Ltd. has obtained the land use right of a piece of land in Baotou, Inner Mongolia of approximately 224,000 square meters, on which we have built ingots manufacturing facilities with a floor area of approximately 18,000 square meters. The production of ingots commenced in 2017. Subsequently, we expanded the facility to include the production of mono ingots with a floor area of approximately 91,700 square meters. The certificates for property ownership thereunder were granted between 2018 and 2024.
- CSI Solar Technology (Xining) Co., Ltd. has obtained a land use right of a piece of land in Xining, Qinghai of approximately 200,000 square meters in 2021. The land use right certificate was granted in July 2021. We have built ingot production lines and supporting facilities on approximately 185,000 square meters of land under Phase I and II. The lines have been operating at full capacity since May 2023.

- Canadian Solar Manufacturing (Changshu) Inc. has the land use right to two pieces of land of approximately 40,000 square meters and 180,000 square meters, respectively, in Changshu, Jiangsu, on which we have built module manufacturing facilities with a total floor area of approximately 165,000 square meters. We have obtained certificates of property ownership for the facilities.
- CSI Modules (DaFeng) Co., Ltd. obtained the land use right to a piece of land of approximately 200,000 square meters in Yancheng, Jiangsu in 2017. The module production facility of approximately 78,000 square meters under Phase I completed construction and production began in 2018. We obtained the certificate of property ownership for Phase I in January 2020. On the same piece of land, we have subsequently built manufacturing facilities with a total floor area of approximately 67,000 square meters under Phase II in May 2021, and obtained the certificate of property ownership in August 2021.
- Canadian Solar Sunenergy (Jiaxing) Co. Ltd. obtained the land use right to a piece of land of approximately 165,000 square meters in Jiaxing, Zhejiang in 2018, on which we have built module manufacturing facilities with floor area of approximately 125,000 square meters under Phase I in 2020. We have further constructed module manufacturing facilities with floor area of approximately 104,014 square meters under Phase II by the end of 2023.
- CSI Cells (Yancheng) Co., Ltd. has obtained the land use right to a piece of land of approximately 134,000 square meters located in Yancheng, Jiangsu. The floor area of cell manufacturing facilities is approximately 63,000 square meters under Phase I. A part of the cell manufacturing facilities has completed construction and commenced operations in 2018, with the entire Phase I facilities commencing operations in 2019. In 2019, we further purchased an additional piece of land of approximately 64,000 square meters and obtained the land use right in 2020, on which we have built cell manufacturing facilities with a total floor area of approximately 50,000 square meters under Phase II. The entire Phase II facilities commenced operations in August 2022 and we have obtained the certificate of property ownership in October 2023.
- Canadian Solar Sunenergy (SuQian) Co., Ltd. has leased approximately 183,000 square meters of module manufacturing facilities for a period of four years in Suqian, Jiangsu commencing from November 2020. The facility commenced full production by the end of 2023.
- CSI Cells (SuQian) Co., Ltd. has leased approximately 130,000 square meters of cell manufacturing facilities for a period of four years in Suqian, Jiangsu commencing from April 2023. The leased facilities completed equipment installation and started production in April 2023.
- CSI Wafer (FuNing) Co., Ltd. has leased three wafer manufacturing facilities in Funing, Jiangsu with a total floor area of approximately 24,000 square meters for a period of four years from April 2021. These leased facilities completed equipment installation and started production in June 2021.
- CSI Solar Manufacturing (Funing) Co., Ltd. has leased cell manufacturing facilities of approximately 27,000 square meters on a piece of land of approximately 67,000 square meters under Phase I in Funing, Jiangsu since 2015. The land use right to approximately 23,000 square meters facilities has been acquired in December 2022. The remainder 4,000 square meters were transferred in 2024. In 2016, we obtained the land use right to another parcel of land of approximately 133,000 square meters, on which we have built cell manufacturing facilities with a total floor area of approximately 26,000 square meters under Phase II and Phase III. Commercial operations have commenced since then and we obtained the certificates for property ownership of Phase II and Phase III cell manufacturing facilities in 2018. In 2017, we obtained the land use right of approximately 34,000 square meters. On the newly acquired land, along with the previously acquired land, we have built Phase IV manufacturing facilities with a floor area of approximately 60,000 square meters and obtained the certificate of property ownership in March 2022, consolidating the land use right of Phase II and Phase III to approximately 167,000 square meters, with built facilities of approximately 86,000 square meters. We have acquired cumulative rights to use approximately 234,000 square meters of land and 112,000 square meters of manufacturing facilities.
- CSI Cells (Yangzhou) Co., Ltd. has entered into an investment agreement with the municipal government of Yangzhou City, Jiangsu to produce 14 GW of annual wafer and cell capacity under Phase I of a three-phase plan in January 2023. We have leased approximately 247,000 square meters of cell manufacturing facilities for five years, and the production commenced in August 2023.
- Canadian Solar US Module Manufacturing Corporation has entered into an agreement in 2023 to lease a building in Mesquite, Texas until December 2033, including manufacturing floor of approximately 59,000 square meters, mezzanine area of approximately 6,100 square meters and office area of approximately 4,600 square meters. The leased facilities completed equipment installation and commenced production in December 2023.

- Canadian Solar US Cell Manufacturing Corp. obtained the land use right to approximately 350,000 square meters of land in Jeffersonville, Indiana, in 2024. We plan to construct a greenfield manufacturing facility, including an office building, of approximately 90,000 square meters to produce solar cells.
- Canadian Solar Manufacturing (Thailand) Co., Ltd. has two lots land totaling 272.8 Rai (approximately 436,000 square meters) in Thailand, with the ownership certificates obtained. The first lot of approximately 179.3 Rai (approximately 287,000 square meters) is located in Chonburi Province, and houses cell manufacturing facilities under Phase I and II covering approximately 37,000 square meters and module manufacturing facilities under Phase I, II and III covering approximately 113,000 square meters. The Phase I cell facility was built, and production commenced in 2017, while the Phase II cell facility was completed, and production commenced in 2019. The Phase I module facility was built, and production commenced in 2016. The Phase II module facility started production in 2019, and the Phase III module facility began production in August 2023. The second lot of approximately 93.5 Rai (approximately 150,000 square meters) is located in Royong Province, and houses the cell manufacturing facility under Phase III covering approximately 27,000 square meters. The land was purchased in June 2022, subsequently constructed, with production commencing in August 2023. We began the construction of wafer manufacturing facility in October 2023 within the Chonburi plant, and production commenced in March 2024 within the Chonburi facilities.
- In Vietnam, Canadian Solar Manufacturing Vietnam Co., Ltd. has leased approximately 16,000 square meters of manufacturing facility in Haiphong City, Vietnam since 2015. The facility has been converted from module manufacturing to new material manufacturing (including EVA and junction box) since May 2023. The lease was renewed for every three years with the latest current lease term ending in August 2027. In July 2023, we leased approximately 1,800 square meters of additional space for the new material manufacturing facility.
- We construct and operate solar power systems in the United States, EU, Brazil, Argentina, Colombia and China, and most of our solar power systems were built or being constructed on leased land. Approximately 5,600 hectares of land were leased for these solar power systems, with lease term ending between 2037 and 2056.

Except as disclosed in the "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China," we believe we have obtained the environmental permits necessary to conduct the business currently carried on by us at our manufacturing facilities. For more details, see "B. Business Overview—Environmental Matters."

ITEM 4A *UNRESOLVED STAFF COMMENTS*

None.

ITEM 5 *OPERATING AND FINANCIAL REVIEW AND PROSPECTS*

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and accompanying notes included elsewhere in this annual report on Form 20-F. The following discussion contains forward-looking statements based on current expectations that involve risks and uncertainties. Our actual results may differ materially as a result of various factors, including those set forth under "Item 3. Key Information—D. Risk Factors" or in other parts of this annual report on Form 20-F.

For year-over-year comparisons between 2023 and 2022, refer to "Item 5. Operating and Financial Review and Prospects" in our Form 20-F for the year ended December 31, 2023, filed with the SEC on April 26, 2024.

A Operating Results

Key Factors Affecting Our Results of Operations

Our operating results are affected by a number of factors, including the following:

- global economic conditions, including inflationary and interest rate pressures, and currency volatility;
- supply and demand dynamics in the solar power and battery storage energy industry, including seasonality;
- mix of products and services we provide, and project sales;

- pricing of solar power and battery energy storage products;
- costs of silicon raw materials, solar ingots, wafers, cells and lithium-ion components relative to the selling prices of modules and battery energy storage products;
- impacts to our business due to raw materials availability and supply chain constraints;
- effects that current credit, interest rate and market conditions could have on the value of our project assets; and
- changes in trade regulations and treaties, including renewable energy incentives, government grants, antidumping and countervailing duties.

We also are subject to other risks as outlined in "Item 3. Key Information—D. Risk Factors."

We are closely monitoring macro-economic developments, including inflation, interest rates, monetary policy changes and foreign currency fluctuations, as well as elevated geopolitical tensions, hostilities and political conflicts around the world, and how they may adversely impact our and our customers', contractors', suppliers' and partners' respective businesses. In particular, weak economic conditions or unfavorable changes in any of these general factors could materially and adversely affect our results of operations.

Our business and revenue growth depend on the increasing demand for solar power, driven by its increasing cost competitiveness with other power generation technologies, its advantages over other renewable sources, and expanding battery energy storage deployment to reduce intermittency of renewables generation. Public support for renewable energy, driven by energy security and environmental concerns, continue to accelerate industry adoption. Although solar technology has been available for decades, significant market expansion has occurred only recently. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—We may be adversely affected by volatility in the solar power and battery energy storage market and industry conditions; in particular, the demand for our solar power and battery energy storage products and services may not grow as expected or may decline." Industry demand is affected by seasonality. Demand tends to be lower in winter, when adverse weather conditions can complicate the installation conditions. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our revenues and results of operations are subject to significant fluctuations, which make our financial performance difficult to predict."

In addition, interconnection constraints have heightened the need for battery energy storage integration in order to shift the feed of electricity into the grid to benefit from peak demand periods and overcome limitations in grid transmission capacity. The current electricity and capacity market design and rules may not adequately compensate for the integration of battery energy storage systems, and as such may hinder, slow down or limit the growth rate of solar power or battery energy storage adoption and implementation.

In 2022, 2023 and 2024, solar modules and system kits product sales generated $6,072.5 million, $6,620.7 million and $4,679.4 million in revenues, accounting for 81.3%, 87.0% and 78.1% of our net revenues, respectively. In 2022, 2023 and 2024, battery energy storage product sales generated $440.7 million, $245.2 million and $814.6 million in revenues, contributing 5.9%, 3.2% and 13.6% of our net revenues, respectively. Revenues from solar and battery energy storage asset sales accounted for 10.2%, 5.2% and 2.6% of our net revenues in 2022, 2023 and 2024, respectively, generating $761.7 million, $399.1 million and $156.7 million in revenues in each respective year. Historically, Recurrent Energy operated under a develop-to-sell model, but we are shifting toward retaining greater ownership of projects in select markets to enhance recurring revenues and asset value.

Our solar module pricing is based on the actual flash test results or nameplate capacity, expressed in watts-peak, and is affected by market demand and supply, module efficiency and power output. Higher efficiency modules usually command premium pricing. In 2022, the average selling prices of our standard solar modules was approximately $0.30 per watt, decreasing to $0.23 and $0.16 per watt in 2023 and 2024, respectively. We anticipate further price reductions driven by industry trends. Our battery energy storage pricing is based on storage capacity, expressed in watts-hour, and is affected by market demand, storage capacity and material costs. Higher storage capacity and longer duration products generally command higher price premium.

Our profitability is highly dependent on the cost of silicon raw materials, solar ingots, wafers, cells, and lithium-ion components relative to the selling prices of our solar modules and battery energy storage products. We produce solar modules, which comprise interconnected solar cells encased in a weatherproof frame. Solar cells are the most important component of solar modules. Our solar cells are primarily made from mono-crystalline silicon wafers through multiple manufacturing steps, including the application of N-type and TOPCon technologies. Solar wafers are the primary material used to make solar cells. Solar ingots are the key material for making solar wafers. If we are unable to procure silicon raw materials, solar ingots, wafers and cells at input costs that aligns with the declines in selling price of our solar modules, our revenues and margins could be adversely impacted, either due to higher manufacturing costs than our competitors or write-downs of inventory, or both. We may lose market share if our competitors are able to offer better pricing than we do. We manufacture our battery energy storage products. The costs of lithium iron phosphate ("LFP") cells, battery modules, and associated electronics are a significant portion of our total cost structure for energy storage products. If we are unable to procure lithium-ion battery components input costs that aligns with the decline in line with the pricing of our battery energy storage products, or if supply chain disruptions result in cost inflation or delays, our margins may be compressed, and our competitiveness in the energy storage market could be adversely impacted.

Our revenues from the sale of solar power and battery energy storage projects are affected by the timing of the completion and our timing and strategy of monetization. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our sale of solar power and battery energy storage projects depends heavily on our ability to find third-party buyers for our projects in a timely manner and on favorable terms and conditions" and "Item 4. Information on the Company—B. Business Overview—Sales, Marketing and Customers—Recurrent Energy" for a description of our solar power and battery energy storage pipelines. Rising interest rates, tightening credit conditions, and changing investor return expectations could place downward pressure on asset valuations across the renewable infrastructure sector, including our projects. Certain classes of investors benchmark solar power and battery energy storage project returns against bond yields, and increases in those yields can lead to higher required internal rates of return ("IRRs") on infrastructure investments. As a result, we may face reduced sale prices for our projects, extended sales cycles, or the need to hold completed projects on our balance sheet for longer periods, potentially reducing liquidity and delaying revenue recognition. Project sales may also be adversely affected by construction delays, changes in government policy or permitting requirements, counterparty credit deterioration, grid curtailment, equipment failures, and extreme weather events. These factors may lead to project cancellations, impairments, or reclassification of assets from held-for-sale to held-for-use. In such cases, we may be required to expense prior capitalized development costs or impair our project investments, which could materially affect our operating results for the relevant period.

While the cost of solar and battery energy storage technologies have generally declined, continued government support remains important to sustain industry growth and investment returns. Our business performance and market demand are influenced significantly by the availability, size, and stability of government incentives, regulatory frameworks, and trade regimes in the countries where we operate. Governments in many of our key markets, including the United States and a number of the states of the European Union (including, Italy, France, Germany and Spain) continue to provide incentives that support solar power and battery energy storage deployment. In the United States, the IRA significantly enhanced and extended tax-based incentives for renewable energy. These include expanded ITC and PTC eligibility, additional bonus credits for projects located in energy communities or meeting domestic content thresholds, and advanced manufacturing production tax credits under Section 45X of the Internal Revenue Code. The IRA also introduced mechanisms for credit transferability and direct pay, which were clarified through temporary and proposed IRS regulations issued in June 2023 and finalized in May 2024. These provisions are designed to accelerate clean energy development, promote domestic manufacturing, and support long-term market growth. In the European Union, several member states continue to implement incentive schemes, including national auctions and tax benefits to support renewable development. Additionally, the revised Renewable Energy Directive, which entered into force on November 20, 2023, aims to further streamline permitting processes and reinforce regulatory support for solar and battery energy storage deployment. However, some member states have enacted land-use limitations and zoning restrictions, particularly in agricultural zones, which may limit project development opportunities. As part of the revised directive, EU member states are required to implement permitting reforms by mid-2024 and to designate renewables acceleration areas by February 2026 to streamline project approvals and facilitate faster deployment. Despite overall government support, many of these incentive programs are subject to change, reduction, or phase-out over time. Revisions, reductions, or eliminations of subsidies and favorable regulations could materially and adversely affect demand for our products and services, particularly in developing or price-sensitive markets. In addition, unfavorable changes in energy laws or policies could deter customer investment, increase competition, or reduce expected returns on our projects.

Our operations are also affected by changes in international trade policy, including the imposition or expansion of antidumping and countervailing duties, tariffs, and other trade remedies. We have been, and may continue to be, subject to trade actions in key jurisdictions such as the United States. These measures may increase our costs or limit our access to important markets. Pending investigations, safeguard measures, and retroactive rulings could also result in supply chain disruptions or unanticipated liabilities.

For a detailed discussion of the impact of government subsidies and incentives, possible changes in government policy and associated risks to our business, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Governments may revise, reduce or eliminate incentives and policy support schemes for solar power and battery energy storage" and "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our global operations are subject to complex and evolving laws, regulations, policies, trade restrictions and geopolitical risks, which could increase compliance costs, disrupt operations, delay project execution and adversely affect our business, financial condition and results of operations."

We have been in the past, and may be in the future, subject to antidumping and countervailing duty rulings and orders. In particular, we have been subject to antidumping and countervailing duty rulings in the U.S., the EU, and Canada and have, as a result, been party to lengthy proceedings related thereto. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—The antidumping and countervailing duty circumvention determinations and the extended safeguard measures in the United States could adversely affect us," "—The antidumping and countervailing duty investigations on active anode materials from China and tariff measures on battery imports from China into the United States could adversely affect us," and "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal and Administrative Proceedings." The U.S., the EU, the U.K. and Canada are important markets for us. Ongoing proceedings relating to, and the imposition of any new, antidumping and countervailing duty rulings and orders or safeguard measures in these markets may result in additional costs to us and/or our customers.

Over the past three years, the COVID-19 pandemic posed significant challenges to many aspects of our business, including our operations, customers, suppliers and projects. On May 5, 2023, the World Health Organization announced that COVID-19 was no longer a public health emergency.

Overview of Financial Results

We evaluate our business using a variety of key financial measures.

Net Revenues

Our business is divided into two segments: CSI Solar, which focuses on solar module and battery energy storage product manufacturing, and Recurrent Energy, which focuses on solar power and battery energy storage project development, asset sales, power services, and electricity revenue from its operating portfolio. The following table sets forth, for the periods indicated, the components of our revenues by amounts and percentages of our total revenues:

	For the years ended December 31,			
	2023		2024	
	(in thousands of $, except percentages)			
Net revenues				
CSI Solar:				
Solar modules	5,941,345	78.0 %	4,281,178	71.4 %
Solar system kits	679,350	8.9 %	398,173	6.7 %
Battery energy storage solutions	245,173	3.2 %	814,604	13.6 %
EPC and others	250,105	3.3 %	181,422	3.0 %
Recurrent Energy:				
Solar power and battery energy storage asset sales	399,098	5.3 %	156,686	2.6 %
Power services	40,636	0.5 %	69,972	1.2 %
Revenue from electricity, battery energy storage operations and others	57,919	0.8 %	91,374	1.5 %
Total	7,613,626	100 %	5,993,409	100 %

Our revenues from CSI Solar are primarily affected by average selling prices per watt and unit volumes shipped of solar power products, as well as the average selling price per watt-hour and unit volumes shipped of battery energy storage solutions products. Revenues from sales to customers are recorded net of sales taxes, goods and services taxes, value added taxes, and estimated returns. Our revenues from our Recurrent Energy are primarily affected by the timing of the completion and the timing and strategy of monetization of solar power and battery energy storage projects. See "Item 4. Information on the Company—B. Business Overview—Sales, Marketing and Customers—Recurrent Energy" for a description of the status of our solar power and battery energy storage projects.

Our revenue recognition policies for sales of battery energy storage products and solar power and battery energy storage asset sales are described in "—Critical Accounting Estimates—Revenue."

Cost of Revenues

The cost of revenues for CSI Solar includes direct and indirect costs associated with the manufacture and delivery of solar modules, and battery energy storage products. These costs primarily consist of raw materials such as high purity and solar-grade silicon, silicon wafers, metallic pastes, glass, aluminum frames, ethylene vinyl acetate ("EVA", an encapsulant used to seal the module), junction boxes, and polymer back sheets, as well as components for energy storage systems including insulated-gate bipolar transistors ("IGBT") module, magnetic components, lithium iron phosphate battery cells, customized sheet metal and storage inverter components. Additional costs include production labor (salaries and benefits for manufacturing staff), warranty expenses, and overhead related to utilities, equipment maintenance, and factory support. Depreciation and amortization of manufacturing equipment and facilities are also included and have increased in line with the expansion of our manufacturing footprint. Furthermore, our cost structure reflects exposure to global trade regulations and compliance-related expenses, including antidumping, countervailing and other duty costs, as well as inventory impairment charges.

The cost of revenues for Recurrent Energy primarily reflects solar power and battery energy storage project expenditures associated with development and construction. These include the cost of acquiring project rights and sites, interconnection and permitting fees, equipment procurement and construction services. Interest capitalized during construction also forms a portion of the costs. Additionally, this segment may recognize impairments on project assets due to adverse changes in market conditions, regulatory uncertainty, or project-specific performance.

Gross Profit

Gross profit is affected by a number of factors, including but not limited to, the performance and contribution of both of our segments, the average selling prices and unit volumes of our solar power and battery energy storage products, our product mix, our ability to cost effectively manage our vertical integration, manufacturing capacity and supply chain, inventory write-downs, tariffs, antidumping and countervailing duties, the timing and pricing of project sales and the impairment of project assets. As a result of these various factors, our gross margin varies from period to period.

Operating Expenses

Selling and Distribution Expenses

Selling and distribution expenses consist primarily of transportation and shipping costs for delivery of our products, salaries and benefits, sales commissions for our sales agents, advertising, promotional and trade show expenses, and other sales and marketing expenses. We expect our selling and distribution expenses will increase over time as we incur more transportation and shipping costs to grow volume, hire additional sales personnel, target more markets, launch more products, and initiate additional marketing programs to reach our goal of continuing to be a leading global brand.

General and Administrative Expenses

General and administrative expenses consist of salaries and benefits for our corporate, finance, legal, IT and other administrative functions, as well as expenses for consulting, professional service fees, government and administration fees and insurance fees. We expect some of our general and administrative expenses to increase as we expand our operations to support the growth of our two segments.

For a description of the stock options, restricted share units and restricted shares granted, including the exercise prices and vesting periods, see "Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Share Incentive Plans." We recognize share-based compensation expense based on the fair value of equity awards at the grant date. Expense for time-based awards is recognized over the requisite service period, while performance-based awards are recognized upon occurrence of certain contingent conditions. We estimate expected forfeitures based on historical and anticipated employee retention and adjust these estimates prospectively. We expect share-based compensation to decrease following the vesting of restricted share units and incentives under the CSI Solar employee plan at the time of its IPO in 2023. However, we expect additional share-based compensation expenses in the future as CSI Solar adopts its own equity incentive plan and we continue to expand our Recurrent Energy operations.

Research and Development Expenses

Research and development expenses consist primarily of costs of raw materials used in our research and development activities, salaries and benefits for research and development personnel and prototype and equipment costs related to the design, development, testing and enhancement of our products. Refer to "—C. Research and Development" for further details of our research and development activities. We expect that our research and development expenses will increase as we devote more efforts to research and development in the future.

Other Operating Income, Net

Other operating income, net, primarily reflects non-core operating items that are not directly attributable to our primary revenue-generating activities. This includes government grants received and gains or losses from disposal of solar power systems, property, plant and equipment. The amount and timing of other operating income can vary depending on the receipt of government incentives, asset management strategies, and external environmental factors.

Interest Expense

Interest expense relates to interest incurred on our short and long-term borrowings from banks and other financial institutions, green bonds, and convertible notes. The level of interest expense is influenced by prevailing interest rates, total outstanding debt balances, and the currency composition of our financing sources.

Loss on Change in Fair Value of Derivatives

We utilize derivative instruments as part of our risk management strategy to mitigate exposures to fluctuations in foreign currency exchange rates, raw material prices, and interest rates. These instruments include foreign exchange forward contracts, commodity hedges, and interest rate swaps. Changes in the fair value of these derivatives that are not designated as accounting hedges are recognized in earnings and may result in gains or losses depending on market movements. These fair value adjustments can introduce volatility to our financial results.

Income Tax Benefit (Expense)

We recognize income tax expense or benefit based on taxable income for the period, as well as deferred tax assets and liabilities arising from temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred tax assets are subject to valuation allowances when management cannot conclude that it is more likely than not that they will be realized. The effective tax rate may fluctuate from period to period due to changes in the geographic mix of income, tax holidays or incentives, changes in valuation allowances, or other nonrecurring tax adjustments.

Results of Operations

The following table sets forth, for the periods indicated, certain of our consolidated results of operations and each item expressed as a percentage of our total net revenues. Our historical results presented below are not necessarily indicative of the results that may be expected for any future period.

	For the years ended December 31,			
	2023		2024	
	(in thousands of $, except percentages)			
Net revenues	7,613,626	100.0 %	5,993,409	100.0 %
CSI Solar segment	7,230,550	95.0 %	6,460,003	107.8 %
Recurrent Energy segment	497,653	6.5 %	323,469	5.4 %
Elimination	(114,577)	(1.5)%	(790,063)	(13.2)%
Cost of revenues	6,333,643	83.2 %	4,994,090	83.3 %
CSI Solar segment	6,121,332	80.4 %	5,272,722	88.0 %
Recurrent Energy segment	292,926	3.8 %	257,976	4.3 %
Elimination	(80,615)	(1.1)%	(536,608)	(9.0)%
Gross profit	1,279,983	16.8 %	999,319	16.7 %
CSI Solar segment	1,109,218	14.6 %	1,187,281	19.8 %
Recurrent Energy segment	204,727	2.7 %	65,493	1.1 %
Elimination	(33,962)	(0.4)%	(253,454)	(4.2)%
Operating expenses:				
Selling and distribution expenses	369,670	4.9 %	487,947	8.1 %
General and administrative expenses	440,488	5.8 %	515,204	8.6 %
Research and development expenses	100,844	1.3 %	120,792	2.0 %
Other operating income, net	(84,339)	(1.1)%	(94,543)	(1.6)%
Total operating expenses	826,663	10.9 %	1,029,400	17.2 %
Income (loss) from operations	453,320	6.0 %	(30,081)	(0.5)%
Other income (expenses)				
Interest expense	(114,099)	(1.5)%	(137,468)	(2.3)%
Interest income	51,621	0.7 %	88,470	1.5 %
Loss on change in fair value of derivatives, net	(27,504)	(0.4)%	(51,400)	(0.9)%
Foreign exchange gain, net	30,555	0.4 %	46,750	0.8 %
Investment income, net	14,632	0.2 %	1,427	0.0 %
Total other income (expense)	(44,795)	(0.6)%	(52,221)	(0.9)%
Income (loss) before income taxes and equity in earnings (loss) of affiliates	408,525	5.4 %	(82,302)	(1.4)%
Income tax benefit (expense)	(59,501)	(0.8)%	16,576	0.3 %
Equity in earnings (loss) of affiliates	14,610	0.2 %	(12,136)	(0.2)%
Net income (loss)	363,634	4.8 %	(77,862)	(1.3)%
Less: Net income (loss) attributable to non-controlling interests and redeemable non-controlling interests	89,447	1.2 %	(113,913)	(1.9)%
Net income attributable to Canadian Solar Inc.	274,187	3.6 %	36,051	0.6 %

Year Ended December 31, 2024 Compared to Year Ended December 31, 2023

Net Revenues. Our net revenues totaled $5,993.4 million in 2024, a decrease of 21.3% compared to $7,613.6 million in 2023, primarily driven by a decline in solar modules ASPs. Total module shipments increased modestly to 31.1 GW in 2024 from 30.7 GW in 2023, as we strategically prioritized margin over volume. CSI Solar maintained strong positions across core markets, including the United States, Europe, Asia, and South America. Of total shipments, approximately 803 MW were delivered to our own utility-scale solar power projects. Revenues from battery energy storage solutions grew significantly in 2024, reaching 6.6 GWh in shipped volume, which represents a year-over-year increase of over 500%.

Project sales contributed 2.6% of total revenue in 2024, compared to 5.2% in 2023, primarily due to delays in project monetization. Notwithstanding, we made substantial progress in our IPP transition, initiating construction on 1.4 GWp of solar PV and 1.4 GWh of energy storage projects. Of these, 420 MWp of solar PV projects reached commercial operation in the U.S. As more projects enter commercial operation, recurring revenue streams continued to scale. In 2024, revenue contributions from power services and electricity, battery energy storage operations and others were 1.2% and 1.5%, respectively, up from 0.5% and 0.8% in 2023.

Cost of Revenues. Our cost of revenues decreased by $1,339.6 million, or 21.1%, from $6,333.6 million in 2023 to $4,994.1 million in 2024. This decline was primarily due to lower raw material and supply chain costs in our CSI Solar manufacturing operations. Our average module manufacturing cost in China, inclusive of purchased polysilicon and wafers, declined to $0.106 per watt in 2024 from $0.169 in 2023. The decrease in costs was partially offset by higher sales of battery energy storage solutions, which carry different cost dynamics, as well as inventory write-downs and impairments related to solar assets held for use. Additionally, lower volume of solar power and battery storage asset sales in Recurrent Energy impacted the segment's cost contribution for 2024.

Gross Profit. Our gross profit for 2024 was $999.3 million, resulting in a gross margin of 16.7%, compared to gross profit of $1,280.0 million and gross margin of 16.8% in 2023. Despite pressure from declining solar modules ASPs, we mitigated some margin compression through continued reductions in manufacturing costs and improved operational efficiencies. In particular, growth in higher-margin battery energy storage solutions positively contributed to overall gross margin. The pricing environment for modules remains challenging, however, our diversification into battery energy storage has enhanced the resilience of our gross profit.

Operating Expenses. Our operating expenses increased by $202.7 million, or 24.5%, to $1,029.4 million in 2024 from $826.7 million in 2023. As a percentage of net revenues, operating expenses rose to 17.2% in 2024 from 10.9% in 2023, primarily due to the increases in selling and distribution expenses and general and administrative expenses.

Selling and Distribution Expenses. Our selling and distribution expenses increased by $118.3 million, or 32.0%, to $487.9 million in 2024 from $369.7 million in 2023, representing 8.1% of net revenues in 2024 compared to 4.9% in 2023. The increase was primarily driven by $93.0 million in higher shipping and handling costs, and $14.0 million in payroll and related personnel expenses associated with global sales expansion.

General and Administrative Expenses. Our general and administrative expenses increased by $74.7 million, or 17.0%, to $515.2 million in 2024 from $440.5 million in 2023. The increase was mainly attributable to a $80.7 million impairment charge on manufacturing equipment, $16.1 million in personnel and severance expenses, and $11.0 million in depreciation and amortization. These increases was partially offset by a $33.2 million reduction in share-based compensation expense related to the vesting pattern of awards associated with the CSI Solar IPO. As a percentage of net revenues, general and administrative expenses increased from 5.8% in 2023 to 8.6% in 2024.

Research and Development Expenses. Our R&D expenses increased by $20.0 million, or 19.8%, to $120.8 million in 2024 from $100.8 million in 2023. The increase was driven by continued investment in product innovation and next-generation technology development. R&D expenses represented 2.0% of net revenues in 2024, up from 1.3% in 2023. Refer to "—C. Research and Development" for additional detail on our R&D activities.

Other Operating Income, Net. Our other operating income, net, increased by $10.2 million, or 12.1%, to $94.5 million in 2024 from $84.3 million in 2023. The increase was primarily due to an increase in government grants received.

Interest Expense, Net. Our interest expense, net, decreased by $13.5 million, or 21.6%, from $62.5 million in 2023 to $49.0 million in 2024. Our interest expense increased by $23.4 million, or 20.5%, from $114.1 million in 2023 to $137.5 million in 2024. The increase was primarily attributable to a higher average level of outstanding debt during the year. In 2024 and 2023, we capitalized interest costs related to the construction of qualifying assets totaling approximately $108.9 million and $61.7 million, respectively. The remaining interest expense was recognized in current period operations.

Our interest income increased by $36.8 million, or 71.4%, from $51.6 million in 2023 to $88.5 million in 2024. The increase was driven primarily by higher prevailing interest rates, partially offset by a reduction in our average balance of cash, cash equivalents, and restricted cash during 2024 compared to 2023. In 2023 and 2024, we earned $0.1 million and $18.9 million, respectively, in interest benefits generated from anti-dumping and countervailing duty deposit refunds and supplier settlements.

Loss on Change in Fair Value of Derivatives, Net. We recorded a loss of $51.4 million in 2024 from changes in the fair value of derivative instruments, compared to $27.5 million in 2023. The increase was primarily due to unfavorable movements in the RMB, Euro and JPY exchange rates, partially offset by favorable BRL exchange rates.

Foreign Exchange Gain, Net. We recognized a foreign exchange gain of $46.8 million in 2024, compared to $30.6 million in 2023. The gain was primarily attributable to the favorable movements in the RMB, Euro and JPY exchange rates, partially offset by unfavorable BRL exchange rates.

Investment Income, Net. Our investment income declined to $1.4 million in 2024 from $14.6 million in 2023. The decrease was primarily due to a reduction in the fair value of our investments in China.

Income Tax Benefit (Expense). We recognized an income tax benefit of $16.6 million in 2024, compared to an income tax expense of $59.5 million in 2023. The change was primarily driven by a loss before income tax in 2024. Our effective tax rate may continue to fluctuate due to changes in pre-tax earnings, jurisdictional mix of income, tax incentives, valuation allowances, and other permanent tax items.

Equity in Earnings (Loss) of Affiliates. Our share of the earnings of affiliates resulted in a net loss of $12.1 million in 2024, compared to a net gain of $14.6 million in 2023. The year-over-year decline was primarily due to weaker performance from certain investees.

Net Income (Loss) Attributable to Non-Controlling Interests and Redeemable Non-Controlling Interests. Our net income (loss) attributable to non-controlling interests and redeemable non-controlling interests increased to $113.9 million in 2024 from $89.4 million in 2023. The increase was primarily driven by the recognition of $164.3 million in income attributable to our consolidated tax equity partnerships under the hypothetical liquidation at book value ("HLBV") method. This was partially offset by lower net income attributable to noncontrolling shareholders of CSI Solar.

Recently Issued Accounting Pronouncements

See "Item 17. Consolidated Financial Statements—Note 2—Recently Issued Accounting Pronouncements."

B Liquidity and Capital Resources

As of December 31, 2024, we had $1,701.5 million in cash and cash equivalents and $562.5 million in restricted cash. We intend to fund our existing and future material cash requirements for at least the next 12 months, including working capital, capital expenditures, investment requirements, subsidiary share repurchases, debt repayments, and convertible notes redemptions, through available cash and cash equivalents, anticipated cash flow from operations, and drawdowns under our credit and convertible note facilities. From time to time, we may also seek additional financing, refinancing, or equity transactions, including open market purchases and privately negotiated transactions, and acquisitions or investments in other companies and businesses that we believe could expand our operations, augment our market coverage, enhance our technical capabilities, or otherwise offer growth opportunities. The timing and amount of any such transaction will depend on prevailing market conditions, our liquidity requirements, contractual restrictions, and other factors, and the amounts involved may be significant.

Our future cash flows and working capital needs will depend on many factors. We intend to expand and upgrade our solar modules and battery energy storage production capacities and to remain competitive in production technology. We target to adjust our solar module, cell, wafer and ingot annual production capacities to 61.0 GW, 36.2 GW, 37.0 GW and 33.0 GW, respectively, by December 31, 2025, subject to market conditions. We target increasing the annual battery energy storage system and battery cell manufacturing capacities to 30.0 GWh and 3.0 GWh, respectively, by December 31, 2025. These initiatives may result in elevated near-term capital expenditures. Prepayment for future supply of raw materials and other components will continue to increase cash outflows in the near term. Advances to suppliers totaled $326.0 million and $242.6 million as of December 31, 2023 and 2024, respectively, and may increase in the event of supply chain constraints or raw material cost surges. To manage working capital, we require certain customers to make partial prepayments, which totaled $445.0 million and $246.2 million as of December 31, 2023 and 2024, respectively.

Our projects business requires significant investment in solar power and battery energy storage assets, including equity investments in project affiliates. We aim to grow both recurring income from operating assets and revenue from project development activities. However, these projects typically involve multi-year development cycles and require substantial upfront investments, such as interconnection deposits, letters of credit, and permitting, legal, equipment and construction costs, before any returns are realized. Liquidity needs may increase due to project delays, regulatory or policy changes (including tariffs), or supply chain disruptions. If existing credit facilities are insufficient to support development, construction, or asset acquisition, we may need to seek additional financing, equity or reduce investment levels. In certain joint ventures, we also rely on capital contributions from our partners. Delays in asset monetization could adversely affect our liquidity.

In 2020, we raised RMB 1.78 billion ($261.3 million) to position CSI Solar for its planned carve-out IPO in China and bring in leading institutional investors and strategic partners. In 2021, we conducted an “at-the-market” (ATM) offering program, through which we sold 3,639,918 common shares, raising $150.0 million in gross proceeds.

In June 2023, CSI Solar completed its STAR Listing on the Shanghai Stock Exchange, raising gross proceeds of RMB 6.01 billion ($842.6 million). In July 2023, the full over-allotment option was exercised, raising an additional gross proceeds of RMB 0.9 billion ($124.3 million). All U.S. dollar equivalents are based on the exchange rate on the respective transaction dates. CSI Solar issued 622,217,324, representing approximately 17% of the its outstanding shares post-IPO. As of the date of this annual report, we own a 63.1% equity interest in CSI Solar.

In January 2024, Canadian Solar Energy Group B.V. and Recurrent Energy B.V., our subsidiaries, entered into a purchase and sale agreement with GRP IV UK Holdco Limited (“GRP IV”), which is managed by BlackRock, Inc.’s climate infrastructure business (“BlackRock”) to issue Series A preferred shares of Recurrent Energy B.V. (“Series A Preferred Shares”) to GRP IV. GRP IV subsequently assigned its rights, liabilities and obligations under the agreement to GRP IV Rose Bidco Ltd. (“Investor”), an affiliated entity that is also managed by BlackRock. Following initial and subsequent closings in May and September 2024, respectively, BlackRock’s total investment reached $500.0 million, representing 20% of Recurrent Energy B.V.’s fully diluted shares on an as-converted basis as determined immediately upon closing. See “Item 4. Information on the Company—B. Business Overview—Recurrent Energy Key Development.”

Cash Flows and Working Capital

As of December 31, 2024, we had approximately $7,697.5 million in contractual credit facilities, with $3,693.7 million drawn as borrowings, $513.5 million utilized through bank guarantees, letters of credit and short-term notes payable, and $3,490.4 million available for draw down upon demand. In addition, we had uncommitted credit facilities totaling approximately $2,153.6 million, with $519.7 million drawn as borrowings and $351.8 million utilized under similar banking arrangements as of December 31, 2024.

As of December 31, 2024, borrowings of $2,212.1 million were secured by property, plant and equipment with a carrying amount of $504.8 million, inventories of $20.0 million, land use rights of $36.4 million, restricted cash of $306.6 million, accounts receivable of $10.0 million, equity interests of $768.3 million, project assets of $502.9 million, and solar power and battery energy storage systems of $1,430.8 million. These borrowings were classified as short-term borrowings of $433.9 million, non-recourse borrowings - current of $130.1 million, long-term borrowings of $790.3 million and non-recourse borrowings of $857.9 million.

Our long-term borrowings mature between the first quarter of 2025 and the third quarter of 2047. A portion of these borrowings, relating to solar power and battery energy storage project assets expected to be sold within one year, are classified as current liabilities and have maturities ranging from the third quarter of 2026 to the third quarter of 2029. Our long-term borrowings carried a weighted average interest rate of 5.4% as of December 31, 2024.

Our short-term borrowings mature between the first quarter to the fourth quarter of 2025 and bored a weighted average interest rate of 3.1% as of December 31, 2024. While these facilities do not include automatic renewal provisions, we have historically secured the replacement of these short-term borrowings on similar terms prior to maturity.

In 2016, we secured a JPY9.6 billion ($85.2 million) syndicated loan led by Sumitomo Mitsui Banking Corporation ("SMBC") to support our Japan solar development pipeline and for general corporate purposes. The facility was renewed in 2020 at JPY9.1 billion ($88.2 million) for two years and expanded in 2021 to JPY10.0 billion ($89.9 million) for three years. In 2022, we amended to split the facility into a JPY7.5 billion ($57.2 million) tranche 1, guaranteed by us, and a JPY2.5 billion ($19.1 million) tranche 2, secured by a pledge of equity interest in CSIF. In 2023, we amended the tranche 1 loan facility to JPY6.3 billion ($44.3 million), with maturity unchanged in September 2024. In 2024, tranche 1 was reduced to JPY5.8 billion ($33.6 million) and tranche 2 was increased to JPY3.0 billion ($20.4 million). In 2024, we extended maturity to September 2027. As of December 31, 2024, $36.6 million and $17.3 million were outstanding under each respective tranche.

In 2020, we entered a $75.0 million facilities with Nomura Securities International, Inc ("Nomura"). The syndicated facility was expanded to $125.0 million in 2021, and extended in November 2023 to mature in November 2025. The facility, guaranteed by us, is secured by certain project assets in the U.S. and was fully drawn as of December 31, 2024. In 2023, we obtained a further $100.0 million facility from Nomura. The facility, guaranteed by us, is secured by certain project assets in the Brazil and was fully outstanding as of December 31, 2024. In March 2025, the facility was expended to $150.0 million and extended to mature in March 2027.

In 2020, we issued $230.0 million of 2.50% convertible senior notes due October 1, 2025. We received net proceeds of $223.0 million from the offering.

In 2021, our 51%-owned subsidiary, Sunmex Renovables, S.A. De C.V., obtained a $60.0 million facility from SMBC for the El Mayo project in Mexico, maturing in March 2037. As of December 31, 2024, $22.4 million was outstanding. We provided a guarantee via letter of credit, and the non-controlling interests maintained its pro rata contribution through shareholder loans of $50.1 million as of December 31, 2024.

In 2021, we obtained a €50.0 million ($61.1 million) credit facility with Banco Santander, S.A., comprising a €25.0 million term loan and €25.0 million revolving credit facility. In 2022, the subsidiary obtained an additional term loan facility of €45.0 million ($48.3 million). These facilities are guaranteed by the us. As of December 31, 2024, all three facilities were fully drawn. These facilities were refinanced in April 2025.

In 2021, we issued a €30.0 million ($34.1 million) fixed rate notes, maturing in December 2026, on Spain's alternative fixed-income market, guaranteed by us.

In 2022, we secured a $50.0 million facility from ING Bank. In August 2024, we secured a €50.0 million ($55.0 million) revolver from ING Bank. The two facilities, guaranteed by us, mature in May 2025 and August 2025, respectively. As of December 31, 2024, these facilities were fully outstanding.

From 2023 to 2024, we obtained several project financings totaling over $1,047.9 million with institutions including NordLB, MUFG, Coöperatieve Rabobank U.A. ("Rabobank") and US Bank for our Bayou Galion, Liberty, North Fork, Papago, Blue Moon and Fort Duncan projects in the U.S. These facilities are secured by project assets and equity interests in subsidiaries. As of December 31, 2024, $83.3 million in recourse and $502.2 million in non-recourse facilities were outstanding.

From 2023 to 2024, we obtained several non-recourse project financings totaling over BRL 1,306.2 million ($212.9 million) with institutions including BNB, Bradesco, Itaú BBA, Vortx Serviços Fiduciários Ltda., and Banco ABC, for our Ciranda I, Ciranda II, Lavras II, Jaíba II, Jaíba III and Luiz Gonzaga projects in Brazil. These facilities are secured by project assets and equity interests in subsidiaries. As of December 31, 2024, $211.2 million was outstanding.

In 2023, we issued JPY18.5 billion ($122.0 million) in private placement of green bonds, maturing in September 2026, guaranteed by us.

In 2023, we secured two credit facilities, comprising a €30.0 million ($32.7 million) and $20.0 million term loan facility, and a $110.5 million revolver with Santander Corporate & Investment Banking ("Santander CIB"), guaranteed by us. As of December 31, 2024, the two facilities were fully drawn. These facilities were refinanced in April 2025.

From 2023 to 2024, we entered multiple credit facilities, guaranteed by CSI Solar, across several subsidiaries totaling over RMB 10.1 billion ($1.4 billion) with maturities ranging from 2025 to 2030. These include unsecured and secured borrowings backed by land use rights, property, plant and equipment, and equity interests in subsidiaries. As of December 31, 2024, $830.7 million was outstanding.

In 2024, we entered into a $450.0 million syndicated credit facility agreement with Santander acting as mandated lead arranger and bookrunner, and six other participating financial institutions. The credit facility will mature through October 2029 by installments. The credit facility is secured by the equity interest and certain assets of our U.S. cell factory, and is guaranteed by us and our U.S. module sales subsidiary. As of December 31, 2024, the facility was undrawn.

In January 2024, we secured a $50.0 million facility with Rabobank. In April 2024, we expanded the facility to $150.0 million, comprising a $50.0 million term loan and a $100.0 million revolver. As of December 31, 2024, $148.1 million was outstanding. This facility was refinanced in April 2025.

In February 2024, we secured a €95.0 million ($102.6 million) facility with Investec Bank Plc. The syndicated multicurrency green facility, guaranteed by us, comprises a €40.0 million term loan and a €55.0 million revolver, maturing in February 2027. As of December 31, 2024, $97.2 million was outstanding.

In May 2024, we secured a non-recourse syndicated revolver of €674.0 million ($731.2 million) with Santander CIB and other banks, maturing in May 2029 and secured by our solar power and battery energy storage systems. As of December 31, 2024, $102.2 million was drawn.

In August 2024, we entered a $200.0 million convertible notes agreement with PAG (the “2029 Notes”) and completed a $50.0 million draw in January 2025. The 2029 Notes bear an interest rate of 6% per annum, payable quarterly in arrears and mature on December 31, 2029. Holders of the Notes also have the right to require us to repurchase the 2029 Notes after December 31, 2027.

From 2021 to 2024, we entered several letter of credit facilities totaling over $600.0 million with institutions including Itaú BBA, Credit Agricole, Nomura, Rabobank, Nordic Guarantee Insurance Ltd and Norddeutsche Landesbank to support our project pipeline. As of December 31, 2024, $463.9 million was outstanding.

In April 2025, we completed a refinancing for $406.8 million in existing credit facilities outstanding as of December 31, 2024, with Banco Santander, S.A., Intesa Sanpaolo S.p.A New York Branch, Coöperatieve Rabobank U.A., New York Branch, and Morgan Stanley Senior Funding, Inc. The new $415.0 million credit facility consists of a €83.8 million ($90.5 million) and a $324.5 million tranche, maturing in April 2028 and extendable by one year subject to lender consent, and is partially guaranteed by us.

Most of our long-term borrowings and credit facilities contain financial covenants, including interest and debt coverage ratios, loan to equity value of designated project ratios, debt to asset ratios, and minimum equity requirements. We were in compliance with these covenants as of December 31, 2024.

The following table sets forth a summary of our cash flows for the periods indicated:

	For the years ended December 31,	
	2023	2024
	(in thousands of $)	
Net cash provided by (used in) operating activities	684,615	(885,324)
Net cash used in investing activities	(1,671,416)	(1,962,257)
Net cash provided by financing activities	2,052,828	2,319,771

Operating Activities

Net cash used in operating activities was $885.3 million in 2024, compared to net cash provided by operating activities of $684.6 million in 2023. The decrease was primarily attributable to a net loss of $77.9 million in 2024 compared to net income of $363.6 million in 2023, as well as a significant increase in cash outflows from changes in operating assets and liabilities, which used $1,652.0 million in 2024 compared to $189.7 million in 2023. These outflows reflected higher working capital requirements associated with our manufacturing expansion, project development activities, inventory for e-STORAGE manufacturing, increase in accounts receivable and a reduction in customer advances.

Investing Activities

Net cash used in investing activities increased to $1,962.3 million in 2024 from $1,671.4 million in 2023, primarily due to higher investments in solar power and battery energy storage systems of $757.6 million in 2024, up from $409.0 million in 2023, while capital expenditures remained elevated at $1,106.2 million, compared to $1,116.5 million in 2023.

Financing Activities

Net cash provided by financing activities was $2,319.8 million in 2024, compared to $2,052.8 million in 2023. The increase was primarily driven by $482.2 million of proceeds from the issue of redeemable preferred shares of a subsidiary and $226.9 million in contributions from redeemable non-controlling interests in tax equity partnerships. In contrast, financing inflows in 2023 were largely supported by the $927.9 million raised in CSI Solar's IPO. Proceeds from borrowings and other financing arrangements increased to $1,690.2 million in 2024 from $1,124.9 million in 2023, primarily to support capital deployment for project construction, pipeline development, and manufacturing expansion in the U.S. and for our e-STORAGE business.

For disclosures related to interest rates, refer to "Item 5. Operating and Financial Review and Prospects—A. Operating Results."

Material Cash Requirements

Our material cash requirements as of December 31, 2024 and any subsequent period primarily include obligations related to borrowings, green bonds, convertible notes, construction, lease liabilities, purchase commitments, financing liabilities, and associated interest payments.

Our purchase obligations arise in the normal course of business and include binding purchase orders for inventories and capital expenditures. As of December 31, 2024, we had inventory purchase commitments, primarily for silicon raw materials, totaling $1,042.7 million, of which $501.4 million is expected to be paid in 2025. Capital expenditures were focused on expanding our manufacturing capacity, totaling $1,116.5 million and $1,106.2 million in 2023 and 2024, respectively. As of December 31, 2024, our commitments for property, plant and equipment purchases were $743.0 million, of which $686.4 million is expected to be paid in 2025. As of December 31, 2024, our commitments for the construction and development for solar power, and battery energy storage systems and project assets were $360.1 million, of which $316.5 million is expected to be paid in 2025.

As of December 31, 2024, we had $2,731.5 million in long-term borrowings and $1,873.3 million in short-term borrowings. Scheduled principal payments on long-term borrowings are $812.8 million in 2026, $569.2 million in 2027, $329.4 million in 2028, $141.7 million in 2029, and $878.4 million in 2030 and thereafter. Long-term borrowing may have fixed or variable interest rates. For borrowings with variable-rate interest, interest payments are estimated based on projected market interest rates for various floating-rate benchmarks received from third parties. Expected interest payments on long-term borrowing are $146.9 million in 2025, $126.1 million in 2026, $92.1 million in 2027, $71.6 million in 2028, $62.6 million in 2029, and $362.8 million in 2030 and thereafter. Interest on short-term borrowings in 2025 is expected to be $57.3 million. Future changes in interest rate environment may materially affect our estimate of interest payments in the future.

As of December 31, 2024, we had outstanding convertible notes with principal amount of $230.0 million, bearing an annual interest rate of 2.5%, which will mature on October 1, 2025. Assuming no conversion, regular interest obligations on convertible notes as of December 31, 2024 are $4.3 million in 2025. We also had outstanding green bonds of $146.5 million maturing in 2026, with interest payments of $3.1 million in 2025 and $2.5 million in 2026.

As of December 31, 2024, financing liability totaled $77.5 million, with scheduled repayments expected through 2030. Operating lease liabilities were $293.2 million, of which $25.6 million matures in 2025 and finance lease liabilities totaled $186.4 million, with $57.8 million maturing in 2025.

In the normal course of business, our subsidiaries provide letters of credit through their banks for purposes including, but not limited to, guarantees for accounts payable, debt service reserves, capital reserves, construction completion and performance. Letters of credit provided by our subsidiaries totaled $632.0 million as of December 31, 2024.

Our cash flows and capital requirements may be affected by changes in the timing of, increases in, or delays in the regulatory determinations of tariffs, duties and tax regulations. We have historically been, and may continue to be, subject to antidumping and countervailing duty rulings and orders, and related proceedings in the U.S., EU and Canada. See "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal and Administrative Proceedings." for further information.

We have contingent contractual obligations in the ordinary course of developing solar power and battery energy storage projects. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our project construction activities may not complete on time, and our development and construction costs could increase to levels that cause the return on our investment in the projects to be lower than expected" and "—We face a number of risks involving offtake contracts, including failure or delay in entering into contracts, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration and other clauses." These obligations are designed to cover specific risks and are only triggered upon the occurrence of certain events, such as construction delays, cost overruns, change of control, subsidiary defaults, political or tax risks, sale indemnities, energy delivery shortfalls, sponsor support and liquidated damages. While we do not expect to make material payments under these contingent contractual obligations, many of the triggering events are outside our control, and we can provide no assurance that we will be able to fund these obligations if we are required to make substantial payments thereunder.

C Research and Development

We conduct research and development activities in the following areas: i) ingot growth and wafering, ii) solar cells, iii) modules, iv) battery energy storage, v) energy solutions, vi) power electronics, vii) system performance analysis, and viii) reliability testing.

- Ingot growth and wafering research is focused on developing advanced crystallization and sawing technologies to produce high quality mono wafers and reduce energy and material use.
- Solar cell research is focused on developing new N-type based high efficiency solar cells, including TOPCon, HJT and IBC, and advanced solar cell processing technologies.
- Module research is focused on developing new module designs and technologies for improving wattage, reliability, efficiency and system-level performance.
- Battery energy storage, energy solutions and power electronic research is primarily focused on developing high quality battery energy storage systems and inverters for utility, commercial and residential applications.
- System performance analysis provides module- and system-level performance evaluation and LCOE benchmarking for new products and innovations.
- Product reliability research is engaged in research collaboration with leading research institutes to accelerate market penetration of incremental and rupture solar technologies, by allowing state-of-the-art reliability evaluation and performance characterization. Our ISO17025-accredited Changshu Photovoltaic Testing Laboratory ("CPTL") in China conducts certification per IEC61215/61730/62804 standards and collaborates with leading research institutes to develop extensive reliability research on solar modules and components. Since 2010, the laboratory has been approved by VDE and CSA certification bodies under their data approval programs. Using data science, extensive characterization platforms and data-driven proprietary tool, the research focuses on enabling products with longer service life and lower degradation rates, supporting improved module warranties.

As of December 31, 2024, we had 1,224 employees engaged in research, product development and engineering.

Our research and development activities include:

- developing Czochralski ("CZ") mono pulling technologies compatible with 182 mm and 210 mm ingot size with a competitive cost structure;
- developing novel diamond wire sawing technology compatible with 182 mm and 210 mm mono ingots;

- continuously improving the conversion efficiency of existing solar cells and reducing costs through process and material improvements and innovation;
- developing new N-type based cell structures and technologies for higher efficiencies and performance;
- continuously improving the wattage of existing solar modules and reducing costs through process and material improvements and innovation;
- developing new modules with improved design and assembly methods to achieve higher power output, module-level efficiency, reliability and system-level performance;
- designing and developing customized solar modules and products to meet specific customer requirements;
- designing and developing power electronics such as inverters;
- designing and developing battery energy storage systems;
- conducting testing, data tracking and analysis to assess system-level performance and reliability of various products and innovations;
- developing data-based, accurate reliability models to guide future materials and design innovations, and commercialize long-lifetime and low-degradation solar modules; and
- establishing highly accelerated reliability testing and innovative characterization methods to expedite the large-scale commercialization of product innovations.

In the future, we expect to focus on the following research and development initiatives that we believe will enhance our competitiveness.

- *Ingot and wafer*. Since cell efficiency heavily depends on wafer quality, we focus on continuously improving quality performance of mono wafers, including decreasing the oxygen content and reducing the axial-direction resistivity difference of N-type ingot to support the further improvement of cell efficiency. Additional R&D efforts focus on consuming less energy and materials in CZ pulling and diamond wire sawing, such as increasing pulling speed, lowering power consumption during crystal growth, improving the success rate of seeding and neck growth in CZ pulling, and reducing diamond wire diameter while improving the yield of diamond wire sawing.
- *High efficiency cells*. Our research and development is focused on new products, such as N-type HJT cells, TOPCon cells, and other technologies such as IBC cells. We began developing HJT cell technologies in March 2023 and launched HJT module products for premium rooftop applications in 2023 and for utility-scale applications in 2024. We expanded our TOPCon module product offering in 2024, achieving 26.5% cell efficiency, and began full-scale production from ingot to module in February 2024. These advanced technologies lower system-level LCOE and enhance product competitiveness. In the future, we plan to launch new high-efficiency IBC cell and module products for residential applications.
- *Competitive solar module products.* Our research and development efforts include module R&D, processing, testing and reliability, make our products highly competitive in the market. Our BiHiKu7 TOPCon module achieved wattages of 705W and module efficiency of 22.7% in 2023. Through optimization of design, process, quality control and testing methods, the degradation rate of our modules reduced significantly over the past ten years, supporting enhanced warranty conditions from 0.7% per year to 0.45% per year for our reliability-leading BiHiKu7 modules. We started mass production of 182 mm bifacial TOPCon modules in February 2023 and 210 mm bifacial TOPCon modules in July 2023. In 2022, we introduced a BIPV system with innovative metal roof design and installation method. This system was launched in 2023. In 2022, we developed an alloy steel frame module and launched in 2023. In the future, we will develop modules for seawater floating systems, IBC modules, HJT utility modules, and PV systems integrated with roads and agriculture.

- *Utility-scale battery energy storage products.* SolBank 1.0 was our first generation product tailored for utility-scale applications around the world. In 2023, we developed SolBank3.0, featuring disruptive design to increase energy density with over 5MWh nominal capacity within a 20-foot container, durable LFP cells, BMS for active balancing, Thermal Management System ("TMS") for smart liquid cooling/heating for battery system, centralized water-cooling and back-to-back installation support. In 2023, we developed KuBank, a battery energy storage product, targets C&I applications. KuBank offers standardized, modular design enabling unlimited parallel expansion of the energy storage system. By 2024, KuBank had achieved certification and commercial launch across China, the U.S. and EMEA.

- *Residential battery energy storage products.* Our EP Cube offerings comprise a flexible whole-home battery energy storage solution that includes a smart gateway, hybrid inverter and battery module. The solution is available in 9.9 kWh, 13.3 kWh, 16.6 kWh, 19.9 kWh configurations and is scalable up to 119.9 kWh with six parallel units. EP Cube provides reliable power backup, integrates a self-designed hybrid inverter and supports up to 16 Amp 4 MPPT connections to store electricity generated by a PV system, and automatically stores electricity from the grid during off-peak times through authorized settings. With 24/7 monitoring capabilities, EP Cube can detect outages and provide a seamless response when the power supply is disrupted.

- *Energy solution products*. We have developed single-phase solar, three-phase solar and hybrid storage inverters, as well as battery energy storage systems for utility, commercial and residential applications, across front-of-meter and behind-the-meter applications. Our string inverters are progressing through certifications to expand market availability. We also continue to develop ready-to-install solar system kits that integrates solar modules, inverters, racking systems, battery energy storage and accessories, with global deployment.

- *Power electronic products.* Our power electronics cover a full inverter portfolio, including residential 3-5 kW and 7-9 kW inverters, C&I 15-25 kW, 40-60 kW and 75-125 kW inverters, utility-scale 320kW/333kW/350kW inverters, and 200kW PCS for energy storage system. We began our R&D focus for residential inverters in 2017, with products delivered to the market by 2019. Our Suzhou facility has 3 GW of production capacity. We maintain local and international certifications, including IEC62109/62116 safety certification and CQC certification in China, KSC 8565/8567 in Korea, RS097 in South Africa, 140/515 in Brazil and EN50549-1/EN50549-2/CEI0-21/CEI0-16/RD1699/NTS2.1/VDE4105/PPDS in Europe, with additional certifications underway before the products enter the relevant markets.

D Trend Information

Other than as disclosed elsewhere in this annual report on Form 20-F, we are not aware of any trends, uncertainties, demands, commitments or events that are reasonably likely to have a material adverse effect on our net revenues, income, profitability, liquidity or capital resources, or that would render reported financial information to be not necessarily indicative of future operating results or financial conditions.

E Critical Accounting Estimates

Our significant accounting policies are described in "Note 2. Summary of Principal Accounting Policies" to our consolidated financial statements included elsewhere in this annual report on Form 20-F. The preparation of these financial statements in accordance with U.S. GAAP requires us to make estimates and judgments that affect the reported amount of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. Critical accounting estimates are those that involve significant judgment or uncertainty and could materially impact our financial condition or results of operations if different assumptions or conditions were to occur. The following represent our most critical accounting estimates.

We are not aware of any specific events or circumstances that would require updates to our estimates and judgments or require us to revise the carrying value of our assets or liabilities from what had been assumed when the financial statements were prepared. These estimates may change as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions.

Revenue

We recognize revenue from sales of battery energy storage products at a point in time when the customers obtain control of the products, typically upon shipment or delivery depending on contract terms. Revenue from turnkey battery storage solutions and EPC services is recognized over time using the percentage-of-completion method, based on actual costs incurred relative to total estimated costs to determine progress towards contract completion. Revenue recognition involves significant estimates and assumptions, including the effects of performance incentives, liquidated damages and other contractual adjustments. These estimates and assumptions are reassessed periodically. Changes in estimated costs or revenues result in a cumulative effect recorded in the period of change. If estimated total project costs indicate a loss, the total amount of such loss, excluding general and administrative expense, is recognized immediately.

We recognize revenue from sales of solar power and battery energy storage projects at a point in time when customers obtain control of the projects. These projects are typically held in special purpose legal entities, partnerships or trusts, which we refer to as project companies. Significant judgment is involved in assessing whether deconsolidation of the project companies is appropriate upon transfer of equity interest to customers, identifying performance obligations, and estimating variable considerations as part of the transaction price.

Impairment of Long-lived Assets, Project Assets and Solar Power and Battery Energy Storage Systems

We evaluate our property, plant and equipment, and solar power and battery energy storage systems for impairment whenever events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. These require significant judgment in determining whether such events or changes have occurred. We consider factors such as asset group utilization, process and equipment technologies, temporary idling of capacity and the expected timing of placing this capacity back into production to evaluate impairment on our property, plant and equipment. We examine factors such as changes in energy curtailment, environmental, permitting, grid interconnection, capital cost, electricity merchant pricing and regulatory conditions that may cause the costs of the project to increase or the selling price of the project to decrease.

In 2024, we recorded impairment losses of $65.3 million for property, plant and equipment, $33.1 million for project assets and $21.4 million for solar power systems.

Inventories

We value our inventories at the lower of cost and net realizable value, based upon assumptions about future demand, market prices and production costs. We assess product-specific facts and circumstances for inventory impairment, particularly when market conditions turn unfavorable, and production costs and estimated costs to sell exceed expected selling price, including trends in polysilicon pricing. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Oversupply of polysilicon, solar wafers, cells and modules may cause substantial downward pressure on the prices of our products and reduce our revenues and earnings.”

In 2024, we recorded an inventory impairment of $152.0 million to reflect the lower of cost and net realizable value.

Redeemable Non-controlling Interests in Subsidiaries, including Tax Equity Partnerships

We finance a portion of the costs of our recently constructed U.S. solar energy and battery energy storage projects through tax equity partnerships. We account for our contractual relationships with tax equity investors using the Hypothetical Liquidation at Book Value ("HLBV") method. These tax equity partnerships are typically consolidated as variable interest entities ("VIEs") in which we hold a variable interest and are deemed the primary beneficiary.

Under the terms of these arrangements, tax equity investors are generally entitled to substantially all of the accelerated depreciation tax deductions and investment tax credits associated with the projects, together with a portion of the distributable cash. Their entitlement to these benefits typically declines to a residual interest after a predefined flip point is reached, typically the expiration of a time period or the achievement of a target yield. Because the allocation of tax attributes and cash flows is not proportionate to initial capital contributions or ownership percentages, we have determined that these arrangements represent substantive profit-sharing arrangements. In order to reflect the substantive profit-sharing arrangements under the HLBV method, the income or loss attributable to redeemable noncontrolling interests reflects the changes in the amounts that tax equity investors would hypothetically receive upon liquidation at the beginning and end of each reporting period, after considering any capital transactions, such as contributions or distributions, between our subsidiaries and tax equity investors. Attributing income and loss to the tax equity investors under the HLBV method requires significant assumptions and estimates to calculate the amounts that tax equity investors would receive in a hypothetical liquidation. Changes in these assumptions and estimates can materially affect the income or loss allocated to the tax equity investors.

In 2024, we recorded a HLBV adjustment of $164.3 million to reflect the changes in the tax equity investors' interest in the net assets of the relevant tax equity partnerships. Further, we classified Recurrent Energy B.V.'s preferred shares as redeemable non-controlling interests. The carrying value of the redeemable non-controlling interest is not accreted or adjusted to redemption value unless the redemption of such preferred shares by our subsidiary becomes probable, which involves significant judgment.

Warranties

We provide warranties on solar products and battery storage systems covering performance, manufacturing defects, and degradation. We have established procedures to monitor trends in warranty support, replacement and repair costs, historical claims experience, expected failure rates based on quality reviews and other relevant assumptions. These estimates are revised as necessary to reflect new information. We also assess expected future product performance through quality and reliability testing, and actual field operating information. In 2024, we accrued warranty provisions of $35.7 million. As of December 31, 2024, our accrued warranty liability was $84.1 million.

ITEM 6 *DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES*

A Directors and Senior Management

The following table sets forth information regarding our directors and executive officers as of the date of this annual report on Form 20-F.

Name	Age	Position/Title
Shawn (Xiaohua) Qu	61	Chairman of the Board, President and Chief Executive Officer
Yan Zhuang	61	Director and President of CSI Solar
Harry E. Ruda	66	Independent Director
Andrew (Luen Cheung) Wong	67	Independent Director
Lauren C. Templeton	49	Independent Director
Leslie Li Hsien Chang	70	Lead Independent Director
Xinbo Zhu	52	Director and Chief Financial Officer

Directors

Dr. Shawn (Xiaohua) Qu founded Canadian Solar Inc. in Guelph, Ontario, Canada in 2001 and has been the chairman and chief executive officer of our company since then. He is also the Chairman of CSI Solar, and has been serving as a director of CSI Solar since September 2020. Canadian Solar went public on the Nasdaq in 2006 and is one of the world's largest solar technology and renewable energy companies, with approximately 17,000 employees globally. We are 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, our products and services have benefited thousands of customers in over 160 countries, and provided clean electricity to millions of households. Prior to founding Canadian Solar, Dr. Qu worked at ATS Automation Tooling Systems in Canada and its subsidiary Photowatt International in France. Before that, Dr. Qu was a Research Scientist at Ontario Hydro (now Ontario Power Generation). Dr. Qu received the EY Sustainability Excellence Award 2023 for individuals and was named an Innovator on the TIME100 Climate List of the 100 most influential leaders driving business climate action of 2024. Dr. Qu received a BSc degree from Tsinghua University, an MSc degree in Physics from the University of Manitoba and a PhD degree in Materials Science from the University of Toronto. Dr. Qu continued working as a postdoctoral researcher at the University of Toronto, focusing on semiconductor optical devices and photovoltaic cells. Dr. Qu has been a fellow of Canadian Academy of Engineering since 2019.

Mr. Yan Zhuang has served as a director of our company since September 2020. He is also the President of CSI Solar, and has served as a director of CSI Solar since September 2020. Mr. Zhuang is currently an independent non-executive director of Zhongji Innolight Co., Ltd., which is listed on the Shenzhen Stock Exchange. He has served various leadership roles, most recently as our president and chief operating officer, and previously as acting chief executive officer, senior vice president and chief commercial officer, senior vice president of global sales and marketing, and prior to that as our vice president of global sales and marketing. He was an independent director of our company from September 2007 to June 2009. Mr. Zhuang has worked in corporate branding, sales and marketing positions with, or provided consulting services to, a variety of multinational companies for over 20 years. In 2008, he founded and became a director of INS Research and Consulting. Mr. Zhuang was the head of Asia for Hands-on Mobile, Inc., a global media and entertainment company with operations in China, South Korea and India, from 2006 to 2007. He previously served as its senior vice president of business operations and marketing in Asia. Before joining Hands-on Mobile, Inc., he held various marketing and business operation positions with Motorola Inc., including as its Asia Pacific regional director of marketing planning and consumer insight. Mr. Zhuang holds a bachelor's degree in electrical engineering from Northern Jiaotong University, China, a Master of Science degree in applied statistics from the University of Alberta, Canada and a Master of Science degree in marketing management from the University of Guelph, Canada.

Dr. Harry E. Ruda has served as an independent director of our company since July 2011. He is the Director of the Centre for Advanced Nanotechnology, the Stanley Meek Chair in Nanotechnology and Professor of Applied Science and Engineering at the University of Toronto, Canada. From 1982 to 1984, he developed one of the first theories for electron transport in selectively doped two-dimensional electron gas heterostructures, while working as an IBM post-doctoral fellow. From 1984 to 1989, he was a senior scientist at 3M Corporation, developing some of the first models for electronic transport and optical properties of wide bandgap II-VI semiconductors. Dr. Ruda joined the faculty of the University of Toronto in 1989 in the Materials Science and Engineering and Electrical and Computer Engineering Departments. His research interests focus on the fabrication and modeling of semiconductor nanostructures with applications in the fields of optoelectronics, energy and sensing. Dr. Ruda was one of the founders of a Canadian National Centre of Excellence in Photonics. He has served on the National Science and Engineering Council of Canada and on other government panels, including those of the Department of Energy, Environmental Protection Agency, National Science Foundation in the U.S. and the Royal Academy of Engineering and Engineering Physical Sciences Research Council in the United Kingdom. Dr. Ruda is a Fellow of the Royal Society of Canada, a Fellow of the Institute of Physics, a Fellow of the Institute of Nanotechnology, and a Fellow of the Canadian Academy of Engineering. He obtained his Ph.D. in semiconductor physics from the Massachusetts Institute of Technology in 1982.

Mr. Andrew (Luen Cheung) Wong has served as an independent director of our company since August 2014. He has also served as an independent director and the vice-chairman of Huazhong In-vehicle Holdings Company Limited, which is listed on the Hong Kong Stock Exchange. Previously, Mr. Wong served as an independent non-executive director of Chubb Life Insurance Company Ltd., between 2008 and 2024, a director and a member of the audit committee, nomination and remuneration committee of China CITIC Bank Corporation Limited, a company listed on The Stock Exchange of Hong Kong, between 2013 and 2018. Mr. Wong was the director of Intime Retail (Group) Co. Ltd., a company listed on The Stock Exchange of Hong Kong, between 2013 and 2014, and was the director and a member of audit committee, risk management committee, nomination and remuneration committee of China Minsheng Bank, a company listed on The Stock Exchange of Hong Kong, from 2006 to 2012. From 1982 to 2006, Mr. Wong held senior positions at the Royal Bank of Canada, the Union Bank of Switzerland, Citicorp International Limited, a merchant banking arm of Citibank, Hang Seng Bank Limited and DBS Bank Limited, Hong Kong. Mr. Wong was awarded the National Excellent Independent Director by the Shanghai Stock Exchange in 2010 and received the Medal of Honour (Hong Kong SAR) from the Hong Kong SAR Government in 2011. Mr. Wong obtained his Bachelor of Social Sciences (Honours) degree from the University of Hong Kong in 1980 and a Master of Philosophy degree from Hong Kong Buddhist College in 1982.

Ms. Lauren C. Templeton has served as an independent director of our company since January 2020. Ms. Templeton is the founder and President of Templeton & Phillips Capital Management, LLC, a global investing boutique located in Chattanooga, Tennessee. She is also an independent director and member of the audit committee of Fairfax Financial Holdings Limited, a financial holding company engaged in property and casualty insurance and reinsurance and associated investment management, and its publicly-traded subsidiary, Fairfax India Holdings Corporation. Ms. Templeton serves on a number of non-profit organizations, including serving as Chairperson of the Board of Trustees of the John Templeton Foundation. She is a member of the Templeton World Charities Foundation and the Templeton Religion Trust. She also serves on the Board of Overseers at the Atlas Economic Research Foundation. Ms. Templeton is the former President of the Southeastern Hedge Fund Association, based in Atlanta, Georgia. She is also the co-author of “Investing the Templeton Way: The Market Beating Strategies of Value Investing’s Legendary Bargain Hunter”, which has been translated into nine languages. Ms. Templeton holds a Bachelor of Arts Degree in Economics from the University of the South, Sewanee.

Mr. Leslie Li Hsien Chang has served as an independent director of our company since September 2020 and has served as a director of CSI Solar since December 2020. Mr. Chang is the lead independent director of our company. Mr. Chang is currently an independent non-executive director, chairman of the audit committee, and a member of the remuneration committee and nomination committee of Huzhou Gas Company Limited. Since March 2014, Mr. Chang has been serving as Senior Advisor to CITIC Capital (Holdings) Limited. Prior to that, Mr. Chang served as a senior corporate executive and board director at several companies listed on the Hong Kong Stock Exchange. He joined CITIC Pacific Limited (now known as China CITIC Limited) initially as General Manager, Finance in 1994 and later became the Executive Director and Deputy Managing Director of the company responsible for the Group’s financial management, accounting, and treasury functions. Mr. Chang also served as the Executive Director and Chief Executive Officer of HKC (Holdings) Limited; Executive Director and Vice Chairman of China Renewable Energy Investment Limited; Alternate Director on the board of Cathay Pacific Airways Limited and Independent Non-Executive Director of Pou Sheng International (Holdings) Limited, among other senior executive roles. Mr. Chang started his career after graduating from George Mason University business school in 1984 and joined the New York Office of KPMG. He became a partner of the firm specializing in the financial services industry and served as the Director of the Chinese Practice. Mr. Chang served as a certified public accountant in the State of New York. He is a member of the American Institute of Certified Public Accountants, New York State Society of Certified Public Accountant, Chartered Global Management Accountants, and the Hong Kong Institute of Certified Public Accountants.

Mr. Xinbo Zhu has served as a director of our company since June 2024. He also served as Senior Vice President and Chief Financial Officer since May 2024. He previously served as chief supply and risk officer of Recurrent Energy, oversaw global procurement and chaired the investment committee. Before that, he was vice president of operations and project finance for our project development business before it was rebranded as Recurrent Energy in 2023. Mr. Zhu also served as finance controller of the company from 2018 to 2020, having been finance controller of the project development business from 2016 to 2018. Mr. Zhu joined the company in 2014 as special assistant to the CEO, responsible for corporate strategy. Before joining our company, he worked for multinational companies including Vishay, American Power Conversion and Royal Philips Electronics. Mr. Zhu earned his MBA from Rotman School of Management, University of Toronto, and his M.S. in electronic engineering and B.S. with double majors in telecommunication engineering and mechanical engineering from Shanghai Jiao Tong University.

Duties of Directors

Under the OBCA, Canadian Solar Inc.'s directors are required to manage, or to supervise the management of, the business and affairs of our company. Pursuant to the OBCA, every director and officer of Canadian Solar Inc. in exercising his or her powers and discharging his or her duties to us shall act honestly and in good faith with a view to our best interests and shall exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. A shareholder has the right to seek damages if a duty owed by our directors is breached.

The functions and powers of our board of directors include:

- convening shareholder meetings and reporting to shareholders at such meetings;
- declaring dividends and authorizing other distributions to shareholders;
- appointing officers and determining the term of office of officers;
- exercising the borrowing powers of our company and mortgaging the property of our company; and
- approving the issuance of shares.

Every director and officer of Canadian Solar Inc. has a duty to comply with the OBCA and the regulations made thereunder and with our articles and by-laws. No provision in a contract or in the articles or by-laws of Canadian Solar Inc. or a resolution of our board of directors relieves a director or officer from the duty to act in accordance with the OBCA and the regulations made thereunder or relieves him or her from liability for a breach thereof.

However, a director will not be liable for breaching his or her duty to act in accordance with the OBCA in certain circumstances if the director exercised the care, diligence and skill that a reasonably prudent person would have exercised in comparable circumstances, including reliance in good faith on:

- financial statements of our company represented to him or her by an officer of our company or in a written report of the auditor of our company as presenting fairly the financial position of our company in accordance with generally accepted accounting principles;
- an interim or other financial report of our company represented to him or her by an officer of our company as presenting fairly the financial position of our company in accordance with generally accepted accounting principles;
- a report or advice of an officer or employee of our company, where it is reasonable in the circumstances to rely on the report or advice; or
- a report of a lawyer, accountant, engineer, appraiser or other person whose profession lends credibility to a statement made by any such person.

B Compensation of Directors and Executive Officers

Cash Compensation

We paid our directors, executive officers and key management personnel aggregate cash remuneration, including salaries, bonuses and benefits in kind, of approximately $10.1 million for 2024. Of this amount, we paid approximately $0.4 million to our six independent directors, approximately $3.3 million to our executive officers and $6.4 million to key management personnel. The total amount set aside or accrued by us and our subsidiaries to provide pension, retirement or similar benefits for our directors and executive officers was approximately $0.2 million in 2024.

The following table summarizes the base compensation of our executive officers and key management personnel for the year ended December 31, 2024. Target performance-based compensation is calculated as a percentage of base salary. The actual bonus payable may be more or less than the annual target bonus, depending on the achievement of both corporate and individual performance goals.

Name	Base Salary (in thousands of $)
Shawn (Xiaohua) Qu	962
Yan Zhuang	866
Xinbo Zhu	410
Canadian Solar Inc. executives[1]	2,563
CSI Solar executives[2]	1,744
Total	6,545

(1) Includes seven key management personnel across various corporate functions of Canadian Solar Inc.
(2) Includes five key management personnel across various corporate functions of CSI Solar.

Share Incentive Plans

In March 2006, we adopted a share incentive plan (the "Plan").

The purpose of the Plan is to promote the success and enhance the value of our company by linking the personal interests of the directors, employees and consultants to those of the shareholders and providing the directors, employees and consultants with an incentive for outstanding performance to generate superior returns to the shareholders. The Plan is also intended to motivate, attract and retain the services of the directors, employees and consultants upon whose judgment, interest and effort the successful conduct of our operations is largely dependent.

In September 2010, the shareholders approved an amendment to the Plan to increase the maximum number of common shares which may be issued pursuant to all awards of restricted shares, options and restricted share units under the Plan to the sum of (i) 2,330,000 plus (ii) the sum of (a) 1% of the number of our outstanding common shares on the first day of each of 2007, 2008 and 2009 and (b) 2.5% of our outstanding common shares on the first day of each calendar year after 2009. In June 2020, the shareholders approved an amendment to the Plan to extend the term of the Plan for a further ten-year period. As a result, the Plan will expire on, and no awards may be granted after June 30, 2029. As of January 31, 2025, the maximum number of common shares which may be issued pursuant to all awards of restricted shares, options and restricted share units under the Plan was 25,486,000 common shares, of which 566,190 restricted shares, 3,283,393 options, and 10,269,841 restricted share units (in each case net of forfeitures) have been awarded, leaving 11,366,576 common shares available to be issued.

The following describes the principal terms of the Plan:

Types of Awards. We may make the following types of awards under the Plan:

- restricted shares, which are common shares that are subject to certain restrictions and may be subject to a risk of forfeiture or repurchase;
- options, which entitle the holder to purchase our common shares; and
- restricted share units, which entitle the holder to receive our common shares.

Plan Administration. The Compensation Committee of our board of directors administers the Plan. The Compensation Committee or the full board of directors, as appropriate, determines the provisions, terms, and conditions of each award.

Award Agreement. Awards are evidenced by an award agreement that sets forth the terms, conditions and limitations for each award.

Eligibility. We may grant awards to employees, directors and consultants of our company or any of our related entities, which include our subsidiaries and any entities in which we hold a substantial ownership interest. We may, however, grant options that are intended to qualify as incentive share options only to our employees.

Acceleration of Awards upon Corporate Transactions. Outstanding awards will accelerate upon a change-of-control where the successor entity does not assume our outstanding awards. In such event, each outstanding award will become fully vested and immediately exercisable, the transfer restrictions on the awards will be released and the repurchase or forfeiture rights will terminate immediately before the date of the change-of-control transaction.

Exercise Price and Term of Options. In general, the Compensation Committee determines the exercise price of an option and sets out the price in the award agreement. The exercise price may be a fixed or variable price related to the fair market value of our common shares. If we grant an incentive share option to an employee who, at the time of that grant, owns shares representing more than 10% of the voting power of all classes of our share capital, the exercise price cannot be less than 110% of the fair market value of our common shares on the date of that grant and the share option is exercisable for no more than five years from the date of that grant.

The term of an award may not exceed ten years from the date of the grant.

Vesting Schedule. In general, the Compensation Committee determines the vesting schedule.

Restricted Share Units

The following table summarizes, as of January 31, 2025, the restricted share units that we had granted under the Plan to our directors, executive officers and certain other individuals.

Name	Restricted Share Units Granted	Restricted Share Units Vested	Restricted Share Units Forfeited	Date of Grant
Directors:				
Shawn (Xiaohua) Qu	6,154 (1)	6,154	—	May 8, 2011
	13,706 (2)	13,706	—	May 20, 2011
	75,075 (2)	75,075	—	March 16, 2012
	67,024 (2)	67,024	—	March 9, 2013
	11,983 (2)	11,983	—	May 4, 2014
	8,274 (2)	8,274	—	May 3, 2015
	20,216 (2)	20,216	—	July 8, 2016
	121,951 (3)	121,951	—	November 6, 2016
	22,607 (2)	22,607	—	May 17, 2017
	77,289 (3)	77,289	—	November 5, 2017
	18,018 (2)	18,018	—	May 13, 2018
	83,805 (3)	83,805	—	November 10, 2018
	15,690 (2)	15,690	—	May 13, 2019
	26,691 (3)	26,691	—	November 9, 2019
	15,748 (2)	15,748	—	May 23, 2020
	11,924 (2)	8,943	—	August 22, 2020
	26,073 (4)	26,073	—	December 30, 2020
	250,000 (6)	187,500	—	September 22, 2020
	12,330 (2)	6,165	—	May 23, 2022
	7,585 (2)	1,896	—	May 23, 2023
	18,326 (2)	—	—	May 20, 2024
Yan Zhuang	2,564 (1)	2,564	—	May 8, 2011
	8,224 (2)	8,224	—	May 20, 2011
	45,045 (2)	45,045	—	March 16, 2012
	40,214 (2)	40,214	—	March 9, 2013
	7,988 (2)	7,988	—	May 4, 2014
	5,516 (2)	5,516	—	May 3, 2015
	13,477 (2)	13,477	—	July 8, 2016
	15,072 (2)	15,072	—	May 17, 2017
	12,012 (2)	12,012	—	May 13, 2018
	10,460 (2)	10,460	—	May 13, 2019
	5,230 (1)	5,230	—	May 13, 2019
	15,748 (2)	15,748	—	May 23, 2020
	11,924 (2)	8,943	—	August 22, 2020
	130,000 (6)	97,500	—	September 22, 2020

Name	Restricted Share Units Granted	Restricted Share Units Vested	Restricted Share Units Forfeited	Date of Grant
Harry E. Ruda	1,020	1,020	—	July 1, 2014
	800	800	—	October 1, 2014
	1,274	1,274	—	January 1, 2015
	880	880	—	April 1, 2015
	993	993	—	July 1, 2015
	1,820	1,820	—	October 1, 2015
	1,033	1,033	—	January 1, 2016
	1,572	1,572	—	April 1, 2016
	2,051	2,051	—	July 1, 2016
	2,228	2,228	—	October 1, 2016
	2,411	2,411	—	January 1, 2017
	2,562	2,562	—	April 1, 2017
	1,901	1,901	—	July 1, 2017
	1,818	1,818	—	October 1, 2017
	1,767	1,767	—	January 1, 2018
	1,802	1,802	—	April 1, 2018
	2,458	2,458	—	July 1, 2018
	2,056	2,056	—	October 1, 2018
	2,096	2,096	—	January 1, 2019
	1,623	1,623	—	April 1, 2019
	1,381	1,381	—	July 1, 2019
	1,486	1,486	—	October 1, 2019
	1,361	1,361	—	January 1, 2020
	1,883	1,883	—	April 1, 2020
	1,587	1,587	—	July 1, 2020
	908	908	—	October 1, 2020
	588	588	—	January 1, 2021
	639	639	—	April 1, 2021
	20,000 (6)	15,000	—	September 22, 2020
	693	693	—	July 1, 2021
	883	883	—	October 1, 2021
	969	969	—	January 1, 2022
	843	—	—	April 1, 2022
	942	—	—	July 1, 2022
	796	—	—	October 1, 2022
	989	—	—	January 1, 2023
	770	—	—	April 1, 2023
	809	—	—	July 1, 2023
	1,203	—	—	October 1, 2023
	1,157	—	—	January 1, 2024
	1,602	—	—	April 1, 2024
	1,953	—	—	July 1, 2024
	1,955	—	—	October 1, 2024
	2,629	—	—	January 1, 2025
Andrew (Luen Cheung) Wong	610	610	—	August 7, 2014
	800	800	—	October 1, 2014
	1,274	1,274	—	January 1, 2015
	880	880	—	April 1, 2015
	993	993	—	July 1, 2015
	1,820	1,820	—	October 1, 2015
	1,033	1,033	—	January 1, 2016
	1,572	1,572	—	April 1, 2016
	2,051	2,051	—	July 1, 2016

	2,228	2,228	—	October 1, 2016
	2,411	2,411	—	January 1, 2017
	2,562	2,562	—	April 1, 2017
	1,901	1,901	—	July 1, 2017
	1,818	1,818	—	October 1, 2017
	1,767	1,767	—	January 1, 2018
	1,802	1,802	—	April 1, 2018
	2,458	2,458	—	July 1, 2018
	2,056	2,056	—	October 1, 2018
	2,096	2,096	—	January 1, 2019
	1,623	1,623	—	April 1, 2019
	1,381	1,381	—	July 1, 2019
	1,486	1,486	—	October 1, 2019
	1,361	1,361	—	January 1, 2020
	1,883	1,883	—	April 1, 2020
	1,587	1,587	—	July 1, 2020
	908	908	—	October 1, 2020
	588	588	—	January 1, 2021
	639	639	—	April 1, 2021
	20,000 (6)	15,000	—	September 22, 2020
	693	693	—	July 1, 2021
	883	883	—	October 1, 2021
	969	969	—	January 1, 2022
	843	—	—	April 1, 2022
	942	—	—	July 1, 2022
	796	—	—	October 1, 2022
	989	—	—	January 1, 2023
	770	—	—	April 1, 2023
	809	—	—	July 1, 2023
	1,203	—	—	October 1, 2023
	1,157	—	—	January 1, 2024
	1,602	—	—	April 1, 2024
	1,953	—	—	July 1, 2024
	1,955	—	—	October 1, 2024
	2,629	—	—	January 1, 2025
Lauren C. Templeton	1,361	1,361	—	January 1, 2020
	1,883	1,883	—	April 1, 2020
	1,587	1,587	—	July 1, 2020
	908	908	—	October 1, 2020
	588	588	—	January 1, 2021
	639	639	—	April 1, 2021
	20,000 (6)	15,000	—	September 22, 2020
	693	693	—	July 1, 2021
	883	883	—	October 1, 2021
	969	969	—	January 1, 2022
	843	—	—	April 1, 2022
	942	—	—	July 1, 2022
	796	—	—	October 1, 2022
	989	—	—	January 1, 2023
	770	—	—	April 1, 2023
	809	—	—	July 1, 2023
	1,203	—	—	October 1, 2023
	1,157	—	—	January 1, 2024
	1,602	—	—	April 1, 2024
	1,953	—	—	July 1, 2024

	1,955	—	—	October 1, 2024
	2,629	—	—	January 1, 2025
Leslie Li Hsien Chang	908	908	—	October 1, 2020
	588	588	—	January 1, 2021
	639	639	—	April 1, 2021
	20,000 (6)	15,000	—	September 22, 2020
	693	693	—	July 1, 2021
	883	883	—	October 1, 2021
	969	969	—	January 1, 2022
	843	—	—	April 1, 2022
	942	—	—	July 1, 2022
	796	—	—	October 1, 2022
	989	—	—	January 1, 2023
	770	—	—	April 1, 2023
	809	—	—	July 1, 2023
	1,203	—	—	October 1, 2023
	1,157	—	—	January 1, 2024
	1,602	—	—	April 1, 2024
	1,953	—	—	July 1, 2024
	1,955	—	—	October 1, 2024
	2,629	—	—	January 1, 2025
Xinbo Zhu	2,542 (2)	2,542	—	May 4, 2014
	1,931 (2)	1,931	—	May 3, 2015
	6,739 (2)	6,739	—	July 8, 2016
	11,304 (2)	11,304	—	May 17, 2017
	9,009 (2)	9,009	—	May 13, 2018
	7,845 (2)	7,845	—	May 13, 2019
	7,874 (2)	7,874	—	May 23, 2020
	5,962 (2)	4,471	—	August 22, 2020
	120,000 (6)	90,000	—	September 22, 2020
	6,165 (2)	3,082	—	May 23, 2022
	3,793 (2)	948	—	May 23, 2023
	12,217 (2)	—	—	May 20, 2024
Directors as a group	**1,678,783**	**1,415,413**	**—**	

Name	Restricted Share Units Granted	Restricted Share Units Vested	Restricted Share Units Forfeited	Date of Grant
Employees				
Hanbing Zhang	1,538 (1)	1,538	—	May 8, 2011
	5,482 (2)	5,482	—	May 20, 2011
	21,021 (2)	21,021	—	March 16, 2012
	18,767 (2)	18,767	—	March 9, 2013
	2,796 (2)	2,796	—	May 4, 2014
	2,344 (2)	2,344	—	May 3, 2015
	4,717 (2)	4,717	—	July 8, 2016
	5,275 (2)	5,275	—	May 17, 2017
	4,204 (2)	4,204	—	May 13, 2018
	3,661 (2)	3,661	—	May 13, 2019
	5,249 (2)	5,249	—	May 23, 2020
	3,975 (2)	2,981	—	August 22, 2020
	20,000 (6)	15,000	—	September 22, 2020
Other employees and certain individuals as a group	10,286,069 (5)	7,513,825	899,640	Various dates from May 8, 2011 to November 5, 2023
	107,239 (2)	5,491	1,639	Various dates from February 6, 2024 to November 11, 2024
Total Restricted Share Units	12,171,120	9,027,764	1,901,279	

(1) Vest over a one-year period from the date of grant.

(2) Vest over a four-year period from the date of grant, except for the August 22, 2020 grants, which vest over a four-year period beginning May 1, 2021.

(3) Vest over an eight-quarter period from the date of grant.

(4) Vest immediately upon the date of grant.

(5) 13,844 restricted share units granted on May 8, 2011 vested over one-year period from the date of grant. 126,036 restricted share units granted on August 11, 2013 vested immediately upon the date of grant. 1,326,000 restricted share units granted on June 2, 2021 and 205,000 restricted share units granted on October 25, 2022 vested following the completion of the IPO of CSI Solar (50% vested on the IPO date, with 25% vesting on each of the first and second anniversaries of the IPO). All other restricted share units granted vest over a four-year period from the date of grant.

(6) Vest following completion of the IPO of CSI Solar (50% vested on the IPO date, with 25% vesting on each of the first and second anniversaries of the IPO).

We grant each of our independent directors restricted share units quarterly in advance on the first day of July, October, January and April in each year of service. The number of restricted share units granted quarterly is determined by dividing $30,000 by the average of the closing price of our common shares on each of the five trading days preceding the date of the grant. Each restricted share unit will entitle those directors to receive one of our common shares upon vesting. These restricted share units vest on the earlier of the date that the director ceases to be a member of our board of directors for any reason and three years after the grant date. We agree to issue common shares to those directors as soon as practicable, and in any event within 60 days, after the granted restricted share units vested.

CSI Solar Share Incentive Plan

In November 2024, CSI Solar adopted a restricted share incentive plan that provides for the grant of equity awards, including options to purchase CSI Solar shares to its directors, officers and employees. The awards are subject to service-based and performance-based vesting conditions, as determined by the board of directors of CSI Solar.

On November 28, 2024, CSI Solar granted options to purchase an aggregate of 54,004,000 CSI Solar shares, with an exercise price of RMB 5.56 ($0.77) per share. The grants include the following awards to certain of our directors and executive officers and related persons:

Name	Share Options Granted	Share Options Vested	Share Options Forfeited	Date of Grant
Directors:				
Shawn (Xiaohua) Qu	2,520,000 (7)	—	—	November 28, 2024
Yan Zhuang	1,260,000 (7)	—	—	November 28, 2024
Directors as a group	**3,780,000**	—	—	
Employee:				
Hanbing Zhang	840,000 (7)	—	—	November 28, 2024

(7) CSI Solar share options are subject to time-based and performance-based vesting conditions and will vest in three tranches over a four-year period, beginning 12 months after the grant date. 33% of the options will vest between months 12 and 24, an additional 33% will vest between months 24 and 36, and the remaining 34% will vest between months 36 and 48, subject to continued employment and the achievement of applicable performance criteria.

Deferred Compensation Plans

In 2021, we adopted two nonqualified deferred compensation plans for eligible employees, each for CSI Solar and Recurrent Energy. The plans provide eligible employees and directors with an opportunity to defer a portion of their compensation to be held by us under two separate grantor trusts. Assets of the plans are held by an independent trustee for the sole benefit of the participating employees. The amount of $1.0 million and $0.5 million was contributed to the trustee in 2023 and 2024, respectively, and the plans are not subject to the requirements of Employee Retirement Income Security Act of 1974 ("ERISA").

C Board Practices

In 2024, our board of directors held seven meetings and passed 57 resolutions by unanimous written consent.

Terms of Directors and Executive Officers

Our officers are appointed by and serve at the discretion of our board of directors. Our current directors have not been elected to serve for a specific term and, unless re-elected, hold office until the close of our next annual meeting of shareholders or until such time as their successors are elected or appointed.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee, a nominating and corporate governance committee, a technology committee and a sustainability committee.

Audit Committee

Our audit committee consists of Mr. Leslie Li Hsien Chang, Dr. Harry E. Ruda and Mr. Andrew (Luen Cheung) Wong, and is chaired by Mr. Chang. Mr. Wong was appointed to serve on our audit committee effective July 17, 2024. Under applicable Nasdaq rules, we are required to have at least three members on the Audit Committee. Mr. Chang qualifies as an "audit committee financial expert" as required by the SEC. Dr. Ruda and Mr. Wong are "financially literate" as required by Nasdaq rules. Each member of our audit committee satisfies the "independence" requirements under Nasdaq corporate governance rules. The audit committee oversees our accounting and financial reporting processes and the audits of our consolidated financial statements.

The audit committee is responsible for, among other things:

- selecting our independent auditors and pre-approving all auditing and non-auditing services permitted to be performed by our independent auditors;

- reviewing with our independent auditors any audit concerns or difficulties and management responses;
- reviewing and approving all proposed related-party transactions, as defined in Item 404 of Regulation S-K under the Securities Act;
- discussing the audited consolidated financial statements with management and our independent auditors;
- reviewing major issues related to the adequacy of our internal controls and any special audit steps adopted in light of material control deficiencies;
- annually reviewing and reassessing the adequacy of our audit committee charter;
- addressing such other matters as they may be specifically delegated to the audit committee by our board of directors from time to time;
- meeting separately and periodically with management and our internal and independent auditors; and
- reporting regularly to the full board of directors.

In 2024, our audit committee held seven meetings and did not pass any resolutions by unanimous written consent.

Compensation Committee

Our compensation committee consists of Mr. Andrew (Luen Cheung) Wong, Dr. Harry E. Ruda and Ms. Lauren Templeton, and is chaired by Mr. Wong. Each member of our compensation committee satisfies the “independence” requirements of Nasdaq corporate governance rules. The compensation committee assists the board of directors in reviewing and approving the compensation structure for our directors and executive officers, including all forms of compensation to be provided to our directors and executive officers. Members of the compensation committee are not prohibited from direct involvement in determining their own compensation. Our chief executive officer may not be present at any committee meeting during which the compensation of whom is deliberated.

The compensation committee is responsible for, among other things:

- reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive officer, evaluating the performance of our chief executive officer in light of those goals and objectives, and setting the compensation level of our chief executive officer based on that evaluation;
- reviewing and approving the compensation arrangements for our directors and other executive officers; and
- overseeing and periodically reviewing the operation of our employee benefits plans, including bonus, incentive compensation, stock incentives, pension and welfare plans.

In 2024, our compensation committee held five meetings and did not pass any resolutions by unanimous written consent.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Ms. Lauren Templeton, and Mr. Andrew (Luen Cheung) Wong and Mr. Leslie Li Hsien Chang, and is chaired by Ms. Templeton. Each member of our nominating and corporate governance committee satisfies the "independence" requirements of Nasdaq corporate governance rules. The nominating and corporate governance committee assists the board of directors in identifying individuals qualified to become our directors and in determining the composition of the board of directors and its committees.

The nominating and corporate governance committee is responsible for, among other things:

- identifying and recommending to the board of directors nominees for election or re-election to the board, or for appointment to fill any vacancies;
- reviewing annually with the board of directors the composition of the board of directors in terms of independence, skills, experience, strengths and availability of service to us;
- recommending to the board of directors, the directors to serve as members of the board's committees;
- advising on developments in corporate governance and compliance, and making recommendations to the board of directors on all matters of corporate governance and on any corrective actions to be taken; and
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance.

In 2024, our nominating and corporate governance committee held four meetings and passed one resolution by unanimous written consent.

Technology Committee

Our technology committee consists of Dr. Harry E. Ruda and Dr. Shawn Qu, and is chaired by Dr. Ruda. The technology committee advises the board of directors and management on technology and innovation matters related to our solar power and battery energy storage business.

The technology committee is responsible for, among other things:

- evaluating and advising the board of directors and management regarding the quality, scope, direction and effectiveness of our research and development programs and activities;
- reviewing and advising the board of directors and management regarding our progress towards our research and development goals and objectives;
- advising the board of directors and management on internal and external science and technology investments;
- monitoring, evaluating and advising the board of directors and management regarding new solar power and battery energy storage technologies, as well as emerging and competing science and technologies;
- assessing and advising the board of directors and our chief executive officer regarding the composition and quality of the research and development function; and
- providing general oversight on intellectual property matters.

In 2024, our technology committee held one meeting and did not pass any resolutions by unanimous written consent.

Sustainability Committee

Our sustainability committee consists of Ms. Lauren Templeton, Mr. Leslie Li Hsien Chang and Dr. Harry E. Ruda, and is chaired by Ms. Templeton. Dr. Ruda was appointed to serve on our sustainability committee effective July 17, 2024. The sustainability committee oversees management's ESG plans.

The sustainability committee is responsible for, among other things:

- reviewing sustainability-related risks and opportunities associated with our strategy and business development;
- reviewing climate-related risks and opportunities;
- monitoring progress and advising on strategic measures related to the long-term sustainability initiatives; and
- overseeing the progress, execution and review of our ESG plan.

In 2024, our sustainability committee held one meeting and did not pass any resolutions by unanimous written consent.

Interested Transactions

The OBCA contains provisions that relate to a scenario where a director or officer of Canadian Solar Inc. is a party to a material contract or transaction or proposed material contract or transaction with our company, or is a director or an officer of, or has a material interest in, any person who is a party to a material contract or transaction or proposed material contract or transaction with our company, as summarized below.

A director or officer of Canadian Solar Inc. who is a party to a material contract or transaction or proposed material contract or transaction with our company, or is a director or an officer of, or has a material interest in, any person who is a party to a material contract or transaction or proposed material contract or transaction with our company, shall disclose in writing to Canadian Solar Inc. or request to have entered in the minutes of meetings of directors the nature and extent of his or her interest. In the case of a director, such disclosure shall be made (a) at the meeting at which a proposed contract or transaction is first considered; (b) if the director was not then interested in a proposed contract or transaction, at the first meeting after he or she becomes so interested; (c) if the director becomes interested after a contract is made or a transaction is entered into, at the first meeting after he or she becomes so interested; or (d) if a person who is interested in a contract or transaction later becomes a director, at the first meeting after he or she becomes a director. In the case of an officer who is not a director, such disclosure shall be made (a) forthwith after the officer becomes aware that the contract or transaction or proposed contract or transaction is to be considered or has been considered at a meeting of directors; (b) if the officer becomes interested after a contract is made or a transaction is entered into, forthwith after he or she becomes so interested; or (c) if a person who is interested in a contract or transaction later becomes an officer, forthwith after he or she becomes an officer. Where a director or officer of Canadian Solar Inc. is required to make such disclosure in respect of a material contract or transaction or proposed material contract or transaction that, in the ordinary course of our business, would not require approval by the directors or shareholders, the director or officer shall disclose in writing to Canadian Solar Inc. or request to have entered in the minutes of meetings of directors the nature and extent of his or her interest forthwith after the director or officer becomes aware of the contract or transaction or proposed contract or transaction. A general notice to the directors by a director or officer disclosing that he or she is a director or officer of or has a material interest in a person, or that there has been a material change in the director's or officer's interest in the person, and is to be regarded as interested in any contract made or any transaction entered into with that person, is sufficient disclosure of interest in relation to any such contract or transaction.

A director who is required to make such disclosure in respect of a material contract or transaction or proposed material contract or transaction shall not attend any part of a meeting of directors during which the contract or transaction is discussed and shall not vote on any resolution to approve the contract or transaction unless the contract or transaction is (a) one relating primarily to his or her remuneration as a director of our company or an affiliate; (b) one for indemnity or insurance under the OBCA; or (c) one with an affiliate of our company. If no quorum exists for the purpose of voting on a resolution to approve a contract or transaction only because a director is not permitted to be present at the meeting for such reason, the remaining directors shall be deemed to constitute a quorum for the purposes of voting on the resolution. Where all of the directors are required to make such disclosure in respect of a material contract or transaction or proposed material contract or transaction, the contract or transaction may be approved only by the shareholders.

Where a material contract is made or a material transaction is entered into between our company and a director or officer of Canadian Solar Inc., or between our company and another person of which a director or officer of Canadian Solar Inc. is a director or officer or in which he or she has a material interest, (a) the director or officer is not accountable to our company or our shareholders for any profit or gain realized from the contract or transaction; and (b) the contract or transaction is neither void nor voidable, by reason only of that relationship or by reason only that the director is present at or is counted to determine the presence of a quorum at the meeting of directors that authorized the contract or transaction, if the director or officer disclosed his or her interest in accordance with the OBCA, and the contract or transaction was reasonable and fair to our company at the time it was so approved.

A director or officer, acting honestly and in good faith, is not accountable to our company or to our shareholders for any profit or gain realized from any such contract or transaction by reason only of his or her holding the office of director or officer, and the contract or transaction, if it was reasonable and fair to our company at the time it was approved, is not by reason only of the director's or officer's interest therein void or voidable, where, (a) the contract or transaction is confirmed or approved by special resolution at a meeting of the shareholders duly called for that purpose; and the nature and extent of the director's or officer's interest in the contract or transaction are disclosed in reasonable detail in the notice calling the meeting or in the information circular required by the OBCA.

Subject to those exceptions, where a director or officer of Canadian Solar Inc. fails to disclose his or her interest in a material contract or transaction in accordance with the OBCA or otherwise fails to comply with the relevant provisions of the OBCA, Canadian Solar Inc. or a shareholder of Canadian Solar Inc. may apply to the court for an order setting aside the contract or transaction and directing that the director or officer account to Canadian Solar Inc. for any profit or gain realized and upon such application the court may so order or make such other order as it thinks fit.

In 2024, we did not enter into any interested transactions other than those described in this "Item 6. Directors, Senior Management and Employees" and "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions."

Remuneration and Borrowing

Our directors may determine the remuneration to be paid to them. The compensation committee will assist the directors in reviewing and approving the compensation structure for our directors.

Pursuant to the OBCA, Canadian Solar Inc.'s articles are deemed to state that our directors may, without authorization of the shareholders, (a) borrow money upon the credit of the corporation; (b) issue, reissue, sell or pledge debt obligations of the corporation; (c) give a guarantee on behalf of the corporation to secure performance of an obligation of any person; and (d) mortgage, hypothecate, pledge or otherwise create a security interest in all or any property of the corporation, owned or subsequently acquired, to secure any obligation of the corporation.

Qualification

Each of our independent directors is asked to hold common shares and/or restricted share units having a value which is at least five times the director's annual cash retainer and to satisfy this requirement before three years after he or she becomes a director.

Employment Agreements

We have entered into employment agreements with each of our executive officers.

All of the employment agreements with our executive officers are for an indefinite term. Under the employment agreements, we may terminate the employment of an executive officer at any time by giving written notice of termination to the executive officer. An executive officer may terminate his employment at any time by giving 30 days' written notice of termination to us.

If we terminate the employment of an executive officer for any reason other than cause or disability, or the executive officer terminates his employment for good reason, in both cases other than within 12 months after a change of control, (a) the unvested RSUs held by the executive officer immediately before the date of termination of the employment that would otherwise vest within 12 months after the date of termination of the employment will be deemed to have vested immediately before the date of termination of the employment; (b) the executive officer is entitled to receive his target bonus for the year in which the date of termination of the employment occurs; and (c) the executive officer is entitled to continue to receive his base salary and benefits for a period of six plus N months following the date of termination of the employment provided that he continues to comply with his confidentiality, inventions, non-competition, non-solicitation and assistance obligations described below. “N” is the number of years (including part years) that the executive officer was employed by us and our subsidiaries during the period beginning on January 1, 2007 and ending on the date of termination of the Employment but not exceeding 12.

If we terminate the employment of an executive officer for any reason other than cause or disability, or the executive officer terminates his employment for good reason, in both cases within 12 months after a change of control, (a) all unvested RSUs held by the executive officer immediately before the date of termination of the employment will be deemed to have vested immediately before the date of termination of the employment; (b) the executive officer is entitled to receive an lump sum amount equal to the sum of: (1) his target bonus for the year in which the date of termination of the employment occurs, (2) his annual base salary and (3) the estimated annual cost of his providing his benefits multiplied by a fraction, the numerator of which is 12 plus N and the denominator of which is 12.

Each executive officer has agreed: (a) not to disclose or use any of our confidential information, including trade secrets and information concerning our finances, employees, technology, processes, facilities, products, suppliers, customers and markets, except in the performance of his duties and responsibilities or as required pursuant to applicable law; (b) to disclose in confidence to us all inventions, designs and trade secrets which he may conceive, develop or reduce to practice during his employment and to assign all right, title and interest in them to us; (c) during and within one year after the termination of his employment, (1) not to communicate or have any other dealings with our customers or suppliers that would be likely to harm the business relationship between us and our suppliers; (2) not to provide services, whether as a director, officer, employee, independent contractor or otherwise, to a competitor; and (3) not to solicit, whether by offer of employment or otherwise, the services of any of our employees; and (d) at our request, to answer our requests for information about those aspects of our business and affairs in which he was involved and assist us in prosecuting or defending claims or responding to investigations or reviews by any regulatory authority or stock exchange in relation to events or occurrences that took place during the employment. “Competitor” is a person that, directly or indirectly, carries on business in any jurisdiction where we and our subsidiaries carry on business if that person or any subsidiary or division of that person generates more than 10% of its revenues from solar power products and services similar to those provided by us and our subsidiaries.

Our compensation committee is required to approve the employment agreements entered into by us with our executive officers.

Director Agreements

We have entered into director agreements with our independent directors, pursuant to which we make payments in the form of an annual cash retainer, payable quarterly, and quarterly grants of restricted share units to our independent directors for their services. See “—B. Compensation of Directors and Executive Officers.”

Indemnification of Directors and Officers

The OBCA contains provisions that relate to indemnification by Canadian Solar Inc. in favor of an individual who is a present or former director or officer or an individual who acts or has acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, as summarized below.

Canadian Solar Inc. may indemnify any individual who is a present or former director or officer or an individual who acts or has acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with us or other entity. Canadian Solar Inc. may advance money to such an individual for such costs, charges and expenses of a proceeding, but the individual shall repay the money and Canadian Solar Inc. shall not indemnify any such individual unless the individual acted honestly and in good faith with a view to our best interests or, as the case may be, to the best interests of the other entity for which the individual acted as a director or officer or in a similar capacity at our request. In addition, if the matter is a criminal or administrative action or proceeding that is enforced by a monetary penalty, Canadian Solar Inc. shall not indemnify such an individual under the OBCA unless the individual had reasonable grounds for believing that the individual's conduct was lawful.

Canadian Solar Inc. may, with the approval of a court, indemnify such an individual, or advance moneys to such an individual, in respect of an action by or on behalf of Canadian Solar Inc. or other entity to obtain a judgment in its favor, to which the individual is made a party because of the individual's association with Canadian Solar Inc. or other entity, against all costs, charges and expenses reasonably incurred by the individual in connection with such action, if the individual acted honestly and in good faith with a view to our best interests or, as the case may be, to the best interests of the other entity for which the individual acted as a director or officer or in a similar capacity at our request.

Any such individual is entitled to indemnity from Canadian Solar Inc. in respect of all costs, charges and expenses reasonably incurred by the individual in connection with the defence of any civil, criminal, administrative, investigative or other proceeding to which the individual is subject because of the individual's association with Canadian Solar Inc. or other entity, if the individual seeking an indemnity (a) was not judged by a court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done; (b) acted honestly and in good faith with a view to our best interests or, as the case may be, to the best interests of the other entity for which the individual acted as a director or officer or in a similar capacity at our request, and (c) if the matter is a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that the individual's conduct was lawful.

Under Canadian Solar Inc.'s by-laws, Canadian Solar Inc. shall indemnify our directors and officers and former directors and officers and such other individual who acts or acted at our request as a director or officer, or in a similar capacity, of another entity, to the greatest extent permitted by law.

We have entered into indemnity agreements with each of our directors agreeing to indemnify them, to the fullest extent permitted by law, against all liability, loss, harm damage cost or expense, reasonably incurred by the director in respect of any threatened, pending, ongoing or completed claim or civil, criminal, administrative, investigative or other action or proceeding made or commenced against him or in which he is or was involved by reason of the fact that he is or was a director of our company.

Our directors and officers are covered by directors' and officers' insurance policies.

D Employees

As of December 31, 2022, 2023 and 2024, we had 18,423, 22,234 and 17,113 full-time employees, respectively. The following table sets forth the number of our employees categorized by our areas of operations and as a percentage of our workforce as of December 31, 2024.

	As of December 31, 2024	
	Number of Employees	Percentage of Total
Manufacturing and operations	11,370	66 %
General and administrative	3,212	19 %
Research and development	1,224	7 %
Sales and marketing	1,307	8 %
Total	17,113	100 %

As of December 31, 2024, we had 11,756 employees at our facilities in China, and 5,357 employees based in our facilities and offices in the U.S., Canada, Japan, Australia, Singapore, Korea, Hong Kong, Taiwan, India, Thailand, Vietnam, Brazil, United Arab Emirates, South Africa, the U.K., Latin America and the EU (including Spain, Italy, Germany, France and Netherlands). Our employees are not covered by any collective bargaining agreement. We consider our relations with our employees to be good. From time to time, we also employ or engage part-time employees or independent contractors to support our manufacturing, research and development and sales and marketing activities. We plan to hire additional employees as we expand.

Our culture has always been to put people first and treat everyone with fairness and dignity. We are committed to maintaining an environment where all individuals are treated equally and provided with the opportunity to contribute and thrive. Best practices are implemented locally in keeping with our global strategies across our operating operations, from manufacturing to sales and project development. See "Item 4. Information on the Company—B. Business Overview—Environmental, Social and Governance Initiatives."

Continuous learning is the cornerstone of our human capital development strategy. Employees across all functions and levels of us are offered participation in the Canadian Solar education courses and programs, which are designed to support their career development through an extensive suite of resources, including classroom training, e-learning, coaching, mentoring and on-the-job training. We partner with professional consultants such as Development Dimensions International to establish leadership standards and create tailor-made development programs.

Training programs for junior positions are focused on developing technical and professional skills, including, but not limited to, areas such as project development, permitting, asset management, financing, sales management, order management and operations, supply chain management, marketing, technical services and support. This is complemented by specific training sessions designed to develop soft skills and nurture a culture of continuous self and mutual learning.

For more senior-level employees, our in-house training program is more targeted towards developing leadership and managerial skills. The Leadership Foundation Program focuses on executive strategy, effective decision-making, coaching for peak performance, delegation, and other leadership skills. Global workshops on key business topics such as PPA and storage are organized to help our leaders continue to learn. We also selectively sponsor key talents to attend top MBA programs.

We regularly carry out global succession planning reviews to identify high-potential talents and follow up with individual development plans for them. Our succession planning calls for a robust leadership development program. Initiatives such as the Business Leader Development Program, where we partner with prestigious universities to provide online lectures, webinars and project assignments, meet this need by providing training and development opportunities for all different levels of leadership. We also have a Middle Manager Development Program and a Frontline Leadership Program, where we partner with Franklin Covey to deliver leadership, individual effectiveness and business execution training to our business leaders.

We strive to create a culture of openness and transparency, which values and promotes two-way communication between management and team members. Feedback is both encouraged and appreciated, as we consider it a key driver for employee engagement.

We consider the turnover rate a valuable metric to measure the effectiveness of our programs and to assist in developing new programs. Our employee turnover for 2023 and 2024 was 17% and 28%, respectively. We believe the combination of training and development programs, regular performance reviews, competitive compensation, and the redesign of our company culture to better inspire employees, as well as career growth and development opportunities, has helped reduce voluntary turnover.

E Share Ownership

The following table sets forth information with respect to the beneficial ownership of our common shares as of January 31, 2025, the latest practicable date, by:

- each of our directors and executive officers; and
- each person known to us to beneficially own more than 5% of our common shares.

The calculations in the table below are based on the 66,961,795 common shares outstanding as of January 31, 2025.

Petitioner Canadian Solar, Ex. 1079, p. 101
Canadian Solar (USA) Inc. v. First Solar, Inc., IPR2025-01432

Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of common shares beneficially owned by a person and the percentage ownership of that person, we have included common shares that the person has the right to acquire within 60 days from January 31, 2025, including through the vesting of any restricted share unit, or the exercise of any option, warrant or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person.

	Common Shares Beneficially Owned[1]	
	Number	%
Directors and Executive Officers: [2]		
Shawn (Xiaohua) Qu [3]	13,973,893	20.9 %
Yan Zhuang [4]	113,933	*
Harry E. Ruda [5]	843	*
Andrew (Luen Cheung) Wong [6]	1,807	*
Lauren C. Templeton [7]	843	*
Leslie Li Hsien Chang [8]	20,497	*
Xinbo Zhu [9]	102,883	*
All Directors and Executive Officers as a Group	14,214,699	21.2 %
Principal Shareholders:		
PAG [10]	8,241,765	11.0 %
Mackenzie Financial Corporation [11]	5,523,565	8.2 %
Venture Holding S.a.r.l. SPF [12]	5,116,300	7.6 %
BlackRock, Inc. [13]	4,504,021	6.7 %

* The person beneficially owns less than 1% of our outstanding shares.

(1) Beneficial ownership is determined in accordance with Rule 13d-3 of the General Rules and Regulations under the Exchange Act, and includes voting or investment power with respect to the securities.

(2) The business address of our directors and executive officers is 4273 King Street East, Suite 102, Kitchener, Ontario, N2P 2E9, Canada.

(3) Comprises 13,947,602 common shares directly held by Dr. Shawn Qu and Ms. Hanbing Zhang, the wife of Dr. Shawn Qu, and 26,291 common shares issuable upon the exercise of options held by Dr. Shawn Qu and Ms. Zhang.

(4) Comprises 113,933 common shares directly held by Mr. Yan Zhuang.

(5) Comprises 843 common shares issuable upon vesting of restricted share units held by Dr. Harry E. Ruda within 60 days from January 31, 2025.

(6) Comprises 964 common shares directly held by Mr. Andrew (Luen Cheung) Wong and 843 shares issuable upon vesting of restricted share units held by Mr. Andrew (Luen Cheung) Wong within 60 days from January 31, 2025.

(7) Comprises 843 common shares issuable upon vesting of restricted share units held by Ms. Lauren C. Templeton within 60 days from January 31, 2025.

(8) Comprises 19,654 common shares directly held by Mr. Leslie Li Hsien Chang and 843 shares issuable upon vesting of restricted share units held by Mr. Leslie Li Hsien Chang within 60 days from January 31, 2025.

(9) Comprises 102,883 common shares directly held by Mr. Xinbo Zhu.

(10) Represents 8,241,765 common shares issuable upon conversion of the convertible notes that PAG Castle Holdings Pte. Ltd. has acquired or is entitled to acquire at any time within the next 60 days (all of which are or shall be immediately convertible), as reported on Schedule 13G filed jointly by PAG Castle Holdings Pte. Ltd., PAGGC II-1 (Cayman) Limited, PAG Growth II LP, PAG Growth Capital GP II Limited, PAG Growth Limited, Pacific Alliance Group Limited, and PAG on January 24, 2025. PAG Castle Holdings Pte. Ltd. is a Singapore company which is beneficially held as to 100.0% by PAGGC II-1 (Cayman) Limited. PAGGC II-1 (Cayman) Limited is a Cayman Islands company which is beneficially held as to 100.0% by PAG Growth II LP. PAG Growth II LP is a Cayman Islands limited partnership, of which PAG Growth Capital GP II Limited is the general partner. PAG Growth Capital GP II Limited is a Cayman Islands company which is beneficially held as to 100.0% by PAG Growth Limited. PAG Growth Limited, a Cayman Islands company, which is beneficially held as to 100.0% by Pacific Alliance Group Limited. Pacific Alliance Group Limited is a Cayman Islands company, which is beneficially held as to 100.0% by PAG. Each of PAGGC II-1 (Cayman) Limited, PAG Growth II LP, PAG Growth Capital GP II Limited, PAG Growth Limited, Pacific Alliance Group Limited, and PAG may thereby be deemed to beneficially own 8,241,765 common shares beneficially owned by PAG Castle Holdings Pte. Ltd. The percentage of beneficial ownership was calculated based on the total number of our common shares as of January 31, 2025. The principal business address of PAG Castle Holdings Pte. Ltd. is 9 Temasek Boulevard, #12-01/02, Suntec Tower Two, 038989, Singapore. The principal business address of PAGGC II-1 (Cayman) Limited, PAG Growth II LP, PAG Growth Capital GP II Limited, PAG Growth Limited, Pacific Alliance Group Limited, and PAG is PO Box 472, 2nd Floor, Harbour Place, 103 South Church Street, George Town, Grand Cayman KY1-1106, Cayman Islands.

(11) Represents 5,523,565 common shares owned by Mackenzie Financial Corporation as reported on Schedule 13G/A filed by Mackenzie Financial Corporation on February 13, 2025. The percentage of beneficial ownership was calculated based on the total number of our common shares as of January 31, 2025. The principal business address of Mackenzie Financial Corporation is 180 Queen Street West, Toronto, Ontario, Canada M5V 3K1.

(12) Represents 5,116,300 common shares owned by Venture Holding S.a.r.l. SPF, as reported on Schedule 13G/A filed by Venture Holding S.a.r.l. SPF on February 14, 2025. The percentage of beneficial ownership was calculated based on the total number of our common shares as of January 31, 2025. The principal business address of Venture Holding S.a.r.l. SPF is 31-33 Grand rue, L-1661 Luxembourg.

(13) Represents 4,504,021 common shares owned by BlackRock, Inc., as reported on Schedule 13G/A filed by BlackRock, Inc. on February 5, 2025. The percentage of beneficial ownership was calculated based on the total number of our common shares as of January 31, 2025. The principal business address of BlackRock, Inc. is 50 Hudson Yards, New York, NY 10001.

None of our shareholders have different voting rights from other shareholders as of the date of this annual report on Form 20-F. We are currently not aware that we are directly or indirectly owned or controlled by another corporation, by any foreign government or by any other natural or legal person severally or jointly and we are currently not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

F Disclosure of A Registrant's Action to Recover Erroneously Awarded Compensation

Not applicable.

ITEM 7 *MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS*

A Major Shareholders

Please refer to "Item 6. Directors, Senior Management and Employees—E. Share Ownership."

B Related Party Transactions

Sales and Purchase Contracts with Affiliates

We sold solar modules to Marangatu Holding S.A. and Panati Holding S.A., our 30% owned affiliates in Brazil, in the amounts of $100.9 million and $67.5 million in 2023, and $0.2 million and nil in 2024, respectively. In 2022, 2023 and 2024, we delivered battery energy storage solutions to RE Crimson Holdings LLC, our 20% owned affiliate in the U.S., totaling $367.4 million, $17.2 million and $5.3 million, respectively. In 2022, 2023 and 2024, we purchased raw materials from Yancheng Jiwa New Material Technology Co., Ltd., our 10.9% owned affiliate, in the amounts of $5.2 million, $8.3 million and $4.3 million, respectively. In 2022, 2023 and 2024, we provided asset management services to Canadian Solar Infrastructure Fund, Inc., our 14.9% owned affiliate, totaling $4.2 million, $10.0 million and $5.5 million, respectively, and provided power services totaling $7.0 million, $7.0 million and $7.6 million, respectively. In 2022, 2023 and 2024, we delivered turnkey battery energy storage solutions and EPC services to Suzhou Financial Leasing Co., Ltd., our 3% owned affiliate, in the amount of nil, nil and $17.8 million, respectively.

Employment Agreements

See "Item 6. Directors, Senior Management and Employees—C. Board Practices—Employment Agreements."

Share Incentive Plans

See "Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Share Incentive Plans."

C Interests of Experts and Counsel

Not applicable.

ITEM 8 ***FINANCIAL INFORMATION***

A Consolidated Statements and Other Financial Information

We have appended audited consolidated financial statements filed as part of this annual report.

Legal and Administrative Proceedings

Class Action Lawsuits

Canadian Solar Inc. and certain of our directors and executive officers were named as defendants in class action lawsuits in the U.S. and Canada alleging that our financial disclosures during 2009 and early 2010 were false or misleading and in violation of U.S. federal securities laws and Ontario securities laws, respectively. The lawsuits in the U.S. were consolidated into one class action, which was dismissed with prejudice by the district court in March 2013. The dismissal was subsequently affirmed by the circuit court in December 2013. In January 2015, the plaintiff in the class action lawsuit obtained an order for class certification in respect of certain claims for which he had obtained leave in September 2014 to assert the statutory cause of action for misrepresentation under the Ontario Securities Act, for certain negligent misrepresentation claims and for oppression remedy claims advanced under the *Canada Business Corporations Act* (Canadian Solar Inc's governing corporate statute at the time). A settlement of the lawsuit in Canada was achieved and approved by the Ontario Superior Court of Justice on October 30, 2020. The settlement is no admission of liability or wrongdoing by us or any of the other defendants.

U.S. Antidumping, Countervailing Duty and Safeguard Proceedings

Solar 1 China

On October 17, 2012, the USDOC issued final affirmative determinations with respect to its antidumping and countervailing duty investigations on crystalline silicon photovoltaic, or CSPV, cells, whether or not incorporated into modules, from China. On November 30, 2012, the USITC determined that imports of CSPV cells had caused material injury to the U.S. CSPV industry. The USITC's determination was subsequently affirmed by the U.S. Court of International Trade ("CIT"), and the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit").

As a result of these determinations, we were required to pay cash deposits on Chinese-origin CSPV cells imported into the U.S., whether or not incorporated into modules. The rates applicable to us were 13.94% (antidumping duty) and 15.24% (countervailing duty). We paid all the cash deposits due under these determinations. Several parties challenged the determinations of the USITC in appeals to the CIT. On August 7, 2015, the CIT sustained the USITC's final determination and on January 22, 2018, the Federal Circuit upheld the CIT's decision. There was no further appeal to the U.S. Supreme Court and, therefore, this decision is final.

The rates at which duties will be assessed and payable are subject to administrative reviews.

The USDOC published the final results of the first administrative reviews in July 2015. As a result of these decisions, the duty rates applicable to us were revised to 9.67% (antidumping duty) and 20.94% (countervailing duty). The assessed rates were appealed to the CIT. The CIT affirmed the USDOC's countervailing duty rates, and no change was made to our countervailing duty rate. This decision by the CIT was not appealed to the Federal Circuit. The CIT likewise affirmed USDOC's antidumping duty rates, and no change was made to our antidumping duty rate. This decision by the CIT was, however, appealed to the Federal Circuit, which upheld the CIT's decision. There was no further appeal to the U.S. Supreme Court and, therefore, this decision is final.

The USDOC published the final results of the second administrative reviews in June 2016 (antidumping duty) and July 2016 (countervailing duty). As a result of these decisions, the antidumping duty rate applicable to us was reduced to 8.52% (from 9.67%) and then to 3.96% (from 8.52%). Because we were not subject to the second administrative review of the countervailing duty order, our countervailing duty rate remained at 20.94%. The antidumping duty rates were appealed to the CIT. The CIT affirmed the USDOC's second antidumping duty rate. This decision by the CIT was appealed to the Federal Circuit, which in June 2020 reversed the CIT's decision, in part, and directed the USDOC to reconsider certain issues related to its final determination. The USDOC submitted its antidumping duty redetermination to the CIT in September 2021. In December 2021, the CIT sustained USDOC's antidumping duty redetermination. As a result, our antidumping duty rate was reduced to 0.00% (from 3.96%). There was no further appeal to the Federal Circuit of the USDOC's antidumping duty redetermination and, therefore, this decision is final.

The USDOC published the final results of the third administrative reviews in June 2017 (antidumping duty) and July 2017 (countervailing duty), and later amended in October 2017. As result of these decisions, the duty rates applicable to us were changed to 13.07% (from 8.52%) (antidumping duty) and 18.16% (from 20.94%) (countervailing duty). The assessed rates were appealed to the CIT. The CIT has twice remanded the antidumping duty appeal to the USDOC to consider adjustments to our rate. Pursuant to CIT's remand orders, the USDOC issued a redetermination. The antidumping duty rate applicable to us was reduced to 4.12% (from 13.07%) and then further to 3.19% (from 4.12%). In June 2020, the CIT issued its third opinion sustaining the USDOC's remand redetermination. Canadian Solar filed a motion for reconsideration with the CIT advocating for an even lower antidumping duty rate. In September 2020, the CIT granted our motion for reconsideration and remanded to USDOC for further consideration of our antidumping duty rate. The USDOC submitted its antidumping duty redetermination to the CIT in September 2021. In December 2021, the CIT sustained USDOC's antidumping duty redetermination. As a result, our antidumping duty rate was reduced to 0.00% (from 3.19)%. There was no further appeal to the Federal Circuit of the USDOC's antidumping duty redetermination and, therefore, this decision is final. The CIT has likewise twice remanded the countervailing duty appeal to the USDOC to consider adjustments to our rate. In August 2020, the CIT sustained USDOC's second remand redetermination. As a result, our countervailing duty rate was reduced to 7.36% (from 18.16%). There was no further appeal to the Federal Circuit of the USDOC's countervailing duty redetermination and, therefore, this decision is final.

The USDOC published the final results of the fourth administrative reviews in July 2018 (both antidumping duty and countervailing duty), with the countervailing duty rate later amended in October 2018. Because we were not subject to the fourth administrative review of the antidumping duty order, our antidumping duty rate remained at 13.07%. In this review, the countervailing duty rate applicable to us was reduced to 11.59% (from 18.16%) for the broader Canadian Solar entity and 10.64% (from 18.16%) for Canadian Solar International Limited. The countervailing duty rates were appealed to the CIT. The CIT remanded the countervailing duty appeal to the USDOC to consider adjustments to our rate. Pursuant to the CIT's remand orders, the USDOC made a redetermination that reduced our countervailing duty rate to 5.02% (from 11.59%) for the broader Canadian Solar entity and 4.22% (from 10.64%) for Canadian Solar International Limited. We appealed the CIT decision to the Federal Circuit to contest USDOC's continued assessment of a countervailing duty rate related to the alleged electricity subsidy program. In January 2022, the Federal Circuit sustained the CIT's decision, and no change was made to our countervailing duty rate. There was no further appeal to the U.S. Supreme Court and, therefore, this decision is final.

The USDOC published the final results of the fifth administrative reviews in July 2019 (antidumping duty) and August 2019 (countervailing duty). The antidumping duty rate applicable to us was lowered to 4.06% (from 13.07%). The countervailing duty rate applicable to us was reduced to 9.70% (from 11.59%). The countervailing duty final results were amended to correct ministerial errors in December 2019, but this amendment resulted in no change to our 9.70% rate. The countervailing duty and antidumping duty rates were appealed to the CIT. Pursuant to the CIT's remand order in the antidumping appeal, USDOC made a remand redetermination that reduced our antidumping duty rate to 3.30% (from 4.06%). In May 2021, the CIT sustained USDOC's antidumping duty redetermination. There was no further appeal to the Federal Circuit of the USDOC's antidumping duty redetermination and, therefore, this decision is final. The CIT remanded the countervailing duty appeal to the USDOC to consider adjustments to our rate. Pursuant to the CIT's remand order in the countervailing duty appeal, USDOC made a remand redetermination that reduced our countervailing duty rate to 3.65% (from 9.70%). In May 2022, the CIT sustained USDOC's countervailing duty redetermination. There was no further appeal to the Federal Circuit of the USDOC's countervailing duty redetermination and, therefore, this decision is final.

The USDOC published the final results of the sixth administrative reviews in October 2020 (antidumping duty) and December 2020 (countervailing duty). USDOC assessed an antidumping duty rate of 68.93% (from 13.07%). The antidumping duty final results were amended to correct ministerial errors in December 2020 and as a result, the antidumping duty rate applicable to us was raised to 95.50% (from 68.93%). USDOC assessed a countervailing duty rate of 12.67% (from 9.70%). The countervailing duty final results were amended to correct ministerial errors in April 2021 and, as a result, our countervailing duty rate was reduced to 11.97% (from 12.67%). The antidumping duty rates were appealed to the CIT. The CIT remanded the antidumping duty appeal to the USDOC to consider adjustments to our rate. Pursuant to the CIT's remand order, the USDOC made a redetermination that reduced our antidumping duty rate to 23.02% (from 95.50%). This decision by the CIT was appealed to the Federal Circuit in March 2023, and we are currently participating in the appeal at the Federal Circuit. We did not appeal USDOC's final results of its sixth administrative review of the countervailing duty order and, therefore, this decision is final and our countervailing duty rate is expected to remain at 11.97%.

The USDOC published the final results of the seventh administrative reviews in August 2021 (countervailing duty) and October 2021 (antidumping duty). The antidumping duty rate applicable to us was lowered to 0.00% (from 95.50%). The countervailing duty rate applicable to Canadian Solar International Limited ("CSIL") was raised to 19.28% (from 11.97%). USDOC did not change the rate of 11.97% for Canadian Solar Manufacturing (Changshu) Inc. and Canadian Solar Manufacturing (Luoyang) Inc. because the countervailing duty review was rescinded for both of these companies. We did not appeal USDOC's final results of its seventh administrative reviews and, therefore, these decisions are final. Our antidumping duty rate will remain at 0.00% and our countervailing duty rate is expected to remain at 19.28% for CSIL.

The USDOC published the final results of the eighth administrative reviews in June 2022 (antidumping duty) and July 2022 (countervailing duty). The USDOC determined that the Canadian Solar entities subject to the eighth antidumping duty administrative review had no shipments during the period of review and therefore, our antidumping duty rate (0.00%) will remain unchanged for our Solar 1 CSPV products. The antidumping duty final results were amended to correct ministerial errors in August 2022, but this amendment resulted in no change to USDOC's no shipment determination with respect to Canadian Solar. USDOC assessed a countervailing duty rate of 15.75% (from 19.28%). The countervailing duty final results were amended to correct ministerial errors in August 2022 and, as a result, our countervailing duty rate was raised to 15.87% (from 15.75%). We did not appeal USDOC's final results of its eighth administrative review of the countervailing duty order and, therefore, this decision is final and our countervailing duty rate is expected to remain at 15.87%.

The USDOC published the final results of the ninth administrative reviews in July 2023. The USDOC determined that the Canadian Solar entities subject to the ninth antidumping duty administrative review had no shipments during the period of review and therefore, our antidumping duty rate (0.00%) will remain unchanged for our Solar 1 CSPV products. The USDOC did not change our countervailing duty rate of 15.87% because the countervailing duty review was rescinded for the Canadian Solar entities subject to the ninth countervailing duty administrative review. The countervailing duty final results were amended in August 2023, but this amendment resulted in no change to USDOC's determination to rescind the review with respect to Canadian Solar. We did not appeal USDOC's final results of its ninth administrative reviews and, therefore, these decisions are final.

The USDOC published the final results of the tenth administrative reviews in June 2024 (countervailing duty) and July 2024 (antidumping duty). The USDOC determined that the Canadian Solar entities subject to the tenth antidumping duty administrative review had no shipments during the period of review and therefore, our antidumping duty rate (0.00%) will remain unchanged for our Solar 1 CSPV products. The antidumping duty final results were corrected in August 2024, but the corrections resulted in no change to USDOC's no shipment determination with respect to Canadian Solar. The USDOC did not change our countervailing duty rate of 15.87% because the countervailing duty review was rescinded for the Canadian Solar entities subject to the tenth countervailing duty administrative review. The countervailing duty final results were amended in August 2024, but this amendment resulted in no change to USDOC's determination to rescind the review with respect to Canadian Solar. We did not appeal USDOC's final results of its tenth administrative reviews and, therefore, these decisions are final as to Canadian Solar.

The eleventh antidumping duty and countervailing duty administrative reviews were initiated in February 2024 and are currently underway. The USDOC issued the preliminary results of the eleventh antidumping and countervailing duty administrative reviews in April 2025. The USDOC preliminarily determined that the Canadian Solar entities subject to the eleventh antidumping and countervailing duty administrative reviews had no shipments during the period of reviews and therefore, the USDOC is rescinding both reviews with respect to Canadian Solar. Accordingly, our antidumping duty and countervailing duty rates, therefore, are expected to remain the same at 0.00% and 15.87%, respectively. The USDOC will likely issue the final results of the eleventh administrative reviews in late 2025, subject to potential extensions.

The USDOC initiated the twelfth administrative reviews on January 27, 2025, and so those proceedings are in their infancy. USDOC will likely issue preliminary results of the twelfth administrative reviews in late 2025 or early 2026.

In February 2024, the USDOC and USITC initiated the second five-year sunset reviews of the Solar 1 antidumping and countervailing duty orders. Those sunset reviews were concluded by USDOC and the ITC in June and September 2024, respectively, with both agencies finding that the orders should be maintained for another five years.

Solar 2 China

On December 31, 2013, SolarWorld Industries America, Inc. filed another trade action with the USDOC and the USITC accusing Chinese producers of certain CSPV modules of dumping their products into the U.S. and of receiving countervailable subsidies from the Chinese authorities. This trade action also alleged that Taiwanese producers of certain CSPV cells and modules dumped their products into the U.S. Excluded from these new actions were those Chinese-origin solar products covered by the Solar 1 orders described above. We were identified as one of a number of Chinese producers exporting the Solar 2 subject goods to the U.S. market.

"Chinese CSPV products subject to Solar 2 orders" refers to CSPV products manufactured in mainland China using non-Chinese (e.g., Taiwanese) CSPV cells and imported into the U.S. during the investigation or administrative review periods of Solar 2. "Taiwanese CSPV products subject to Solar 2 orders" refer to CSPV products manufactured outside of mainland China using Taiwanese CSPV cells and imported into the U.S. during the investigation or review periods of Solar 2.

On December 23, 2014, the USDOC issued final affirmative determinations with respect to its antidumping and countervailing duty investigation on these CSPV products. On January 21, 2015, the USITC determined that imports of these CSPV products had caused material injury to the U.S. CSPV industry. As a result of these determinations, we are required to pay cash deposits on these CSPV products, the rates of which applicable to our Chinese CSPV products were 30.06% (antidumping duty) and 38.43% (countervailing duty).

The USDOC's determination and the assessed countervailing duty rates were appealed to the CIT and the Federal Circuit. In March 2019, the Federal Circuit affirmed the CIT's decision confirming the USDOC's determination but reduced our countervailing duty rate to 33.58% (from 38.43%). There was no further appeal to the U.S. Supreme Court and, therefore, this decision is final.

The antidumping cash deposit rate applicable to our Taiwanese CSPV products subject to Solar 2 orders varied by solar cell producer. We paid all the cash deposits due under these determinations. There is no countervailing duty order on Taiwan Solar 2 products.

The rates at which duties will be assessed and payable are subject to administrative reviews.

The USDOC published the final results of the first administrative reviews in July 2017 (China and Taiwan antidumping duty orders) and September 2017 (China-only countervailing duty order). Because we were not subject to the first administrative reviews of the Solar 2 orders, our duty rates will remain at 30.06% (antidumping duty) and 33.58% (countervailing duty) for our Chinese CSPV products. Our antidumping duty rates for our Taiwanese CSPV products had ranged from 3.56% to 4.20%, until they were changed to 1.52% to 3.78% in June 2019.

The second administrative reviews for the Solar 2 China antidumping and countervailing duty orders were rescinded, meaning that there is no change in the Chinese antidumping and countervailing duty rates applicable to our Chinese CSPV products 30.06% (antidumping duty) and 33.58% (countervailing duty). The USDOC published the final results of the second administrative review for the Taiwan antidumping duty order (there is no countervailing duty order) in June 2018. The rate applicable to us is 1.33%. There is no ongoing litigation related to the Taiwan antidumping duty rate.

We were not subject to the third administrative reviews of the Chinese orders and, therefore, our duty rates remained unchanged at 30.06% (antidumping duty) and 33.58% (countervailing duty) for our Chinese CSPV products. The third administrative review of the Taiwan antidumping order concluded in mid-2019. The rate assessed to us was 4.39% (from 1.33%). There is no ongoing litigation related to the Taiwan antidumping duty rate.

The USDOC rescinded the fourth administrative reviews of the Solar 2 China antidumping duty and countervailing duty orders in late 2019. Our duty rates will remain unchanged at 30.06% (antidumping duty) and 33.58% (countervailing duty) for our Chinese CSPV products. The rate assessed to us in the fourth administrative review of the Taiwan antidumping order was 2.57% (from 4.39%). The USDOC also found that certain Canadian Solar entities had no shipments during this period of this review.

The USDOC rescinded the fifth administrative reviews of the Solar 2 China antidumping and countervailing duty orders. Our duty rates will remain unchanged at 30.06% (antidumping duty) and 33.58% (countervailing duty) for our Chinese CSPV products. The USDOC published the final results of the fifth administrative review of the Taiwan antidumping duty order in September 2021. The USDOC determined that the Canadian Solar entities subject to the fifth administrative review had no shipments during the period of review and therefore, our antidumping duty rates will remain unchanged for our Taiwanese CSPV products.

The USDOC did not initiate the sixth administrative reviews of the Solar 2 China antidumping and countervailing duty orders because no parties requested reviews. Our duty rates will remain unchanged at 30.06% (antidumping duty) and 33.58% (countervailing duty) for our Chinese CSPV products. The USDOC published the final results of the sixth administrative review of the Taiwan antidumping duty order in March 2022. The USDOC determined that the Canadian Solar entities subject to the sixth administrative review had no shipments during the period of review and therefore, our antidumping duty rates will remain unchanged for our Taiwanese CSPV products.

The USDOC initiated the seventh administrative reviews of the Solar 2 China antidumping and countervailing duty orders in April 2022. The countervailing duty review was not initiated with respect to Canadian Solar and therefore, our countervailing duty rates (33.58%) will remain unchanged for our Solar 2 China CSPV products. The USDOC rescinded the seventh administrative review of the Solar 2 Taiwan antidumping duty order in October 2022 and therefore, our antidumping duty rates will remain unchanged for our Solar 2 Taiwan CSPV products. The USDOC initiated the seventh administrative review of the Solar 2 China antidumping duty order in April 2022 with respect to certain of the Canadian Solar entities. The USDOC rescinded the seventh administrative review of the Solar 2 China antidumping duty order in March 2023 with respect to the Canadian Solar entities and therefore, our antidumping duty rates will remain unchanged for our Solar 2 China CSPV products.

The USDOC initiated the eighth administrative review of the Solar 2 China antidumping duty order in April 2023 with respect to certain of the Canadian Solar entities. The USDOC rescinded the eighth administrative review of the Solar 2 China antidumping duty order in July 2023 and therefore, our antidumping duty rates will remain unchanged for our Solar 2 China CSPV products. The USDOC did not initiate the eighth administrative review of the Solar 2 China countervailing duty order because no parties requested reviews and therefore, our countervailing duty rates (33.58%) will remain unchanged for our Solar 2 China CSPV products. The USDOC initiated the eighth administrative review of the Solar 2 Taiwan antidumping duty order in April 2023, however, the review was not initiated with respect to Canadian Solar and therefore, our antidumping duty rates will remain unchanged for our Taiwanese CSPV products.

The USDOC initiated the ninth administrative review of the Solar 2 China antidumping duty order in April 2024 with respect to certain of the Canadian Solar entities. The USDOC rescinded the ninth administrative review of the Solar 2 China antidumping duty order in October 2024. Therefore, our antidumping duty rates will remain unchanged for our Solar 2 China CSPV products. The USDOC did not initiate the ninth administrative review of the Solar 2 China countervailing duty order because no parties requested reviews. Therefore, our countervailing duty rates (33.58%) will remain unchanged for our Solar 2 China CSPV products. The USDOC initiated the ninth administrative review of the Solar 2 Taiwan antidumping duty order in April 2024, however, the review was not initiated with respect to Canadian Solar and therefore, our antidumping duty rates will remain unchanged for our Taiwanese CSPV products.

The USDOC initiated the tenth administrative review of the Solar 2 China antidumping duty order in March 2025 with respect to certain of the Canadian Solar entities. The USDOC did not initiate the tenth administrative review of the Solar 2 China countervailing duty order because no parties requested reviews. Therefore, our countervailing duty rates (33.58%) will remain unchanged for our Solar 2 China CSPV products. The USDOC initiated the tenth administrative review of the Solar 2 Taiwan antidumping duty order in March 2025, however, the review was not initiated with respect to Canadian Solar and therefore, our antidumping duty rates will remain unchanged for our Taiwanese CSPV products.

In 2020, the USDOC and USITC conducted five-year sunset reviews and determined to continue the Solar 2 antidumping and countervailing duty orders. In May 2020, the USDOC published the results of its expedited first sunset reviews and concluded that revocation of the Solar 2 orders would likely lead to a continuation or recurrence of dumping and a countervailable subsidy. The USITC issued an affirmative determination on September 4, 2020, declining to revoke the Solar 2 orders and finding that such revocation would be likely to lead to a continuation or recurrence of material injury to the U.S. industry within a reasonably foreseeable time. As a result, the Solar 2 orders are expected to remain in effect through at least 2025.

Solar 3 Southeast Asia

On April 24, 2024, the American Alliance for Solar Manufacturing Trade Committee (the "Committee") filed petitions for AD/CVD orders on CSPV cells and modules imported from Cambodia, Malaysia, Thailand, and Vietnam. Certain Canadian Solar entities entered an appearance in these proceedings before the USDOC and USITC. On May 15, 2024, the USDOC initiated the Solar 3 AD/CVD investigations with respect to all four countries, and the USITC preliminarily voted to continue its investigations on June 7, 2024. The USDOC rendered final affirmative CVD and AD determinations with respect to all four countries on April 18, 2025. In the Solar 3 Thailand AD/CVD investigations, the final countervailing duty rate (all others) applicable to Canadian Solar is 263.74%, and the final antidumping duty rate (all others) applicable to Canadian Solar is 111.45%. In the Solar 3 Vietnam AD/CVD investigations, the final countervailing duty rate (all others) applicable to Canadian Solar is 124.57%, and the final antidumping duty rate (all others) applicable to Canadian Solar is 271.28%. In addition, the USDOC determined that critical circumstances exist for imports of CSPV products from Thailand and Vietnam produced or exported by firms subject to the AD/CVD all other rates, including Canadian Solar. Final affirmative findings of critical circumstances by the USITC could lead to the imposition of antidumping duty and countervailing duty up to 90 days prior to the USDOC's AD/CVD preliminary determinations. The Group participated in the April 15, 2025 public hearing related to the USITC's final determination, which is expected to be announced on June 2, 2025. The Group is defending its interests in these proceedings.

Section 201 Safeguard

On May 17, 2017, following receipt of a petition from Suniva, Inc., which was later joined by SolarWorld Americas, Inc., the USITC instituted a safeguard investigation to determine whether there were increased imports of CSPV products in such quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing like or directly competitive products. On September 22, 2017, the USITC determined that CSPV products are being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry.

On January 23, 2018, the U.S. government imposed a safeguard measure on imports of CSPV cells, whether or not partially or fully assembled into other products such as modules, consisting of (1) a tariff-rate quota for four years on imports of CSPV cells not partially or fully assembled into other products, with (a) an in-quota quantity of 2.5 gigawatts, and (b) a tariff rate applicable to over-quota CSPV cells of 30%, declining annually by five percentage points to 25% in the second year, 20% in the third year, and 15% in the fourth year; and (2) a 30% tariff for four years on CSPV modules, declining annually by five percentage points to 25% in the second year, 20% in the third year, and 15% in the fourth year. This safeguard measure, which became effective on February 7, 2018, applies to CSPV products imported from all countries, except for certain developing country members of the World Trade Organization.

The safeguard measure was extended by the U.S. government in February 2022, with its terms subsequently adjusted on several occasions. The safeguard measure is scheduled to terminate in February 2026.

On June 13, 2019 and following an abbreviated public comment period, the Office of the U.S. Trade Representative (the "USTR") granted an exclusion from the safeguard measure for solar panels comprising solely bifacial solar cells (or bifacial solar panels). In October 2019, USTR determined to withdraw this exclusion. Invenergy Renewables LLC (or Invenergy) promptly contested USTR's withdrawal determination at the CIT and secured a temporary restraining order against USTR in November 2019. In December 2019, the CIT preliminarily enjoined USTR's withdrawal due to procedural deficiencies. USTR then sought and was granted a voluntary remand to reconsider its withdrawal determination for bifacial solar panels.

In early 2020, USTR conducted a renewed notice-and-comment process regarding the exclusion for bifacial solar panels from the safeguard measures. In April 2020, USTR again determined that the exclusion for bifacial solar panels should be withdrawn based on the findings of its second notice-and-comment process. Notwithstanding, in May 2020 the CIT denied without prejudice the United States' motion to dissolve the preliminary injunction and to resume the collection of the safeguard tariff on entries of bifacial modules. USTR appealed the CIT's interlocutory decision to the Federal Circuit in July 2020, but subsequently dismissed its appeal in January 2021. The United States continued to litigate the merits of USTR's April 2020 withdrawal of the bifacial exclusion before the CIT. On November 17, 2021, the CIT vacated USTR's April 2020 withdrawal in *Invenergy Renewables LLC v. United States*. The CIT's judgment holding USTR's April 2020 withdrawal of the bifacial exclusion unlawful was not appealed to the Federal Circuit and, therefore, this decision is final.

In early 2020, the USITC conducted a midterm review of the safeguard order, issuing its monitoring report in February 2020. Additionally, in March 2020, at the request of the USTR, the USITC released a report regarding the probable economic effect on the domestic CSPV cell and module manufacturing industry of modifying the safeguard measure on CSPV products. The USITC found that increasing the tariff-rate quota (TRQ) on CSPV cells (an integral component of CSPV modules) would likely result in a substantial increase in U.S. module producers' production, capacity utilization, and employment.

The U.S. government must consider the USITC's views but is not required to follow them or to take any action in the safeguard midterm review. On October 10, 2020, the U.S. government issued Proclamation 10101 pertaining to the midterm review. Proclamation 10101 authorized the following: (1) the revocation of the bifacial module exclusion effective October 25, 2020; (2) the reduction of the safeguard tariff to 18% *ad valorem* (as opposed to 15% *ad valorem* as prescribed in the original safeguard measures) effective February 7, 2021; and (3) the delegation to USTR of the U.S. government's authority to ask the USITC to assess whether the safeguard measures should be extended. The U.S. government decided not to follow the USITC's recommendation to increase the TRQ applicable to CSPV cells.

Following the issuance of Proclamation 10101, Invenergy and other plaintiffs (AES Distributed Energy, Inc., Clearway Energy Group LLC, EDF Renewables, Inc. ("EDF"), the Solar Energy Industries Association ("SEIA")) sought to challenge the Proclamation and filed motions to amend their complaints with the CIT. The CIT ultimately denied plaintiffs' motions and refused to extend the bifacial module exclusion beyond October 24, 2020 as a consequence of the Proclamation (as opposed to USTR's withdrawals). Subsequently, on December 29, 2020, Invenergy and another set of plaintiffs (SEIA, NextEra Energy, Inc., and EDF) commenced new and separate litigation once again challenging Proclamation 10101 in the CIT. This new complaint alleges that the U.S. government unlawfully terminated the bifacial module exclusion and revised the safeguard tariff, effective February 7, 2021, to be 18% ad valorem (as opposed to the originally announced 15% ad valorem).

On November 16, 2021, the CIT held in Solar Energy Industries Association et al. v. United States (SEIA) that the U.S. government acted outside of its statutory authority in issuing Proclamation 10101, and enjoined the Government from enforcing that proclamation. This judgment had the effect of reinstating the exclusion of bifacial modules from the safeguard tariffs and lowering the fourth year safeguard tariff to 15% ad valorem. On January 14, 2022, the Government filed a notice of appeal of SEIA to the Federal Circuit. In November 2023, the Federal Circuit reversed and remanded the CIT's judgment, finding that the U.S. government had acted lawfully in issuing Proclamation 10101. Appellees have filed a petition for en banc rehearing in January 2024, and the Federal Circuit's decision on the petition is pending. In October 2022, Canadian Solar filed an appeal at the CIT challenging U.S. Customs and Border Protection's erroneous collection of certain Section 201 safeguard duties on bifacial panels pursuant to Proclamation 10101, which the CIT had previously ruled "null and void" in SEIA. Canadian Solar's appeal remains stayed pending final resolution of the SEIA appeal at the Federal Circuit.

In 2021, the USITC conducted an extension investigation of the safeguard measure, in response to petitions by representatives of the domestic industry. In December 2021, the USITC issued its determination and report finding that the safeguard order continues to be necessary to prevent or remedy the serious injury to the domestic industry, and that there is evidence that the domestic industry is making a positive adjustment to import competition. On February 4, 2022, the U.S. government issued Proclamation 10339 extending the safeguard measure on U.S. imports of CSPV products for four years until February 6, 2026. The extended safeguard measure doubled the volume of the TRQ on imported CSPV cells to 5.0 gigawatts and maintains a tariff on imports of CSPV modules and above-quota CSPV cells, beginning at a rate of 14.75% ad valorem and declining annually by 0.25 percentage points to 14.50% in the sixth year, 14.25% in the seventh year, and 14.0% in the eighth year. The extended safeguard measure excluded bifacial panels.

CSPV cells and modules from Canada are no longer subject to the safeguard measure as of February 1, 2022 following the United States and Canada's entrance into a memorandum of understanding to resolve a dispute under the U.S.-Mexico-Canada Agreement.

In late 2023, the USITC conducted its second midterm review of the safeguard measure, issuing its monitoring report in February 2024. On June 21, 2024, the U.S. government issued Proclamation 10779, revoking the exclusion of bifacial panels from safeguard relief previously proclaimed in Proclamation 10339, thus reinstating bifacial panels under the Section 201 Safeguard Action, subject to certain qualifications. In addition, on August 12, 2024, the U.S. government issued a Proclamation expanding the TRQ for imported solar cells from 5 gigawatts to 12.5 gigawatts annually. The extended safeguard measure could be subject to further revision prior to its scheduled expiration in February 2026.

Canadian Antidumping and Countervailing Duties Expiry Review

On June 3, 2015, the Canada Border Services Agency ("CBSA") released final determinations regarding the dumping and subsidization of solar modules and laminates originating from China. The CBSA determined that such goods were dumped and subsidized. The CBSA found Canadian Solar to be a "cooperative exporter" and, as such, ascertained a low (relative to other Chinese exporters) Canadian Solar-specific subsidies rate of RMB 0.014 per Watt. On July 3, 2015, the Canadian International Trade Tribunal ("CITT") determined that the Canadian industry was not negatively affected as a result of imported modules but was threatened with such negative impact, excluding from its finding 195 W monocrystalline photovoltaic modules made of 72 monocrystalline cells, each cell being no more than 5 inches in width and height. As a result of these findings, definitive duties were imposed on imports of Chinese solar modules into Canada starting on July 3, 2015. The CITT may initiate an expiry review pursuant to Subsection 76.03(3) of the Special Import Measures Act ("SIMA") before the end of 5 years of its finding. If the CITT does not initiate such an expiry review pursuant to Subsection 76.03(3) of SIMA, the finding is deemed to have been rescinded as of the expiry of the five years.

On April 1, 2020, the CITT initiated the expiry review which concluded on March 25, 2021. The CITT determined to continue its aforementioned finding to impose definitive duties on imports of Chinese solar modules and laminates into Canada and declined to make a product exclusion on the Order for bifacial PV modules consisting of either 72 monocrystalline silicon photovoltaic cells or 144 monocrystalline silicon photovoltaic half-cells, with a power output exceeding 515 Watts and module efficiency exceeding 20.5%. As a result, the Canadian Solar-specific subsidies rate of RMB 0.014 per Watt remains unchanged. The subsidies rate applies for a period of five years. The CITT is required to conduct a further expiry review before the scheduled termination of the Order on March 24, 2026.

Patent Dispute

On March 25, 2024, Maxeon Solar Pte. Ltd. ("Maxeon") filed a patent infringement lawsuit against Canadian Solar, Inc. in the U.S. District Court for the Eastern District of Texas. Maxeon alleges that by manufacturing, importing, selling, or offering for sale of its TOPCon (Tunnel Oxide Passivated Contact) solar modules in the United States, Canadian Solar, Inc., via its affiliates, has directly and indirectly infringed and continues to infringe upon three patents currently held by Maxeon. The three patents asserted by Maxeon are U.S. Patent Nos. 8222516, 8878053, and 11251315. Maxeon's complaint requests the Court to grant, among other relief, a permanent injunction enjoining Canadian Solar, Inc. from the alleged infringement, and a judgment for monetary damages and fees. The specific amount of monetary damages has not been identified. Based on our preliminary assessment, we believe that our TOPCon solar modules do not infringe Maxeon's asserted patents and intend to vigorously defend ourselves in the lawsuit.

On February 10, 2025, CSI Solar was notified of two lawsuits filed against it by Trina at the Jiangsu Province High Court, alleging infringement of two patents and seeking approximately RMB 1.1 billion ($153.0 million) in damages. The patents in question are Patent No. ZL201710975923.2, titled "Solar Cell Module" ("Patent 1"), and Patent No. ZL201510892086.8, titled "Solar Cell and Its Manufacturing Method" ("Patent 2"). Based on our preliminary assessment, we do not believe our proprietary technology infringes on the patents asserted by Trina and we intend to vigorously defend ourselves in these proceedings. In October 2024, Trina also filed a patent lawsuit against CSI Solar's US subsidiaries in the Delaware federal court concerning the U.S. counterparts of Patent 2. In addition, Canadian Solar Manufacturing (Changshu) Inc., a subsidiary of CSI Solar, initiated patent invalidation proceedings before China's National Patent Office, challenging Patent 1 in August 2024 and Patent 2 in November 2024. These invalidation proceedings are still ongoing, and no final decisions have been issued.

From time to time, we face patent infringement claims and other disputes, which are inherently uncertain. Although we have been able to resolve such claims and disputes in the past without leaving a material adverse effect on our financial position, we cannot guarantee that any ongoing or potential disputes, if resolved unfavorably to us, will not have a material adverse effect on our business and results of operations. See also "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Our inability to protect our intellectual property rights or defend against patent infringement or other intellectual property claims, could undermine our competitive position, adversely affect our business and impose significant costs."

Dividend Policy

We have never declared or paid any dividends on our common shares, and have no present plans to declare or pay any dividends on our common shares in the foreseeable future. We currently intend to retain our available funds and any future earnings to operate and expand our business.

Our board of directors has complete discretion over whether to declare and pay dividends, subject to the requirements of the OBCA. Even if our board of directors decides to declare dividends, the form, frequency and the amount will depend upon our future operations, earnings, capital requirements, available surplus, overall financial condition, contractual restrictions, and any other factors that our board of directors deems relevant.

We are a holding company incorporated under the laws of the Province of Ontario, Canada, and we rely primarily on dividends and other income from our majority-owned operating subsidiaries, CSI Solar and Recurrent Energy, to meet our cash, investment and financing requirements. CSI Solar is required to comply with applicable PRC regulations when paying dividends to us. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China.”

B Significant Changes

We have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

ITEM 9 *THE OFFER AND LISTING*

A Offering and Listing Details

Not applicable.

B Plan of Distribution

Not applicable.

C Markets

Our common shares have been listed on the Nasdaq since November 9, 2006 under the symbol ”CSIQ.”

D Selling Shareholders

Not applicable.

E Dilution

Not applicable.

F Expenses of the Issue

Not applicable.

ITEM 10 *ADDITIONAL INFORMATION*

A Share Capital

Not applicable.

B Articles

General

On July 29, 2022, Canadian Solar Inc. filed articles of continuance to change our jurisdiction from the provincial jurisdiction of the Province of British Columbia to the provincial jurisdiction of the Province of Ontario. As a result, Canadian Solar Inc. is governed by the OBCA, and its affairs are governed by its articles and by-laws. Canadian Solar Inc.'s Ontario corporation number is 1497760.

The following are summaries of certain of the material provisions of Canadian Solar Inc.'s articles and by-laws and the OBCA. This summary is not intended to be complete and is qualified in its entirety by reference to Canadian Solar Inc.'s articles, by-laws and the OBCA. The information set forth in Exhibit 2.2 to this Annual Report on Form 20-F is incorporated herein by reference.

Objects and Purposes of Our Company

Canadian Solar Inc.'s articles and by-laws do not contain any stated objects or purposes and do not place any limitations on the business that we may carry on. Pursuant to the OBCA, Canadian Solar Inc. has the capacity and the rights, powers and privileges of a natural person, and the capacity to carry on its business, conduct its affairs and exercise its powers in any jurisdiction outside Ontario to the extent that the laws of such jurisdiction permit.

Voting on Proposals, Arrangements, Contracts or Compensation by Directors

Other than as disclosed in "Item 6. Directors, Senior Management and Employees—C. Board Practices—Interested Transactions", neither the OBCA nor our articles or by-laws restrict a director's power to (a) vote on a proposal, arrangement or contract in which the director is materially interested or (b) to vote compensation to themselves or any other members of their body in accordance with the OBCA.

Borrowing Powers of Directors

Pursuant to the OBCA, Canadian Solar Inc.'s articles are deemed to state that our directors may, without authorization of the shareholders, (a) borrow money upon the credit of the corporation; (b) issue, reissue, sell or pledge debt obligations of the corporation; (c) give a guarantee on behalf of the corporation to secure performance of an obligation of any person; and (d) mortgage, hypothecate, pledge or otherwise create a security interest in all or any property of the corporation, owned or subsequently acquired, to secure any obligation of the corporation.

Qualifications of Directors

Canadian Solar Inc.'s articles and by-laws do not contain any requirements for qualifications of directors.

Pursuant to the OBCA, the following persons are disqualified from being a director of Canadian Solar Inc.:

- A person who is less than eighteen years of age.
- A person who has been found under the *Substitute Decisions Act, 1992* or under the *Mental Health Act* to be incapable of managing property or who has been found to be incapable by a court in Canada or elsewhere.
- A person who is not an individual.
- A person who has the status of bankrupt.

Pursuant to the OBCA, a director of Canadian Solar Inc. ceases to be a director when:

- the term of office of the director expires, provided that a director not elected for an expressly stated term ceases to hold office at the close of the first annual meeting of shareholders following his or her election;
- the director dies;
- the director resigns as a director by notice in writing provided to us;
- the director is removed from office by an ordinary resolution of our shareholders; or
- the director becomes disqualified pursuant to the above criteria.

Common Share Rights

Dividends

Subject to the prior rights of the holders of the issued preferred shares, if any, the holders of the common shares are entitled to receive dividends declared by our board of directors. Pursuant to the OBCA, the board of directors shall not declare and Canadian Solar Inc. shall not pay a dividend if there are reasonable grounds for believing that (a) Canadian Solar Inc. is, or after the payment, would be unable to pay its liabilities as they become due; or (b) the realizable value of Canadian Solar Inc.'s assets would thereby be less than the aggregate of its liabilities, and its stated capital of all classes. All holders of common shares will share equally on a per share basis in any dividend declared by the board of directors on the common shares. The dividend entitlement time limit will be fixed by the board of directors at the time any such dividend is declared.

Voting Rights

The holders of common shares are entitled to receive notice of and to attend and vote at all meetings of our shareholders and each common share confers the right to one vote in person or by proxy at all meetings of our shareholders, except meetings at which the holders of the issued preferred shares, if any, are entitled to vote separately as a class or series. All directors stand for re-election annually.

Liquidation

Subject to the prior rights of the holders of the issued preferred shares, if any, the holders of the common shares are entitled to receive the remaining property of Canadian Solar Inc. in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, or in the event of any other distribution of the property or assets of Canadian Solar Inc. among the shareholders for the purpose of winding up our affairs, whether voluntary or involuntary.

Other

The common shares are not convertible or redeemable and have no preemptive, subscription or conversion rights. In the event of a merger or consolidation, all common shareholders will be entitled to receive the same per share consideration. There are no provisions in our articles discriminating against any existing or prospective shareholder as a result of such shareholder owning a substantial number of our common shares. Our common shares are not subject to liability for further capital calls by our Company. Also, no provisions or rights exist in our articles regarding our common shares in connection with exchange, redemption, retraction, purchase for cancellation, surrender or sinking or purchase funds.

Preferred Share Rights

General

The preferred shares may include one or more series and, subject to the OBCA, our board of directors may issue one or more series of preferred shares at any time and from time to time. Before it issues any series of preferred shares, our board of directors shall fix the number of preferred shares in, and determine the designation, rights, privileges, restrictions and conditions attaching to the preferred shares of, such series, including without limitation:

(a) the issue price per share, which may be expressed in a foreign currency, provided that the issue price per share shall not be less than C$1.00 (or its equivalent in a foreign currency at the date of issue) or more than C$100.00 (or its equivalent in a foreign currency at the date of issue);

(b) the rate, amount or method of calculation of dividends, including whether such rate, amount or method shall be subject to change or adjustment in the future;

(c) the method of payment of dividends, including whether such dividends shall be cumulative, non-cumulative, partially cumulative, deferred or payable on some other basis;

(d) the date or dates, manner and currency or currencies of payment of dividends;

(e) the restrictions, if any, on the payments of dividends on any Junior Shares (defined below);

(f) the rights and obligations, if any, that we have to redeem or purchase the shares, including the prices and other terms of redemption or purchase;

(g) the terms of any share purchase plan or sinking or similar fund providing for the purchase or redemption of the shares;

(h) the rights, if any, of the holders of the shares to retract the shares, including the prices and other terms of retraction;

(i) the rights, if any, of the holders of the shares or of us to convert or exchange the shares for other securities of ours or any other entity and the rates and other terms of conversion or exchange;

(j) the voting rights, if any, attached to the shares; and

(k) the preferences, if any, of the shares over any Junior Shares with respect to the distribution of our assets in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, or in the event of any other distribution of our property or assets among our shareholders for the purpose of winding up its affairs, whether voluntary or involuntary.

"Junior Shares" means the common shares and any other of our shares ranking junior to the preferred shares with respect to the payment of dividends and with respect to the distribution of assets in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, or in the event of any other distribution of our property or assets among our shareholders for the purpose of winding up its affairs, whether voluntary or involuntary.

Voting Rights

Except where the rights, privileges, restrictions and conditions attaching to a series of our preferred shares otherwise provide, the holders of our preferred shares shall not be entitled as such to receive notice of, or to attend or vote at, a meeting of our shareholders. Except where the rights, privileges, restrictions and conditions attaching to a series of our preferred shares otherwise provide, on any poll taken at any meeting of the holders of preferred shares, whether as a class or a series or two or more series, each holder of preferred shares entitled to vote at the meeting shall have one one-hundredth of a vote in respect of each C$1.00 (or its equivalent in a foreign currency at the date of issuance) of the issue price for each preferred share held. Except where the rights, privileges, restrictions and conditions attaching to a series of our preferred shares otherwise provide, the formalities to be observed with respect to the giving of notice of, and voting at, any meeting of holders of preferred shares, including without limitation, the quorum therefor, shall be those from time to time prescribed by our by-laws or by standing resolutions of our board of directors with respect to meetings of shareholders.

Creation of Additional Classes and Other Matters

Subject to the rights, privileges, restrictions and conditions attaching to a series of our preferred shares, we may, without the approval or consent of the holders of the preferred shares voting separately as a class or series, at any time and from time to time:

(a) create one or more other classes of shares ranking on a parity with the preferred shares with respect to the payment of dividends or the distribution of assets in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, or in the event of any other distribution of our property or assets among our shareholders for the purpose of winding up our affairs, whether voluntary or involuntary;

(b) if all dividends on each outstanding series of preferred shares accrued to the most recently preceding date for the payment of dividends on such series shall have been declared and paid or set apart for payment, create one or more other classes of shares ranking superior to the preferred shares with respect to the payment of dividends or the distribution of assets in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, or in the event of any other distribution of our property or assets among our shareholders for the purpose of winding up our affairs, whether voluntary or involuntary;

(c) increase any maximum number of authorized shares of any other class of shares; and

(d) effect an exchange, reclassification or cancellation of all or part of the preferred shares.

Liquidation

In the event of our liquidation, dissolution or winding-up, whether voluntary or involuntary, or in the event of any other distribution of our property or assets among our shareholders for the purpose of winding up our affairs, whether voluntary or involuntary, before any amount shall be paid to, or any property distributed among, the holders of our common shares, the holders of our preferred shares shall be entitled to receive:

(a) the amount paid up on such shares or such other amount or amounts as have been provided for with respect to such shares;

(b) the premium, if any, provided for with respect to such shares;

(c) in the case of shares entitled to cumulative dividends, any unpaid cumulative dividends on such shares; and

(d) in the case of shares entitled to non-cumulative dividends, any declared but unpaid non-cumulative dividends on such shares.

After payment of the amounts payable to them, the holders of our preferred shares shall not be entitled to share in any further distribution of our property and assets.

No Pre-Emptive Rights

The holders of our preferred shares shall not be entitled as such to subscribe for, purchase or receive any part of any issue of our securities, now or hereafter authorized, or any rights to acquire the same, otherwise than in accordance with any conversion, exchange or other rights which may from time to time be attached to any series of preferred shares.

Procedures to Change the Rights of Shareholders

Other than as disclosed in “Item 10. Additional Information—B. Articles—Preferred Share Rights”, Canadian Solar Inc.’s articles and by-laws do not provide for us to be able to change the rights of Canadian Solar Inc.’s shareholders.

The OBCA provides for certain avenues for the rights of Canadian Solar Inc.'s shareholders to be changed including:

- The directors may, by resolution, make, amend or repeal any by-laws that regulate our business or affairs, which may change the rights of our shareholders. Where the directors make, amend or repeal a by-law, they are required to submit the by-law, amendment or repeal to the shareholders at the next meeting of shareholders, and the shareholders may, by ordinary resolution, confirm, reject or amend the by-law, amendment or repeal. However the by-law, amendment or repeal is effective from the date of the resolution of the directors until it is confirmed, confirmed as amended or rejected by the shareholders or until the date of the meeting of shareholders at which it should have been submitted if it is not so submitted.

- Subject to the OBCA, we may from time to time if authorized by a special resolution of our shareholders (i.e., a resolution that is submitted to a special meeting of the shareholders duly called for the purpose of considering the resolution and passed, with or without amendment, at the meeting by at least two-thirds of the votes cast), amend Canadian Solar Inc.'s articles to add, change or remove any provision that is permitted by the OBCA to be, or that is, set out in its articles, including without limiting the generality of the foregoing, to:

  - change our name;

  - add, change or remove any restriction upon the business or businesses that we may carry on or upon the powers that we may exercise;

  - add, change or remove any maximum number of shares that we are authorized to issue or any maximum consideration for which any of our shares are authorized to be issued;

  - create new classes of shares;

  - change the designation of all or any of its shares, and add, change or remove any rights, privileges, restrictions and conditions, including rights to accrued dividends, in respect of all or any of its shares, whether issued or unissued;

  - change the shares of any class or series, whether issued or unissued, into a different number of shares of the same class or series or into the same or a different number of shares of other classes or series;

  - divide a class of shares, whether issued or unissued, into series and fix the number of shares in each series and the rights, privileges, restrictions and conditions thereof;

  - authorize the directors to divide any class of unissued shares into series and fix the number of shares in each series and the rights, privileges, restrictions and conditions thereof, or to revoke, diminish or enlarge any such authority;

  - authorize the directors to change the rights, privileges, restrictions and conditions attached to unissued shares of any series, or to revoke, diminish or enlarge any such authority;

  - subject to certain constraints, increase or decrease the number, or minimum or maximum number, of directors; and

  - add, change or remove restrictions on the issue, transfer or ownership of shares of any class or series.

- Where the directors are authorized by the articles to divide any class of unissued shares into series and determine the designation, rights, privileges, restrictions and conditions thereof, they may by resolution authorize the amendment of the articles to so provide.

Shareholder Meetings

Each director holds office until our next annual general meeting or until his or her office is earlier vacated in accordance with the provisions of the OBCA. A director appointed or elected to fill a vacancy on our board also holds office until our next annual general meeting.

Pursuant to the OBCA, we must hold an annual meeting of our shareholders at a time and place determined by our board of directors, provided that the meeting must not be held later than 15 months after the preceding annual meeting. Our directors may, whenever they think fit, call a special meeting of our shareholders. A meeting of our shareholders may be held by telephonic or electronic means and a shareholder who, through those means, votes at the meeting or establishes a communications link to the meeting shall be deemed for the purposes of the OBCA to be present at the meeting.

For the purpose of determining shareholders entitled to receive notice of a meeting of shareholders, the directors may fix in advance a date as the record date for such determination of shareholders, but the record date shall not precede by more than 60 days or by less than 30 days the date on which the meeting is to be held. Where no record date is fixed, the record date for the determination of shareholders entitled to receive notice of a meeting of shareholders shall be at the close of business on the day immediately preceding the day on which the notice is given, or if no notice is given, the day on which the meeting is held.

We must send notice of the date, time and location of any meeting of shareholders, in the manner provided in our by-laws and the OBCA, to each shareholder entitled to vote at the meeting and to each director and to our auditor not less than twenty-one days and not more than sixty days before the meeting. A notice of a meeting is not required to be sent to shareholders who were not registered on the records of our transfer agent on the record date, but failure to receive a notice does not deprive a shareholder of the right to vote at the meeting.

All business transacted at a special meeting of shareholders and all business transacted at an annual meeting of shareholders, except consideration of the minutes of an earlier meeting, the financial statements and auditor's report, election of directors and reappointment of the incumbent auditor, shall be deemed to be special business. Notice of a meeting of shareholders at which special business is to be transacted shall state or be accompanied by a statement of the nature of that business in sufficient detail to permit the shareholder to form a reasoned judgment thereon, and the text of any special resolution or by-law to be submitted to the meeting.

Unless otherwise required by the OBCA or the articles and by-laws of Canadian Solar Inc., (a) all questions proposed for the consideration of the shareholders shall be determined by the majority of the votes cast; (b) the chairman presiding at a meeting of shareholders may, with the consent of the meeting and subject to such conditions as the meeting decides, adjourn the meeting from time to time and from place to place subject to certain limits set out in the OBCA; and (c) the chairman or, in his absence, the present or, in their absence, a director designated by our board of directors shall act as chairman of each meeting of shareholders, but if no such officer is present within thirty minutes after the time appointed by the holding of the meeting, the persons present and entitled to vote at the meeting shall choose one of their number to be chairman of the meeting.

A shareholder and any other person entitled to attend a meeting of shareholders may in any manner and at any time waive notice of a meeting of shareholders, and attendance of any such person at a meeting of shareholders is a waiver of notice of the meeting, except where such person attends a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called. The only persons entitled to attend a meeting of shareholders shall be those entitled to vote thereat, our auditors and others who, although not entitled to vote, are entitled or required under any provision of the OBCA or the by-laws to be present at the meeting. Other persons may attend a meeting of shareholders only with the consent of the chairman of the meeting or the shareholders present, or deemed to be present, in person or by proxy at the meeting. Subject to the OBCA, any person entitled to attend a meeting of shareholders may participate in the meeting by means of a telephonic, electronic or other communication facility made available by us that permits all participants to communicate adequately with each other during the meeting. The persons participating in a meeting of shareholders by such means shall be deemed for the purposes of our by-laws to be present at the meeting. If our board of directors or shareholders call a meeting of shareholders pursuant to the OBCA, our board of directors or shareholders, as the case may be, may determine that the meeting shall be held, in accordance with the OBCA, entirely by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during the meeting.

A registered holder of shares entitled to vote or a beneficial owner of shares that are entitled to be voted at a meeting of shareholders may, submit to us notice of a proposal; and discuss at the meeting any matter in respect of which the registered holder or beneficial owner would have been entitled to submit a proposal. Subject to certain exceptions set out in the OBCA, where we receive notice of a proposal, (a) if we provide a management information circular, it shall set out the proposal in the management information circular or attach the proposal to that circular; (b) if we do not provide a management information circular, it shall set out the proposal in the notice of meeting for the shareholders' meeting at which the matter is proposed to be raised or shall attach the proposal to such notice of meeting; and (c) at the request of a person who submits notice of a proposal, we are required to include in the management information circular or the notice of meeting, as the case may be, or shall attach to it, the person's statement in support of the proposal and the person's name and address. The exceptions include if the notice of the proposal is not submitted to us within certain time restrictions set out in the OBCA, if it clearly appears that the primary purpose of the proposal is to enforce a personal claim or redress a personal grievance against us or our directors, officers or security holders, and if it clearly appears that the proposal does not relate in a significant way to our business or affairs. The proposal and the statement in support of it shall together not exceed 500 words. A proposal may include nominations for the election of directors if the proposal is signed by one or more holders of shares representing in the aggregate not less than five percent of the issued shares or five percent of the issued shares of a class or series of shares entitled to vote at the meeting to which the proposal is to be presented. This description of the provisions of the OBCA relating to shareholder proposals does not purport to be complete. For complete details, refer to the OBCA.

We are required to prepare a list of shareholders entitled to receive notice of a meeting, arranged in alphabetical order and showing the number of shares held by each shareholder, which list shall be prepared, if a record date is fixed, not later than ten days after such record date, or if no record date is fixed, at the close of business on the day immediately preceding the day on which notice is given, or where no notice is given, on the day on which the meeting is held. A shareholder whose name appears on such list is entitled to vote the shares shown opposite the shareholder's name at the meeting to which the list relates. A shareholder may examine the list of shareholders during usual business hours at our registered office or at the place where our central securities register is maintained, and at the meeting of shareholders for which the list was prepared.

A quorum for the transaction of business at any meeting of shareholders shall be two or more shareholders present, or deemed to be present, in person or by proxy at the meeting and together holding or representing by proxy shares carrying at least 33 1/3 percent of the votes entitled to be cast at the meeting. If a quorum is present at the opening of a meeting of shareholders, the shareholders present may, unless the by-laws otherwise provide, proceed with the business of the meeting even if a quorum is not present throughout the meeting. If a quorum is not present at the time appointed for a meeting of shareholders, or within such reasonable time thereafter as the shareholders present may determine, the shareholders present may adjourn the meeting to a fixed time and place but may not transact any other business.

Each of our common shares entitles the holder thereof to one vote at a meeting of shareholders. Where a body corporate or association is a shareholder, we will recognize any individual authorized by a resolution of the directors or governing body of the body corporate or association to represent it at meetings of our shareholders. Unless the by-laws otherwise provide, where two or more persons hold shares jointly, one of those holders present at a meeting of shareholders may in the absence of the others vote the shares, but if two or more of those persons are present, in person or by proxy, they shall vote as one on the shares jointly held by them.

At a meeting of shareholders, every motion shall, subject to the provisions of the OBCA, be decided by a show of hands, unless a ballot thereon is required by the chairman of the meeting or is demanded by any shareholder entitled to vote and present, or deemed to be present, in person or by proxy at the meeting. Upon a show of hands, every such person who is entitled to vote shall have one vote. Before or after a show of hands has been taken upon any motion, the chairman may require, or any shareholder entitled to vote and present, or deemed to be present, in person or by proxy at the meeting may demand a ballot thereon. Notwithstanding the foregoing, the vote on any motion may be held, subject to compliance with the OBCA, by means of a telephonic, electronic or other communication facility made available by us for such purpose. Unless a ballot thereon is demanded, a declaration by the chairman of the meeting that the vote upon a motion has been carried or carried by a particular majority or not carried shall be the decision of the shareholders upon the motion and an entry in the minutes of the meeting to the effect that the chairman of the meeting declared the motion to be carried or defeated is, in the absence of evidence to the contrary, proof of that fact without proof of the number or proportion of the votes recorded in favor of or against the motion. A demand for a ballot may be withdrawn at any time before the ballot is taken. If a ballot is required by the chairman of the meeting or is duly demanded by any shareholder entitled to vote and present, or deemed to be present, in person or by proxy at the meeting and the demand is not withdrawn, a ballot upon the motion shall be taken in such manner as the chairman of the meeting shall direct. Unless the OBCA or articles otherwise requires, upon a ballot, each shareholder who is present, or deemed to be present, in person or by proxy at the meeting shall be entitled to one vote for each share in respect of which he or she is entitled to vote at the meeting and the result of the ballot shall be the decision of the shareholders upon the motion.

Pursuant to the OBCA, the holders of not less than five percent of the issued shares of Canadian Solar Inc. that carry the right to vote at a meeting sought to be held may requisition the directors to call a meeting of shareholders for the purposes stated in the requisition. Upon receiving such a requisition, unless certain statutory exceptions apply the directors shall call a meeting of shareholders to transact the business stated in the requisition and if they do not do so within twenty-one days after receiving the requisition, any shareholder who signed the requisition may call the meeting. We are obligated to reimburse the shareholders for the expenses reasonably incurred by them in requisitioning, calling and holding the meeting unless the shareholders have not acted in good faith and in the interest of our shareholders generally.

If for any reason it is impracticable to call a meeting of our shareholders in the manner in which meetings of shareholders may be called or to conduct the meeting in the manner prescribed by the articles and by-laws of Canadian Solar Inc. and the OBCA, or if for any other reason the court thinks fit, the court, upon the application of a director or a shareholder entitled to vote at the meeting, may order a meeting to be called, held and conducted in such manner as the court directs and upon such terms as to security for the costs of holding the meeting or otherwise as the court deems fit.

A corporation, shareholder or director may apply to the court to determine any controversy with respect to an election or appointment of a director or auditor of the corporation. Upon an application under this section, the court may make any order it thinks fit including, without limiting the generality of the foregoing, (a) an order restraining a director or auditor whose election or appointment is challenged from acting pending determination of the dispute; (b) an order declaring the result of the disputed election or appointment; (c) an order requiring a new election or appointment and including in the order directions for the management of the business and affairs of the corporation until a new election is held or appointment made; and (d) an order determining the voting rights of shareholders and of persons claiming to own shares.

Limitations on Ownership of Securities

Except as provided below, there are no limitations specific to the rights of non-Canadians to hold or vote our shares under the laws of Canada or Ontario, or in our articles or by-laws.

Competition Act

Limitations on the ability to acquire and hold our shares may be imposed by the *Competition Act* (Canada). This legislation establishes a pre-merger notification regime for certain types of merger transactions that exceed certain statutory shareholding and financial thresholds. Transactions that are subject to notification cannot be closed until the required materials are filed and the applicable statutory waiting period has expired or been waived by the Commissioner of Competition, or the Commissioner. Further, the *Competition Act* (Canada) permits the Commissioner to review any acquisition of control over or of a significant interest in us, whether or not it is subject to mandatory notification. This legislation grants the Commissioner jurisdiction, for up to one year (in respect of a merger that is subject to mandatory notification) or three years (in respect of any other merger), to challenge this type of acquisition before the Canadian Competition Tribunal if it would, or would be likely to, substantially prevent or lessen competition in any market in Canada.

Investment Canada Act

The *Investment Canada Act* requires notification and, in certain cases, advance review and approval by the Government of Canada, through the Minister of Innovation, Science and Industry (the "Minister"), of an investment to establish a new Canadian business by a non-Canadian or of the acquisition by a non-Canadian of "control" of a "Canadian business", all as defined in the Investment Canada Act. Generally, the threshold for advance review and approval will be higher in monetary terms for an investor who is controlled in a country that is a member of the World Trade Organization and who is not a state-owned enterprise. The *Investment Canada Act* generally prohibits the implementation of such a reviewable transaction unless, after review, the Minister is satisfied that the investment is likely to be of net benefit to Canada. The *Investment Canada Act* contains various rules to determine if there has been an acquisition of control. For example, for purposes of determining whether an investor has acquired control of a corporation by acquiring shares, the following general rules apply, subject to certain exceptions: (1) the acquisition of a majority of the voting shares of a corporation is deemed to be acquisition of control of that corporation; (2) the acquisition of less than a majority but one-third or more of the voting shares of a corporation is presumed to be an acquisition of control of that corporation unless it can be established that, on the acquisition, the corporation is not controlled in fact by the acquiror through the ownership of voting shares; and (3) the acquisition of less than one-third of the voting shares of a corporation is deemed not to be acquisition of control of that corporation.

In addition, under the *Investment Canada Act*, "national security" review on a discretionary basis may also be undertaken by the federal Canadian government in respect of a much broader range of investments by a non-Canadian to "acquire, in whole or in part, or to establish an entity carrying on all or any part of its operations in Canada", with the relevant test being whether the Minister has "reasonable grounds to believe that an investment by a non-Canadian could be injurious to national security." The Minister has broad discretion to determine whether an investor is a non-Canadian and therefore may be subject to "national security" review. Review on national security grounds is at the discretion of the federal government and may occur on a pre- or post-closing basis. If the Minister, after consultation with the Minister of Public Safety, considers that the investment could be injurious to "national security," the Minister may impose interim conditions and/or undertakings on the investment during the national security review. Such measures could include (without limitation) restricting the investor's voting or board appointment rights, restricting information sharing or other operational integration between the investor and the Canadian business and/or reporting obligations. If the Minister believes that the investment would or may be injurious to national security after consultation with the Minister of Public Safety, it may refer the investment to, the Governor in Council, who may take any measures in respect of the investment that it considers advisable to protect national security, including denying the investment, asking for undertakings, imposing terms or conditions for the investment, or ordering divestiture (if the investment has been completed). Any of these provisions may discourage a potential acquirer from proposing or completing a transaction that may have otherwise presented a premium to our shareholders. We cannot predict whether investors will find our company and our common shares less attractive because we are governed by foreign laws.

Provisions that would have an Effect of Delaying, Deferring or Preventing a Change of Control

The following provisions in Canadian Solar Inc.'s articles may deprive our shareholders of the opportunity to sell their shares at a premium over the prevailing market price by delaying or preventing a change of control of our company:

- Our board of directors has the authority, without approval from the shareholders, to issue an unlimited number of preferred shares, in one or more series, at any time and from time to time. Before it issues any series of preferred shares, our board of directors shall fix the number of preferred shares in, and determine the designation, rights, privileges, restrictions and conditions attaching to the preferred shares of, such series. See "Item 10. Additional Information—B. Articles" for a more detailed description of the attributes of the preferred shares.

- Our board of directors is entitled to fix and may change the number of directors within the minimum and maximum number of directors provided for in our articles (i.e., a minimum of three and a maximum of ten directors). Our board of directors may appoint one or more additional directors, who shall hold office for a term expiring not later than the close of the next annual meeting of shareholders, but the total number of directors so appointed may not exceed one-third of the number of directors elected at the previous annual meeting of shareholders.

In addition, Canadian Solar Inc's by-laws and the OBCA provide for minimum time periods for the calling and holding of meetings of shareholders. See "Item 10. Additional Information—B. Articles—Shareholder Meetings" for more information.

Otherwise, there are no provisions in Canadian Solar Inc's articles or by-laws or in the OBCA that would have an effect of delaying, deferring or preventing a change in control of our company which would operate with respect to a merger, acquisition or corporate restructuring involving our company or any of our subsidiaries.

Provisions Governing the Ownership Threshold Above Which Shareholder Ownership Must be Disclosed

Canadian Solar Inc.'s articles and by-laws do not have any specific threshold requiring disclosure of ownership by holders of our shares. The OBCA and securities regulation in Canada requires that we disclose in our proxy information circular for our annual general meeting and certain other disclosure documents filed by us under such regulation, holders who beneficially own, directly or indirectly, or control or direct, voting securities of Canadian Solar Inc. carrying 10% or more of the voting rights attached to any class of outstanding voting securities. Most state corporation statutes do not contain provisions governing the threshold above which shareholder ownership must be disclosed. United States federal securities laws require us to disclose, in an annual report on Form 20-F, holders who own 5% or more of Canadian Solar Inc.'s issued and outstanding shares.

Conditions Imposed by Our Articles and By-Laws Governing Changes in Capital

The requirements imposed by Canadian Solar Inc.'s articles and by-laws governing changes in capital are not more stringent than is required by applicable laws, including the OBCA.

C Material Contracts

We have not entered into any material contracts other than in the ordinary course of business and other than those described in "Item 4. Information on the Company" or elsewhere in this annual report on Form 20-F.

D Exchange Controls

See "Item 4. Information on the Company—B. Business Overview—Government Regulations—Foreign Currency Exchange" and "Item 4. Information on the Company—B. Business Overview—Government Regulations—Dividend Distribution."

E Taxation

Principal Canadian Federal Tax Considerations

General

The following is a summary of the principal Canadian federal income tax implications generally applicable to a holder of our common shares who, at all relevant times, (a) is a resident of the United States for purposes of the Canada-United States Income Tax Convention (1980) (the "**Convention**"), is fully entitled to the benefits of the Convention, and did not, does not and will not have a fixed base or permanent establishment in Canada within the meaning of the Convention, and (b) for purposes of the *Income Tax Act* (Canada) (the "**Canadian Tax Act**"), (i) is not a resident, or deemed to be a resident, of Canada; (ii) holds such common shares as capital property and as beneficial owner; (iii) deals at arm's length with and is not affiliated with us; (iv) does not use or hold, and is not deemed to use or hold, such common shares in the course of carrying on a business in Canada; (v) did not acquire our common shares by virtue of employment, and (vi) is not a financial institution, specified financial institution, registered non-resident insurer, authorized foreign bank, partnership or trust as defined in the Canadian Tax Act (a "**U.S. Holder**").

This summary does not deal with special situations, such as the particular circumstances of traders or dealers, tax exempt entities, insurers or financial institutions, or other holders of special status or in special circumstances. Such holders, and all other holders who do not meet the criteria in clauses (a) and (b) above, should consult their own tax advisors.

For the purposes of the Canadian Tax Act, all amounts relating to the acquisition, holding or disposition of our common shares must generally be expressed in Canadian dollars. Amounts denominated in United States currency generally must be converted into Canadian dollars using the rate of exchange that is acceptable to the Canada Revenue Agency.

The Canadian federal income tax consequences of acquiring, holding and disposing of our common shares will depend on each U.S. Holder's particular situation. This summary is not intended to be a complete analysis of or description of all potential Canadian federal income tax consequences, and should not be construed to be, legal, business or tax advice directed at any particular U.S. Holder or prospective purchaser of our common shares. Accordingly, U.S. Holders or prospective purchasers of our common shares should consult their own tax advisors for advice with respect to the Canadian federal income tax consequences of an investment in our common shares based on their own particular circumstances.

Dividends

Amounts paid or credited, or deemed under the Canadian Tax Act to be paid or credited, on account or in lieu of payment of, or in satisfaction of, dividends to a U.S. Holder that has provided the requisite documentation regarding its entitlement to benefits under the Convention will be subject to Canadian withholding tax at the reduced rate of 15% under the Convention. This rate is further reduced to 5% in the case of a U.S. Holder that is a company for purposes of the Convention that owns at least 10% of our voting shares at the time the dividend is paid or deemed to be paid.

Disposition of Our Common Shares

A U.S. Holder will not be subject to income tax under the Canadian Tax Act in respect of any capital gain realized on a disposition or deemed disposition of our common shares that it holds unless, at the time of disposition, such common shares constitute "taxable Canadian property" of the U.S. Holder for the purposes of the Canadian Tax Act and the U.S. Holder is not otherwise entitled to an exemption under the Convention.

Provided that our common shares are then listed on a "designated stock exchange" for purposes of the Canadian Tax Act (which currently includes the Nasdaq), at the time of disposition, our common shares generally will not constitute taxable Canadian property of a U.S. Holder at that time, unless at any time during the 60 month period immediately preceding the disposition of the common shares (i) 25% or more of the issued shares of any class or series of the capital stock of our company were owned by, or belonged to, any combination of (a) the U.S. Holder, (b) persons with whom the U.S. Holder did not deal at arm's length, and (c) partnerships in which the U.S. Holder or a person described in (b) held a membership interest directly or indirectly through one or more partnerships; and (ii) at such time, more than 50% of the fair market value of such shares was derived, directly or indirectly, from any combination of real or immovable property situated in Canada, "Canadian resource property" (as defined in the Canadian Tax Act), "timber resource property" (as defined in the Canadian Tax Act), or options in respect of, interests in, or for civil law rights in such properties, whether or not such property exists. Notwithstanding the foregoing, our common shares may also be deemed to be taxable Canadian property to a U.S. Holder for purposes of the Canadian Tax Act in certain circumstances.

U.S. Holders for whom our common shares are, or may be, taxable Canadian property should consult their own tax advisors with respect to the application of Canadian capital gains taxation, any potential relief under the Convention, and compliance procedures under the Canadian Tax Act, none of which is described in this summary.

Canada—United States Income Tax Convention

The Convention includes a complex limitation on benefits provision. U.S. Holders are urged to consult their own tax advisors to determine their entitlement to benefits under the Convention.

United States Federal Income Taxation

The following discussion describes certain material United States federal income tax consequences to a United States Holder (as defined below), under current law, of an investment in our common shares. This discussion is based on the federal income tax laws of the United States as of the date of this annual report on Form 20-F, including the United States Internal Revenue Code of 1986, as amended, or the Code, existing and proposed Treasury Regulations promulgated thereunder, judicial authority, published administrative positions of the IRS and other applicable authorities, all as of the date of this annual report on Form 20-F. All of the foregoing authorities are subject to change, which change could apply retroactively and could significantly affect the tax consequences described below. We have not sought any ruling from the IRS with respect to the statements made and the conclusions reached in the following discussion and there can be no assurance that the IRS or a court will agree with our statements and conclusions. Moreover, this discussion does not address the United States federal estate, gift, Medicare, and alternative minimum tax consequences, or any state, local and non-United States tax consequences, relating to an investment in our common shares. Except as explicitly described below, this discussion does not address any tax consequences or reporting obligations that may be applicable to persons holding our common shares through a bank, financial institution or other entity, or a branch thereof, located, organized or resident outside the United States, and does not describe any tax consequences arising in respect of the "Foreign Account Tax Compliance Act", or FATCA, regime.

This discussion applies only to a United States Holder (as defined below) that holds our common shares as capital assets (that is, property generally held for investment) for United States federal income tax purposes. The discussion neither addresses the tax consequences to any particular investor nor describes all of the tax consequences applicable to persons in special tax situations such as:

- banks and certain other financial institutions;
- insurance companies;
- regulated investment companies;
- real estate investment trusts;
- brokers or dealers in stocks and securities, or currencies;
- persons that use or are required to use a mark-to-market method of accounting;
- certain former citizens or residents of the United States subject to Section 877 of the Code;

- entities subject to the United States anti-inversion rules;
- tax-exempt organizations and entities;
- persons subject to the alternative minimum tax provisions of the Code;
- persons whose functional currency is other than the United States dollar;
- persons holding common shares as part of a straddle, hedging, conversion or integrated transaction;
- persons that actually or constructively own common shares representing 10% or more of our total voting power or value;
- persons who acquired common shares pursuant to the exercise of an employee stock option or otherwise as compensation;
- partnerships or other pass-through entities, or persons holding common shares through such entities;
- persons required to accelerate the recognition of any item of gross income with respect to our common shares as a result of such income being recognized on an applicable financial statement; or
- persons that held, directly, indirectly or by attribution, common shares or other ownership interest in us prior to our initial public offering.

If a partnership (including an entity or arrangement treated as a partnership for United States federal income tax purposes) holds our common shares, the tax treatment of a partner in the partnership generally will depend upon the status of the partner and the activities of the partnership. A partnership holding our common shares, or a partner in such a partnership, should consult its tax advisors regarding the tax consequences of investing in and holding our common shares.

THE FOLLOWING DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT A SUBSTITUTE FOR CAREFUL TAX PLANNING AND ADVICE. HOLDERS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE UNITED STATES FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE FEDERAL ESTATE OR GIFT TAX LAWS OR THE LAWS OF ANY STATE, LOCAL OR NON-UNITED STATES TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

For purposes of the discussion below, a “United States Holder” is a beneficial owner of our common shares that is, for United States federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to United States federal income taxation regardless of its source; or
- a trust, if (i) a court within the United States is able to exercise primary jurisdiction over its administration and one or more United States persons (as defined in the Code) have the authority to control all of its substantial decisions or (ii) in the case of a trust that was treated as a domestic trust under the law in effect before 1997, a valid election is in place under applicable Treasury Regulations to treat such trust as a domestic trust.

Dividends and Other Distributions on the Common Shares

Subject to the passive foreign investment company rules discussed below, the gross amount of any distribution that we make to you with respect to our common shares (including any amounts withheld to reflect Canadian or PRC withholding taxes) will be taxable as a dividend, to the extent paid out of our current or accumulated earnings and profits, as determined under United States federal income tax principles. Such income (including any withheld taxes) will be includable in your gross income on the day actually or constructively received by you. Because we do not intend to determine our earnings and profits on the basis of United States federal income tax principles, any distribution paid generally will be reported as a "dividend" for United States federal income tax purposes. Such dividends will not be eligible for the dividends-received deduction allowed to qualifying corporations under the Code.

Dividends received by a non-corporate United States Holder may qualify for the lower rates of tax applicable to "qualified dividend income," if the dividends are paid by a "qualified foreign corporation" and other conditions discussed below are met. A non-United States corporation is treated as a qualified foreign corporation (a) with respect to dividends paid by that corporation on shares that are readily tradable on an established securities market in the United States or (b) if such non-United States corporation is eligible for the benefits of a qualifying income tax treaty with the United States that includes an exchange of information program. However, a non-United States corporation will not be treated as a qualified foreign corporation if it is a passive foreign investment company in the taxable year in which the dividend is paid or the preceding taxable year.

Under a published IRS Notice, common shares are considered to be readily tradable on an established securities market in the United States if they are listed on the Nasdaq Global Market, as our common shares are, but we cannot guarantee that our common shares will always be so listed. In addition, we may be eligible for the benefits of the income tax treaty between the United States and Canada, or, if we are treated as a PRC resident enterprise under the PRC tax law (see "—People's Republic of China Taxation") then we may be eligible for the benefits of the income tax treaty between the United States and the PRC. If we are eligible for such benefits, then dividends that we pay to certain non-corporate United States Holders on our common shares would be, subject to applicable limitations, eligible for the reduced rates of taxation.

Even if dividends would be treated as paid by a qualified foreign corporation, a non-corporate United States Holder will not be eligible for reduced rates of taxation if it does not hold our common shares for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date (disregarding certain periods of ownership while the United States Holder's risk of loss is diminished) or if such United States Holder elects to treat the dividend income as "investment income" pursuant to Section 163(d)(4) of the Code. In addition, the rate reduction will not apply to dividends of a qualified foreign corporation if the non-corporate United States Holder receiving the dividend is obligated to make related payments with respect to positions in substantially similar or related property.

You should consult your tax advisors regarding the availability of the lower tax rates applicable to qualified dividend income for any dividends that we pay with respect to the common shares, as well as the effect of any change in applicable law after the date of this annual report on Form 20-F.

Any Canadian or PRC withholding taxes imposed on dividends paid to you with respect to our common shares (at a rate not exceeding any applicable treaty rate in the case of a United States Holder that is eligible for the benefits of a relevant treaty) generally will be treated as foreign taxes eligible for deduction or credit against your United States federal income tax liability, subject to the various limitations and disallowance rules that apply to foreign tax credits generally (including that the election to deduct or credit foreign taxes applies to all of your other applicable foreign taxes for a particular tax year). For purposes of calculating the foreign tax credit, dividends paid to you with respect to the common shares will be treated as income from sources outside the United States and generally will constitute passive category income, or in certain cases, general category income. The rules relating to the determination of the foreign tax credit are complex and recently issued Treasury Regulations have introduced additional requirements and limitations to the foreign tax credit rules. You should consult your tax advisors regarding the availability of a foreign tax credit in your particular circumstances.

The amount of any dividend paid in currency other than the United States dollar will be the dividend's United States dollar value calculated by reference to the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into United States dollars. A United States Holder may have foreign currency gain or loss, which generally will be United States source ordinary income or loss, if any dividend is converted into United States dollars after the date of receipt.

Disposition of the Common Shares

You will recognize gain or loss on a sale or exchange of our common shares in an amount equal to the difference between the amount realized on the sale or exchange and your tax basis in the common shares. Subject to the discussion under "Passive Foreign Investment Company" below, such gain or loss generally will be capital gain or loss. Capital gains of a non-corporate United States Holder, including an individual, that has held the common share for more than one year currently are eligible for reduced tax rates. The deductibility of capital losses is subject to limitations.

Any gain or loss that you recognize on a disposition of our common shares generally will be treated as United States-source income or loss for foreign tax credit limitation purposes. However, if we are treated as a PRC resident enterprise for PRC tax purposes and PRC tax is imposed on gain from the disposition of our common shares (see "—People's Republic of China Taxation") then a United States Holder that is eligible for the benefits of the income tax treaty between the United States and the PRC may elect to treat the gain as PRC-source income for foreign tax credit purposes. If such an election is made, the gain so treated will be treated as a separate class or "basket" of income for purposes of the foreign tax credit. You should consult your tax advisors regarding the proper treatment of gain or loss, as well as the availability of a foreign tax credit, in your particular circumstances.

A United States Holder that receives currency other than the United States dollar upon the sale or other disposition of our common shares generally will realize an amount equal to the United States dollar value of the foreign currency on the date of such sale or other disposition or, if our common shares are traded on an established securities market, in the case of cash basis and electing accrual basis taxpayers, the settlement date. If a United States Holder is not able to treat the settlement date as the realization date, the United States Holder generally will recognize currency gain or loss if the United States dollar value of the currency received on the settlement date differs from the amount realized. A United States Holder will have a tax basis in the currency received equal to the United States dollar amount at the spot rate on the settlement date. Generally, any gain or loss realized by a United States Holder on a subsequent conversion or disposition of such currency will be United States-source ordinary income or loss.

Passive Foreign Investment Company

Based on the value of our assets and the nature and composition of our income and assets, we do not believe we were a passive foreign investment company, or PFIC, for United States federal income tax purposes for our taxable year ended December 31, 2024, though there can be no assurances in this regard. PFIC status is based on an annual determination that cannot be made until the close of a taxable year, involves extensive factual investigation, including ascertaining the fair market value of all of our assets on a quarterly basis and the character of each item of income that we earn, and is subject to uncertainty in several respects. Moreover, we cannot guarantee that the IRS will agree with any positions that we take. Accordingly, we cannot assure you that we will not be treated as a PFIC for any taxable year or that the IRS will not take a position contrary to any position that we take.

We will be treated as a PFIC for United States federal income tax purposes for any taxable year if, applying applicable look-through rules, either:

- at least 75% of our gross income for such year is passive income; or
- at least 50% of the value of our assets (generally determined based on a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income.

For this purpose, passive income generally includes dividends, interest, royalties, rents and gains from commodities transactions (other than certain royalties, rents and commodities gains derived in the active conduct of a trade or business and not derived from a related person). We will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, more than 25% by value of the stock. We hold a substantial amount of cash and other assets treated as producing passive income, and if the percentage of our assets treated as producing passive income increases, we may be more likely to be a PFIC for the current or one or more future taxable years.

Changes in the value of our assets and/or the nature or composition of our income or assets may cause us to be more likely to be a PFIC. The determination of whether we will be a PFIC for any taxable year also may depend in part upon the value of our goodwill and other unbooked intangibles not reflected on our balance sheet (which may be determined based upon the market value of the common shares from time to time, which may be volatile) and by how, and how quickly, we spend our liquid assets and the cash we generate from our operations. Among other matters, if our market capitalization declines, we may be a PFIC because our liquid assets and cash (which are for this purpose considered assets that produce passive income) may then represent a greater percentage of our overall assets. Further, while we believe our classification methodology and valuation approach (including, if relevant, any approach taken with respect to our market capitalization) are reasonable, it is possible that the IRS may challenge our classification or valuation of our goodwill and other unbooked intangibles, which may result in our being or becoming a PFIC for the current taxable year or one or more future taxable years.

If we are a PFIC for any taxable year during your holding period for our common shares, we will continue to be treated as a PFIC with respect to you for all succeeding years during which you hold common shares, unless we were to cease to be a PFIC and you make a "deemed sale" election with respect to the common shares. If such election is made, you will be deemed to have sold the common shares you hold at their fair market value and any gain from such deemed sale would be subject to the rules described in the following two paragraphs. After the deemed sale election, so long as we do not become a PFIC in a subsequent taxable year, your common shares with respect to which such election was made will not be treated as shares in a PFIC and, as a result, you will not be subject to the rules described below with respect to any "excess distribution" you receive from us or any gain from a sale or other taxable disposition of the common shares. You are strongly urged to consult your tax advisors as to the possibility and consequences of making a deemed sale election if we are and then cease to be a PFIC and such an election becomes available to you.

If we are a PFIC for any taxable year during your holding period for our common shares, then, unless you make a "mark-to-market" election (as discussed below), you generally will be subject to special and adverse tax rules with respect to any "excess distribution" that you receive from us and any gain that you recognize from a sale or other disposition, including a pledge, of the common shares. For this purpose, distributions that you receive in a taxable year that are greater than 125% of the average annual distributions that you received during the shorter of the three preceding taxable years or your holding period for the common shares will be treated as an excess distribution. Under these rules:

- the excess distribution or recognized gain will be allocated ratably over your holding period for the common shares;
- the amount of the excess distribution or recognized gain allocated to the taxable year of distribution or gain, and to any taxable years in your holding period prior to the first taxable year in which we were treated as a PFIC, will be treated as ordinary income; and
- the amount of the excess distribution or recognized gain allocated to each other taxable year will be subject to the highest tax rate in effect for individuals or corporations, as applicable, for each such year and the resulting tax will be subject to the interest charge generally applicable to underpayments of tax.

If we are a PFIC for any taxable year during your holding period for our common shares and any of our non-United States subsidiaries or other corporate entities in which we directly or indirectly own equity interests is also a PFIC, you would be treated as owning a proportionate amount (by value) of the shares of each such non-United States entity classified as a PFIC (each such entity, a lower-tier PFIC) for purposes of the application of these rules. You should consult your tax advisor regarding the application of the PFIC rules to any of our lower tier PFICs.

If we are a PFIC for any taxable year during your holding period for our common shares, then in lieu of being subject to the tax and interest-charge rules discussed above, you may make an election to include gain on the common shares as ordinary income under a mark-to-market method, provided that the common shares constitute "marketable stock." Marketable stock is stock that is regularly traded on a qualified exchange or other market, as defined in applicable Treasury Regulations. Our common shares are listed on the Nasdaq Global Market, which is a qualified exchange or other market for these purposes. Consequently, as long as our common shares are regularly traded, and you are a holder of such common shares, we expect that the mark-to-market election would be available to you if we become a PFIC, but no assurances are given in this regard.

If you make a mark-to-market election, it will be effective for the taxable year for which the election is made and all subsequent taxable years unless our common shares are no longer regularly traded on a qualified exchange or other market, or the IRS consents to the revocation of the election. United States Holders should consult their tax advisors regarding the availability of the mark-to-market election and whether making the election would be advisable in such United States Holder's particular circumstances.

Because a mark-to-market election cannot be made for any lower-tier PFICs that we may own, if we were a PFIC for any taxable year, a United States Holder that makes a mark-to-market election with respect to our common shares may continue to be subject to the tax and interest charges under the general PFIC rules with respect to such United States Holder's indirect interest in any investments held by us that are treated as an equity interest in a PFIC for United States federal income tax purposes.

In certain circumstances, a United States shareholder in a PFIC may avoid the adverse tax and interest-charge regime described above by making a "qualified electing fund" election to include in income its share of such corporation's income on a current basis. However, you may make a qualified electing fund election with respect to your common shares only if we agree to furnish you annually with a PFIC annual information statement as specified in the applicable Treasury Regulations. We currently do not intend to prepare or provide the information that would enable you to make a qualified electing fund election.

A United States Holder that holds our common shares in any year in which we are classified as a PFIC will be required to file an annual report containing such information as the United States Treasury Department may require. You should consult your tax advisor regarding the application of the PFIC rules to your ownership and disposition of the common shares and the availability, application and consequences of the elections discussed above.

Information Reporting and Backup Withholding

Information reporting to the IRS and backup withholding generally will apply to dividends in respect of, and the proceeds from the sale or exchange of, our common shares that are paid to you within the United States (and in certain cases, outside the United States), unless you furnish a correct taxpayer identification number and make any other required certification (generally on IRS Form W-9), or otherwise establish an exemption from information reporting and backup withholding. Backup withholding is not an additional tax. Amounts withheld as backup withholding generally are allowed as a credit against your United States federal income tax liability, and you may be entitled to obtain a refund of any excess amounts withheld under the backup withholding rules if you file an appropriate claim for refund with the IRS and furnish any required information in a timely manner.

United States Holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules.

Information with Respect to Foreign Financial Assets

United States Holders who are individuals (and certain entities closely held by individuals) generally will be required to report our name, address and such information relating to an interest in the common shares as is necessary to identify the class or issue of which your common shares are a part. These requirements are subject to exceptions, including an exception for common shares held in accounts maintained by certain financial institutions and an exception applicable if the aggregate value of all "specified foreign financial assets" (as defined in the Code) does not exceed US$50,000.

United States Holders should consult their tax advisors regarding the application of these information reporting rules.

People's Republic of China Taxation

Under the EIT Law, which took effect as of January 1, 2008 and amended on February 24, 2017 and December 29, 2018, enterprises established under the laws of non-PRC jurisdictions but whose "de facto management body" is located in China are considered "resident enterprises" for PRC tax purposes. Under the implementation regulations issued by the State Council relating to the EIT Law, "de facto management bodies" are defined as the bodies that have material and overall management and control over the business, personnel, accounts and properties of an enterprise. The Circular on Identification of China-controlled Overseas-registered Enterprises as Resident Enterprises on the Basis of Actual Management Organization, or Circular 82, further provides certain specific criteria for determining whether the "de facto management body" of a PRC-controlled offshore incorporated enterprise is located in the PRC. The criteria include whether (a) the premises where the senior management and the senior management bodies responsible for the routine production and business management of the enterprise perform their functions are mainly located within the PRC, (b) decisions relating to the enterprise's financial and human resource matters are made or subject to approval by organizations or personnel in the PRC, (c) the enterprise's primary assets, accounting books and records, company seals, and board and shareholders' meeting minutes are located or maintained in the PRC and (d) 50% or more of voting board members or senior executives of the enterprise habitually reside in the PRC. Although the Circular 82 only applies to offshore enterprises controlled by enterprises or enterprise group located within the PRC, the determining criteria set forth in the Circular 82 may reflect the tax authorities' general position on how the "de facto management body" test may be applied in determining the tax resident status of offshore enterprises. As the tax resident status of an enterprise is subject to the determination by the PRC tax authorities, uncertainties remain with respect to the interpretation of the term "de facto management body" as applicable to us.

Under the EIT Law and its implementation regulations, dividends paid to a non-PRC investor are generally subject to a 10% PRC withholding tax, if such dividends are derived from sources within China and the non-PRC investor is considered to be a non-resident enterprise without any establishment or place within China or if the dividends paid have no connection with the non-PRC investor's establishment or place within China, unless such tax is eliminated or reduced under an applicable tax treaty. Similarly, any gain realized on the transfer of shares or convertible notes by such investor is also subject to a 10% PRC withholding tax if such gain is regarded as income derived from sources within China, unless such tax is eliminated or reduced under an applicable tax treaty.

The implementation regulations of the EIT Law provide that (a) if the enterprise that distributes dividends is domiciled in the PRC, or (b) if gains are realized from transferring equity interests of enterprises domiciled in the PRC, then such dividends or capital gains shall be treated as China-sourced income. Currently there are no detailed rules applicable to us that govern the procedures and specific criteria for determining the meaning of being "domiciled" in the PRC. As such, it is not clear how the concept of domicile will be interpreted under the EIT Law. Domicile may be interpreted as the jurisdiction where the enterprise is incorporated or where the enterprise is a tax resident.

As a result, if we are considered a PRC "resident enterprise" for tax purpose, it is possible that the dividends we pay with respect to our common shares to non-PRC enterprises, or the gain non-PRC enterprises may realize from the transfer of our common shares or our convertible notes, would be treated as income derived from sources within China and be subject to the PRC withholding tax at a rate of 10% or a lower applicable treaty rate for enterprises.

Under the IIT Law, individual income tax is payable on PRC-source dividend income. The implementation regulations of the IIT Law provide that income from dividends derived from companies, enterprises and other economic organizations in China as well as income realized from transfer of properties in China is considered derived from sources inside China, regardless of whether the place of payment was inside China. Therefore, if we are treated as a company in China for tax purposes, any dividends we pay to our non-PRC individual shareholders as well as any gains realized by our non-PRC individual shareholders or our non-PRC individual note holders from the transfer of our common shares or our convertible notes may be regarded as China-sourced income and, consequently, be subject to PRC withholding tax at a rate of up to 20% or a lower applicable treaty rate for individuals.

F Dividends and Paying Agents

Not applicable.

G Statement by Experts

Not applicable.

H Documents on Display

We previously filed with the SEC our registration statements on Form F-1 (File Number 333-138144), initially filed on October 23, 2006, and registration statements on Form F-3 (File Number 333-208828), initially filed on January 4, 2016.

We are subject to the periodic reporting and other informational requirements of the Exchange Act. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F within four months after the end of each fiscal year for fiscal years ending on or after December 15, 2011. Copies of reports and other information, when so filed, may be inspected without charge and may be obtained at prescribed rates at the public reference facilities maintained by the Securities and Exchange Commission at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the Commission at 1-800-SEC-0330. The SEC also maintains a web site at www.sec.gov that contains reports, proxy and information statements, and other information regarding registrants that make electronic filings with the SEC using its EDGAR system. As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

Our financial statements have been prepared in accordance with U.S. GAAP.

We will furnish our shareholders with annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP.

I Subsidiary Information

For a listing of our significant subsidiaries, see “Item 4. Information on the Company—C. Organizational Structure.”

J Annual Report to Security Holders

Not applicable.

ITEM 11 ***QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK***

Foreign Exchange Risk

Our business transactions are carried out in various currencies, including the U.S. dollar, Renminbi, Euro, and others such as Brazilian real, Japanese yen, South African rand, Australian dollar, and British pound. We continually evaluate our foreign currency exposure based on current market conditions and the locations in which we conduct business. We manage most foreign currency exposures on a consolidated basis, which allows us to net certain exposures and take advantage of natural offsets. Currency fluctuations may affect our cash flows, revenues, and expenses, particularly when transactions occur in currencies that differ from the functional currencies of our subsidiaries. We recorded foreign exchange gains of $30.6 million in 2023 and $46.8 million in 2024. To mitigate currency risk, we use derivative instruments, primarily foreign exchange forwards or options, to hedge against U.S. dollar exposures. We incurred losses from changes in the fair value of foreign currency derivatives of $27.5 million in 2023 and $51.4 million in 2024.

As of December 31, 2024, we held approximately $141.2 million in net monetary liabilities denominated in various currencies. A 10% change in those currencies relative to their functional currencies would result in a foreign exchange impact of approximately $14.1 million, excluding the effect of hedges. We also face translation risk, as our consolidated financial statements are presented in U.S. dollars while some subsidiaries use other functional currencies. Appreciation or depreciation of these currencies may result in gains or losses upon disposal or sale of these subsidiaries. As we expand our international business, our foreign exchange exposure may increase further.

Interest Rate Risk

Our interest rate risk primarily arises from floating-rate borrowings and short-term investments. We use derivative financial instruments, such as interest rates swap, to manage some of our interest risk exposure. A hypothetical 1% increase in interest rates would have increased our annual interest expense by approximately $30.2 million based on floating-rate borrowings as of December 31, 2024, compared to $17.4 million based on floating-rate borrowings as of December 31, 2023.

Commodity Price Risk

We are exposed to price volatility in raw materials, components, logistics and energy costs used in the manufacturing and transportation related to our solar modules and battery energy storage products, and EPC costs related to our project constructions. Our reliance on a limited number of suppliers further heightens this exposure. Price increases or supplier disruptions could materially impact our costs and margins if not passed on to customers. We may use commodity hedging instruments and supplier diversification to mitigate these risks.

For our supply chain management, see "Item 4. Information of the Company—B. Business Overview—Supply Chain Management." For risks relating to the long-term agreements with our raw material suppliers, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Supply chain disruptions, cost increases or performance issues could adversely affect our business and relationship with customers, particularly given our dependence on a limited number of key suppliers."

In connection with our long-term ownership of solar power and battery energy storage projects, we are exposed to merchant power price fluctuations and power price volatility in the electricity markets, particularly during periods of grid congestion. Our participation in power trading activities could further increase our exposure to such market price volatility.

Inflation, particularly in the U.S. and Europe, has led to rising costs for transportation, labor and materials. While inflation has not historically had a material impact on our operations, continued or elevated inflation could adversely affect our cost structure. If our costs become subject to significant inflationary pressures, we may not be able to fully offset higher costs through price increases for our products and services. Our inability to do so could harm our business, financial condition and results of operations.

ITEM 12 ***DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES***

Not applicable.

PART II

ITEM 13 *DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES*

None of these events occurred in any of the years ended December 31, 2022, 2023 and 2024.

ITEM 14 *MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS*

A Material Modifications to the Rights of Security Holders

See "Item 10. Additional Information—B. Articles" for a description of the rights of shareholders, which remain unchanged.

B Use of Proceeds

Not applicable.

ITEM 15 *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this report, as required by Rule 13a-15(b) under the Exchange Act. Based upon that evaluation, our management has concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were effective in ensuring that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act was recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our chief executive officer and chief financial officer, to allow timely decisions regarding required disclosures.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such item is defined in Rules 13a-15(f) under the Exchange Act, for our company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with generally accepted accounting principles and includes those policies and procedures that (a) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of a company's assets; (b) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that a company's receipts and expenditures are being made only in accordance with authorizations of a company's management and directors; and (c) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of a company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As required by Section 404 of the Sarbanes-Oxley Act of 2002 and related rules as promulgated by the Securities and Exchange Commission, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2024 using criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2024.

Deloitte Touche Tohmatsu Certified Public Accountants LLP, an independent registered public accounting firm, who audited our consolidated financial statements for the year ended December 31, 2024, has also audited the effectiveness of internal control over financial reporting as of December 31, 2024.

Petitioner Canadian Solar, Ex. 1079, p. 133
Canadian Solar (USA) Inc. v. First Solar, Inc., IPR2025-01432

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Canadian Solar Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Canadian Solar Inc. and subsidiaries (the "Company") as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2024, of the Company and our report dated April 30, 2025, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte Touche Tohmatsu Certified Public Accountants LLP
Shanghai, China
April 30, 2025

Changes in Internal Controls

Management has evaluated, with the participation of our chief executive officer and chief financial officer, whether any changes in our internal control over financial reporting that occurred during our last fiscal year have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on the evaluation we conducted, management has concluded that no such changes occurred during the period covered by this annual report on Form 20-F.

ITEM 16A *AUDIT COMMITTEE FINANCIAL EXPERT*

Our board of directors has determined that Leslie Li Hsien Chang qualifies as an "audit committee financial expert" as defined in Item 16A of Form 20 F. Each of the members of the audit committee is an "independent director" as defined in the Nasdaq Marketplace Rules.

ITEM 16B *CODE OF ETHICS*

Our board of directors has adopted a code of ethics that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officer, chief financial officer, vice presidents and any other persons who perform similar functions for us. We have posted our code of business conduct on our website at www.canadiansolar.com. We hereby undertake to provide to any person without charge, a copy of our code of business conduct and ethics within ten working days after we receive such person's written request.

ITEM 16C *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The following table sets forth the aggregate fees (in whole U.S. dollars) by categories specified below in connection with certain professional services rendered by Deloitte Touche Tohmatsu Certified Public Accountants LLP and its affiliates, our principal external auditors, for the periods indicated. We did not pay any other fees to our auditors during the periods indicated below.

	For the years ended December 31,	
	2023	2024
Audit fees[1]	$ 1,630,000	$ 1,579,000
Audit related fees[2]	$ 816,130	$ 1,565,265
Tax fees[3]	$ 57,128	$ 58,846
Others[4]	$ —	$ 66,000

(1) "Audit fees" means the aggregate fees billed for professional services rendered by our principal auditors for the annual audit of our consolidated financial statements.

(2) "Audit related fees" represents the aggregate fees billed for assurance and related services by our principal auditors and its affiliates that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported as audit fees. These include professional services rendered in connection with statutory audits, agreed upon procedure of our subsidiary companies, quarterly reviews and other related services. In 2023, "Audit related fees" included approximately $0.5 million for the statutory audits and agreed upon procedures of our subsidiaries. In 2024, "Audit related fees" included $1.4 million for statutory audits, assurance audits and agreed upon procedure of our subsidiaries.

(3) "Tax fees" were for services rendered by our principal auditors for tax compliance, tax advice and tax planning.

(4) Others refer to the aggregate fees for other non-audit service provided by our principal auditors' affiliates to CSI Solar.

The policy of our audit committee is to pre-approve all audit and non-audit services provided by Deloitte Touche Tohmatsu Certified Public Accountants LLP and its affiliates, including audit services, audit-related services, tax services and other services as described above, other than those for de minimis services which are approved by the Audit Committee prior to the completion of the audit. We have a written policy on the engagement of an external auditor.

ITEM 16D ***EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES***

Not applicable.

ITEM 16E ***PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS***

None.

ITEM 16F ***CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT***

Not applicable.

ITEM 16G ***CORPORATE GOVERNANCE***

None.

ITEM 16H ***MINE SAFETY DISCLOSURE***

Not applicable.

ITEM 16I ***DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS***

Not applicable.

ITEM 16J ***INSIDER TRADING POLICIES***

We have adopted an insider trading policy that governs the purchase, sale, and other dispositions of our securities by directors, officers and employees that is reasonably designed to promote compliance with insider trading laws, rules and regulations, as well as applicable listing standards. A copy of the insider trading policy is included as Exhibit 11.1 to this annual report on Form 20-F.

ITEM 16K ***CYBERSECURITY***

Cybersecurity Risk Management

We collect and maintain information in digital form that is necessary to conduct operations and engage with our customers and business partners, and we are increasingly dependent on information technology systems and network infrastructure to operate our business. We rely on information technology systems to keep financial records, manage our manufacturing operations, maintain quality control, fulfill customer orders, facilitate our research and development initiatives, maintain corporate records, communicate with staff and external parties and operate other critical functions. We operate some of these systems, but we also rely on third-party providers for a range of software, products and services that are critical to our operations and business. Both our and our third-party providers' information technology systems are vulnerable to threat from cyber intrusion, ransomware, denial of service, phishing, account takeover, data manipulation, and other cyber misconduct.

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

- Cybersecurity incident response plan. The plan outlines the processes and procedures that we should follow to respond to, remediate and resolve a security incident involving a potential or actual compromise 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 cybersecurity incident response plan is reviewed on an annual basis and revised as necessary.

- Incident detection and prevention. We have implemented and maintained 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.

We designed and assessed our program based on industry standards and framework, including ISO ("International Organization for Standardization"), NIST ("National Institute of Standards and Technology"), and ITIL ("Information Technology Infrastructure Library"). While this does not imply that we meet any particular technical standards, specifications or requirements, we use these industry standards and framework as a guide to assist us to identify, assess and manage cybersecurity risks relevant to our business.

We work with third party cybersecurity professionals to conduct security assessments of our enterprise-wide cybersecurity practices, including penetration testing, and identify areas for continuous improvement within the information security program.

Although we have implemented various measures to protect our information technology systems and mitigate cybersecurity threats, cybersecurity risk can never be eliminated, and we may from time to time be exposed to risks from cybersecurity threats. While we have not experienced any material cybersecurity threats or incidents as of the date of this Annual Report on Form 20-F, there can be no guarantee that we will not be the subject of future successful attacks, threats, or incidents that may materially affect us, including our business strategy, results of operations, or financial condition.

For more information regarding the risks associated with cybersecurity incidents, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Company and Our Industry—Interruption, security breaches or failures of information technology, control and communication systems could disrupt our business and expose us to liability" and "—Risks Related to Doing Business in China—Failure to comply with PRC regulations and other legal obligations concerning cybersecurity, privacy, data protection and informational security may materially and adversely affect our business, as we routinely collect, store and use data during the conduct of our business."

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 legal, compliance, strategic, operational and financial risk areas.

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. In addition, our management updates the Nominating and Corporate Governance Committee, as necessary, regarding any material cyber security incidents, as well as any incidents with lesser impact potential. The Nominating and Corporate Governance Committee reports to the full board of directors regarding its activities, including those related to cybersecurity.

Our management supervises efforts to prevent, detect, mitigate and remediate cybersecurity risks and incidents through various means, which may include briefings from internal information technology personnel; threat intelligence and other information obtained, including external consultants engaged by us; and alerts and reports produced by security tools deployed in the information technology environment. Our internal information technology personnel who support our information security program have relevant educational and industry experience, including holding similar positions at large companies.

PART III

ITEM 17 *FINANCIAL STATEMENTS*

We have elected to provide financial statements pursuant to Item 18.

ITEM 18 *FINANCIAL STATEMENTS*

The consolidated financial statements of Canadian Solar Inc. are included at the end of this annual report.

ITEM 19 *EXHIBITS*

Exhibit Number	Description of Document
1.1	Certificate of Continuance and Articles of Continuance of Canadian Solar Inc. (incorporated by reference to Exhibit 1.1 of our annual report on Form 20-F for the year ended December 31, 2022 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 18, 2023)
2.1	Registrant's Specimen Certificate for Common Shares. (incorporated by reference to Exhibit 2.1 of our annual report on Form 20-F for the year ended December 31, 2022 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 18, 2023)
2.2	Description of Securities of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 2.2 of our annual report on Form 20-F for the year ended December 31, 2022 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 18, 2023)
2.3	Indenture, dated as of September 15, 2020, between Canadian Solar Inc. and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 2.3 of our annual report on Form 20-F for the year ended December 31, 2020 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 19, 2021)
4.1	Amended and Restated Share Incentive Plan of the Registrant, effective on May 8, 2011 (incorporated by reference to Exhibit 4.1 of our annual report on Form 20-F for the year ended December 31, 2016 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 27, 2017)
4.2	Form of Director Indemnity Agreement (incorporated by reference to Exhibit 4.1 of our annual report on Form 20-F for the year ended December 31, 2008 (File No. 001-33107), as amended, initially filed with the Securities and Exchange Commission on June 8, 2009)
4.3	Employment Agreement between the Registrant and Dr. Shawn Qu (incorporated by reference to Exhibit 10.2 of our registration statement on Form F-1 (File No. 333-138144), as amended, initially filed with the Securities and Exchange Commission on October 23, 2006)
4.4	Form of Employment Agreement between the Registrant and its executive officers (incorporated by reference to Exhibit 4.7 of our annual report on Form 20-F for the year ended December 31, 2010 (File No. 001-33107), as amended, initially filed with the Securities and Exchange Commission on May 17, 2011)
8.1*	List of Significant Subsidiaries
11.1*	Insider Trading Policy
12.1*	CEO Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2*	CFO Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	CEO Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2**	CFO Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1*	Consent of Deloitte Touche Tohmatsu Certified Public Accountants LLP
97.1	Clawback Policy (incorporated by reference to Exhibit 97.1 of our annual report on Form 20-F for the year ended December 31, 2023 (File No. 001-33107), initially filed with the Securities and Exchange Commission on April 26, 2024)
101*	Financial information from registrant for the year ended December 31, 2024 formatted in Inline eXtensible Business Reporting Language (iXBRL): (i) Consolidated Balance Sheets as of December 31, 2023 and 2024; (ii) Consolidated Statements of Operations for the Years Ended December 31, 2022, 2023 and 2024; (iii) Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2022, 2023 and 2024; (iv) Consolidated Statements of Changes in Redeemable Non-Controlling Interests and Equity for the Years Ended December 31, 2022, 2023 and 2024; (v) Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2023 and 2024; (vi) Notes to Consolidated Financial Statements; and (vii) Additional Information—Financial Statements Schedule I
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

** Furnished herewith.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

CANADIAN SOLAR INC.

By: /s/ Shawn (Xiaohua) Qu
Name: Shawn (Xiaohua) Qu
Title: Chairman, President and Chief Executive Officer

By: /s/ Xinbo Zhu
Name: Xinbo Zhu
Title: Director and Chief Financial Officer

Date: April 30, 2025

Consolidated Financial Statements of Canadian Solar Inc.
For the Financial Year Ended December 31, 2024

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Canadian Solar Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Canadian Solar Inc. and subsidiaries (the "Company") as of December 31, 2024 and 2023, the related consolidated statements of operations, comprehensive income (loss), changes in redeemable non - controlling interests and equity, and cash flows, for each of the three years in the period ended December 31, 2024, and the related notes and the financial statement schedule (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated April 30, 2025, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition of Battery Energy Storage Solutions, Refer to Note 2 (y) and Note 21 to the Financial Statements

Critical Audit Matter Description

The Company recognizes revenue from the delivery of battery energy storage solutions ("BESS") based on the estimated progress to completion using a cost-based input method. Management of the Company uses its judgment to identify the performance obligation, and to estimate total costs for the identified performance obligation, including liquidated damages and other contractual adjustments. We identified revenue recognition for the delivery of BESS as a critical audit matter because of the judgments necessary for management to estimate future costs at completion and to continuously monitor project status for these BESS contracts. This required extensive audit effort due to the complexity of these BESS contracts and the judgment involved when performing audit procedures to assess management's estimates of total costs and evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to revenue recognized over time in relation to battery energy storage solutions included the following, among others:

- We tested the effectiveness of internal controls over the recognition of revenue and the determination of estimated total costs, including controls over the review of management's assumptions and inputs used to recognize revenue over time.
- We selected samples of completed projects during the year and evaluated management's ability to accurately estimate costs at inception by comparing actual costs to management's estimates.
- We selected a sample of contracts with customers that were recognized over time, and we performed the following:
    - Evaluating the appropriateness of management's methods and assumptions used to recognize revenue and costs on the contracts.
    - Testing the accuracy and occurrence of the incurred costs.
    - Assessing the reasonableness of estimated total costs used by management to determine the progress to completion.
    - Verifying the mathematical accuracy of management's calculation of revenue recognized over time.

/s/ Deloitte Touche Tohmatsu Certified Public Accountants LLP
Shanghai, China
April 30, 2025

We have served as the Company's auditor since 2006.

Canadian Solar Inc.
Consolidated Balance Sheets

(U.S. dollars in thousands, except share data)	December 31, 2023	December 31, 2024
Assets		
Including balances in variable interest entities (Note 10)		
Current assets:		
Cash and cash equivalents	$ 1,938,689	$ 1,701,487
Restricted cash	999,933	551,387
Accounts receivable trade, net	904,943	1,118,770
Accounts receivable, unbilled	101,435	142,603
Amounts due from related parties	40,582	5,220
Inventories	1,179,641	1,206,595
Value added tax recoverable	162,737	221,539
Advances to suppliers, net	193,818	124,440
Derivative assets	9,282	14,025
Project assets	280,793	394,376
Prepaid expenses and other current assets	283,600	436,635
Total current assets	6,095,453	5,917,077
Restricted cash	7,810	11,147
Property, plant and equipment, net	3,088,442	3,174,643
Solar power and battery energy storage systems, net	951,513	1,976,939
Deferred tax assets, net	263,458	473,500
Advances to suppliers, net	132,218	118,124
Investments in affiliates	236,928	232,980
Intangible assets, net	19,727	31,026
Project assets	576,793	889,886
Right-of-use assets	237,007	378,548
Amounts due from related parties	32,313	75,215
Other non-current assets	254,098	232,465
Total Assets	$ 11,895,760	$ 13,511,550
Liabilities, Redeemable Interests and Equity		
Including balances in variable interest entities (Note 10)		
Current liabilities:		
Short-term borrowings	$ 1,805,198	$ 1,873,306
Convertible notes	—	228,917
Accounts payable	813,677	1,062,874
Short-term notes payable	878,285	637,512
Amounts due to related parties	511	3,927
Other payables	1,359,679	984,023
Advances from customers	392,308	204,826
Derivative liabilities	6,702	13,738
Operating lease liabilities	20,204	21,327
Other current liabilities	587,827	388,460
Total current liabilities	5,864,391	5,418,910
Long-term borrowings	1,265,965	2,731,543
Green bonds and convertible notes	389,033	146,542
Liability for uncertain tax positions	5,701	5,770
Deferred tax liabilities	82,828	204,832
Operating lease liabilities	116,846	271,849
Other non-current liabilities	465,752	582,301
Total Liabilities	8,190,516	9,361,747
Redeemable non-controlling interests	—	247,834
Commitments and contingencies (Note 20)		
Equity:		
Common shares: no par value, unlimited authorized, 66,158,741 and 66,954,634 outstanding, respectively	835,543	835,543
Additional paid-in capital	292,737	590,578
Retained earnings	1,549,707	1,585,758
Accumulated other comprehensive loss	(118,744)	(196,379)
Total Canadian Solar Inc. shareholders' equity	2,559,243	2,815,500
Non-controlling interests	1,146,001	1,086,469
Total Equity	3,705,244	3,901,969
Total Liabilities, Redeemable Interests and Equity	$ 11,895,760	$ 13,511,550

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Consolidated Statements of Operations

(U.S. dollars in thousands, except share and per share data)	Years Ended December 31, 2022	2023	2024
Net revenues	$ 7,468,610	$ 7,613,626	$ 5,993,409
Cost of revenues	6,205,474	6,333,643	4,994,090
Gross profit	1,263,136	1,279,983	999,319
Operating expenses:			
Selling and distribution expenses	558,926	369,670	487,947
General and administrative expenses	342,129	440,488	515,204
Research and development expenses	69,822	100,844	120,792
Other operating income, net	(63,802)	(84,339)	(94,543)
Total operating expenses	907,075	826,663	1,029,400
Income (loss) from operations	356,061	453,320	(30,081)
Other income (expenses):			
Interest expense	(74,266)	(114,099)	(137,468)
Interest income	40,615	51,621	88,470
Loss on change in fair value of derivatives, net	(44,489)	(27,504)	(51,400)
Foreign exchange gain, net	77,689	30,555	46,750
Investment income, net	858	14,632	1,427
Total other income (expenses)	407	(44,795)	(52,221)
Income (loss) before income taxes and equity in earnings (losses) of affiliates	356,468	408,525	(82,302)
Income tax benefit (expense)	(73,353)	(59,501)	16,576
Equity in earnings (losses) of affiliates	15,440	14,610	(12,136)
Net income (loss)	298,555	363,634	(77,862)
Less: net income (loss) attributable to non-controlling interests and redeemable non-controlling interests	58,587	89,447	(113,913)
Net income attributable to Canadian Solar Inc.	$ 239,968	$ 274,187	$ 36,051
Earnings per share — basic	$ 3.73	$ 4.19	$ 0.54
Shares used in computation — basic	64,324,558	65,375,084	66,616,400
Earnings per share — diluted	$ 3.44	$ 3.87	$ 0.54
Shares used in computation — diluted	71,183,135	72,194,006	66,939,428

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Consolidated Statements of Comprehensive Income (Loss)

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Net income (loss)	$ 298,555	$ 363,634	$ (77,862)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment	(150,127)	8,141	(112,941)
Gain (loss) on changes in fair value of available-for-sale debt securities	904	(3,487)	2,223
Gain (loss) on interest rate swap	716	(1,124)	(1,569)
Share of gain on changes in fair value of interest rate swap of affiliate	3,754	11,264	693
Comprehensive income (loss)	153,802	378,428	(189,456)
Less: comprehensive income (loss) attributable to non-controlling interests and redeemable non-controlling interests	34,345	90,829	(145,860)
Comprehensive income (loss) attributable to Canadian Solar Inc.	$ 119,457	$ 287,599	$ (43,596)

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Consolidated Statements of Changes in Redeemable Non-controlling Interests and Equity

(U.S. dollars in thousands, except share data)	Redeemable Non-controlling Interests	Common Shares		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Canadian Solar Inc. Shareholders' Equity	Non-Controlling Interests	Total Equity
	$	Amount	$	$	$	$	$	$	$
Balance as of December 31, 2021	—	64,022,678	835,543	(19,428)	1,035,552	(50,584)	1,801,083	325,355	2,126,438
Net income	—	—	—	—	239,968	—	239,968	58,587	298,555
Foreign currency translation adjustment	—	—	—	—	—	(125,885)	(125,885)	(24,242)	(150,127)
Share-based compensation	—	—	—	9,370	—	—	9,370	—	9,370
Exercise of RSUs	—	483,377	—	—	—	—	—	—	—
Proceeds from non-controlling interests	—	—	—	—	—	—	—	2,529	2,529
Transfer of equity interest in subsidiary to non-controlling interests	—	—	—	11,185	—	544	11,729	4,094	15,823
Disposal of subsidiary	—	—	—	—	—	—	—	(1,268)	(1,268)
Change in fair value of available-for-sale debt securities	—	—	—	—	—	904	904	—	904
Change in fair value of derivatives	—	—	—	—	—	716	716	—	716
Share of fair value change in derivatives of affiliates	—	—	—	—	—	3,754	3,754	—	3,754
Balance as of December 31, 2022	—	64,506,055	835,543	1,127	1,275,520	(170,551)	1,941,639	365,055	2,306,694
Net income	—	—	—	—	274,187	—	274,187	89,447	363,634
Foreign currency translation adjustment	—	—	—	—	—	6,759	6,759	1,382	8,141
Share-based compensation	—	—	—	46,981	—	—	46,981	8,354	55,335
Subsidiary's shares under employee incentive plan	—	—	—	—	—	—	—	36,416	36,416
Exercise of RSUs	—	1,652,686	—	—	—	—	—	—	—
Subsidiary's equity offering [1]	—	—	—	244,629	—	38,395	283,024	644,873	927,897
Acquisition of non-controlling interest's ownership	—	—	—	—	—	—	—	(1,446)	(1,446)
Proceeds from non-controlling interests	—	—	—	—	—	—	—	5,910	5,910
Distributions to non-controlling interests	—	—	—	—	—	—	—	(3,990)	(3,990)
Change in fair value of available-for-sale debt securities	—	—	—	—	—	(3,487)	(3,487)	—	(3,487)
Change in fair value of interest rate swap	—	—	—	—	—	(1,124)	(1,124)	—	(1,124)
Share of change in fair value of interest rate swap of affiliates	—	—	—	—	—	11,264	11,264	—	11,264
Balance as of December 31, 2023	—	66,158,741	835,543	292,737	1,549,707	(118,744)	2,559,243	1,146,001	3,705,244
Net income	(132,475)	—	—	—	36,051	—	36,051	18,562	54,613
Foreign currency translation adjustment	—	—	—	—	—	(80,994)	(80,994)	(31,947)	(112,941)
Subsidiary's repurchase of its common shares	—	—	—	(55,730)	—	3,824	(51,906)	(27,676)	(79,582)
Subsidiary's issuance of redeemable preferred shares [2]	153,374	—	—	330,682	—	(1,812)	328,870	—	328,870
Capital contributions from tax equity investors in subsidiaries	226,935	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	21,404	—	—	21,404	—	21,404
Exercise of RSUs	—	795,893	—	—	—	—	—	—	—
Acquisition of non-controlling interest	—	—	—	1,485	—	—	1,485	(9,569)	(8,084)
Proceeds from non-controlling interests	—	—	—	—	—	—	—	18,707	18,707
Distribution to non-controlling interests	—	—	—	—	—	—	—	(27,609)	(27,609)
Change in fair value of available-for-sale debt securities	—	—	—	—	—	2,223	2,223	—	2,223
Change in fair value of interest rate swap	—	—	—	—	—	(1,569)	(1,569)	—	(1,569)
Share of change in fair value of interest rate swap of affiliates	—	—	—	—	—	693	693	—	693
Balance as of December 31, 2024	247,834	66,954,634	835,543	590,578	1,585,758	(196,379)	2,815,500	1,086,469	3,901,969

(1) 2023 IPO of CSI Solar Co., Ltd. See Note 1 for details.
(2) 2024 issuance of redeemable preferred shares by Recurrent Energy B.V. See Note 1 for details.

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Consolidated Statements of Cash Flows

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Operating activities:			
Net income (loss)	$ 298,555	$ 363,634	$ (77,862)
Adjustments to net income (loss):			
Depreciation and amortization	234,559	307,040	501,443
Write-down of inventories	7,475	113,079	151,957
Allowance for credit losses	5,773	12,014	39,060
Impairment loss of property, plant and equipment	60,330	5,938	65,285
Impairment loss of project assets	1,674	16,239	33,052
Impairment loss of solar power systems	—	—	21,400
Impairment loss of investments in affiliates	357	—	600
Share-based compensation	9,370	55,335	21,404
Deferred taxes	16,908	(17,908)	(98,205)
Loss on change in fair value of derivatives, net	44,489	27,504	51,400
Loss (gain) on change in fair value of other financial assets	—	(12,696)	590
Equity in losses (earnings) of affiliates	(15,440)	(14,610)	12,136
Non-cash operating lease expenses	13,208	18,844	35,893
Accretion of green bonds and convertible notes	1,302	2,145	3,413
Others	1,712	(2,206)	5,109
Changes in operating assets and liabilities:			
Accounts receivable trade	(357,276)	58,985	(221,479)
Accounts receivable, unbilled	(23,367)	(43,571)	(42,487)
Inventories	(406,343)	182,767	(312,522)
Project assets	(302,839)	(349,830)	(697,813)
Advances to suppliers	(52,893)	54,915	62,461
Accounts payable	351,535	13,115	268,207
Short-term notes payable	721,039	(590,418)	(221,218)
Advances from customers	209,855	59,383	(184,262)
Prepaid expenses and other current assets	151,663	(22,277)	(99,716)
Value added tax recoverable	(43,881)	(5,985)	(65,211)
Net settlement of derivatives	(31,851)	(39,133)	(49,134)
Other payables	(417)	169,944	90,841
Other liabilities	68,492	337,055	(104,328)
Others	(47,358)	(14,687)	(75,338)
Net cash provided by (used in) operating activities	$ 916,631	$ 684,615	$ (885,324)

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Consolidated Statements of Cash Flows (Continued)

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Investing activities:			
Purchase of property, plant and equipment and intangible assets	$ (627,115)	$ (1,116,461)	$ (1,112,834)
Purchase of solar power and battery energy storage systems	(882)	(408,999)	(757,577)
Investment in affiliates	(19,355)	(113,404)	(28,815)
Acquisition of subsidiaries, net of cash	—	(9,448)	(10,913)
Investment in bank time deposits and structured deposits	—	—	(64,650)
Others	16,864	(23,104)	12,532
Net cash used in investing activities	(630,488)	(1,671,416)	(1,962,257)
Financing activities:			
Proceeds from short-term borrowings	1,387,537	1,566,240	1,774,846
Repayments of short-term borrowings	(1,695,563)	(1,603,571)	(1,550,809)
Proceeds from long-term borrowings	770,368	1,016,931	1,449,754
Proceeds from issuance of green bonds	—	121,023	—
Repayments of finance lease obligations	(19,217)	(39,801)	(72,211)
Proceeds from subsidiary's issuance of preferred shares, net of $17,756 in transaction costs	—	—	482,244
Capital contributions from tax equity investors in subsidiaries	—	—	226,935
Proceeds from subsidiary's offering of equity interests, net of $38,995 in transaction costs	—	927,897	—
Repurchase of shares by subsidiary	—	—	(79,582)
Distributions to non-controlling interests	—	(3,990)	(27,609)
Proceeds from sales-leaseback arrangements	—	91,648	56,057
Others	(14,486)	(23,549)	60,146
Net cash provided by financing activities	428,639	2,052,828	2,319,771
Effect of exchange rate changes	(179,561)	(89,098)	(154,601)
Net increase (decrease) in cash, cash equivalents and restricted cash	535,221	976,929	(682,411)
Cash, cash equivalents and restricted cash, beginning of year	1,434,282	1,969,503	2,946,432
Cash, cash equivalents and restricted cash, end of year	$ 1,969,503	$ 2,946,432	$ 2,264,021
Supplemental disclosure of cash flow information:			
Interest paid, net of amounts capitalized	$ 76,511	$ 121,665	$ 130,964
Income taxes paid, net of tax refunds	77,400	83,077	113,911
Supplemental schedule of non-cash activities:			
Reclassification of project assets to solar power and battery energy storage systems	263,710	119,067	312,773
Reclassification of inventories to solar power and battery energy storage systems	—	46,197	111,525
Borrowings assumed by third parties in connection with project asset sales	193,578	161,709	—
Property, plant and equipment costs included in other payables	$ 549,883	$ 933,029	$ 478,573

The following table reconciles cash, cash equivalents, and restricted cash on the balance sheets to the amounts shown in the statements of cash flows.

(U.S. dollars in thousands)	December 31, 2023	December 31, 2024
Cash and cash equivalents	$ 1,938,689	$ 1,701,487
Restricted cash — current	999,933	551,387
Restricted cash — non-current	7,810	11,147
Total cash, cash equivalents and restricted cash	$ 2,946,432	$ 2,264,021

The accompanying notes are an integral part of these consolidated financial statements.

Canadian Solar Inc.
Notes to Consolidated Financial Statements

All amounts in the Notes to Consolidated Financial Statements are in U.S. dollars in thousands, unless otherwise indicated.

1. Organization and Operations

Canadian Solar Inc. ("CSI") and its subsidiaries (collectively, the "Company") is a global solar and renewable energy company incorporated under the laws of Ontario, Canada. The Company operates in two segments: CSI Solar, focused on solar module and battery energy storage manufacturing and products; and Recurrent Energy, focused on utility-scale solar power and battery energy storage project development and operations.

CSI was originally incorporated in Ontario in 2001 and has since undergone several jurisdictional continuances, most recently returning to Ontario in July 2022. The Company's shares are listed on NASDAQ under the symbol "CSIQ."

In 2020, the Company initiated the carve-out and public listing of its subsidiary, CSI Solar Co., Ltd. ("CSI Solar"), in China. To support the IPO, the Company transferred a portion of CSI Solar shares to third-party institutional investors and employees, resulting in a combined 20.4% ownership by non-controlling interests as of December 31, 2022. On June 9, 2023, CSI Solar completed its IPO on the Science and Technology Innovation Board ("STAR Market") of the Shanghai Stock Exchange, raising net proceeds of RMB 6,628,683,000 ($927,897) after deducting offering expenses of RMB 277,929,000 ($38,995).

In April 2024, CSI Solar launched a share repurchase program of RMB 500,000,000 up to RMB 1,000,000,000 ($70,416 up to $140,832) to reserve shares for future share-based awards. As of December 31, 2024, 52,700,000 shares had been repurchased for RMB 566,202,000 ($79,582), reducing the non-controlling interest to 36.86%. As of December 31, 2024, the Company held 63.14% of the outstanding CSI Solar shares.

In January 2024, Canadian Solar Energy Group B.V. and Recurrent Energy B.V., subsidiaries of CSI, entered into a purchase and sale agreement with GRP IV UK Holdco Limited, managed by BlackRock's climate infrastructure business, for the issuance of Series A preferred shares of Recurrent Energy B.V. Following initial and subsequent closings in May and September 2024, respectively, BlackRock's total investment reached $500,000, before deducting issuance expenses of $17,756, and represented 20% of Recurrent Energy B.V. on a fully diluted, as-converted basis as determined immediately upon closing. See Note 26 for details.

2. Summary of Significant Accounting Policies

(a) Basis of presentation

The consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP").

(b) Basis of consolidation

The consolidated financial statements include Canadian Solar Inc. and its subsidiaries where it holds a controlling financial interest or is the primary beneficiary of variable interest entities ("VIEs"). A controlling financial interest generally exists when the Company holds a majority voting interest in an entity, and the non-controlling shareholders or partners do not possess substantive participating or redemption rights, nor are there other conditions that would indicate the Company does not have control. Non-controlling interests in consolidated subsidiaries are reported as equity, unless redeemable outside the Company's control, in which case they are classified as temporary equity.

The Company consolidates VIEs in which it is the primary beneficiary, with both power to direct the day-to-day operating activities that most significantly impact the VIE's performance and the obligation to absorb losses or receive benefits that could potentially be significant. Consolidated VIEs include tax equity partnerships and similar structures where the Company, through its subsidiaries, acts as the managing member and controls day-to-day operations, silent partnerships and bankruptcy-remote structures used to hold project companies in Japan, where the Company does not hold a majority equity interest but is entitled to substantially all economic benefits and controls key operational decisions through asset management agreements. The obligations of these consolidated VIEs are nonrecourse to the Company, except where contractual liquidity support or guarantee exists. Required contributions were made during the years ended December 31, 2023 and 2024 in accordance with the respective operating agreements.

2. Summary of Significant Accounting Policies (Continued)

Certain solar power and battery energy storage project subsidiaries in the United States have issued Class A membership interests to third-party investors. Under the terms of these tax equity partnership arrangements, the investors are generally entitled to substantially all of the accelerated depreciation tax deductions and investment tax credits ("ITCs") associated with the projects, together with a portion of the distributable cash, until a specified flip date, after which the majority of economics shift to the Company. These interests are redeemable and classified as temporary equity. The allocation of income or loss to these interests is performed using the Hypothetical Liquidation at Book Value ("HLBV") method. Under HLBV, the income or loss attributable to redeemable non-controlling interests reflects the changes in the amounts that tax equity investors would hypothetically receive upon liquidation at the beginning and end of each reporting period, after considering any capital transactions, such as contributions or distributions, between these subsidiaries and the tax equity investors. As a result, the income tax benefit from the ITC and accelerated depreciation is reflected in the Company's consolidated financial statements through the allocation of earnings to the redeemable non-controlling interests representing the tax equity investors' share in the consolidated project companies.

Assets and liabilities of consolidated VIEs are disclosed separately if creditors do not have recourse to the Company, except where a financial guarantee exists. See Note 10 for details. As of December 31, 2023 and 2024, the Company guaranteed VIE obligations of $11,163 and $87,436, respectively.

Intercompany balances and transactions are eliminated upon consolidation.

(c) Use of estimates

Preparation of consolidated financial statements in conformity with U.S. GAAP requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at balance sheet date, and the reported amounts of revenues and expenses during the reporting period. Significant accounting estimates include revenue recognition (including identification of performance obligations, determination and allocation of transaction price, use of the percentage-of-completion method, and estimates of variable consideration and total costs), allowance for credit losses, inventory valuation, asset impairments and useful lives, provisions for contingent liabilities, warranty accruals, fair value estimates of financial instruments and derivatives, deferred taxes, uncertain tax positions and income or loss allocations using the HLBV method and the redemption value of temporary equity instruments. Actual results may differ from these estimates.

(d) Cash, cash equivalents and restricted cash

Cash and cash equivalents are stated at cost, which approximates fair value, and includes cash on hand, money market funds and demand deposits that are unrestricted and have original maturities of three months or less when acquired. Restricted cash represents amounts held by banks as security for short-term notes payable, letters of guarantee, letters of credit or bank borrowings. These amounts are unavailable for general use until the related obligations mature or are repaid, at which point the funds become unrestricted.

(e) Accounts receivable, unbilled

Accounts receivable, unbilled represents a contract asset for revenue recognized prior to billing the customer. The Company uses a cost-based input method to recognize revenue from turnkey battery energy storage solutions and EPC services when all revenue recognition criteria are met. Once billing criteria are satisfied, typically structured around construction milestones, and the right to consideration becomes unconditional, the Company bills the customer and reclassifies the unbilled amount to trade accounts receivable.

(f) Allowance for credit losses

The trade accounts receivable, advances to suppliers, warranty insurance receivables, and other receivables are presented net of allowances for credit losses. Current expected credit losses ("CECL") are estimated based on external and internal credit ratings, historical loss rates, and other relevant factors. Where individual credit risk evidence is not available, financial instruments are grouped by aging, size, industry, and other shared risk characteristics.

2. Summary of Significant Accounting Policies (Continued)

To mitigate credit risk, the Company purchases credit insurance from providers such as China Export & Credit Insurance Corporation and PICC Property and Casualty Company Limited for certain trade receivables. An allowance is recorded based on historical collection experience, receivable aging, and other available evidence, regardless of insurance coverage. When a claim is made, a receivable is recorded equal to the expected recovery, up to the specific allowance amount, with a corresponding reduction in general and administrative expenses. Receivables from insurers included in prepaid expenses and other current assets were $2,929 and $6,881 as of December 31, 2023 and 2024, respectively.

(g) Advances to suppliers

The Company records prepayments to suppliers as advances to suppliers. Amounts expected to be utilized within one year are classified as current assets and those expected to be utilized beyond one year are classified as non-current assets.

(h) Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using the weighted-average method. Inventory costs include direct materials such as high purity and solar-grade silicon, silicon wafers, metallic pastes, glass, aluminum frames, ethylene vinyl acetate ("EVA", an encapsulant used to seal the module), junction boxes, and polymer back sheets, as well as components for energy storage systems including insulated-gate bipolar transistors ("IGBT") module, magnetic components, lithium iron phosphate battery cells, customized sheet metal and storage inverter components. Applicable direct labor, tolling, and overhead costs incurred to bring inventories to their present location and condition are also included.

When indicators suggest that inventory carrying amounts may not be recoverable, such as obsolescence, damage, declining market prices, and reduced demand forecasts, the Company records inventory write-downs to net realizable value.

(i) Project assets

Project assets primarily consist of capitalized costs related to solar power and battery energy storage assets under development or construction, prior to the intended project sale. These costs include pipeline and land acquisition, permitting, consulting, legal, grid and network connection, civil works, and equipment installation (including solar modules, lithium battery energy storage systems, inverters, energy stations, and power plant controllers), as well as interest, amortized deferred financing costs, and capitalized indirect project costs incurred during the construction phase.

Solar power and battery energy storage projects are classified as project assets unless the Company intends to retain and operate them to generate electricity or storage revenue, in which case they are classified as solar power and battery energy storage systems. In accordance with ASC 970, costs incurred during development phase are capitalized. These expenditures are classified as operating or investing activities in the consolidated statement of cash flows, depending whether the assets are held for sale or for use. Project assets are typically held in separate legal entities or VIEs formed for development purposes, referred to as "project companies" and are consolidated in accordance with Note 2(b). Project assets are generally classified as non-current assets unless their sale is expected within one year, in which case they are presented as current.

The Company evaluates project assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. A fully developed or constructed project is considered recoverable if it is expected to be sold for a profit. Otherwise, recoverability is assessed by comparing the anticipated net selling price to the carrying amount. Impairments are generally recorded if changes in environmental, regulatory, interconnection, capital cost, or market pricing conditions adversely affect recoverability. Impairments are recognized within cost of revenues in the consolidated statements of operations.

Project assets are not depreciated. Any incidental revenue generated is accounted for as a reduction of the capitalized costs. If the Company later decides to retain the project for long-term operation, the asset is reclassified to solar power and battery energy storage systems at the lower of its carrying value adjusted for depreciation that would have been recognized had the asset been continuously classified as held for use, or its fair value at the date of reclassification.

2. Summary of Significant Accounting Policies (Continued)

(j) Business combination

Business combinations are accounted for using the acquisition method. Assets and liabilities assumed are recorded at their fair value as of the acquisition date. Any excess of the purchase consideration over the fair value of the net assets, including identifiable intangible assets, is recorded as goodwill. Acquisition-related costs not included in the purchase price, including legal, accounting, and other professional fees, and integration costs, are expensed as incurred within general and administrative expenses. Adjustments to provisional amounts are recognized as additional information becomes available regarding facts and circumstances that existed as of acquisition date. The measurement period ends when the Company obtains sufficient information to finalize fair value measurements, but no later than one year from the acquisition date.

(k) Assets acquisition

When the assets acquired and liabilities assumed do not constitute a business, the transaction is accounted for as an asset acquisition. The consideration transferred, including transaction costs, is allocated to the acquired assets and assumed liabilities based on their relative fair values. Goodwill is not recognized, and no gain or loss is recorded unless the fair value of non-cash consideration differs from the carrying amount of the net assets acquired. If non-cash consideration is involved, it is measured at either the fair value of the net assets transferred or net assets acquired, whichever is more clearly evident and reliably measurable.

(l) Property, plant and equipment

Property, plant and equipment is recorded at cost, less accumulated depreciation. Cost comprises the purchase price and any directly attributable costs, including interest capitalized during the period in which the asset is brought to the condition and location for its intended use. Repair and maintenance costs are expensed as incurred. Costs incurred in constructing new facilities, including progress payments, capitalized interest and other related construction expenditures, are capitalized and transferred to property, plant and equipment upon completion. Depreciation commences when the asset is placed into service.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets. Buildings are depreciated over 10 to 20 years. Leasehold improvements are depreciated over the shorter of the lease term or their estimated useful lives. Machinery and equipment are depreciated over 5 to 10 years. Furniture, fixtures, and office equipment, as are motor vehicles, are depreciated over 5 years. If property, plant and equipment placed into service are temporarily idled, the Company continues to record depreciation during the idle period. The estimated useful life of idled assets is reviewed and adjusted if necessary to reflect changes in expected usage.

(m) Solar power and battery energy storage systems

Solar power and battery energy storage systems comprise utility-scale facilities that the Company intends to hold for use. These systems are stated at cost, less accumulated depreciation. Cost comprises direct expenditures incurred during various stages of development prior to the commencement of operations. For self-developed solar power or battery energy storage systems, capitalized costs include expenditures related to power purchase agreements ("PPA") or battery tolling agreements, application for performance-based energy incentives, permits, construction and equipment costs, land acquisition, capitalized interest, and other associated development costs. Expenditures for major additions and improvements are capitalized, while minor replacements, maintenance, and repairs are expensed as incurred. Upon retirement or disposal of a solar power and battery energy storage system, the cost and related accumulated depreciation are removed from the balance sheet, and any resulting gain or loss is recorded in the results of operations for the applicable period.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets. Solar power systems are depreciated over a period of up to 35 years, while battery energy storage systems are depreciated over a period of up to 25 years. The Company regularly reviews the estimated useful lives of its solar power and battery energy storage systems. In 2024, based on internal analysis and market data reflecting advancements in solar technology, the Company determined that the actual service lives of certain solar power systems exceeded previous estimates. As a result, the Company revised the estimated useful life of its solar power systems from 30 years to 35 years and applied the change prospectively as a change in accounting estimate. This change does not apply to solar power systems subject to PPAs with term shorter than 35 years, where a transfer of ownership to the offtaker is expected at the end of the PPA term. In such cases, the useful life is aligned with the expected transfer date. Had the revised estimate been applied at the beginning of 2023, depreciation expense for the years ended December 31, 2023 and 2024 would have been reduced by $629 and $2,642, respectively.

2. Summary of Significant Accounting Policies (Continued)

(n) Intangible assets

Intangible assets consist of customer-related intangible assets, including customer relationships and backlog, trademarks, technical know-how, and computer software purchased from third parties. These assets are recorded at fair value at the time of acquisition and are subsequently stated net of accumulated amortization, using the straight-line method over their estimated useful lives. Customer-related intangible assets are amortized over periods ranging from 7 to 20 years, trademarks are amortized over 20 years, technical know-how is amortized over 10 years, and computer software is amortized over periods ranging from 3 to 10 years.

(o) Land use rights

Land use rights are accounted for as operating leases in accordance with ASC 842. Amounts paid for land use rights in China are recorded as operating lease right-of-use ("ROU") assets on the balance sheets. These amounts are expensed on a straight-line basis over the relevant periods, which are generally 50 years.

(p) Investments in affiliates

The Company accounts for its investments in affiliates using the equity method. Investments are initially recorded at historical cost and subsequently adjusted for the Company's proportionate share of the investee's earnings or losses, as well as other required equity method adjustments. Dividends received are recorded as reductions in the carrying amount of the investments. The portion of earnings considered as a return on capital is recognized accordingly, while any excess is treated as a return of capital.

Investments are evaluated for impairment when events or changes in circumstances indicate that the fair value may be less than the carrying amount. An impairment is recognized when the decline in fair value is determined to be other than temporary. In assessing whether a loss is other than temporary, the Company considers several factors, including the nature of the investment, the cause and duration of the impairment, the extent to which fair value is less than cost, the financial condition and near-term prospects of the investee, and the Company's ability to hold the investment for a sufficient period to allow for recovery. For the years ended December 31, 2022, 2023 and 2024, the Company did not record any material impairment charges on its investments in affiliates.

(q) Impairment of long-lived assets

The Company evaluates the recoverability of long-lived assets, including property, plant and equipment, non-current project assets, solar power and battery energy storage systems, and intangible assets, whenever indicators of impairment are identified. For impairment testing, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent. When indicators of impairment exist, the Company compares the asset group's carrying amount to the sum of expected undiscounted future cash flows, including the estimated disposal value. If the sum of those cash flows is less than the carrying amount, the asset group is considered not recoverable, and the excess of carrying value over fair value is recognized as an impairment loss. Fair value is generally determined using quoted market prices, if available, or discounted cash flow analysis. The assessment also considers changes in asset group utilization, including temporarily idled capacity, the expected timing of placing this capacity back into production, capital investments, inflation, the terms of new or anticipated PPAs, eligibility for tax incentives, and long-term electricity and power price forecasts.

(r) Interest capitalization

The Company capitalizes interest costs that are directly attributable to the acquisition, development, or construction of certain assets during the period required to prepare the asset for its intended use or sale. Interest is capitalized when expenditures to acquire, construct, or develop an asset have been made and interest has been incurred. For property, plant and equipment, and solar power and battery energy storage systems, capitalized interest cost is depreciated over the asset's estimated useful life once placed in service. For project assets, capitalized interest is included in cost of revenues when sold. Capitalization ceases when the project is substantially complete or when construction activities necessary to prepare it for its intended use are no longer in progress.

2. Summary of Significant Accounting Policies (Continued)

(s) Advances from customers

Customer advances received for inventory purchases are recorded as contract liabilities and recognized as revenue when the related performance obligations are satisfied. As of December 31, 2023 and 2024, current advances from customers totaled $392,308 and $204,826, respectively, and non-current advances totaled $52,693 and $41,337, respectively. These amounts are classified as current or non-current liabilities based on the expected timing of performance.

(t) Short-term notes payable

The Company enters into arrangements with banks in China whereby the banks issue notes to the Company's materials and equipment vendors, effectively extending the payment terms of the related accounts payable. Vendors may present these notes to a bank, including the issuing bank, prior to the stated maturity date, generally at a discount to face value. The Company is typically required to maintain restricted cash deposits with the issuing banks, which are used to immediately repay the bank upon settlement of the notes. Given that the purpose of these arrangements is to extend the payment terms to suppliers, the Company records such amounts as short-term notes payable. Because the bank settlements are immediately repaid using the Company's restricted cash and other deposits held at the same banks, the notes payable do not represent cash borrowings. As of December 31, 2023 and 2024, short-term notes payable totaled $878,285 and $637,512, respectively.

(u) Assets retirement obligation

In certain jurisdictions or under specific land lease agreements, the Company is required to remove its solar power and battery energy storage systems upon decommissioning. A liability for asset retirement obligation ("ARO") is recognized at fair value in the period the obligation is incurred and can be reasonably estimated. The corresponding asset retirement cost is capitalized as part of the related long-lived asset. The liability is accreted over time to its expected future value, and the capitalized cost is depreciated over the asset's useful life, or over the lease term if shorter. Upon settlement of the obligation, the liability is derecognized, and any difference between recorded amount and actual costs incurred is recognized as a gain or loss. ARO liabilities included in solar power and battery energy storage systems were $1,249 and $5,811 as of December 31, 2023 and 2024, respectively.

(v) Leases

The Company determines whether an arrangement contains a lease at inception based on the applicable facts and circumstances. Operating leases are recorded as right-of-use ("ROU") assets and operating lease liabilities, while finance leases are included in property, plant and equipment and corresponding liabilities on the consolidated balance sheets. ROU assets represent the right to use an underlying asset for the lease term, while lease liabilities represent the obligation to make future lease payments. ROU assets and lease liabilities are measured as the present value of lease payments not yet paid, discounted using the rate implicit in the lease, if readily determinable. If the implicit rate is not readily available, the Company uses its incremental borrowing rate, based on information available at lease commencement. Lease payments exclude variable components, which are expensed when incurred. Operating lease ROU assets include lease prepayments, initial direct costs, and deferred rent, if applicable, and exclude lease incentives. Lease option to extend or terminate is included in the lease term only when it is reasonably certain the option will be exercised. Lease expenses for operating leases are recognized on a straight-line basis over the lease term. For finance leases, asset amortization is recognized over the shorter of the lease term or useful life within depreciation expense, and interest, including variable payments, is recognized in interest expense, in the consolidated statements of operations.

Short-term leases with initial terms of 12 months or less and no extension or purchase option reasonably certain to be exercised are not recorded on the consolidated balance sheets, and instead related lease payments are recognized on a straight-line basis over the lease term. Lease liabilities due within one year are classified as current liabilities. The Company's leases do not include material residual value guarantees or restrictive covenants.

The Company reviews ROU assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. If the undiscounted cash flows expected from the use and eventual disposition of the asset are less than its carrying amount, an impairment loss is recognized in the consolidated statements of operations for the difference between the carrying amount and asset's fair value.

2. Summary of Significant Accounting Policies (Continued)

(w) Contingencies

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties and similar matters are recognized when it is probable that a liability has been incurred and the amount can be reasonably estimated. If a potential material loss contingency is not probable but is reasonably possible, or is probable but not reasonably estimable, the nature of the contingency, and if determinable, an estimate of the possible loss or range of loss is disclosed. The Company may be exposed to certain liabilities related to its business operations, including various international trade proceedings, government actions and ongoing patent litigations. The Company makes these assessments based on facts and circumstances that may change in the future resulting in additional expenses. See Note 20 for details. Legal costs associated with such contingencies are expensed as incurred.

(x) Income taxes

Deferred income taxes are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities, and for net tax operating loss carryforwards and tax credits, using enacted tax rates expected to apply when the deferred tax assets or liabilities are realized or settled. A valuation allowance is established to reduce the deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized.

Income tax expense includes current tax expense, which represents amounts payable to or receivable from taxing authorities; deferred tax expense, which reflects changes in deferred tax assets and liabilities, including changes in valuation allowances; and non-current tax expense, which arises from changes in uncertain tax positions not settled with cash or other tax attributes.

The Company only recognizes tax benefits related to uncertain tax positions when such positions are more likely than not of being sustained upon examination. For such positions, the amount of tax benefit that the Company recognizes is the largest amount of tax benefit that is more than fifty percent likely of being sustained upon the ultimate settlement of such uncertain tax position. The Company records penalties and interests associated with the uncertain tax positions as a component of income tax expense.

The Company applies the flow-through method for ITCs related to energy project placed into service. Under this method, ITCs that are not part of a transaction with a tax equity investor are recognized as a reduction to income tax expense in the period in which the credit arises. This approach results in a basis difference between the tax and book value of the related asset, giving rise to a deferred tax liability, which is accounted for using the income statement method. For ITCs monetized through tax equity financing structures, the Company applies guidance under ASC 740 and ASC 810, as applicable, based on the structure and associated accounting model used for the tax equity partnership. Production Tax Credits ("PTCs") are recognized as solar energy is generated and sold, based on applicable statutory rates, and reduce current income taxes payable or are recorded as deferred tax assets if utilization is limited.

(y) Revenue recognition

The Company recognizes revenue when it satisfies a performance obligation by transferring a promised good or service to the customer. Revenue is presented net of sales, value-added, and similar taxes, and estimated returns.

Solar power products

Revenue from solar modules, system kits, inverters, and related components is recognized at a point in time when the customers obtain control of the products, typically upon shipment or delivery, depending on the contract terms. Sales agreements generally include only assurance-type customary product warranties and do not include significant post-shipment obligations. Shipping and handling charges are included in revenue when billed. If collectability is not probable at the time of delivery, revenue is deferred and the products remain in inventory until collectability becomes probable.

Battery energy storage solutions and EPC services

Revenue from battery energy storage products is recognized at a point in time when customers obtain control of the products, typically upon shipment or delivery, depending on the contract terms. Revenue from the delivery of turnkey battery energy storage solutions and EPC services is recognized over time based on estimated progress toward completion using a cost-based input method. Customer advances received for these solutions are recorded as deferred revenue on the consolidated balance sheets and subsequently recognized as revenue over time, based on the estimated progress to completion.

2. Summary of Significant Accounting Policies (Continued)

In applying the cost-based input method of revenue recognition, the Company measures progress towards contract completion based on actual costs incurred relative to total estimated contract costs. This method requires the Company to make significant estimates and judgments of total contract revenues and costs, including the impact of performance incentives, liquidated damages, and other variable payments. If at any point estimated total contract costs exceed total estimated revenues, the full amount of the expected loss is recognized immediately in the period the loss becomes known. Revisions to estimates of revenues or costs, including changes in contract scope or performance expectations, are recognized in the period in which the revisions are identified and are reflected as cumulative adjustments to revenue. For contract that include variable consideration, the Company estimates the amount of consideration it expects to receive using either the most likely amount method or the expected value method, depending on which approach better predicts the amount of consideration to which it will be entitled. Variable consideration is included in the transaction price to the extent that it is probable that a significant reversal of revenue will not occur. The contracts do not contain significant financing component.

Revenue for long-term service contracts, such as those covering capacity guarantees, operating system performance, or battery augmentation, is recognized separately when the performance obligation is distinct. A performance obligation is considered distinct if the customer can benefit from the good or service either on its own or together with other readily available resources, and if the promise to transfer the good or service is separately identifiable within the context of the contract. The Company allocates the transaction price to each performance obligation based on relative standalone selling prices. These are determined using observables prices when available or estimated using judgment, taking into account market conditions, entity-specific factors, and customer-specific information.

Solar power and battery energy storage assets sales

Revenue from the sale of solar power and battery energy storage assets is recognized at a point in time when the customer obtains control of the asset. If the Company retains a non-controlling interest in the project, it recognizes the full amount of the consideration received as revenue, including the fair value of the retained interest, and defers any profit associated with that interest. These projects are typically held in separate legal entities, partnerships, trusts, or investment funds formed for the sole purpose of developing and constructing the assets, which the Company refers to as “project companies.” The Company applies ASC 810 to assess whether deconsolidation of a project company is appropriate upon the sale of equity interests. If deconsolidated, ASC 606 is then applied to evaluate performance obligations, determine transaction price, including variable consideration, and recognize revenue accordingly.

Power services

Revenue from power services, primarily Operations and Maintenance (“O&M”), is recognized over time, when the customer receives and consumes the benefits of the Company’s performance. Revenue is recognized based on the work completed to date that does not require significant re-performance, and related costs are expensed when incurred.

Electricity and battery energy storage operations

Revenue from electricity and battery energy storage operations is primarily generated from long-term PPAs, virtual power purchase agreements (“VPPAs”), tolling agreements, and performance-based energy incentives. Under PPAs, revenue is recognized when electricity is generated and delivered to the grid at the contractually stated prices. Performance-based energy incentives are recognized when conditions are met and collection is reasonably assured. For the years ended December 31, 2022, 2023 and 2024, the Company recognized $2,908, $2,772 and $2,542, respectively, from such incentives.

Revenue from uncontracted solar power projects and battery energy storage systems operating, in whole or in part, under merchant power pricing is recognized as revenue when the electricity or ancillary services are transferred to the market operator. Merchant projects earn revenue based on prevailing market prices or compensation for services such as frequency regulation or demand response. Revenue is recognized at the point of delivery, when performance obligations are satisfied and pricing is determinable.

2. Summary of Significant Accounting Policies (Continued)

The Company evaluates offtake contracts, including PPAs, VPPAs, tolling agreements, and long-term contracts, to determine whether they represent leases. If the customer is deemed to assume the principal risks and rewards of ownership, the arrangement is classified as a finance lease. In such cases, the Company derecognizes the assets and recognizes a finance lease receivable measured as the present value of future lease payments. Income is recognized over time using a constant rate of return. If the Company retains the principal risks and rewards of ownership, the arrangement is classified as an operating lease. The asset remains capitalized, and lease revenue is recognized either on a straight-line basis for the fixed payments or as contingent rent for variable payments linked to output.

The Company's electricity revenue was as follows:

	Years Ended December 31,		
	2022	2023	2024
Electricity revenue by segment:			
CSI Solar	$ 2,256	$ 3,273	$ 5,697
Recurrent Energy	21,579	44,842	83,473
Total	$ 23,835	$ 48,115	$ 89,170

Certain PPAs are accounted for as operating leases, with revenue recognized as contingent rental revenue upon electricity delivery. Such revenue under ASC 842 totaled $4,736, $4,434 and $3,987 for the years ended December 31, 2022, 2023 and 2024, respectively. The remaining amounts of $19,099, $43,681 and $85,183 for the same periods, including performance-based energy incentives, was recognized in accordance with ASC 606. No finance lease revenue was recognized during these periods. The Company's fixed-priced VPPAs are financially settled on a monthly basis. The Company concluded that its VPPA contracts do not meet the definition of a derivative under ASC 815, as they do not contain a notional amount.

Disaggregation of Revenue

Revenue from contracts with customers for the years ended December 31, 2022, 2023 and 2024 is disaggregated by timing of revenue recognition and segment. See Note 21 for additional details of revenues by product or service, and geographic location.

The following table presents revenue recognized at a point in time or over time:

	Years Ended December 31,		
	2022	2023	2024
CSI Solar:			
Revenue recognized at a point in time	$ 6,173,338	$ 6,767,156	$ 4,810,787
Revenue recognized over time	473,747	348,817	864,590
Recurrent Energy:			
Revenue recognized at a point in time	763,698	399,826	156,746
Revenue recognized over time	57,827	97,827	161,286
Total	$ 7,468,610	$ 7,613,626	$ 5,993,409

For the years ended December 31, 2023 and 2024, $398,545 and $645,727 of revenue, respectively, were recognized from contract liabilities outstanding as of January 1, 2023 and 2024. Contract liabilities of $417,278 as of December 31, 2024 are expected to be recognized within one year.

2. Summary of Significant Accounting Policies (Continued)

The contract assets and liabilities were as follows:

	December 31, 2023	December 31, 2024
Contract Assets		
Accounts receivable, unbilled	$ 101,435	$ 142,603
Contract Liabilities		
Advances from customers	392,308	204,826
Other current liabilities	333,500	212,452
Other non-current liabilities	52,693	41,337
Total	$ 778,501	$ 458,615

The Company applies the portfolio approach as a practical expedient for contracts or performance obligations with similar characteristics. The Company does not expect that the effects on the financial statements of applying the revenue recognition guidance to the portfolio would differ materially from applying the guidance to the individual contracts or performance obligations within that portfolio. The Company does not assess whether promised goods or services are performance obligations if they are immaterial in the context of the contract. When revenue is recognized for a performance obligation that includes such immaterial items before they are transferred to the customer, the related costs to transfer those items are accrued. The Company does not disclose the value of remaining performance obligations for contracts with an original expected duration of one year or less, and contracts where revenue is recognized in the amount to which the Company has a right to invoice. Revenue recognized in years ended December 31, 2022, 2023 and 2024 from performance obligations satisfied in prior periods were insignificant. Incremental costs of obtaining a contract are generally expensed in operating expense as incurred because the amortization period would be less than one year. Costs associated with contracts exceeding one year are not material.

(z) Shipping and handling

Amounts billed to customers for shipping and handling are included in net revenues. Related costs are generally included in selling and distribution expenses, and totaled $453,865, $237,947 and $330,909 for the years ended December 31, 2022, 2023 and 2024, respectively.

(aa) Research and development

Research and development costs, including design, development, testing and product enhancements, are expensed when incurred.

(ab) Other operating income, net

Other operating income, net primarily includes gains and losses on the disposal of property, plant and equipment, solar power and battery energy storage systems, and government grants. For the years ended December 31, 2022, 2023 and 2024, the Company recorded net gains of $4,259, $5,342 and net loss of $896, respectively, on the disposal of property, plant and equipment. The loss on the disposal of solar power and battery energy storage systems were immaterial for the periods presented.

2. Summary of Significant Accounting Policies (Continued)

Government grants include both unrestricted and restricted grants and subsidies. Unrestricted grants, which provide the Company with full discretion over the use of funds, are recognized when it is probable that all the conditions stipulated by governments, generally related to operating a business within a government's jurisdiction and complying with specific policies promoted by the governments, have been satisfied. Restricted grants related to ROU assets, property, plants and equipment, and certain projects are recorded as deferred subsidies within other non-current liabilities and are amortized on a straight-line basis over the useful life of the related assets. In most cases, the conditions attached to such grants pertain to specific performance or time-based requirements, such as the construction or acquisition of property, plant and equipment, achievement of business development milestones, technological innovation, or human capital development. These conditions may be subject to review, audit and approval by the government authorities and, therefore, the actual amounts realized may differ from the amounts initially recorded. As of December 31, 2024, deferred government grants included in other non-current liabilities amounted to $168,708. The Company qualifies for refundable or transferable tax credits under Section 45X of the Internal Revenue Code for eligible solar modules and components manufactured in the United States and sold to third parties. These credits are treated as income-based grants and recognized as reduction to cost of revenues related to the activities that generated the benefit, when there is reasonable assurance that the Company will comply with the eligibility criteria and receive the credits. The Section 45X credits were not material to the consolidated cost of revenues or balance sheet for any of the periods presented.

(ac) Product warranties and performance guarantees

The Company provides warranties and performance guarantees on its solar modules, battery energy storage products, and EPC services. For its solar modules, the Company offers a defects in materials and workmanship warranty of up to 25 years and a performance guarantee against power degradation for periods of up to 30 years, depending on the module type and warranty terms.

The Company maintains warranty reserves based on its own and industry claim history, accelerated testing, failure rate estimates, and other reasonable assumptions. The warranty provision is typically 1% of revenue from solar module sales. Actual warranty claims are charged against the accrued warranty liability, and the accrual rate is revised prospectively if needed. For battery energy storage systems, the Company provides a standard assurance-type warranty covering performance and manufacturing defects, generally for one to five years, with separately sold extended warranties of up to 15 years, accounted for as separate performance obligations. Warranty reserves are accrued upon revenue recognition and evaluated continuously based on claims history, field monitoring, vendor data, reliability estimates, and industry benchmarks. The Company also obtains vendor and supplier warranties to back up a portion of its warranty obligations. For contracts that include performance guarantees and long-term service agreements, liquidated damages may apply if performance thresholds are not met.

In EPC contracts, the Company offers a limited workmanship or balance of system warranty against defects in engineering design, installation and construction under normal use, operation and service conditions, typically for two years post energization of the project. Claims under these warranties may be remedied through repair, refurbishment or replacement. The Company may enter into similar workmanship warranties from key subcontractors and suppliers.

The Company maintains insurance policies with a group of insurers to back up a portion of its warranty obligations. Under these policies, the insurers are obliged, subject to certain maximum claim limits and deductibles, to reimburse the Company for actual warranty costs incurred in accordance with the terms of its product warranties. Insurance premiums are recorded as prepaid expenses and amortized over the coverage period. The Company considers insured losses related to defective products shipped to customers as analogous to incurred but not reported claims. Accordingly, the Company recognizes an insurance receivable for the portion of incurred warranty losses that are probable of recovery, not to exceed the warranty costs, in accordance with ASC 410. As of December 31, 2023 and 2024, non-current insurance receivables were $82,735 and $56,000, respectively. Insurance receivable is evaluated for recoverability based on insurer credit quality, insurance policy terms, and written communications of claim acceptance. There can be no absolute assurance that the Company will collect all amounts recorded as probable of recovery from the insurers. To the extent that uncertainties arise regarding the solvency of insurance carriers or the legal sufficiency of claims (including if they became subject to litigation) were to arise, the Company will establish a provision for uncollectible amounts based on specific facts and circumstances, and the measurement of expected credit losses. Actual insurance recoveries could differ significantly from amounts currently estimated.

2. Summary of Significant Accounting Policies (Continued)

Warranty obligation and insurance receivables are presented gross in the consolidated balance sheets. The insurance receivable is classified as a non-current asset to the extent it aligns with the long-term nature of the related warranty obligation, with the portion expected to be collected within one year presented as a current receivable. The Company made downward adjustments of $18,024 to its accrued warranty liability for the year ended December 31, 2024 to reflect the net effect of a decrease in average selling prices of solar modules and an increase in shipment volumes, which are two primary inputs into the estimated warranty costs. See Note 14 for accrued warranty costs included in cost of revenues.

(ad) Foreign currency translation

The Company uses the United States dollars ("U.S. dollars" or "$") as its functional and reporting currency. Monetary assets and liabilities denominated in foreign currencies are translated at exchange rates in effect at the balance sheet date. Transactions in foreign currencies are translated at the exchange rates prevailing on the transaction dates. Resulting transaction gains and losses are recognized in the consolidated statements of operations. Gains and losses on foreign currency transactions between consolidated entities that are of a long-term-investment nature, that is, settlement is not planned or anticipated in the foreseeable future, are not recognized in the consolidated statements of operations, but are recorded in other comprehensive income or loss. For subsidiaries that use a local currency as their functional currency, assets and liabilities are translated at exchange rates at the balance sheet date, equity accounts are translated at historical exchange rates, and revenues, expenses, gains and losses are translated at average rates for the period. Resulting translation adjustments are reported as foreign currency translation adjustments and are presented as a separate component of other comprehensive income or loss in the consolidated statements of comprehensive income (loss).

(ae) Comprehensive income (loss)

Comprehensive income (loss) includes all changes in redeemable non-controlling interests and equity, other than those resulting from investments by or distributions to owners. For the periods presented, total comprehensive income (loss) comprises net income (loss), foreign currency translation adjustments, including gains and losses on foreign currency transactions between consolidated entities that are of a long-term-investment nature, unrealized gains or losses (effective portion) and de-recognition of derivative instruments designated as cash flow hedges, and unrealized gains and losses on available-for-sale debt securities.

(af) Derivatives and foreign currency risk

The Company generates revenues, incurs expenses, holds cash and enters into financing arrangements in multiple currencies. These activities expose the Company to foreign currency risk, which may result in exchange gains or losses due to fluctuations in currency exchange rates. The Company is particularly exposed to foreign currency movements in countries where it has significant manufacturing, sourcing, or financing activities. To mitigate a portion of this risk, the Company uses foreign currency forward or option contracts as part of its hedging plan. These derivative instruments are accounted for in accordance with ASC 815, and changes in fair value that are not designated as hedges are recognized in the consolidated statements of operations within gain or loss on change in fair value of derivatives, net. The fair value of derivatives is determined using observable market inputs, including forward exchange rates. Fair value measurements are adjusted, as necessary, to reflect counterparty credit risk and the Company's own nonperformance risk. Realized gains or losses on derivative settlements are classified within operating activities in the consolidated statements of cash flows, consistent with the nature of the economically hedged item. For derivatives designated as cash flow hedges, the Company formally establishes and maintains the hedging relationship, including the related risk management objective, at inception. The effective portion of changes in fair value is recorded in other comprehensive income (loss), net of tax and subsequently reclassified into earnings in the same period the hedged item impacts the income statement.

2. Summary of Significant Accounting Policies (Continued)

(ag) Concentration of credit risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily include cash and cash equivalents, restricted cash, accounts receivable, advances to suppliers, and amounts due from related parties. All of the Company's cash and cash equivalents are held with financial institutions of high credit quality. The Company performs credit evaluations of its customers and generally does not require collateral. An allowance for credit losses is recorded based on the age of receivables and specific credit factors. Advances to suppliers, primarily for raw materials and manufacturing equipment, are also unsecured. The Company conducts ongoing evaluations of suppliers' financial conditions and maintains a reserve for potential credit losses, which historically have been within expectations. As of December 31, 2024, the Company made prepayments to three individual suppliers, each of which represented more than 10% of total advances to suppliers, in the amount of $46,486, $33,855 and $24,764, respectively. No such supplier concentrations (defined as individual suppliers accounting for more than 10% of total advances to suppliers) existed as of December 31, 2023.

(ah) Fair value of financial instruments

The Company applies ASC 820 for fair value measurements of financial assets and liabilities. Fair value is defined as the exit price, the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The three-tiered hierarchy, which prioritizes which inputs should be used in measuring fair value and requires the use of observable market data when available in determining fair value, is comprised of:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities. The Company's money market funds included in cash equivalent, restricted cash balance, mutual funds related to employee compensation plan, and listed equity securities are measured using Level 1 inputs.

Level 2 - Inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly. These include quoted prices for similar assets in active markets or inputs corroborated by observable market data.

Level 3 - Unobservable inputs reflecting the Company's own assumptions, consistent with those market participants would use when pricing the asset or liability.

(ai) Earnings per share

Basic earnings per common share is calculated by dividing net income attributable to common shareholders, after deducting cumulative dividends on any outstanding redeemable preferred shares of subsidiaries, by the weighted average number of common shares outstanding during the period. Diluted earnings per common share reflect the potential dilution that could occur if securities or other contracts to issue common shares were exercised or converted into common shares. The dilutive effect of share-based awards is calculated using the treasury stock method, while the effects of convertible notes is calculated using the if-converted method. Anti-dilutive common share equivalents are excluded from the dilutive earnings per share calculation. The Company is required to apply the two-class method when calculating basic and diluted earnings per share, if preferred shares of subsidiaries are considered participating securities under ASC 260.

(aj) Share-based compensation

The Company may grant restricted share units ("RSUs") and share options to employees and directors. Awards with time-based vesting conditions are measured at grant date fair value and recognized as compensation expense, net of estimated forfeitures, over the requisite service period, which is generally the vesting period. For awards with both time-based and performance-based vesting conditions, compensation expense is recognized when it becomes probable that the performance condition will be met. The fair value of awards with performance conditions, such as the CSI Solar IPO, does not reflect the likelihood of achieving the performance condition and is recognized in accordance with ASC 718. Share-based compensation expense is allocated to cost of revenues, selling and distribution, general and administrative, and research and development expenses, based on the job function of the grantee.

2. Summary of Significant Accounting Policies (Continued)

(ak) Recently issued accounting pronouncements

In September 2022, the FASB issued ASU No. 2022-04, Liabilities-Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations, which requires that a buyer in a supplier finance program disclose sufficient information to enable the user of financial statements to understand the nature, period activity, and potential magnitude of these programs. The guidance aims to enhance financial reporting by requiring new disclosures about the programs and effects on working capital, liquidity, and cash flows. The new standard is effective for fiscal years beginning after December 15, 2022, with the rollforward disclosure requirement effective for fiscal years beginning after December 15, 2023. The Company adopted provisions of this ASU effective January 1, 2023, with the exception of the rollforward disclosure requirement, which was adopted on January 1, 2024. Adoption of the new standard did not have a material impact on the consolidated financial statements.

In March 2023, the FASB issued ASU No. 2023-01, Leases (Topic 842): Common Control Arrangements, which requires that leasehold improvements associated with common control leases be amortized over their useful life to the common control group. The new standard is effective for fiscal years beginning after December 15, 2023. The Company adopted the new standard effective January 1, 2024, and it did not have a material impact on the consolidated financial statements.

In November 2023, the FASB issued ASU No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which enhances disclosure requirements for reportable segments, primarily by requiring additional information about significant segment expenses. The new standard is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The Company adopted the new standard effective January 1, 2024. See Note 21 for additional details.

In December 2023, the FASB issued ASU No. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which requires enhanced disaggregation in the income tax rate reconciliation and additional disclosures by nature and jurisdiction for reconciling items exceeding a quantitative threshold. The new standard is effective for fiscal years beginning after December 15, 2024. The Company is currently evaluating the impact of adopting this new standard on its consolidated financial statements.

In March 2024, the FASB issued ASU 2024-02, Codification Improvements—Amendments to Remove References to the Concepts Statements, which removes various references to concepts statements from the FASB Accounting Standards Codification. The new standard is effective for fiscal years beginning January 1, 2025, with early adoption permitted. The Company expects the new standard to have an immaterial impact on its consolidated financial statements.

In November 2024, the FASB issued ASU No. 2024-03, Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures (Subtopic 220-40), which requires additional disaggregation of specific expense categories in the statement of income. In January 2025, the FASB issued ASU 2025-01, which clarifies the effective date of ASU 2024-03. ASU 2024-03 is effective for fiscal years beginning after December 15, 2026, and interim periods within fiscal years beginning after December 15, 2027. The new standard is effective for fiscal years beginning after December 15, 2026, and interim periods beginning after December 15, 2027, with early adoption permitted. The Company is currently evaluating the impact of the new standard on its consolidated financial statements.

3. ALLOWANCE FOR CREDIT LOSSES

The allowance for credit losses comprises allowances for accounts receivable-trade, advances to suppliers, warranty insurance receivable, and other receivables. Warranty insurance receivable is presented within other non-current assets and other receivables are included in prepaid expenses and other current assets.

The following tables summarize the gross balances, allowance for credit losses, and net carrying amounts:

	December 31, 2023	December 31, 2024
Accounts receivable trade, gross	$ 961,745	$ 1,194,913
Allowance for credit losses	(56,802)	(76,144)
Accounts receivable trade, net	$ 904,943	$ 1,118,769

	December 31, 2023	December 31, 2024
Advances to suppliers, gross	$ 328,460	$ 244,703
Allowance for credit losses	(2,424)	(2,141)
Advances to suppliers, net	$ 326,036	$ 242,562

	December 31, 2023	December 31, 2024
Warranty insurance receivable, gross	$ 84,035	$ 79,923
Allowance for credit losses	(1,300)	(23,923)
Warranty insurance receivable, net	$ 82,735	$ 56,000

	December 31, 2023	December 31, 2024
Other receivable, gross	$ 145,376	$ 184,139
Allowance for credit losses	(11,878)	(13,901)
Other receivable, net	$ 133,498	$ 170,238

Changes in the allowance for credit losses were as follows:

	Accounts Receivable Trade	Advances to Suppliers, Warranty Insurance Receivable and Other Receivables
Balance as of December 31, 2021	$ 47,126	$ 29,079
Provision for credit losses, net	4,349	1,424
Write-offs	(109)	(18,295)
Foreign exchange effect	(1,436)	(834)
Balance as of December 31, 2022	49,930	11,374
Provision for credit losses, net	7,381	4,633
Write-offs	(2,073)	(242)
Foreign exchange effect	1,564	(163)
Balance as of December 31, 2023	56,802	15,602
Provision for credit losses, net	14,289	24,771
Write-offs	(647)	—
Foreign exchange effect	5,700	(408)
Balance as of December 31, 2024	$ 76,144	$ 39,965

4. INVENTORIES

Inventories consist of the following:

	December 31, 2023	December 31, 2024
Raw materials	$ 222,826	$ 233,034
Work-in-process	139,116	157,290
Finished goods	817,699	816,271
Total	$ 1,179,641	$ 1,206,595

The Company recorded inventory write- downs of $7,475, $113,079 and $151,957 in the year ended December 31, 2022, 2023 and 2024, respectively, to reflect lower of cost and net realizable value.

5. PROJECT ASSETS

Project assets consist of the following:

	December 31, 2023	December 31, 2024
Development costs, including acquisition and land	$ 651,920	$ 907,526
EPC and other construction costs	205,666	376,736
	$ 857,586	$ 1,284,262
Current portion	280,793	394,376
Non-current portion	$ 576,793	$ 889,886

The Company recorded impairment losses of $1,674, $16,239 and $33,052 on project assets for the years ended December 31, 2022, 2023 and 2024, respectively. Capitalized interest during development and construction was $26,439, $27,676 and $38,456 for the same periods, respectively.

6. PROPERTY, PLANT AND EQUIPMENT, NET

The components of property, plant and equipment, net were as follows:

	December 31, 2023	December 31, 2024
Buildings	$ 978,924	$ 967,761
Leasehold improvements	44,275	188,780
Machinery and equipment	2,213,281	2,497,250
Furniture, fixtures and office equipment	178,455	192,081
Motor vehicles	14,768	15,678
Freehold land	45,397	56,234
Total costs	3,475,100	3,917,784
Accumulated depreciation	(1,061,281)	(1,322,347)
Subtotal	2,413,819	2,595,437
Construction in progress	674,623	579,206
Property, plant and equipment, net	$ 3,088,442	$ 3,174,643

Depreciation expense was $225,351, $287,130 and $462,254 for the years ended December 31, 2022, 2023 and 2024, respectively. Construction in progress primarily includes production facilities under construction and machinery and equipment pending installation.

7. SOLAR POWER AND BATTERY ENERGY STORAGE SYSTEMS, NET

Solar power and battery energy storage systems, net consist of the following:

	December 31, 2023	December 31, 2024
Systems in operation	$ 532,833	$ 1,270,389
Systems under construction	450,339	762,523
Total costs	983,172	2,032,912
Accumulated depreciation	(31,659)	(55,973)
Solar power and battery energy storage systems, net	$ 951,513	$ 1,976,939

The Company reclassified $263,710, $119,067 and $312,773, from project assets to solar power and battery energy storage systems during the years ended December 31, 2022, 2023 and 2024, respectively, reflecting a change in intent to hold and operate these assets to generate electricity or storage revenue.

The Company recorded impairment losses on solar power systems of nil, nil and $21,400 for the years ended December 31, 2022, 2023 and 2024, respectively. Depreciation expense was $4,074, $14,266 and $28,900 for the same periods, respectively. Capitalized interest during development and construction was $18,666, $33,097 and $70,487 for the years ended December 31, 2022, 2023 and 2024, respectively.

8. INTANGIBLE ASSETS, NET

The components of intangible assets, net were as follows:

December 31, 2024	Gross Carrying Value	Accumulated Amortization	Net
Computer software	$ 52,279	$ (29,148)	$ 23,131
Customer-related intangible assets	5,704	(1,402)	4,302
Trademark	4,150	(557)	3,593
Intangible assets, net	$ 62,133	$ (31,107)	$ 31,026

December 31, 2023	Gross Carrying Value	Accumulated Amortization	Net
Computer software	$ 37,898	$ (23,820)	$ 14,078
Customer-related intangible assets	3,647	(478)	3,169
Trademark	2,533	(53)	2,480
Intangible assets, net	$ 44,078	$ (24,351)	$ 19,727

Amortization expense was $3,586, $3,793 and $7,993, for the years ended December 31, 2022, 2023 and 2024, respectively. Estimated future amortization expense for the years ending December 31, 2025 through 2029 and thereafter is approximately $7,644, $7,389, $6,930, $4,094, $1,189 and $3,780, respectively.

9. FAIR VALUE MEASUREMENT

The Company measures its financial assets and liabilities at fair value using a three-level hierarchy that prioritizes inputs to valuation techniques based on observability. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at measurement date.

9. FAIR VALUE MEASUREMENT (Continued)

The Company uses foreign currency exchange forward and option contracts to mitigate the impact of exchange rate fluctuations on forecasted cash flows. These derivative contracts generally do not qualify for hedge accounting, therefore changes in fair value are recognized in the consolidated statements of operations. Derivative contracts involve currencies such as the Renminbi, Brazilian real, Euro, Japanese yen and South African rand. As these instruments are not exchange traded, fair value is determined using standard industry valuation models that incorporate observable market inputs, including spot and forward rates, credit risk and interest rate curves. These measurements are classified as Level 2 within the fair value hierarchy.

In 2023 and 2024, the Company entered into interest rate swaps to hedge floating-rate debt and to mitigate interest rate volatility. Fair value of interest rate swaps was also based on observable market data and classified as Level 2. Unrealized gains and losses on interest rate swaps that qualified as cash flow hedges were recorded in other comprehensive income (loss).

The fair value of derivative instruments and their impact on the consolidated financial statements were as follows:

	Fair Value of Derivative Assets			
	December 31, 2023		December 31, 2024	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Foreign exchange forward contracts	Derivative assets — current	$ 9,282	Derivative assets — current	$ 14,025
Interest rate swaps	Other non-current assets	387	Other non-current assets	3,543
	Total	$ 9,669	Total	$ 17,568

	Fair Value of Derivative Liabilities			
	December 31, 2023		December 31, 2024	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Foreign exchange forward contracts	Derivative liabilities — current	$ 6,702	Derivative liabilities — current	$ 13,738
Interest rate swaps	Other non-current liabilities	801	Other non-current liabilities	6,063
	Total	$ 7,503	Total	$ 19,801

		Amount of Gain (Loss) Recognized in Statements of Operations		
		Years Ended December 31,		
	Location in Statements of Operations	2022	2023	2024
Foreign exchange forward contracts	Gain (loss) on change in fair value of derivatives, net	$ (49,388)	$ (38,241)	$ (51,406)
Foreign exchange option contracts	Gain (loss) on change in fair value of derivatives, net	8,918	10,712	6
Commodity hedge	Gain (loss) on change in fair value of derivatives, net	(4,019)	25	—
	Total	$ (44,489)	$ (27,504)	$ (51,400)

Equity securities

The Company held equity securities listed on stock exchanges in China, measured at fair value of $15,190 and $18,289 as of December 31, 2023 and 2024, respectively, and included in prepaid expenses and other current assets. Fair value losses of $418, $2,826 and $616 were recognized in investment income, net, for the years ended December 31, 2022, 2023 and 2024, respectively. Fair value was determined using quoted market prices on their respective stock exchanges and classified as Level 1.

9. FAIR VALUE MEASUREMENT (Continued)

The Company invested in Suzhou Jingkong Energy Technology Co., Ltd., Hangzhou Gaote Electronic Equipment Co., Ltd., Suzhou Hongruida New Energy Equipment Co., Ltd. and Youli Intelligent Technology (Shanghai) Co., Ltd. These equity investments, included in other non-current assets, were carried at fair value of $22,869 and $21,034 as of December 31, 2023 and 2024, respectively. Unrealized gain of $15,500 and $1,515 were recognized in investment income, net, for the years ended December 31, 2023 and 2024, respectively. Valuations were based on unobservable market inputs and the Company's own assumptions that were consistent with those of market participants and classified as Level 3.

Debt securities

The Company held available-for-sale debt securities, measured at $4,134 and $10,723 as of December 31, 2023 and 2024, respectively, and included in prepaid expenses and other current assets. Unrealized losses of $3,487 and gains of $2,223 were recognized in other comprehensive income (loss) for the years ended December 31, 2023 and 2024, respectively. The Company had bank time deposits and structured deposits with original maturity exceeding three months, measured at nil and $64,650 as of December 31, 2023 and 2024, respectively, included in prepaid expenses and other current assets. Related gains or losses, recorded in investment income were insignificant for the years ended December 31, 2023 and 2024. Fair value was determined based on quoted pricing of similar debt securities and classified as Level 2.

Other fair value measurements

The Company recognized property, plant and equipment impairments of $60,330, $5,938 and $65,285 in the CSI Solar segment for the years ended December 31, 2022, 2023 and 2024, respectively. The Company recognized solar power systems impairments of nil, nil and $21,400 in the Recurrent Energy segment for the years ended December 31, 2022, 2023 and 2024, respectively. Fair value was measured using unobservable inputs, including indicative offers from unrelated third-parties, and classified as Level 3. Impairments were recorded in general and administrative expenses. Project asset impairments of $1,674, $16,239 and $33,052 were recorded as cost of revenues in the Recurrent Energy segment for the years ended December 31, 2022, 2023 and 2024, respectively. Fair value was measured using unobservable inputs, including indicative pricing or valuation reports from unrelated third parties, and classified as Level 3.

The Company also holds certain financial instruments that are not recorded at fair value, but whose fair values are required to be disclosed. The carrying amount of cash and cash equivalents, restricted cash, trade and other receivables, account and other payables, short-term notes payable, related party balances, current portion of customer advances, and short-term borrowings approximate fair value due to short maturities. Long-term borrowings totaled $1,265,965 and $2,731,543 as of December 31, 2023 and 2024, respectively, and approximate fair value since most of the borrowings contain variable interest rates. The carrying values of green bonds and convertible notes were $389,033 and $375,459 as of December 31, 2023 and 2024, respectively, and approximate fair value. Fair value of these instruments was determined using discounted cash flow, incorporating market-based inputs, and classified as Level 2.

10. VARIABLE INTEREST ENTITIES

As of December 31, 2023 and 2024, nil and two VIEs were deconsolidated, respectively, and the Company did not retain ownership interests or control in any non-consolidated VIEs, which were individually and in aggregate immaterial.

Liberty TE Holdings LLC, Bayou Galion TE Holding LLC, and Papago BESS TE Holdings LLC hold interests in the Liberty solar power system, Bayou Galion solar power system, and Papago BESS battery energy storage system, respectively. Each entity is consolidated as a VIE, with Class A membership interests issued to tax equity investors classified as redeemable non-controlling interests on the consolidated balance sheets.

As of December 31, 2023 and 2024, the carrying amounts of the major assets and liabilities of consolidated VIEs, excluding immaterial line items and intercompany balances elimination in consolidation, included in consolidated balance sheets were as follows:

	December 31, 2023	December 31, 2024
Cash	$ 10,478	$ 79,220
Project assets	109,144	150,919
Property, plant and equipment, net	—	314,319
Solar power and battery energy storage systems, net	—	718,585
Other assets	40,340	90,139
Total assets	$ 159,962	$ 1,353,182
Short-term borrowings	$ 73,131	$ 85,531
Long-term borrowings	16,956	495,477
Other liabilities	27,376	241,793
Total liabilities	$ 117,463	$ 822,801
Redeemable non-controlling interests	$ —	$ 62,650

Net income attributable to consolidated VIEs was insignificant to the Company's consolidated financial statements for the years ended December 31, 2022, 2023 and 2024.

Cash flow activity attributable to consolidated VIEs were insignificant to the consolidated financial statements for the years ended December 31, 2022 and 2023. Cash flow activity attributable to consolidated VIEs for the year ended December 31, 2024 was $159,926 used in operating activities, $634,608 used in investing activities, and $752,825 provided by financing activities, including $226,935 capital contributions from tax equity investors.

11. INVESTMENTS IN AFFILIATES

Investments in affiliates consist of the following:

	December 31, 2023		December 31, 2024	
	Carrying Value	Ownership Percentage	Carrying Value	Ownership Percentage
Lingang Frontier (Yangzhou) CSI New Energy Investment Fund, LP	$ 42,357	44.3 %	$ 54,254	44.9 %
Suzhou Financial Leasing Co., Ltd.	30,048	3.0	32,578	3.0
RE Crimson Holdings LLC	26,551	20	25,230	20
Panati Holding S.A.	28,185	30	21,199	30
Marangatu Holding S.A.	30,790	30	19,640	30
Canadian Solar Infrastructure Fund, Inc.	17,677	14.5	17,078	14.9
Lavras Solar Holding S.A.	12,881	20	12,296	20
Others	48,439	2.2-49 %	50,705	1.8-49 %
Total	$ 236,928		$ 232,980	

11. INVESTMENTS IN AFFILIATES (Continued)

In 2023, CSI Solar established Lingang Frontier (Yangzhou) CSI New Energy Investment Fund, LP, holding an effective interest of 44.3% and 44.9% as of December 31, 2023 and 2024, respectively. In 2015, CSI Solar jointly established Suzhou Financial Leasing Co., Ltd., holding an effective interest of 3.0% as of December 31, 2023 and 2024. One of five board members is designated by CSI Solar. These investments are accounted for under the equity method due to CSI Solar's significant influence over the investees.

In 2022, the majority interests in Marangatu Holding S.A. ("Marangatu") and Panati Holding S.A. ("Panati") were sold to unrelated third parties. Following these sales, the Company retained a 30% interest in each investee, recognized revenue of $12,007 and $2,259, respectively, for the year ended December 31, 2022, and derecognized net assets of $6,267 and $2,262, respectively.

In 2017, Canadian Solar Infrastructure Fund, Inc. ("CSIF") completed its IPO. As of December 31, 2023 and 2024, the Company held 65,672 units in CSIF, representing 14.5% and 14.9% of total units, respectively. One of three board members represents the Company. Given CSIF's board structure and voting requirements, the Company is considered to have significant influence over the investee and applies the equity method.

Equity in earnings of affiliates were $15,440 and $14,610 for the years ended December 31, 2022 and 2023, respectively, and equity in losses of affiliates was $12,136 for the year ended December 31, 2024.

12. LEASE

The Company leases manufacturing facilities in various regions where the Company operates. The Company also leases land for construction and operations of solar power and battery energy storage systems, and leases office space, office equipment and motor vehicles for its sales and administrative functions. Leased assets are mainly located in the United States, PRC and Europe.

The Company capitalizes lease costs to its project assets and solar power and battery energy storage systems, when such costs qualify for capitalization as during periods in which activities necessary to get the property ready for its intended use are in progress.

The leases considered as ROU assets have various terms of up to 50 years. The Company also has certain leases with terms of 12 months or less, which are not recorded on the consolidated balance sheet.

The components of lease expense were as follows:

	Years Ended December 31,	
	2023	2024
Finance lease cost:		
Amortization of finance lease ROU assets	$ 49,483	$ 75,189
Interest on finance lease liabilities	5,368	8,986
Operating fixed lease cost	24,489	24,992
Short-term lease cost	1,824	467
Total lease expense	$ 81,164	$ 109,634

12. LEASE (Continued)

Supplemental balance sheet information for leases is presented below:

	Balance Sheet Location	December 31, 2023	December 31, 2024
Assets:			
Operating lease ROU assets	Right-of-use assets	$ 132,786	$ 280,420
Land use rights, net	Right-of use assets	104,221	98,128
Total operating lease ROU assets		237,007	378,548
Finance lease ROU assets	Property, plant and equipment, net	163,553	178,151
Total finance lease ROU assets		$ 163,553	$ 178,151
Liabilities:			
Operating lease	Operating lease liabilities – current	$ 20,204	$ 21,327
Operating lease	Operating lease liabilities – non-current	116,846	271,849
Total operating lease liabilities		$ 137,050	$ 293,176
Finance lease	Other current liabilities	$ 88,180	$ 54,287
Finance lease	Other non-current liabilities	71,651	132,106
Total finance lease liabilities		$ 159,831	$ 186,393

Other supplemental information related to leases is presented below:

	Years Ended December 31,	
	2023	2024
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash outflows for finance leases	$ (5,368)	$ (8,986)
Operating cash outflows for operating leases	(19,686)	(15,032)
Financing cash outflows for finance leases	(42,319)	(72,211)
ROU assets obtained in exchange for new finance lease liabilities in non-cash transaction	167,726	89,787
ROU assets obtained in exchange for new operating lease liabilities in non-cash transaction	119,412	184,481
ROU assets disposed through early termination of operating leases in non-cash transaction	$ (3,288)	$ (954)

	December 31, 2023	December 31, 2024
Weighted average remaining lease term - finance leases (in years)	4.0	6.8
Weighted average remaining lease term - operating leases (in years)	14.4	15.5
Weighted average discount rate - finance lease	5.5 %	5.3 %
Weighted average discount rate - operating lease	5.7 %	5.0 %

12. LEASE (Continued)

As of December 31, 2024, maturities of operating and finance lease liabilities were as follows:

	Operating Leases	Finance Leases	Total Leases
Year Ending December 31,			
2025	$ 25,641	$ 57,758	$ 83,399
2026	27,541	27,049	54,590
2027	26,247	26,236	52,483
2028	27,314	25,010	52,324
2029	27,500	13,797	41,297
Thereafter	328,346	49,463	377,809
Total lease payments	462,589	199,313	661,902
Less: imputed interest	169,413	12,920	182,333
Present value of lease liabilities	$ 293,176	$ 186,393	$ 479,569
Analysis as:			
Short-term	$ 21,327	$ 54,287	$ 75,614
Long-term	271,849	132,106	403,955
Total lease liabilities	$ 293,176	$ 186,393	$ 479,569

13. BORROWINGS

Borrowings consist of the following:

	December 31, 2023	December 31, 2024
Short-term borrowings related to project assets [(1)]	$ 291,982	$ 455,166
Other short-term borrowings	1,513,216	1,418,140
Total short-term borrowings	1,805,198	1,873,306
Long-term borrowings related to project assets	450,455	702,077
Other long-term borrowings	815,510	2,029,466
Total long-term borrowings	1,265,965	2,731,543
Total borrowings	$ 3,071,163	$ 4,604,849

(1) Includes the current portion of long-term borrowings classified as current liabilities because these borrowings relate to project assets expected to be sold within one year.

As of December 31, 2024, total borrowings were $4,604,849, including $2,264,767 and $2,340,082 related to CSI Solar and Recurrent Energy, respectively. In addition, the Company had $146,542 of green bonds related to Recurrent Energy and $228,917 of convertible notes. As of December 31, 2023, total borrowings were $3,071,163, including $1,702,785 and $1,368,378 related to CSI Solar and Recurrent Energy, respectively. In addition, the Company had $161,609 of green bonds related to Recurrent Energy and $227,424 of convertible notes.

As of December 31, 2024, the Company had contractual credit facilities of $7,697,545, of which $3,693,659 has been drawn under borrowings and $513,470 has been drawn under arrangements with banks, including bank guarantees, letters of credit and notes payable, and $3,490,416 was available for draw down upon demand. In addition, as of December 31, 2024, the Company had uncommitted credit facilities of $2,153,600, of which $519,693 has been drawn under borrowings and $351,819 under similar arrangements with banks.

As of December 31, 2024, $997,434 of borrowings under Recurrent Energy were non-recourse. These borrowings are typically long-term, asset- or portfolio-specific, and denominated in the domestic currency of the respective project subsidiary. These are secured by the assets and equity of each project, and lenders have no recourse to Canadian Solar Inc. in the event of a default.

13. BORROWINGS (Continued)

As of December 31, 2024, borrowings of $2,212,135 were secured by property, plant and equipment with a carrying amount of $504,776, inventories of $20,000, land use rights of $36,392, restricted cash of $306,573, accounts receivable of $10,000, equity interests of $768,328, project assets of $502,936, and solar power and battery energy storage systems of $1,430,751. These borrowings were classified as short-term borrowings of $433,853, non-recourse borrowings - current of $130,051, long-term borrowings of $790,321 and non-recourse borrowings of $857,910.

The Company's significant borrowings for the years ended December 31, 2023 and 2024 were as follows:

In 2020, Recurrent Energy, LLC entered into a $75,000 development loan with Nomura Securities International, Inc. In 2021, the syndicated facility was renewed with Nomura at an expanded amount of $125,000 and was set to mature in December 2023. In November 2023, the maturity was extended for another two years to November 2025. The facility is secured by certain project assets in the U.S., and is guaranteed by the Company. As of December 31, 2024, the loan was fully drawn.

In 2021, Sunmex Renovables, S.A. De C.V., a 51% owned subsidiary, obtained a $60,000 loan facility with Sumitomo Mitsui Banking Corporation ("SMBC") for its project in Mexico and was set to mature in March 2037. The Company has provided a guarantee on the outstanding balance through a letter of credit. As of December 31, 2024, the outstanding balance was $22,367.

In 2021, Canadian Solar Spain S.L.U obtained a €50,000 ($61,132) credit facility with Banco Santander, S.A., comprising a €25,000 term loan and €25,000 revolving credit facility. In 2022, the subsidiary obtained an additional term loan facility of €45,000 ($48,309). These facilities are guaranteed by the Company. As of December 31, 2024, all three facilities were fully drawn. These facilities were refinanced in April 2025. See Note 27.

In 2023, Canadian Solar Netherlands Cooperative U.A. secured a $100,000 credit facility with Nomura Securities International, Inc. In January 2025, the credit facility was novated to Canadian Solar Holdings B.V with a renewed maturity of March 2027 at an expanded capacity of $150,000. The credit facility is guaranteed by the Company. As of December 31, 2024, $99,349 was drawn.

Between 2022 and 2024, six of the project companies in Brazil obtained non-recourse project financings in the aggregate of BRL1,300,200 ($210,249) from various financial institutions, including BNB, Bradesco, Itaú BBA and Vortx Serviços Fiduciários Ltda. These facilities are secured by assets and equity interests in subsidiaries, with maturities set for September 2025 for a BRL200,000 ($38,504) bridge loan, and between 2033 and 2047 for the remaining facilities. As of December 31, 2024, $211,213 was drawn.

In June 2023, Canadian Solar Netherlands Cooperative U.A. secured two credit facilities, comprising a €30,000 ($32,736)and $20,000 term loan facilities, and a $110,500 revolving credit facility with Santander Corporate & Investment Banking ("Santander CIB"). These facilities are guaranteed by the Company. As of December 31, 2024, all facilities were fully drawn. These facilities were refinanced in April 2025. See Note 27.

In 2023, North Fork Solar Project, LLC secured $112,087 in non-recourse project financing for its project in Oklahoma, which achieved commercial operations in June 2024. Norddeutsche Landesbank and Rabobank acted as lead arrangers. The financing includes a $98,736 construction and term loan and a $13,351 letter of credit facility, and is secured by assets and equity interests in the subsidiary. The financing will mature in December 2043. As of December 31, 2024, $95,248 of the term loan was drawn.

In 2023, AURORA 01 GK issued JPY18,500,000 ($121,958) in private placement of green bonds. The bonds will mature in September 2026 and are guaranteed by the Company. As of December 31, 2024, the carrying value net of unamortized issuance costs was $115,804, and is included as a component of green bonds and convertible notes.

In 2024, Canadian Solar UK Projects Ltd secured a €95,000 ($102,648) credit facility with Investec Bank Plc. The syndicated facility comprises a €40,000 ($43,220) term loan and a €55,000 ($59,428) revolving credit facility, which will mature in February 2027 and is guaranteed by the Company. As of December 31, 2024, $97,163 was drawn.

In 2024, RE Gallium LLC secured a $150,000 credit facility with Coöperatieve Rabobank U.A, and is guaranteed by the Company. As of December 31, 2024, $148,066 was drawn. The credit facility was refinanced in April 2025. See Note 27.

13. BORROWINGS (Continued)

In 2024, RE Papago LLC and Papago BESS Class B LLC, obtained $513,312 in project financing for its battery energy storage project in Arizona, with MUFG and Norddeutsche Landesbank as lead arrangers. The facility is secured by assets and equity interests in the subsidiary. The facility includes a $248,664 non-recourse construction and term loan, a $163,560 tax equity bridge loan and a $101,088 letter of credit facility. The latter two are guaranteed by the Company. The financing will mature in April 2030. As of December 31, 2024, $248,664 of the construction and term loan and $58,517 of the tax equity bridge loan was drawn.

In 2023 and 2024, Canadian Solar Sunenergy (Jiaxing) Co. Ltd. entered into credit facilities in the aggregate of RMB 3,780,508,000 ($525,918) with various banks, and these credit facilities will mature through April 2030 by installments. Credit facilities of RMB 81,884,000 ($11,391) are unsecured, and the remaining RMB 3,698,624,000 ($514,527) are guaranteed by CSI Solar. As of December 31, 2024, $305,878 was drawn.

In 2023 and 2024, CSI Cells (Suqian) Co., Ltd. entered into credit facilities in the aggregate of RMB 2,900,000,000 ($403,428) with various banks, and these credit facilities will mature through September 2026 by installments. Credit facilities of RMB 400,000,000 ($55,645) are unsecured and are guaranteed by CSI Solar. The remaining RMB 2,500,000,000 ($347,783) are secured by property, plant and equipment and equity interest of CSI Cells (Suqian) Co., Ltd. and are also guaranteed by CSI Solar. As of December 31, 2024, $208,670 was drawn.

In 2023 and 2024, CSI Cells (Yangzhou) Co., Ltd. entered into credit facilities in the aggregate of RMB 2,176,112,000 ($302,726) with various banks, and these credit facilities will mature through August 2028 by installments. Credit facilities of RMB 450,000,000 ($62,601) are unsecured and are guaranteed by CSI Solar. The remaining RMB 1,726,112,000 ($240,125) are secured by property, plant and equipment and equity interest of CSI Cells (Yangzhou) Co., Ltd. and are also guaranteed by CSI Solar. As of December 31, 2024, $142,634 was drawn.

In 2023 and 2024, CSI Solar Technology (Xining) Co., Ltd. entered into credit facilities in the aggregate of RMB 1,277,237,000 ($177,680) with various banks, and these credit facilities will mature in May 2028 by installments. Credit facilities of RMB 180,000,000 ($25,040) is unsecured and are guaranteed by CSI Solar. The remaining RMB 1,097,237,000 ($152,640) are secured by property, plant and equipment and equity interest of CSI Solar Technology (Xining) Co., Ltd, and are also guaranteed by CSI Solar. As of December 31, 2024, $173,505 was drawn.

In 2024, Canadian Solar US Cell Manufacturing Corporation entered into a $450,000 syndicated credit facility with Santander as lead arranger and various financial institutions. The facility will mature through October 2029 by installments. The credit facility is secured by the equity interest and certain assets of Canadian Solar US Cell Manufacturing Corporation, and is guaranteed by the Company and Canadian Solar US Module Manufacturing Corporation. As of December 31, 2024, the facility was undrawn.

As of December 31, 2024, the financial covenants related to these borrowings were met.

In connection with the sale of project assets in the years ended December 31, 2022, 2023 and 2024, borrowings of $193,578, $161,709 and nil, respectively, were assumed by buyers.

As of December 31, 2024, future principal repayments on borrowings are as follows (including $69,523 of current portion of long-term borrowings classified as current liabilities because these borrowings relate to project assets expected to be sold within one year):

Year Ending December 31,	
2025	$ 1,873,307
2026	812,798
2027	569,199
2028	329,388
2029	141,707
Thereafter	878,450
Total	$ 4,604,849

13. BORROWINGS (Continued)

Weighted average effective interest rates were as follows:

	December 31, 2023	December 31, 2024
Short-term borrowings	3.8 %	3.1 %
Long-term borrowings	6.7 %	5.4 %

The Company capitalized interest on borrowings obtained to finance construction of project assets, solar power and battery energy storage systems, or property, plant and equipment, until the asset is ready for its intended use. Interest costs incurred were as follows:

	Years Ended December 31,		
	2022	2023	2024
Interest expense	$ 74,266	$ 114,099	$ 137,468
Interest capitalized:			
Project assets	26,439	27,676	38,456
Solar power and battery energy storage systems	18,666	33,097	70,487
Property, plant and equipment	—	963	—
Total interest costs	$ 119,371	$ 175,835	$ 246,411

14. ACCRUED WARRANTY COSTS

The warranty activity is summarized below:

	Years Ended December 31,		
	2022	2023	2024
Beginning balance	$ 45,146	$ 76,677	$ 75,519
Warranty provision	68,411	27,944	35,694
Warranty costs incurred	(31,943)	(21,011)	(20,404)
Foreign exchange effect	(4,937)	(8,091)	(6,682)
Ending balance	$ 76,677	$ 75,519	$ 84,127

15. RESTRICTED NET ASSETS

Under PRC laws and regulations, the Company's PRC subsidiaries may pay dividends only from retained earnings determined in accordance with accounting principles generally accepted in the PRC ("PRC GAAP"). In addition, wholly foreign-owned and domestic enterprises are required to appropriate 10% of after-tax income annually to a statutory general reserve before distributing dividends. As a result, a portion of the PRC subsidiaries' net assets is restricted and cannot be transferred to the Company through dividends, loans or advances. Distribution of registered share capital also requires approval from the local PRC authorities and, where applicable, the Shanghai Stock Exchange and China Securities Regulatory Commission. Accordingly, the statutory general reserve and registered share capital of the Company's PRC subsidiaries are considered restricted net assets, totaling $1,593,348 as of December 31, 2024.

16. CONVERTIBLE NOTES

In 2020, the Company issued $230,000 aggregate principal amount of convertible notes (the "2020 Notes"). Key terms are as follows:

Maturity date. The 2020 Notes mature on October 1, 2025.

Interest. Holders of the 2020 Notes are entitled to receive interest at 2.50% per annum on the outstanding principal, payable semi-annually in arrears on April 1 and October 1 of each year, beginning April 1, 2021.

16. CONVERTIBLE NOTES (Continued)

Conversion. The initial conversion rate is 27.2707 shares per $1,000 of principal, equivalent to an initial conversion price of approximately $36.67 per share. The 2020 Notes are convertible at any time prior to maturity, subject to adjustment for certain anti-dilution events and change in control provision. Upon conversion in connection with a change in control, additional shares may be issued based on an adjustment schedule tied to the effective date of the change and the price paid, compensating holders for time value lost on early exercise.

Redemption. The Company may redeem for cash all or part of the 2020 Notes at the Company's option, on or after October 6, 2023, if the Company's share price equals or exceeds 130% of the conversion price for 20 trading days within any 30 consecutive trading day period. Alternatively, the 2020 Notes can be redeemed at a price equal to the principal amount plus accrued interest if certain tax events occur.

As of December 31, 2023 and 2024, the carrying values of the convertible notes were $227,424 and $228,917, net of unamortized issuance costs of $2,576 and $1,083, respectively. The debt issuance costs are amortized using effective interest method at a rate of 3.18% over the period from September 16, 2020 to October 1, 2025. The Company recorded amortization expense of $1,447 and $1,493 for the years ended December 31, 2023 and 2024, respectively. Coupon interest of $5,750 was recorded for each of the years ended December 31, 2023 and 2024, of which $1,438 was not paid and was recorded in other payables as of December 31, 2023 and 2024.

17. INCOME TAXES

The provision for income taxes is comprised of the following:

	Years Ended December 31,		
	2022	2023	2024
Income (loss) before income taxes and equity in earnings (losses) of affiliates			
Canada	$ (19,357)	$ (61,704)	$ (38,474)
United States	22,275	(49,536)	(151,101)
PRC including Hong Kong and Taiwan	193,705	230,768	134,752
Others	159,845	288,997	(27,479)
	$ 356,468	$ 408,525	$ (82,302)
Current tax expense (benefit)			
Canada	$ (16,707)	$ 1,944	$ 972
United States	(1,684)	12,570	(16,750)
PRC including Hong Kong and Taiwan	47,528	55,780	95,325
Others	28,132	4,756	9,244
	57,269	75,050	88,791
Deferred tax expense (benefit)			
Canada	10,629	2,048	(8,799)
United States	1,996	(4,176)	(31,637)
PRC including Hong Kong and Taiwan	500	(724)	(70,231)
Others	2,959	(12,697)	5,300
	16,084	(15,549)	(105,367)
Total income tax expense (benefit)			
Canada	(6,078)	3,992	(7,827)
United States	312	8,394	(48,387)
PRC including Hong Kong and Taiwan	48,028	55,056	25,094
Others	31,091	(7,941)	14,544
	$ 73,353	$ 59,501	$ (16,576)

17. INCOME TAXES (Continued)

The Company's major operating subsidiaries and their respective income taxes are as follows:

Canada

The Company is subject to combined federal and Ontario provincial corporate income tax rate of 26.5% through December 31, 2024.

United States

Canadian Solar (USA) Inc. is subject to combined federal and state corporate income tax rate of 24.6%, 25.5% and 25.0% for the years ended December 31, 2022, 2023 and 2024, respectively. Canadian Solar SSES (US) Inc. is subject to combined federal and state corporate income tax rate of 28.1% and 23.0% for the years ended December 31, 2023 and 2024, respectively. Recurrent Energy Group Inc. is subject to combined federal and state corporate income tax rate of 22.5%, 26.1% and 26.6% for the years ended December 31, 2022, 2023 and 2024, respectively. Canadian Solar US Module Manufacturing Corporation is subject to combined federal and state corporate income tax rate of 21.0% for the year ended December 31, 2024.

PRC

The major operating subsidiaries, including Canadian Solar Manufacturing (Luoyang) Inc., Canadian Solar Manufacturing (Changshu) Inc., CSI Modules (DaFeng) Co., Ltd., Canadian Solar Sunenergy (Jiaxing) Co. Ltd, CSI Cells (Yancheng) Co., Ltd, Canadian Solar Sunenergy (SuQian) Co., Ltd., CSI Cells (SuQian) Co., Ltd., CSI Wafer (FuNing) Co., Ltd. and CSI Cells (Yangzhou) Co., Ltd. are governed by the PRC Enterprise Income Tax Law ("EIT Law").

In 2024, certain of the Company's PRC subsidiaries, including Suzhou Sanysolar Materials Technology Co., Ltd, Changshu Tegu New Material Technology Co., Ltd, CSI New Energy Development (Suzhou) Co., Ltd, CSI Solar Technologies (Jiaxing) Co., Ltd, Canadian Solar Photovoltaic Technology (Luoyang) Co., Ltd. and CSI Energy Storage Co., Ltd. were recognized as HNTEs. In addition, CSI Solar Technology (Xining) Co., Ltd and Canadian Solar Sunenergy (Baotou) Co., Ltd. are qualified as Enterprises in the Encourage Industry. They benefit from preferential income tax rates. Other PRC subsidiaries are subject to a 25.0% corporate income tax rate.

Reconciliation between the provision for income tax, as calculated by applying the combined Canadian federal and provincial statutory tax rate to income before income taxes and equity in earnings of affiliates, and the actual provision (or benefit) for income taxes is as follows:

	Years Ended December 31,		
	2022	2023	2024
Combined federal and provincial income tax rate	27 %	27 %	27 %
Effect of permanent difference	(3)	(15)	13
Effect of different tax rate on earnings in other jurisdictions	1	(4)	(6)
Effect of tax holiday	(1)	(1)	—
Effect of true-up	(2)	—	9
Effect of cross-border tax	—	1	(2)
Tax credits	—	—	8
Change in valuation allowance	(1)	7	(29)
	21 %	15 %	20 %

The aggregate income tax benefit and per share effect of tax holidays were as follows:

	Years Ended December 31,		
	2022	2023	2024
The aggregate amount	$ 2,520	$ 3,043	$ 41
Per share — basic	$ 0.04	$ 0.05	$ 0.01
Per share — diluted	0.04	0.04	0.01

17. INCOME TAXES (Continued)

The components of deferred tax assets and liabilities were as follows:

	December 31, 2023	December 31, 2024
Deferred tax assets:		
Accrued warranty costs	$ 12,944	$ 11,200
Allowance for credit losses	14,728	14,928
Inventory write-downs	5,807	7,022
Future deductible expenses	28,720	33,656
Depreciation difference and impairment of property, plant and equipment, project assets, solar power and battery energy storage systems	18,428	40,359
Accrued liabilities	39	10,886
Government subsidies	46,712	48,473
Net operating losses carryforwards	131,094	233,329
Interest limitations	15,471	26,199
Others	62,193	100,099
Total deferred tax assets, gross	336,136	526,151
Valuation allowance	(72,678)	(52,651)
Total deferred tax assets, net	$ 263,458	$ 473,500
Deferred tax liabilities:		
Investments in partnerships	$ 2,261	$ 69,327
Depreciation difference of property, plant and equipment	34,625	59,729
Others	45,942	75,776
Total deferred tax liabilities	$ 82,828	$ 204,832
Net deferred tax assets	$ 180,630	$ 268,668
Analysis as:		
Deferred tax assets	263,458	473,500
Deferred tax liabilities	(82,828)	(204,832)
Net deferred tax assets	$ 180,630	$ 268,668

In accordance with the EIT Law, a 5% or 10% withholding tax is generally levied on dividends declared by PRC companies to non-resident enterprise investors. A deferred tax liability is required for taxable temporary differences arising from the excess of financial reporting basis over tax basis in investments in foreign subsidiaries. However, a deferred tax liability is not recognized if the basis difference is not expected to reverse in the foreseeable future and is expected to be permanent in duration. As of December 31, 2024, the Company recorded $2,223 of withholding tax related to undistributed earnings of foreign subsidiaries, based on expected future distribution plan, and the remaining undistributed earnings of approximately $834,877 are considered to be indefinitely reinvested. The unrecognized deferred tax liabilities on these earnings are estimated to range between $41,744 and $83,488, depending on whether the immediate offshore entities qualify for the preferential withholding tax rate of 5%.

Movement of the valuation allowance is as follows:

	Years Ended December 31,		
	2022	2023	2024
Beginning balance	$ 45,682	$ 43,488	$ 72,678
Additions (reversals)	(1,531)	28,819	(19,328)
Foreign exchange effect	(663)	371	(699)
Ending balance	$ 43,488	$ 72,678	$ 52,651

17. INCOME TAXES (Continued)

As of December 31, 2024, the Company had accumulated net operating loss carryforward of $1,426,398, including $424,615 of U.S. federal and state net operating loss carryforwards, which expire between 2027 and 2043.

The Company evaluates both positive and negative evidence in assessing the realizability of deferred tax assets, including the nature, frequency and severity of recent losses, forecasts of future profitability, the duration of statutory carryforward periods, the historical expiration of tax attributes and feasible tax planning alternatives. The ultimate realization of deferred tax assets depends on the generation of future taxable income during the periods in which those temporary differences become deductible for tax purposes. The Company recognized a valuation allowance of $72,678 and $52,651 as of December 31, 2023 and 2024, respectively.

Uncertain tax positions

The Company makes an assessment of the level of authority for each of its uncertain tax positions, if that position is more likely than not of being sustained upon examination, based on their technical merits, and has measured the unrecognized benefits associated with such tax positions. This liability is recorded as liability for uncertain tax positions in the consolidated balance sheets. The Company accrues and classifies interest and penalties associated with such unrecognized tax benefits as income tax expense. The amounts of interest and penalties accrued as of December 31, 2023 and 2024 were $956 and $941, respectively. Given the uncertainty in timing and outcome of the Company's tax examinations, an estimate of the range of the reasonably possible change in gross unrecognized tax benefits within one year cannot be made at this time.

The following table presents the movement and balance of the liability for uncertain tax positions (excluding interest and penalties):

	Years Ended December 31,		
	2022	2023	2024
Beginning balance	$ 5,863	$ 4,770	$ 4,745
Additions	—	—	146
Reductions for tax positions from prior years and statute of limitations expirations	(678)	(24)	(63)
Foreign exchange effect	(415)	(1)	1
Ending balance	$ 4,770	$ 4,745	$ 4,829

The Company file income tax returns in Canada and various jurisdictions. Generally, the Company's taxation years from 2018 to 2024 are open for reassessment to the Canadian tax authorities. The Company is subject to taxation in the United States and various state jurisdictions. The Company is not currently under examination by the federal or state tax authorities. The Company's income tax returns for 2020 through 2024 remain open to examination by the U.S. tax authorities.

18. EARNINGS PER SHARE

The following table presents the calculation of basic and diluted earnings per share:

	Years Ended December 31,		
	2022	2023	2024
Numerator:			
Net income attributable to Canadian Solar Inc.	$ 239,968	$ 274,187	$ 36,051
Dilutive effect of convertible notes	5,183	5,290	—
Net income attributable to Canadian Solar Inc. — diluted	$ 245,151	$ 279,477	$ 36,051
Denominator:			
Denominator for basic calculation — weighted average common shares — basic	64,324,558	65,375,084	66,616,400
Diluted effects of share number from RSUs	586,420	546,765	323,028
Dilutive effects of share number from convertible notes	6,272,157	6,272,157	—
Denominator for diluted calculation — weighted average common shares — diluted	71,183,135	72,194,006	66,939,428
Basic earnings per share	$ 3.73	$ 4.19	$ 0.54
Diluted earnings per share	$ 3.44	$ 3.87	$ 0.54

18. EARNINGS PER SHARE (Continued)

For the calculation of diluted earnings per share, the effect of the convertible notes was excluded for the year ended December 31, 2024, as their inclusion would have been anti-dilutive. The anti-dilutive shares excluded for the periods indicated are summarized below:

	Years Ended December 31,		
	2022	2023	2024
RSUs and share options	9,295	48,598	241,652
Convertible notes	—	—	6,272,157

19. RELATED PARTY BALANCES AND TRANSACTIONS

Related party balances

As of December 31, 2023 and 2024, current amounts due from related parties amounted to $40,582 and $5,220, respectively, and non-current amounts due from related parties amounted to $32,313 and $75,215, respectively. These primarily relate to receivables from the Company's 49% owned affiliates in Mexico. As of December 31, 2023 and 2024, current and non-current amounts due from Horus Solar S.A. De Capital Variable were $33,664 and $34,742, respectively, and from Recursos Solares PV De México II S.A. De Capital Variable were $36,832 and $40,711, respectively.

Sales and purchase transactions with affiliates

The Company sold solar modules to Marangatu and Panati in Brazil, in the amounts of $100,939 and $67,463 in 2023, and $173 and nil in 2024, respectively. In 2022, 2023 and 2024, the Company delivered battery energy storage solutions to Crimson in the U.S., totaling $367,383, $17,182 and $5,300, respectively. In 2022, 2023 and 2024, the Company purchased raw materials from Yancheng Jiwa New Material Technology Co., Ltd. in the amounts of $5,192, $8,300 and $4,268, respectively. In 2022, 2023 and 2024, the Company provided asset management services to CSIF totaling $4,180, $10,004 and $5,508, respectively, and provided power services totaling $7,036, $6,974 and $7,623, respectively. The Company delivered turnkey battery energy storage solutions and EPC services to Suzhou Financial Leasing Co., Ltd. in the amount of nil, nil and $17,784 in 2022, 2023 and 2024, respectively.

20. COMMITMENTS AND CONTINGENCIES

a) Property, plant and equipment commitments

As of December 31, 2024, total commitments were $742,980, with payment schedule as follows:

Year Ending December 31,	
2025	$ 686,436
2026	35,295
2027	21,249
2028	—
2029	—
Total	$ 742,980

20. COMMITMENTS AND CONTINGENCIES (Continued)

b) Construction commitments

As of December 31, 2024, outstanding commitments for EPC and construction related to projects were $360,104, with payment schedule as follow:

Year Ending December 31,	
2025	$ 316,467
2026	43,637
2027	—
2028	—
2029	—
Total	$ 360,104

c) Contingencies

Trade Proceedings and Litigations

The Company and its subsidiaries are subject to various international trade proceedings and government actions, including antidumping duty ("AD"), countervailing duty ("CVD"), safeguard measures and tariff regimes affecting imports into the United States and other jurisdictions. These proceedings may result in significant duty deposits, tariffs, or related compliance costs on imports from China, Taiwan, and Southeast Asia, particularly for crystalline silicon photovoltaic ("CSPV") products and lithium battery components.

As of December 31, 2024, the Company's applicable AD and CVD rates on Chinese-origin CSPV products under "Solar 1" and "Solar 2" orders remain in effect, and final results in recent administrative reviews have generally affirmed or reduced prior rates.

Under Solar 1, the Company's current AD rate is 0.00%, and the applicable CVD rate is 15.87%, as of the conclusion of the tenth administrative reviews in 2024. The eleventh and twelfth reviews are ongoing, with final results expected in 2025 and 2026, respectively. Additionally, the second five-year sunset reviews concluded in 2024, with both the U.S. Department of Commerce ("USDOC") and U.S. International Trade Commission ("USITC") voting to continue the Solar 1 orders for another five years.

Under Solar 2, the Company's current AD and CVD rates for Chinese-origin products remain at 30.06% and 33.58%, respectively, as no reviews have resulted in rate changes applicable to the Company. For Taiwanese-origin products, the Company's AD rates have ranged from 1.33% to 4.39%, with no changes since 2021. The Company was not subject to the most recently completed ninth administrative review, and its current rates remain unchanged.

In 2024, the USDOC and USITC initiated new AD and CVD investigations ("Solar 3") against imports from Southeast Asia. Final AD and CVD rates applicable to the Company are 111.45% and 263.74%, respectively, on Thai-origin CSPV products. The Company participated in the April 15, 2025 public hearing related to the USITC's final determination, which is expected to be announced on May 20, 2025. The Company is actively defending its interests in these proceedings.

In 2024, AD and CVD petitions were filed on active anode materials (a lithium battery component) imported from China. The USDOC and USITC initiated investigations in early 2025, with preliminary determinations expected in mid-2025. If affirmed, these measures could impact the Company's lithium batteries from China, including those used in energy storage projects. The Company is monitoring these developments.

The Company is also subject to evolving tariff actions under the International Emergency Economic Powers Act ("IEEPA"). In February and March 2025, the U.S. government imposed and escalated broad reciprocal tariffs, including an 125% tariff on Chinese-origin goods effective April 10, 2025. These measures apply in addition to existing duties and may significantly affect imports of solar and battery components from China and Southeast Asia. The Company is monitoring these developments and evaluating mitigation measures.

20. COMMITMENTS AND CONTINGENCIES (Continued)

The Company is subject to a global safeguard tariff under Section 201 of the Trade Act, originally enacted by the U.S. government in 2018 and extended through February 6, 2026, which applies to imports of certain CSPV cells and modules from most countries. Although bifacial panels were initially excluded from the extended safeguard measure in 2022, this exclusion was revoked in June 2024, reinstating safeguard duties on bifacial panels. In August 2024, the tariff-rate quota ("TRQ") for CSPV cells was increased to 12.5 gigawatts annually. The safeguard measure remains subject to change, and the Company currently has pending litigation challenging the improper imposition of duties on bifacial panels during the period the exclusion was effective.

In Canada, definitive AD and CVD duties remain in effect on China-origin solar modules. The Canadian International Trade Tribunal affirmed continuation of these duties through 2026, with the Company-specific rates remaining unchanged. A further expiry review is expected before March 2026.

Patent Disputes

The Company is party to ongoing patent litigation, including lawsuits filed by Maxeon Solar Pte. Ltd. ("Maxeon") in the U.S. and Trina Solar Limited ("Trina") in China and the U.S., alleging infringement of various solar technologies. The Company believes the asserted claims lack merit and is vigorously defending these matters. However, the outcome of current or future litigation, particularly those seeking injunctive relief or significant damages, could materially impact the Company's financial condition, results of operations, or cash flows. In March 2024, Maxeon filed a U.S. patent infringement lawsuit, alleging infringement of solar-related patents. Maxeon seeks a permanent injunction and damages. Based on its preliminary analysis, the Company believes its modules do not infringe and intends to vigorously defend the case. In February 2025, CSI Solar Co., Ltd. was notified of lawsuits filed in China by Trina, alleging infringement of solar-related patents. Trina also initiated U.S. litigation, which could lead to permanent injunction and damages if successful. Concurrently, the Company has initiated patent invalidation proceedings before China's National Patent Office, which remain pending.

21. SEGMENT INFORMATION

The Company operates in two reportable segments: CSI Solar, focused on solar modules and battery energy storage manufacturing and products, and Recurrent Energy, focused on utility-scale solar power and battery energy storage project development and operation.

The segments are determined in accordance with the management approach under ASC280. The Company's chief operating decision maker ("CODM"), identified as the Chief Executive Officer, regularly reviews financial performance of CSI Solar and Recurrent Energy primarily through revenues, gross profit, operating expenses, income from operations and interest by segment to assess performance and allocate resources. Intersegment transactions, such as the sale of solar modules, EPC services, and battery storage systems from CSI Solar to Recurrent Energy, are conducted on terms comparable to those with unaffiliated third parties and are eliminated in consolidation. The Company does not review balance sheet information by segment and therefore does not present segment assets and liabilities. The segment structure is evaluated regularly to ensure consistency with internal management reporting and to reflect any organizational changes or changes in how the CODM allocates resources and evaluates performance.

21. SEGMENT INFORMATION (Continued)

The following table summarizes the segment financial results for CSI Solar and Recurrent Energy, including revenues, gross profit, operating expenses, income (loss) from operations and interest by segment. Intersegment eliminations reflect transactions between the two segments, including sales of modules, battery energy storage products and EPC, which are eliminated in consolidation. Unallocated items represent corporate-level income and expenses not directly attributable to either segment and include corporate overhead, professional service fees, and other centralized functions.

	Years Ended December 31, 2024			
	CSI Solar	Recurrent Energy	Elimination and Unallocated Items	Total
Net revenues	$ 6,460,003	$ 323,469	$ (790,063)	$ 5,993,409
Cost of revenues	5,272,722	257,976	(536,608)	4,994,090
Gross profit	1,187,281	65,493	(253,455)	999,319
Operating expenses	850,499	155,573	23,328	1,029,400
Income (loss) from operations	$ 336,782	$ (90,080)	$ (276,783)	$ (30,081)
Other segment items [1]				(52,221)
Loss before income taxes and equity in losses of affiliates				$ (82,302)
Supplementary information:				
Interest expense	$ (63,698)	$ (63,465)	$ (10,305)	$ (137,468)
Interest income	63,107	25,281	82	88,470
Depreciation and amortization, included in cost of revenues and operating expenses	463,893	37,550	—	501,443

	Years Ended December 31, 2023			
	CSI Solar	Recurrent Energy	Elimination and Unallocated Items	Total
Net revenues	$ 7,230,550	$ 497,653	$ (114,577)	$ 7,613,626
Cost of revenues	6,121,332	292,926	(80,615)	6,333,643
Gross profit	1,109,218	204,727	(33,962)	1,279,983
Operating expenses	653,135	108,106	65,422	826,663
Income from operations	$ 456,083	$ 96,621	$ (99,384)	$ 453,320
Other segment items [1]				(44,795)
Income before income taxes and equity in earnings of affiliates				$ 408,525
Supplementary information:				
Interest expense	$ (60,413)	$ (46,489)	$ (7,197)	$ (114,099)
Interest income	43,788	7,797	36	51,621
Depreciation and amortization, included in cost of revenues and operating expenses	290,346	16,694	—	307,040

21. SEGMENT INFORMATION (Continued)

	Years Ended December 31, 2022			
	CSI Solar	Recurrent Energy	Elimination and Unallocated Items	Total
Net revenues	$ 6,975,612	$ 821,525	$ (328,527)	$ 7,468,610
Cost of revenues	5,824,855	660,161	(279,542)	6,205,474
Gross profit	1,150,757	161,364	(48,985)	1,263,136
Operating expenses	806,959	81,000	19,116	907,075
Income from operations	$ 343,798	$ 80,364	$ (68,101)	$ 356,061
Other segment items [1]				407
Income before income taxes and equity in earnings of affiliates				$ 356,468
Supplementary information:				
Interest expense	$ (50,756)	$ (16,358)	$ (7,152)	$ (74,266)
Interest income	36,085	4,382	148	40,615
Depreciation and amortization, included in cost of revenues and operating expenses	227,839	6,720	—	234,559

(1) Includes interest expense, net, loss on change in fair value of derivatives, net, foreign exchange gain, net and investment income, net.

21. SEGMENT INFORMATION (Continued)

The following table summarizes the Company's net revenues generated from different geographic locations. The information presented below is based on the location of the customers' global or regional headquarters, as appropriate:

	Years Ended December 31,		
	2022	2023	2024
The Americas:			
United States	$ 1,963,956	$ 1,485,919	$ 2,776,124
Brazil	623,331	846,387	190,925
Mexico	31,912	50,884	42,431
Others	174,452	232,955	94,295
	2,793,651	2,616,145	3,103,775
Asia:			
China	1,904,862	2,151,243	1,220,446
Pakistan	73,531	78,203	266,082
Japan	325,344	597,188	150,727
India	197,772	91,020	50,241
United Arab Emirates	15,974	22,915	23,546
Taiwan	67,411	19,369	21,155
Philippines	26,578	40,612	18,623
Others	128,307	124,946	50,742
	2,739,779	3,125,496	1,801,562
Europe and other regions:			
Spain	434,841	445,321	221,788
Germany	322,189	291,385	198,227
United Kingdom	106,662	144,994	185,240
Australia	393,959	128,247	115,118
Italy	14,465	79,041	81,007
South Africa	118,458	218,596	75,467
Poland	26,136	12,667	27,975
Czech	79,414	62,079	23,670
Romania	31,804	24,491	23,540
Netherlands	136,375	81,820	21,607
Others	270,877	383,344	114,433
	1,935,180	1,871,985	1,088,072
Total net revenues	$ 7,468,610	$ 7,613,626	$ 5,993,409

21. SEGMENT INFORMATION (Continued)

The following table summarizes the long-lived assets, including property, plant and equipment, solar power and battery energy storage systems, intangible assets and ROU assets, based on the geographic location of the assets:

	December 31, 2023	December 31, 2024
China	$ 2,398,130	$ 2,515,326
United States	528,538	1,405,757
Thailand	691,467	620,060
Europe	99,738	500,229
Brazil	409,211	374,177
Colombia	61,847	57,822
Argentina	63,526	49,150
Others	44,232	38,635
Total long-lived assets	$ 4,296,689	$ 5,561,156

The following table summarizes the revenues generated from each product or service:

	Years Ended December 31,		
	2022	2023	2024
	$	$	$
CSI Solar:			
Solar modules	$ 5,534,379	$ 5,941,345	$ 4,281,178
Solar system kits	538,157	679,350	398,173
Battery energy storage solutions	440,716	245,173	814,604
EPC and others	133,833	250,105	181,422
Recurrent Energy:			
Solar power and battery energy storage asset sales	761,677	399,098	156,686
Power services	27,901	40,636	69,972
Revenue from electricity, battery energy storage operations and others	31,947	57,919	91,374
Total net revenues	$ 7,468,610	$ 7,613,626	$ 5,993,409

22. MAJOR CUSTOMERS

No customers accounted for 10% or more of total net revenues for the years ended December 31, 2022, 2023 and 2024.No customers accounted for 10% or more of total net accounts receivable as of December 31, 2023 and 2024.

23. EMPLOYEE BENEFIT PLANS

Employees of the Company located in the PRC are covered by the retirement schemes defined by local practice and regulations, which are essentially defined contribution schemes. The calculation of contributions for eligible employees is based on 16% of the applicable payroll cost. In the U.S., the Company has a qualified 401(k) plan which provides retirement benefits for all of its eligible manufacturing and non-manufacturing employees. Under the 401(k) plan, the Company matches 100% of the first five percent of employee contributions. The expense incurred by the Company to contributions schemes globally was $18,136, $28,222 and $37,090 for the years ended December 31, 2022, 2023 and 2024, respectively.

In addition, the Company is required by PRC law to contribute approximately 6-8.5%, 8%, 0.2-0.7% and 0.9-2.5% of applicable salaries for medical insurance benefits, housing funds, unemployment and other statutory benefits, respectively. The PRC government is directly responsible for the payment of the benefits to these employees. The amounts contributed for these benefit schemes were $15,918, $20,702 and $22,297 for the years ended December 31, 2022, 2023 and 2024, respectively.

24. SHARE-BASED COMPENSATION

Share Incentive

In March 2006, the Company adopted a share incentive plan ("Share Incentive"). The purpose of the Share Incentive is to promote the success and enhance the value of the Company by linking the personal interests of the directors, employees and consultants to those of the shareholders and providing the directors, employees and consultants with an incentive for outstanding performance to generate superior returns to the shareholders. The Share Incentive is also intended to motivate, attract and retain the services of the directors, employees and consultants upon whose judgment, interest and effort the successful conduct of the Company's operations is largely dependent. In September 2010, the shareholders approved an amendment to the Share Incentive to increase the maximum number of common shares which may be issued pursuant to all awards of options, restricted shares and RSUs under the Share Incentive to the sum of (i) 2,330,000 plus (ii) the sum of (a) 1% of the number of outstanding common shares of the Company on the first day of each of 2007, 2008 and 2009 and (b) 2.5% of the number of outstanding common shares of the Company outstanding on the first day of each calendar year after 2009. In June 2020, the shareholders approved an amendment to the Share Incentive to extend its term for a further ten years period. As a result, the Share Incentive will expire and no awards may be granted after June 30, 2029. Under the terms of the Share Incentive, options are generally granted with an exercise price equal to the fair market value of the Company's ordinary shares and expire ten years from the date of grant.

RSUs Activities

The Company granted 444,167, 206,067 and 167,968 RSUs in 2022, 2023 and 2024, respectively. The RSUs entitle the holders to receive the Company's common shares upon vesting. The RSUs were granted for free and generally vest over periods from one to four years based on the specific terms of the grants.

In 2021 and 2022, the Company granted 2,301,000 RSUs to the directors and key employees, with vesting contingent upon the completion of the IPO of CSI Solar (50% vested on the IPO date, followed by 25% vesting on each of the first and second anniversaries). The average grant date fair value of these contingent awards was $25.57 per award. As of December 31, 2024, 594,250 of these RSUs were unvested and outstanding.

The RSUs granted in 2022, 2023 and 2024 had total grant date fair values of $12,909, $7,785 and $2,800, respectively, and are expensed ratably over the vesting period. As of December 31, 2024, total unrecognized share-based compensation related to unvested RSUs granted between 2021 and 2024 was $15,763, expected to be recognized over a weighted-average period of 1.1 years.

A summary of the RSU activity is as follows:

	Number of Shares	Weighted Average Grant-Date Fair Value (in whole US dollars)
Unvested as of January 1, 2024	1,660,182	$ 27.21
Granted	167,968	16.87
Vested	(795,893)	26.20
Forfeited	(32,846)	30.42
Unvested as of December 31, 2024	999,411	$ 26.29

The fair value of RSUs vested during the years ended December 31, 2022, 2023 and 2024 was $13,276, $57,298 and $13,934, respectively.

24. SHARE-BASED COMPENSATION (Continued)

CSI Solar Employee Incentive

In 2020, CSI Solar approved the CSI Solar employee incentive plan ("CSI Solar Employee Incentive"). Eligible CSI Solar directors and employees and board members subscribed for equity interest in the partnership for an aggregate of RMB 248 million ($36,342). Vesting conditions, which were met in 2023, include completion of the IPO and the service period. The plan was accounted for based on grant date fair value, which equaled the value of the discount received by the participants. As of December 31, 2024, no awards granted were outstanding and no future grants may be available for issuance under this plan.

CSI Solar Restricted Share Incentive

In November 2024, CSI Solar adopted a restricted share incentive plan ("CSI Solar Restricted Share Incentive"), which provides for the granting of options to purchase CSI Solar common shares to its officers, directors and employees. Under the plan, options are generally granted with an exercise price of RMB 5.56 ($0.77) per share. The options are subject to time-based and performance-based vesting conditions and will vest in three tranches over a four-year period, beginning 12 months after the grant date. 33% of the options will vest between months 12 and 24, an additional 33% will vest between months 24 and 36, and the remaining 34% will vest between months 36 and 48, subject to continued employment and the achievement of applicable performance criteria. A maximum number of 54,004,000 CSI Solar common shares may be issued under the CSI Solar Restricted Share Incentive. As of December 31, 2024, there was RMB 460,994,000 ($64,130) of total unrecognized share-based compensation related to unvested options granted in 2024, which is expected to be recognized over 2.9 years.

The following table presents the share-based compensation expense included in the consolidated statements of operations:

	Years Ended December 31,		
	2022	2023	2024
Share Incentive	$ 9,370	$ 46,981	$ 20,087
CSI Solar Employee Incentive	—	8,354	—
CSI Solar Restricted Share Incentive	—	—	1,317
	$ 9,370	$ 55,335	$ 21,404

25. NON-CONTROLLING INTERESTS AND REDEEMABLE NON-CONTROLLING INTERESTS

In 2023, CSI Solar completed its IPO on the STAR Market of the SSE, raising net proceeds of approximately $927,897, of which, $644,873 was recorded in non-controlling interest, $244,629 in additional paid-in capital and $38,395 in accumulated other comprehensive loss. As of December 31, 2024, CSI Solar had repurchased 52,700,000 shares for RMB 566,202,000 ($79,582) under its share repurchase program, reducing the non-controlling interests' ownership from 37.76% to 36.86%.

The following schedule presents the effects of transfers from (to) non-controlling interests and redeemable non-controlling interests:

	Years Ended December 31,		
	2022	2023	2024
Net income attributable to Canadian Solar Inc.	$ 239,968	$ 274,187	$ 36,051
Transfers from (to) non-controlling interests and redeemable non-controlling interests:			
Increase in paid-in capital from transfer of equity interest in subsidiary and subsidiary's equity offering	11,185	244,629	—
Increase in paid-in capital from subsidiary's issuance of redeemable preferred shares	—	—	330,682
Increase in paid-in capital from acquisition of non-controlling interest	—	—	1,485
Decrease in paid-in capital from subsidiary's repurchase of its common shares	—	—	(55,730)
Net transfers from (to) non-controlling interests	$ 11,185	$ 244,629	$ 276,437
Change from net income attributable to Canadian Solar Inc. and transfers from (to) non-controlling interests and redeemable non-controlling interests	$ 251,153	$ 518,816	$ 312,488

The Company recorded net loss attributable to redeemable non-controlling interests of nil, nil, and $132,475 for the years ended December 31, 2022, 2023, and 2024, respectively. Amounts attributable to redeemable non-controlling interests were determined based on the HLBV method and the contractual terms of preferred shares of subsidiaries.

26. REDEEMABLE NON-CONTROLLING INTERESTS

As the Recurrent Energy B.V. Series A preferred shares are redeemable upon the occurrence of conditions not solely within the Company's control, the related non-controlling interest is classified as temporary equity on the consolidated balance sheets. As of December 31, 2024, Recurrent Energy B.V. was in compliance with the terms of the Series A preferred shares and as such, it was not probable that the non-controlling interest would become redeemable. The key terms of the Recurrent Energy B.V. Series A preferred shares are as follows:

Dividends

Pursuant to the transaction documents, either (a) Recurrent Energy B.V. shall, to the extent permitted by law and specifically authorized and declared by Recurrent Energy B.V.'s board of directors in respect of a given calendar quarter, pay in cash to the holders of Series A Preferred Shares dividends in respect of each outstanding Series A Preferred Share at a per annum rate equal to 9% of the Stated Value of such share or (b) to the extent of any portion of the dividend not paid in cash, such amount will automatically be added to the Stated Value of the Series A Preferred Shares. Amounts added to the Stated Value as described above ("Accretion Amounts") will continue to accrue at the same 9% annual rate and compound on a quarterly basis, subject to certain adjustments. The "Stated Value" referred to above generally represents the original purchase price of the Series A Preferred Shares plus the compounded Accretion Amounts plus any accumulated preferred return that has not been paid in cash or added to the Stated Value as an Accretion Amount and is determined as of each calendar quarter.

Subject to the foregoing, the transaction documents place limitations on the payment of dividends absent the unanimous approval of the shareholders.

Voting Rights

The holders of the Series A Preferred Shares are generally entitled to vote, on an as-converted basis, on all matters upon which holders of ordinary shares have the right to vote in the general meeting of Recurrent Energy B.V. (voting together as a single class with the holders of the ordinary shares of Recurrent Energy B.V.). Holders of the Series A Preferred Shares are entitled to appoint one director to the board of Recurrent Energy B.V. So long as any Series A Preferred Shares are outstanding, the prior written consent of any holders of at least 60% of the Series A Preferred Shares will be required before Recurrent Energy B.V. or its subsidiaries take certain actions.

Liquidation Events

The Series A Preferred Shares rank senior to Recurrent Energy B.V.'s ordinary shares with respect to rights upon the voluntary or involuntary liquidation, dissolution or winding up of Recurrent Energy B.V. or upon a deemed liquidation event (collectively, a "Liquidation Event"). Deemed liquidation events include, among other events, a sale of 50% or more of the assets of Recurrent Energy B.V. or a merger, consolidation, equity sale or similar transaction involving the transfer of beneficial ownership of 50% or more of the voting power or economic interest of the outstanding capital stock of Recurrent Energy B.V., subject to certain limitations (a "Company Sale"), and the occurrence of an Exit Demand (as defined below).

Upon a Liquidation Event, the holders of Series A Preferred Shares then outstanding shall be entitled to be paid out of the assets of Recurrent Energy B.V. available for distribution to its shareholders, or otherwise received by shareholders in connection with such Liquidation Event, before any payment shall be made to the other shareholders, an amount per Series A Preferred Share equal to the greater of (i) 1.3 times the Stated Value, and (ii) such amount distributable per ordinary share had all Series A Preferred Shares been converted into ordinary shares immediately prior to such Liquidation Event (the "Preferred Liquidation Amount"). If the assets of Recurrent Energy B.V. available for distribution to its shareholders shall be insufficient to pay the full Preferred Liquidation Amount, the holders of Series A Preferred Shares shall share ratably in any distribution of the assets available for distribution.

26. REDEEMABLE NON-CONTROLLING INTERESTS (Continued)

Exit Rights

At any time on or after the fifth anniversary of the first closing (i.e., May 31, 2024), Investor shall be entitled to cause Recurrent Energy B.V. to use commercially reasonable efforts to effect (1) a Company Sale resulting in proceeds in respect of the Series A Preferred Shares equal to at least the Preferred Liquidation Amount (an "Investor Exit") or (2) a qualified primary public offering of the ordinary shares of Recurrent Energy B.V. (an "IPO"), by delivering a written notice (an "Exit Request") to Recurrent Energy B.V. If an Investor Exit or qualified IPO is not consummated within two years of the delivery of an Exit Request, Investor shall have the right to cause Recurrent Energy B.V. and its affiliates to effect an Investor Exit or qualified IPO (an "Exit Demand"). In the event of the closing of an IPO, all outstanding Series A Preferred Shares shall automatically be converted into a number of ordinary shares of Recurrent Energy B.V. equal to the greater of (i) the original liquidation preference of the Series A Preferred Shares divided by the conversion price in effect at such time and (ii) 1.3 times the Stated Value divided by the fair market value of such shares, with such fair market value being deemed to be equal to the public offering price per share disclosed in the final prospectus for such IPO. The original liquidation preference shall initially be equal to the purchase price, subject to adjustment for share splits, share dividends or returns, reverse splits, combinations, recapitalizations and similar transactions. The conversion price shall initially be equal to the purchase price, subject to anti-dilution adjustment as provided in the terms of the Series A Preferred Shares.

Redemption and Conversion Rights

On and after the five-year anniversary of the first closing (or an earlier Exit Demand pursuant to an ESG default in accordance with the shareholders' agreement), the Series A Preferred Shares may be redeemed, in whole or in part, at the option of Recurrent Energy B.V. upon 30 days' prior written notice delivered to all holders of Series A Preferred Shares (an "Optional Redemption Notice").

Following receipt of the Optional Redemption Notice, any holder of Series A Preferred Shares may elect, in its sole discretion, to convert all or any number of the shares subject to redemption into ordinary shares at the then effective conversion price, in which case Recurrent Energy B.V. shall not redeem such Series A Preferred Shares (i.e., the number of Series A Preferred Shares to be redeemed by Recurrent Energy B.V. shall be reduced by the number of Series A Preferred Shares so converted). In addition, each holder of Series A Preferred Shares shall have the option to convert all or any of its Series A Preferred Shares upon the occurrence of a Company Sale and certain other monetization events, into a number of ordinary shares of Recurrent Energy B.V. equal to the greater of (i) the original liquidation preference of the Series A Preferred Shares divided by the conversion price in effect at such time and (ii) 1.3 times the Stated Value divided by the fair market value of such shares.

The carrying value of the Series A preferred shares of Recurrent Energy B.V. is not accreted or adjusted to redemption value unless it becomes probable that redemption will occur.

See Note 10 for details of tax equity investors classified as redeemable non-controlling interests on the consolidated balance sheets.

27. SUBSEQUENT EVENTS

In February 2025, the Company issued $50,000 of 6.0% convertible notes due December 31, 2029 to a subsidiary of Pacific Alliance Group ("PAG") pursuant to definitive agreements entered in August 2024, as amended. The initial conversion rate is 54.9451 share per $1,000 of principal, equivalent to an initial conversion price of $18.20 per share. Holders of the Notes also have the right to require the Company to repurchase the 2029 Notes after December 31, 2027.

In April 2025, Recurrent Energy B.V. completed a refinancing for $406,763 in existing credit facilities outstanding as of December 31, 2024, with Banco Santander, S.A., Intesa Sanpaolo S.p.A New York Branch, Coöperatieve Rabobank U.A., New York Branch, and Morgan Stanley Senior Funding, Inc. The new $415,000 credit facility consists of a €83,778,000 ($90,455) and a $324,545 tranche, maturing in April 2028 and extendable by one year subject to lender consent, and is partially guaranteed by the Company.

Additional Information — Condensed Financial Statements of Parent Company
Canadian Solar Inc.

The following condensed financial statements of Canadian Solar Inc. has been provided pursuant to the requirements of Rules 12-04(a) and 5-04(c) of Regulation S-X, which require condensed financial information as to financial position, cash flows and results of operations of a parent company as of the same dates and for the same periods for which audited consolidated financial statements have been presented as the restricted net assets of Canadian Solar Inc.'s consolidated and unconsolidated subsidiaries not available for distribution to Canadian Solar Inc. as of December 31, 2024 of $1,593,348, exceeded the 25% threshold.

The condensed financial information has been prepared using the same accounting policies as set out in the consolidated financial statements, except that the equity method has been used to account for investments in subsidiaries. The Company's share of income from its subsidiaries is reported as equity in earnings of subsidiaries in the condensed financial statements. These statements should be read in conjunction with the notes to the consolidated financial statements of the Company. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted.

Financial Information of Parent Company
Balance Sheets

(U.S. dollars in thousands, except share data)	December 31, 2023	December 31, 2024
Assets		
Current assets:		
Cash and cash equivalents	$ 642	$ 26,293
Amounts due from subsidiaries	339,809	317,561
Prepaid expenses and other current assets	14,812	20,031
Total current assets	355,263	363,885
Investments in subsidiaries	2,561,797	2,773,463
Investments in affiliates	11,745	11,745
Deferred tax assets	—	2,531
Other non-current assets	39,837	26,904
Total Assets	$ 2,968,642	$ 3,178,528
Liabilities and Equity		
Current liabilities:		
Amounts due to subsidiaries	$ 157,821	$ 111,731
Derivative liabilities	1,438	—
Other current liabilities	8,899	6,471
Convertible notes	—	228,917
Total current liabilities	168,158	347,119
Convertible notes	227,424	—
Deferred tax liabilities	8,115	10,285
Liability for uncertain tax positions	5,702	5,624
Total Liabilities	409,399	363,028
Equity:		
Common shares: no par value, unlimited authorized, 66,158,741 and 66,954,634 outstanding, respectively	835,543	835,543
Additional paid-in capital	292,737	590,578
Retained earnings	1,549,707	1,585,758
Accumulated other comprehensive loss	(118,744)	(196,379)
Total Equity	2,559,243	2,815,500
Total Liabilities and Equity	$ 2,968,642	$ 3,178,528

Financial Information of Parent Company
Statements of Operations

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Net revenues	$ —	$ —	$ —
Cost of revenues	—	—	—
Gross profit	—	—	—
Operating expenses:			
General, administrative and other operating expenses	12,306	40,198	20,180
Total operating expenses	12,306	40,198	20,180
Loss from operations	(12,306)	(40,198)	(20,180)
Other income (expenses):			
Interest expense	(23,229)	(18,720)	(10,580)
Interest income	20,563	22,862	15,569
Gain (loss) on change in fair value of derivatives, net	(844)	(1,535)	2,700
Foreign exchange gain (loss), net	616	(772)	(492)
Other income (expenses), net:	(2,894)	1,835	7,197
Loss before income taxes and equity in earnings of subsidiaries and affiliates	(15,200)	(38,363)	(12,983)
Income tax benefit (expense)	8,786	(6,775)	3,780
Equity in earnings of subsidiaries and affiliates	246,382	319,325	45,254
Net income	$ 239,968	$ 274,187	$ 36,051

Financial Information of Parent Company
Statements of Comprehensive Income (Loss)

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Net income	$ 239,968	$ 274,187	$ 36,051
Other comprehensive income (loss), net of tax	(120,511)	13,412	(79,647)
Comprehensive income (loss)	$ 119,457	$ 287,599	$ (43,596)

Financial Information of Parent Company
Statements of Cash Flows

(U.S. dollars in thousands)	Years Ended December 31, 2022	2023	2024
Operating activities:			
Net income	$ 239,968	$ 274,187	$ 36,051
Adjustments to reconcile net income to net cash provided by provided by (used in) operating activities:			
Accretion of convertible notes	1,302	1,447	1,493
Loss (gain) on change in fair value of derivatives	844	1,535	(2,700)
Equity in earnings of subsidiaries and affiliates	(246,382)	(319,325)	(45,254)
Share-based compensation	9,370	28,410	4,256
Dividend received from subsidiary	—	—	38,519
Deferred taxes	3,319	5,180	(361)
Changes in operating assets and liabilities:			
Amounts due from subsidiaries	10,990	245,001	46,719
Prepaid expenses and other current assets	(7,900)	(1,594)	(36,216)
Other non-current assets	10	—	12,933
Amounts due to subsidiaries	38,610	(232,650)	(44,621)
Other current liabilities	(1,154)	4,377	(2,429)
Liability for uncertain tax positions	(1,702)	(28)	(77)
Net settlement of derivatives	439	(859)	1,262
Net cash provided by operating activities	47,714	5,681	9,575
Investing activities:			
Investments in subsidiaries	(65,421)	(22,164)	(10,310)
Investments in affiliates	(990)	—	—
Loans to subsidiaries	(122,050)	(62,226)	(6,162)
Repayment of loans to subsidiaries	172,573	69,150	32,271
Net cash used in (generated from) investing activities	(15,888)	(15,240)	15,799
Financing activities:			
Repayment of loan from subsidiary	(49,554)	—	—
Net cash used in financing activities	(49,554)	—	—
Effect of exchange rate changes	5,957	(5,460)	277
Net increase (decrease) in cash, cash equivalents and restricted cash	(11,771)	(15,019)	25,651
Cash, cash equivalents and restricted cash at the beginning of the year	27,432	15,661	642
Cash, cash equivalents and restricted cash at the end of the year	$ 15,661	$ 642	$ 26,293
Supplemental disclosure of cash flow information:			
Interest paid	$ 30,521	$ 11,586	$ 10,768

EXHIBIT 8.1

LIST OF MAJOR SUBSIDIARIES

Name of entity	Place of incorporation	Ownership interest
Canadian Solar Solutions Inc.	Canada	100%
Canadian Solar New Energy Holding Company Limited	Hong Kong	100%
Recurrent Energy, LLC	USA	100%
Recurrent Energy B.V.	Netherlands	100%
Canadian Solar Brasil I Fundo de Investimento em Participacoes – Multiestrategia	Brazil	100%
CSI Solar Co., Ltd.	PRC	63.14%
CSI Cells Co., Ltd.	PRC	100%*
Canadian Solar Manufacturing (Luoyang) Inc.	PRC	100%*
Canadian Solar Sunenergy (Baotou) Co., Ltd.	PRC	100%*
CSI Solar Technology (Xining) Co., Ltd	PRC	100%*
Canadian Solar Manufacturing (Changshu) Inc.	PRC	100%*
CSI Modules (DaFeng) Co., Ltd.	PRC	100%*
Canadian Solar Sunenergy (Jiaxing) Co. Ltd	PRC	100%*
CSI Cells (Yancheng) Co., Ltd.	PRC	100%*
Canadian Solar Sunenergy (SuQian) Co., Ltd.	PRC	100%*
CSI Cells (SuQian) Co., Ltd.	PRC	100%*
CSI Wafer (FuNing) Co., Ltd.	PRC	100%*
CSI Cells (Yangzhou) Co., Ltd.	PRC	100%*
Canadian Solar (USA) Inc.	USA	100%*
Canadian Solar US Module Manufacturing Corporation	USA	100%*
Canadian Solar SSES (US) Inc.	USA	100%*
Canadian Solar International Limited	Hong Kong	100%*
Canadian Solar Manufacturing (Thailand) Co., Ltd.	Thailand	99.999996%*
Canadian Solar EMEA GmbH	Germany	100%*

* Significant subsidiaries (as defined in Rule 1-02(w) of Regulation S-X) held through CSI Solar Co., Ltd. in which CSI owned a 63.14% interest as of December 31, 2024.

Exhibit 11.1

Amended to March 19, 2025

INSIDER TRADING POLICY

Policies and Procedures Governing Material Non-Public Information and the Prevention of Insider Trading (the "*Policy*") of Canadian Solar Inc. (together with its subsidiaries, the "*Company*")

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INTRODUCTION

This Policy provides guidelines with respect to transactions in the securities of the Company and the handling of confidential information about the Company and the companies with which the Company does business. This Policy aims to promote compliance with federal, state and foreign securities laws that prohibit certain persons who are aware of material nonpublic information about a company from: (i) trading in securities of that company; or (ii) providing material nonpublic information to other persons who may trade on the basis of that information. Regulators have adopted sophisticated surveillance techniques to identify insider trading transactions, and it is important to the Company to avoid even the appearance of impropriety. Insider trading occurs when a person purchases or sells a security while in possession of inside information relating to the security. As explained in "*Definitions and Explanation of Insider Trading*" below, inside information is information which is both material and non-public.

This Policy only addresses compliance with United States laws and the rules of the Nasdaq Stock Market relating to insider trading. Many other laws, including the laws of Canada and China, also deal with insider trading and may deal more generally with trading in the securities of the Company.

Persons Subject to This Policy

This Policy applies to all directors, officers and employees of the Company. The Compliance Officer may also determine that other persons should be subject to this Policy, such as contractors or consultants who have access to material nonpublic information. This Policy also applies to family members, other members of a person's household and entities controlled by a person covered by this Policy, as described below under "*Transactions by Family Members and Others*" and "*Transactions by Entities You Influence or Control*."

All persons subject to this Policy have a duty to cooperate in the operation of this Policy. Compliance with this Policy is a condition of continued employment for all officers and employees of the Company. Failure to comply may result in disciplinary action, up to and including termination of employment. Each individual is responsible for making sure that he or she complies with this Policy and that any family member, household member or entity whose transactions are subject to this Policy also complies with this Policy.

This Policy continues to apply to transactions in Company securities (collectively referred to in this Policy as "***Company Securities***") even after termination of service to the Company. If a person possesses material, non-public information when his or her service terminates, that person may not trade in Company Securities until the information has become public or is no longer material. The pre-clearance procedures described under "*Pre-Clearance of All Trades by All Directors, Officers and Key Employees*" below, however, will cease to apply to transactions in Company Securities upon the expiration of any Prohibited Trading Period (or special blackout period, as described below) applicable when service terminates. In addition, it is the policy of the Company that no director, officer or other employee of the Company (or any other person designated as being subject to this Policy) who, in the course of

working for the Company, comes into possession of material nonpublic information about a company with which the Company does business, including a customer or supplier of the Company, or that is involved in a potential transaction or business relationship with the Company, may trade in that company's securities until the information becomes public or is no longer material.

Questions regarding this Policy should be directed to the Compliance Officer appointed by the board of directors (the "***Board***") of the Company.

Compliance Officer

Yu Chen, Lead General Counsel, has been appointed by the Board as the Compliance Officer of the Company. Yu Chen may be reached at yu.chen@canadiansolar.com. Any person who has a question about this Policy or its application to any proposed transaction may obtain additional guidance from the Compliance Officer.

The Company will notify you if the Board appoints a different Compliance Officer.

PROHIBITIONS

Insider Trading

No director, officer or employee of the Company or any other person designated by the Compliance Officer (such as contractors or consultants of the Company) shall trade any type of security while in possession of material, non-public information relating to the security, whether the issuer of such security is the Company or any other entity.

In addition, except as otherwise specified in this Policy under the headings "Transactions Under Company Plans and Certain Other Transactions" and "Rule 10b5-1 Plans," no director, officer or key employee of the Company shall trade any type of Company Securities during the period beginning two weeks before the end of each fiscal quarter of the Company and ending two full business days after the public release of the financial results of the Company for the quarter (the "***Prohibited Trading Period***"). The criteria for classifying employees as "***key employees***" for purposes of the Prohibited Trading Period will be determined by the Board. The Company will advise you if you are a key employee. If you have received a copy of this Policy, you are considered to be a key employee or otherwise subject to this Policy.

From time to time, directors, officers, employees, consultants and/or contractors may become aware of material nonpublic information outside of a quarterly Prohibited Trading Period. So long as the information remains material and nonpublic, such persons may not trade Company Securities. In addition, the Company's financial results may be sufficiently material in a particular fiscal quarter that, in the judgment of the Compliance Officer, designated persons should refrain from trading in Company Securities even sooner than the typical quarterly Prohibited Trading Period. In these situations, the Compliance Officer may notify these persons that they should not trade in Company Securities, without disclosing the reason for the restriction. Even if the Compliance Officer has not designated you as a person who should not trade due to an event-specific restriction, you should not trade while aware of material nonpublic information.

Please note that the Prohibited Trading Period may be changed at any time in the

discretion of the Board or the Compliance Officer. The Compliance Officer will advise of any changes.

The foregoing restrictions on trading do not apply to transactions under a pre-existing written plan, contract or instruction that satisfies the conditions of Rule 10b5-1, as in effect at such time ("***Rule 10b5-1***"), under the U.S. Securities Exchange Act of 1934, as amended (the "***Exchange Act***") (a "***10b5-1 Plan***") and approved in writing by the Board or a committee of the Board or any officer of the Company designated by the Board.

In addition, bona fide gifts of Company Securities are not subject to this Policy, unless the person making the gift has reason to believe that the recipient intends to sell the securities while the person making the gift possesses material, non-public information, or the person making the gift is a director, officer or key employee and the sale by the recipient occurs during a Prohibited Trading Period (or special blackout period, as described below).

Tipping

No director, officer or employee of the Company shall directly or indirectly tip material, non-public information, whether the information relates to a security of the Company or any other entity, to anyone.

In addition, material, non-public information should not be communicated to anyone outside the Company under any circumstances, or to anyone within the Company other than on a need-to-know basis.

TRANSACTIONS UNDER COMPANY PLANS AND CERTAIN OTHER TRANSACTIONS

This Policy does not apply to the transactions listed below, except as specifically noted in the paragraphs below. Please note, however, that Covered Senior Persons are required to comply with the pre-clearance and trading restriction requirements described under "*Pre-Clearance of All Trades by All Directors, Officers and Key Employees*" below with respect to these transactions:

1. Stock Option Exercises: This Policy does not apply to the exercise of an employee stock option acquired pursuant to the Company's plans, or to the exercise of a tax withholding right pursuant to which a person has elected to have the Company withhold shares subject to an option to satisfy tax withholding requirements. This Policy does apply, however, to any sale of stock as part of a broker-assisted cashless exercise of an option, or any other market sale of the underlying Company Securities of an option.

2. Restricted Stock Awards: This Policy does not apply to the vesting of restricted stock or restricted stock units, or the exercise of a tax withholding right pursuant to which you elect to have the Company withhold shares of stock to satisfy tax withholding requirements upon the vesting of any restricted stock or restricted stock units. This Policy does apply, however, to any market sale of the Company Securities received upon such vesting.

3. Employee Stock Purchase Plan: This Policy does not apply to purchases of Company Securities in the employee stock purchase plan resulting from your periodic or lump sum contribution of money to the plan pursuant to the election you made at the time of your enrollment in the plan. This Policy does apply, however, to your initial election to

participate in the plan, changes to your election to participate in the plan for any enrollment period, and to your sales of Company Securities purchased pursuant to the plan.

4. Mutual Funds: Transactions in mutual funds that are invested in Company Securities are not transactions subject to this Policy.

TRANSACTIONS BY FAMILY MEMBERS AND OTHERS

This Policy applies to your family members who reside with you (including a spouse, a child, a child away at college, stepchildren, grandchildren, parents, stepparents, grandparents, siblings and in-laws), anyone else who lives in your household, and any family members who do not live in your household but whose transactions in Company Securities are directed by you or are subject to your influence or control, such as parents or children who consult with you before they trade in Company Securities (collectively referred to as "Family Members"). You are responsible for the transactions of these other persons and therefore should make them aware of the need to confer with you before they trade in Company Securities, and you should treat all such transactions for purposes of this Policy and applicable securities laws as if the transactions were for your own account. This Policy does not, however, apply to personal securities transactions of Family Members where the purchase or sale decision is made by a third party not controlled by, influenced by or related to you or your Family Members.

TRANSACTIONS BY ENTITIES THAT YOU INFLUENCE OR CONTROL

This Policy applies to any entities that you or any of your Family Members influence or control, including any corporations, partnerships or trusts (collectively referred to as "Controlled Entities"), and transactions by these Controlled Entities should be treated for the purposes of this Policy and applicable securities laws as if they were for your own account, unless advance approval is obtained from the Compliance Officer.

DEFINITIONS AND EXPLANATION OF INSIDER TRADING

Definitions

"***Trading***" refers to the purchase or sale of a security.

"***Insider trading***" refers to a trade in a security of an entity by an "***insider***" while in possession of "***material***", "***non-public***" information relating to the security. See below for an explanation of these terms.

"***Purchase***" and "***sale***" are defined broadly under U.S. federal securities law. "***Purchase***" includes not only the actual purchase of a security, but any contract to purchase or otherwise acquire a security. "***Sale***" includes not only the actual sale of a security, but any contract to sell or otherwise dispose of a security. These definitions extend to a broad range of transactions including conventional cash-for-shares transactions, conversions, the grant and exercise of options and acquisitions and exercises of warrants or puts, calls or other instruments related to a security.

"***Security***" includes a share, bond, note, debenture, option, restricted share, restricted share unit, warrant or similar instrument issued by an entity or a derivative security relating to any of them, whether or not issued by the entity.

It is generally understood that insider trading includes the following:

- trading by insiders while in possession of material, non-public information;
- trading by persons other than insiders while in possession of material, non-public information where the information either was given in breach of an insider's fiduciary duty to keep it confidential or was misappropriated; or
- communicating or tipping material, non-public information to others, including recommending the purchase or sale of a security while in possession of such information.

What Facts are Material?

The materiality of a fact depends upon the circumstances.

A fact is considered "***material***" if there is a substantial likelihood that a reasonable investor would consider it important in making a decision to buy, sell or hold a security or where the fact is likely to have a significant effect on the market price of the security. Material information can be positive or negative and can relate to virtually any aspect of an entity's business and to any type of security, debt or equity.

Examples of material information in relation to the securities of an entity include facts concerning:

- significant changes in prospects;
- significant write-downs in assets or increases in reserves;
- changes in dividends;
- changes in corporate earnings or earnings forecasts, or unusual gains or losses in major operations;
- proposals, plans or agreements, even if preliminary in nature, involving mergers,

acquisitions, divestitures, recapitalizations, strategic alliances, licensing arrangements, or purchases or sales of substantial assets;

- developments regarding significant litigation or government agency investigations;
- major changes in management;
- offerings of securities;
- award or loss of a significant contract;
- significant borrowings or financings;
- defaults on borrowings; and
- bankruptcy.

Material information does not have to be related to an entity's business. For example, the contents of an about-to-be-released newspaper article that is expected to affect the market price of a security can be material.

Moreover, material information is not limited to historical facts but may also include future events, projections and forecasts. With respect to a future event, such as a merger or acquisition or the introduction of a new product, the point at which negotiations or product development are determined to be material is determined by balancing the probability that the event will occur against the magnitude of the effect the event would have on an entity's operations or stock price should it occur. Thus, information concerning an event that would have a large effect on stock price, such as a merger, may be material even if the possibility that the event will occur is relatively small. When in doubt about whether particular non-public information is material, you should presume it is material. **If you are unsure whether any information is material, you should consult the Compliance Officer before making a decision on whether to disclose such information (other than to persons who need to know it) or to trade in or recommend securities to which that information relates.**

A good general rule of thumb is: **when in doubt, do not trade**.

What is Non-public?

Information is "***non-public***" if it is not available to the general public.

In order for it to be considered available to the general public, information must be widely disseminated in a manner that makes it generally available to investors through such media as *Dow Jones*, newswire services, a broadcast on widely-available radio or television programs, publication in a widely-available newspaper, magazine or news website, or public disclosure documents filed with the SEC that are available on the SEC's website. The circulation of rumors, even if accurate and reported in the media, does not necessarily constitute effective public dissemination.

In addition, even after a public announcement, a reasonable period of time must lapse in order for the market and investors to be able to react to the information. **Generally, one should allow a period of two full business days following publication before information is considered to be public.**

Non-public information may include:

- information available to a select group of analysts or brokers or institutional investors;
- undisclosed facts that are the subject of rumors, even if the rumors are widely circulated; and
- information that has been entrusted to an entity on a confidential basis until a public announcement of the information has been made and enough time has elapsed for the market to respond to a public announcement of the information.

If you are not sure whether information is considered public, you should either consult with the Compliance Officer or assume that the information is non-public and treat it as confidential.

Who is an Insider?

"***Insiders***" include directors, officers and employees of an entity and anyone else who has material, non-public information about the entity.

Insiders of an entity have independent fiduciary duties to the entity and its equity holders not to trade on material, non-public information relating to the entity's securities. All directors, officers and employees of the Company should consider themselves insiders with respect to material, non-public information about the business, operations, activities and securities of the Company.

Directors, officers and employees of the Company may not trade the securities of the Company while in possession of material, non-public information relating to the Company and may not tip (or communicate except on a need-to-know basis) such information to others.

Please note that trading by members of a director's, officer's or employee's family or household can be the responsibility of the director, officer or employee under certain circumstances and could give rise to legal and Company-imposed sanctions.

Trading by Persons Other than an Insider

Insiders may be liable for communicating or tipping material, non-public information to a third party (a "***tippee***").

Also, insider trading violations are not limited to trading or tipping by insiders. Persons other than insiders also can be liable for insider trading, including tippees who trade on material, non-public information tipped to them and other individuals who trade on material, non-public information which has been misappropriated.

Tippees inherit an insider's duties and are liable for trading on material, non-public information illegally tipped to them by an insider. Similarly, just as insiders are liable for the insider trading of their tippees, so too are tippees who pass the information along to others who trade. In other words, a tippee's liability for insider trading is no different from that of an insider. Tippees can obtain material, non-public information by receiving overt tips from others or through such means as conversations at social, business or other gatherings.

Consequences of Violations

You could be subject to severe legal penalties and disciplinary action by the Company for

any conduct prohibited by this Policy or applicable securities laws. Penalties for trading on or tipping material, non-public information can extend significantly beyond any profits made or losses avoided, both for individuals engaging in such unlawful conduct and their employers. Regulators have also prosecuted insider trading violations where an employee or insider has traded in the stock of another related company based on material nonpublic information learned in connection with their employment or role as an insider.

The SEC and the U.S. Department of Justice have made the civil and criminal prosecution of insider trading violations a top priority. Enforcement remedies available to the government or private plaintiffs under the U.S. federal securities laws include:

- SEC administrative sanctions;
- securities industry self-regulatory organization sanctions;
- civil injunctions;
- damage awards to private plaintiffs;
- disgorgement of all profits;
- civil and criminal fines; and
- jail sentences.

In addition, insider trading violations could result in serious sanctions by the Company, including termination of employment. A person's failure to comply with this Policy may subject the person to Company-imposed sanctions, whether or not the person's failure to comply violates any law.

Insider trading violations are not limited to violations of U.S. federal securities laws. Other U.S. federal and state civil or criminal laws, such as the laws prohibiting mail and wire fraud and the U.S. Racketeer Influenced and Corrupt Organizations Act (RICO) also may be violated by insider trading.

Examples of Insider Trading

Examples of insider trading cases include actions brought against:

- corporate directors, officers and employees who have traded a company's securities after learning of significant confidential corporate developments;
- friends, business associates, family members and other tippees of corporate directors, officers and employees who traded a company's securities after receiving information about such corporate developments;
- government employees who learned of corporate developments in the course of their employment; and
- other persons who misappropriated, and took advantage of, confidential information from their employers.

The following are illustrations of insider trading violations. These illustrations are hypothetical and consequently are not intended to reflect on the actual activities or business of the Company or any other entity.

Trading by Insider

An officer of X Corporation learns that earnings to be reported by X Corporation will increase dramatically. Before the public announcement of such earnings, the officer purchases X Corporation's shares.

The officer, an insider, is liable for all profits as well as penalties of up to three times the amount of all profits. The officer also is subject to, among other things, criminal prosecution. Depending upon the circumstances, X Corporation and the individual to whom the officer reports also could be liable as controlling persons.

Trading by Tippee

An officer of X Corporation tells a friend that X Corporation is about to publicly announce that it has concluded an agreement for a major acquisition. This tip causes the friend to purchase X Corporation's shares in advance of the announcement.

The officer is jointly liable with his friend for all of the friend's profits and each of the officer and the friend is liable for penalties of up to three times the amount of the friend's profits. In addition, each of the officer and his friend are subject to, among other things, criminal prosecution, as described above.

Prohibition of Records Falsifications and False Statements

Section 13(b)(2) of the Exchange Act requires companies subject to the Exchange Act to maintain proper internal books and records and to devise and maintain an adequate system of internal accounting controls.

The SEC has supplemented the statutory requirements by adopting rules that prohibit any person from falsifying records or accounts subject to the above requirements and officers or directors from making any materially false, misleading or incomplete statement to any accountant in connection with any audit or filing with the SEC. These provisions reflect the SEC's intent to discourage officers, directors and other persons with access to the Company's books and records from taking action that might result in the communication of materially misleading financial information to the investing public.

PROCEDURES FOR PREVENTING INSIDER TRADING

The Company has established, and will maintain and enforce, the following procedures to prevent insider trading.

Every director, officer and employee of the Company is required to follow these procedures.

Identifying Material, Non-Public Information

Before directly or indirectly trading any Company Securities every director, officer and key employee is required to contact the Compliance Officer (as part of the pre-clearance procedure discussed below) and make an initial determination whether the Company and/or the director, officer or key employee is in possession of material, non-public information relating to the security.

In making such assessment, the explanations of "material" and "non-public" information set forth above should be of assistance.

If, after consulting with the Compliance Officer, it is determined that the Company and/or the director, officer or key employee is in possession of material, non-public information, trading in the security may not take place.

The responsibility for determining whether a person possesses material, non-public information rests with that person, and any action or statement of the Company, the Compliance Officer or any other employee or director pursuant to this Policy (or otherwise) does not constitute legal advice or insulate a person from liability under applicable securities laws.

Information Relating to the Company

Access to Information

Access to material, non-public information about the Company, including the Company's business, operations, earnings or prospects, should be limited to directors, officers and employees of the Company on a need-to-know basis. In addition, such information should not be communicated to anyone outside the Company under any circumstances or to anyone within the Company other than on a need-to-know basis.

In communicating material, non-public information to employees of the Company, all directors, officers and employees must take care to emphasize the need for confidential treatment of such information and adherence to the Company's policies with regard to confidential information.

Inquiries from Third Parties

Inquiries from third parties, such as industry analysts and members of the media, about the Company should be directed to the Chief Executive Officer or the Chief Financial Officer or other appropriate person designated by them.

Limitations on Access to Company Information

The following procedures are designed to maintain confidentiality with respect to the Company's business operations and activities.

(a) All directors, officers and employees should take all steps and precautions necessary to restrict access to, and secure, material, non-public information by, among other things:

- maintaining the confidentiality of Company related transactions;
- conducting their business and social activities so as not to risk inadvertent disclosure of confidential information (Review of confidential documents in public places should be conducted so as to prevent access by unauthorized persons);
- restricting access to documents and files (including computer files) containing material, non-public information to individuals on a need to know basis (including maintaining control over the distribution of documents and drafts of documents);
- promptly removing and cleaning up all confidential documents and other materials from conference rooms following the conclusion of any meetings;

- disposing of all confidential documents and other papers after there is no longer any business or other legally required need through shredders when appropriate;
- restricting access to areas likely to contain confidential documents or material, non-public information; and
- avoiding the discussion of material, non-public information in places where the information could be overheard by others such as in elevators, restrooms, hallways, restaurants, airplanes or taxicabs.

(b) Personnel involved with material, non-public information, should, to the extent feasible, conduct their business and activities in areas separate from other Company activities.

Pre-Clearance of All Trades by All Directors, Officers and Key Employees

To provide assistance in preventing inadvertent violations of applicable securities laws and to avoid the appearance of impropriety in connection with the purchase and sale of the Company's securities, **all transactions in Company Securities (including transactions that are otherwise exempted from the Policy as described under the heading "Transactions Under Company Plans and Certain Other Transactions.") by directors, officers and key employees (the "*Covered Senior Persons*") must be pre-cleared by the Compliance Officer. The Compliance Officer may not engage in any transaction in Company Securities without first obtaining pre-clearance in writing for such transaction form the Chief Executive Officer.**

These procedures also apply to transactions by a Covered Senior Person's spouse and minor children and other persons living in a Covered Senior Person's household and to transactions by entities over which a Covered Senior Person exercises control.

Clearance of a transaction is valid only for a 48 hour period. If the transaction order is not placed within that 48 hour period, clearance for the transaction must be re-requested. If clearance is denied, the fact of such denial must be kept confidential by the Covered Senior Person who requested the clearance.

Avoidance of Aggressive or Speculative Trading; Additional Prohibitions

The Company has determined that there is a heightened legal risk and/or the appearance of improper or inappropriate conduct if the persons subject to this Policy engage in certain types of transactions. It therefore is the Company's policy that any persons covered by this Policy may not engage in any of the following transactions unless advance approval is obtained from the Compliance Officer.

Directors, officers and employees of the Company and their respective family members (including spouses, minor children and other persons living in the same household) shall not directly or indirectly participate in transactions involving trading activities which by their aggressive or speculative nature may give rise to an appearance of impropriety. Such activities include purchasing derivative securities such as put or call options or entering into hedging transactions with respect to the Company Securities, engaging in short sales (i.e., selling shares one does not own and borrowing the shares to make delivery) or selling a security within six months of purchase (which is viewed as short-term or speculative transactions).

Securities held in a margin account or pledged as collateral for a loan may be sold by the

broker if you fail to meet a margin call or by the lender in foreclosure if you default on the loan. You may not have control over these transactions as the securities may be sold at certain times without your consent. A margin or foreclosure sale that occurs when you are aware of material, non-public information may, under some circumstances, result in unlawful insider trading. Because of this danger, you shall not hold Company Securities in a margin account or pledging Company Securities as collateral for a loan.

Standing and limit orders (except standing and limit orders under approved Rule 10b5-1 Plans, as described above) create heightened risks for insider trading violations similar to the use of margin accounts. There is no control over the timing of purchases or sales pursuant to standing instructions to a broker, and as a result the broker could execute a transaction when a director, officer or other employee possesses material, non-public information. The Company therefore prohibits placing standing or limit orders on Company Securities.

Rule 10b5-1 Plans

Rule 10b5-1 under the Exchange Act provides an affirmative defense to insider trading allegations under federal law. In order to be eligible to rely on this defense, a person subject to this Policy must enter into a Rule 10b5-1 Plan for transactions in Company Securities that meets the conditions specified in Rule 10b5-1. If the plan meets the requirements of Rule 10b5-1, Company Securities may be purchased or sold without regard to certain insider trading restrictions described in this Policy.

To comply with this Policy, the adoption, modification or early termination of a Rule 10b5-1 Plan must be approved by the Board or a committee of the Board or any officer of the Company designated by the Board, and all Rule 10b5-1 Plans must meet the requirements of Rule 10b5-1. A Rule 10b5-1 Plan may be entered into or modified only (i) at a time when the person entering into, or modifying the plan is not aware of material nonpublic information about the Company or Company Securities and (ii) in the case of Covered Senior Persons, outside the Prohibited Trading Period.

Once a Rule 10b5-1 Plan is adopted, the person must not exercise any influence over the amount of securities to be traded, the price at which they are to be traded or the date of the trade. The Rule 10b5-1 Plan must either specify the amount, pricing and timing of transactions in advance (including by use of a formula) or delegate discretion on these matters to an independent third party in accordance with the requirements of Rule 10b5-1.

Once a Rule 10b5-1 Plan is pre-cleared and is adopted or modified, it is subject to a “cooling-off” period before execution of the first trade. The “cooling-off” period for directors and officers subject to Section 16 of the Exchange Act ends on the later of: (1) 90 days following the Rule 10b5-1 Plan adoption or modification or (2) two business days following the disclosure in Form 20-F of the Company’s financial results for the fiscal quarter in which the Rule 10b5-1 Plan was adopted or modified (however, the cooling-off period will not exceed 120 days following plan adoption or modification). For all other individuals, a 30-day cooling-off period is required.

All persons entering into a Rule 10b5-1 Plan must act in good faith with respect to that plan.

EXHIBIT 12.1

Certification by the Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Shawn (Xiaohua) Qu, certify that:

1. I have reviewed this annual report on Form 20-F of Canadian Solar Inc. (the "Company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;

4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 30, 2025

By: /s/ Shawn (Xiaohua) Qu
Name: Shawn (Xiaohua) Qu
Title: Chief Executive Officer

EXHIBIT 12.2

Certification by the Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Xinbo Zhu, certify that:

1. I have reviewed this annual report on Form 20-F of Canadian Solar Inc. (the "Company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;

4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 30, 2025

By: /s/ Xinbo Zhu
Name: Xinbo Zhu
Title: Chief Financial Officer

EXHIBIT 13.1

Certification by the Chief Executive Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Canadian Solar Inc. (the "Company") on Form 20-F for the year ended December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Shawn (Xiaohua) Qu, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1). The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2). The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 30, 2025

By: /s/ Shawn (Xiaohua) Qu
Name: Shawn (Xiaohua) Qu
Title: Chief Executive Officer

EXHIBIT 13.2

Certification by the Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Canadian Solar Inc. (the "Company") on Form 20-F for the year ended December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Xinbo Zhu, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1). The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2). The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 30, 2025

By: /s/ Xinbo Zhu
Name: Xinbo Zhu
Title: Chief Financial Officer

EXHIBIT 15.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-147042, 333-178187 and 333-201766 on Form S-8 of our reports dated April 30, 2025, relating to the financial statements of Canadian Solar Inc. and the effectiveness of Canadian Solar Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 20-F for the year ended December 31, 2024.

/s/ Deloitte Touche Tohmatsu Certified Public Accountants LLP

Shanghai, China

April 30, 2025