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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2023

OR

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

Commission File Number: 001-33911

EMEREN GROUP LTD
(Exact name of Registrant as specified in its Charter)

British Virgin Islands **(State or other jurisdiction of incorporation or organization)**	**N/A** **(I.R.S. Employer Identification No.)**

149 Water Street, Suite 302
Norwalk, Connecticut 06854
U.S.A
(Address of principal executive offices, including zip code)
+1 925-425-7335
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
American Depositary Shares, each representing 10 shares, no par value per share	SOL	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, 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 whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

The aggregate market value of the ordinary shares of the registrant held by non-affiliates as of June 30, 2023 (the last trading day of the second fiscal quarter) was approximately $161.2 million, based on the closing price of the shares of the registrant's American Depositary Shares (each representing 10 shares) on the New York Stock Exchange of $3.79 per share.

The number of the registrant's ordinary shares, no par value per share, outstanding as of June 30, 2024 was 512,216,222.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this report incorporates by reference certain portions of the definitive proxy statement for the registrant's 2024 Annual Meeting of Shareholders to be filed with the Commission.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the U.S. Private Securities Litigation Reform Act of 1995 (the "PSLRA"). All statements other than statements of historical fact included in this Form 10-K, including statements regarding the Company's future financial condition, results of operations, plans, objectives, expectations, future performance, business operations or business prospects, are forward-looking statements. Words such as "believes," "expects," "anticipates," "will," "could," "plans, "estimates," "predicts," "goals," "should," "will," "could," "would," "may," forecast," "seeks," and other similar expressions and variations of such words are intended to identify forward-looking statements and are included, along with this statement, with the intention these forward-looking statements be covered by the safe harbor provisions for forward-looking statements contained in the PSLRA. Forward-looking statements are neither historical facts, nor assurances of future performance. Instead, such statements are based only on our beliefs, expectations and assumptions regarding the future, which may not prove to be accurate, and are subject to known and unknown risks and uncertainties, many of which are outside of our control. These risks and uncertainties could cause actual events or results to differ materially from our historical experience and management's present expectations or projections. These risks and uncertainties are discussed in this Annual Report on Form 10-K (including, but not limited to, *Part I, Item 1a. Risk Factors*). Any forward-looking statement speaks only as of the date on which it is made. You are cautioned not to place undue reliance on any forward-looking statements. Except as required by law, we undertake no obligation to publicly update or release any revisions to these forward-looking statements to reflect any events or circumstances after the date of this Annual Report or to reflect the occurrence of unanticipated events, whether as a result of new information, future events, or otherwise.

PART I

Item 1. Business

Conventions Used in This Report

The following is a list of defined terms and naming conventions used in this Annual Report on Form 10-K, unless otherwise specified.

"we," "us," "our company," "our" or "Emeren" refers to Emeren Group Ltd, a British Virgin Islands company, its predecessor entities and its subsidiaries.

"ADSs" refers to our American depositary shares, each of which represents 10 shares, and "ADRs" refers to the American depositary receipts that evidence our ADSs.

"China" or "PRC" refers to the People's Republic of China, excluding, for the purpose of this annual report on Form 10-K, Taiwan, and the special administrative regions of Hong Kong and Macau.

"CNY" or "Renminbi" refers to the legal currency of China.

"DG projects" refers to distributed generation solar power projects, including ground-mounted distributed generation projects and rooftop distributed generation projects.

"EPC" refers to engineering, procurement and construction.

"FIT" refers to feed-in tariff(s), the government guaranteed and subsidized electricity sale price at which solar power projects can sell to the national power grids, which is set by the central government.

"ground-mounted DG projects" refers to small-scale ground-mounted projects with lower grid connection voltage grade and with a substantial portion of the electricity generated to be consumed within the substation area of the grid connection points.

"ground-mounted projects" refers to solar power projects built on the ground, consisting of ground-mounted DG projects and utility-scale projects.

"GW" refers to gigawatt and "GWh" refers to gigawatt hours.

"IPP" refers to Independent Power Producer, a producer of electrical energy (power plant) that is not a public utility but which makes electricity available for sale to utilities or the general public.

"kWh" refers to kilowatt-hour.

"MW" refers to megawatts.

"NTP" refers to notice to proceed.

"PPA" refers to a power purchase agreement.

"PV" refers to photovoltaic.

"rooftop DG projects" refers to distributed generation solar power projects built on roof tops.

"RTB" refers to ready to build.

"shares" refers to shares of Emeren Group Ltd with no par value.

"SPV" refers to special purpose vehicle.

"utility-scale projects" refers to ground-mounted projects that are not ground-mounted DG projects.

"$," "dollars" and "U.S. dollars" refer to the legal currency of the United States.

All discrepancies in any table between the amounts identified as total amounts and the sum of the amounts listed therein are due to rounding.

Overview

Emeren is a solar project developer, owner and operator with a pipeline of projects and IPP assets totaling over 3 GW, as well as a storage pipeline of over 10 GWh across Europe, North America, and Asia. Our strategy is to pursue high-margin project development opportunities in these markets. Emeren focuses on solar power project development, construction management and project financing services with local professional teams across multiple countries.

Prior to business restructuring in September 2017, the Company's business was initially operated through its former subsidiary ReneSola Zhejiang Energy Co., Ltd., whose predecessor Zhejiang Fengding Construction Material Machinery Manufacturing Co., Ltd., or Fengding Construction, was established as a limited liability company in the PRC in 2003. Following a series of share transfers, Fengding Construction was renamed as ReneSola Zhejiang Energy Co., Ltd. in June 2005 and commenced the solar power business in July 2005.

Emeren Group Ltd was incorporated as a limited liability company in the British Virgin Islands on March 17, 2006. In January 2023, we rebranded from ReneSola Ltd. and our legal and commercial name changed to Emeren Group Ltd. Emeren stands for Empowering Renewables, to symbolize our substantial progress and continued dedication to growing solar and renewable energy development globally to deliver affordable and sustainable energy. The logo, which features a sun against a blue background, represents the sun's energy, signifies our commitment to sustainability and serves as a reminder of the importance of renewable energy.

Our principal executive offices are located at 100 First Stamford Place, Suite 302, Stamford, CT 06902, U.S.A. Our registered office is located at the offices of Harneys Corporate Services Limited, Craigmuir Chambers, P.O. Box 71, Road Town, Tortola, VG1110, British Virgin Islands. Our agent for service of process in the United States is CT Corporation System, located at 111 Eighth Avenue, New York, New York 10011.

On September 30, 2022, we purchased 100% of the equity interest of Branston Solar Farm Limited ("Project Branston") from P&T Global Renewable Energy Ltd. Project Branston is located in Branston, Lincoln, UK. The output of the plant is contracted under a 40-year PPA which began on the commercial operation date. The acquisition was in accordance with the Company's overall growth strategy.

On October 11, 2022, we entered into a Shares Purchase Agreement to acquire Emeren Ltd, a United Kingdom-based utility-scale solar power and battery projects developer in Europe. The acquisition transaction was completed on October 11, 2022 through an all-cash deal with an earn-out provision.

Our Business

The Company develops and sells solar power projects or sells project SPVs (project development business); provides engineering, procurement and construction business (EPC business); and owns and operates solar power projects and sell the electricity generated by our operated solar power plants (IPP business). We conduct our IPP business, EPC business and project development business in a number of countries, including United States, Poland, Hungary, Spain, France, United Kingdom, Germany, Italy and China. Emeren is committed to streamlining solar projects with knowledge and assets for a faster implementation and an increased adoption. Our vision is to leverage solar development to realize a brighter and cleaner future.

Our Company is involved in five key areas, including:

- Global solar power project develop business, mainly in Europe and USA; We sell projects either at NTP/RTB or at COD
- Electricity sale business under IPP model, these are mainly in China and Europe. We have a total of 245 MW of solar assets in operation and 15MWh BESS in operation
- Engineering, procurement and construction business, provide renewable project development business to asset owners
- Global solar project development services business; we sell these project at NTP/RTB or operating BESS as IPP
- O&M Service of renewable business
- Energy management business, like Virtual Power Plant (VPP business)

Solar Power Project Development Business

We started our solar power project development business in 2012. We have recorded revenue from the sales of solar power projects since 2015. We have been focused on developing solar projects in different markets, including the United States, China and several European countries. See "-Our Sales and Customers."

As a developer, we have two basic project development models:

- Build-Transfer: we develop and build, or contract out wholly or partially to another party to develop and build, the solar power projects, which will be sold and delivered after being connected on grid.
- Project Rights Sale: we are involved in the earlier development stages to secure land/roofs with interconnection capacity. We leverage the expertise of global project development teams to sell project rights at "notice to proceed," or NTP, with attractive margin by selling project SPVs, which hold the early-to-late stage pipelines, before commencing the construction work of the solar power projects which we develop, acquire or develop jointly with other parties.

Besides the two basic models above, we develop community solar gardens as developers and hold the community solar gardens through project SPVs. Prior to the delivery of the community solar gardens, SPVs enter into PPAs, which generally have a term of 20 years, with the power subscribers. After investors are found, we will sell the project rights, that is, the project SPV holding the community solar gardens, to investors.

The prices of our solar power projects or projects SPVs are primarily based on the cash flow such projects can generate and the rates of return. The cash flow can be affected by drivers such as electricity generation, electricity price (such as FIT or PPA), operating expenses, tax policy or a number of other reasons. Investors may compare the rate of returns generated from the solar power projects with the rates of return in the financing or investment markets.

Purchasers of our developed solar power projects normally pay the purchase price in stages. Substantially all of these purchasers may require us to provide retention money, performance bonds or bank guarantees for a certain period of time to secure the quality and performance of our developed solar power projects. During the covered period of time, if any significant defects or efficiency problem arises from sold solar power projects, it may cause the retention money to be deducted or forfeited.

The solar power project development business continues to be our important strategy for the foreseeable future.

IPP Business

We started our IPP business in 2013 by owning and operating solar power projects and selling electricity generated by these solar power projects. We have built our business as an IPP to develop and operate DG projects in well-developed regions for high PPA/FIT users.

We primarily conduct our IPP business, comprised of the solar power projects that we have developed, through our wholly and partially owned subsidiaries, where we can sell electricity in gross metering or net metering. Since 2016, we have been building an in-house O&M team in China to operate and maintain our entire owned and operated IPP portfolio in China.

In China, NEA and NDRC published the Notice on the Pilot of Distributed Generation Traded in Markets (file 2017-1901) to establish electricity trading market for DG projects which are similar to virtual net metering and US community solar gardens, allowing the IPP one of following:

- To sell electricity to users directly, eligible for solar premium, and pay wheeling cost to the grid;
- To sell electricity indirectly where the grid operators will arrange the sales, eligible for solar premium, and pay only wheeling cost to the grid;
- Or sell electricity to the grid at national solar FIT price, and subtract corresponding transmission cost.

Under gross metering, except for grid parity/low pilot projects in areas with ample resources, good conditions and high market consumption, each solar project approved by China's National Development and Reform Commission, or the NDRC, is eligible to receive an attractive fixed FIT which was determined by NDRC at the time when the project was filed for 20 years in principle and we expect our solar power projects to be long-term contracted assets. Therefore, except for grid parity/low pilot projects, we can sell all electricity generated by our gross metering projects to the State Grid and receive a total amount of FIT amount, which comprises an agreed electricity sales price from the State Grid and the subsidies from the government, for 20 years. Net metering is important to achieve grid parity. We develop and operate net metering DG projects in well-developed regions in China. Under net metering, we sell a majority of the electricity to non-State Grid power purchasers at an agreed negotiated electricity sales price, which is usually at a market discount rate of the public retail rate, and then sell the remaining unpurchased electricity to the State Grid at a price based on the local desulphurized coal benchmark. Aside from the electricity sale, electricity generated (sold to non-Sate Grid power purchasers or State Grid) will receive subsidies from the government. State Grid is an enterprise which constructs and operates power grids and is a pilot state holding company approved by the State Council of China to carry out state-authorized investment. The non-State Grid power purchasers are primarily commercial and industrial users. See "-Our Solar Power Projects." The governmental subsidies in gross metering and net metering may be different. We have focused and will continue to focus on net metering projects with high return on invested capital.

In our IPP business, power purchasers may pay us monthly, bi-monthly, quarterly or half-yearly based on the terms in the Energy Management Contract (EMCs) and PPAs. The EMCs, which, among other terms, provide the terms and pricing of the sales and include the PPAs, are long-term, generally 20 years with a possible 5-year extension.

On September 30, 2022, we acquired a 50 MWp operational solar farm ("Project Branston") located in Branston, Lincoln, United Kingdom from P&T Global Renewable Ltd. We expanded our IPP business in Europe. Project Branston's has been in operation since October 12, 2020 and is currently generating an annualized yield of 1,011 MWh/MWp. This fully operational solar farm provides stable cash flows and helps diversify risks from project sales. We believe the acquisition to further strengthens our market position in the Europe.

In October, 2022, we energized our first inaugural IPP project in Hungary. The project "Csomad 1-2" consists of two PV plants with total installed of 10.2 MWp, equivalent to powering approximately 4,000 households per day. The project entered the commercial operation stage in the beginning of October, 2022. The 10 MWp project in Hungary is our first self-developed and self-constructed project, which is another project to our growing IPP assets in Europe. We are committed to becoming major contributor to the renewable energy transition in Hungary.

In 2023, we started to build our own Battery Energy Storage Systems ("BESS") projects in China to operate as an IPP based on energy arbitrage. We build and operate approximately our own 5MWh in Q4 2023. In December 2023, we acquired a 10.76 MWh energy storage power portfolio from Kunneng Smart Energy Service Group Co. Ltd. ("Kunneng Group"), which specializes in renewable energy industry, offering comprehensive solutions in solar, energy storage, power sales, and carbon asset management in China. Located in Zhejiang Province, the 10.76 MWh portfolio comprises of six energy storage power stations, operates under the Energy Management Services agreements providing benefits to the customer based on energy arbitrage. Emeren will realize its return on investments mainly from the energy arbitrage with additional revenue coming from various Virtual Power Plant "("VPP") scenarios. As of today, all six storage facilities are connected to VPP platform owned and operated by Huaneng Power International (0902.HK), one of the largest IPP operators in China. This is the first time Emeren is operating BESS to enter into Energy management business.

We also operate a 24MW small utility scale solar projects in North Carolina, USA.

As of December 31, 2023, we had more than 100 solar power plants in operation globally with an aggregate capacity of approximately 245MW and BESS 15MWh.

Operating Assets	Capacity (MW)
Europe	60
U.S.	24
China	161
Total	245

BESS Operating Assets	Capacity (MWh)
Europe	0
U.S.	0
China	15
Total	15

Owning self-consumption DG projects is an attractive business model for us, as it generates very high margin recurring revenue. However, following our long-term transformation plan to be an asset-light project developer and our new global expansion strategy, we may strategically dispose of our China DG assets depending on the market situation.

Engineering, Procurement and Construction Business

Our Engineering, Procurement and Construction Business (“EPC”) includes engineering design, procurement of solar modules, balance-of-system components and other components, and construction contracting and management. We may engage our in-house EPC team or engage external experienced and qualified EPC contractors to handle and monitor the EPC process for our developed projects. Despite that, as the developer, we may procure the key components, such as solar modules and balance-of-system components.

We typically enter into short-term contracts with our suppliers and contractors on project-by-project basis or project portfolio basis based on the market prices.

Engineering

Through engineering design, we aim to reduce the risks, reduce the costs and improve the performance of our solar power projects. The engineering design process includes the site layout and the electrical design as well as assessing a variety of factors to choose an appropriate technology, including the modules and inverters. In additional to relying on our in-house EPC team, we may engage independent third-party EPC contractors to conduct and monitor this process.

Procurement

We procure solar modules and other key components for our developed solar power projects primarily by entering into short-term contracts to purchase at market prices. Suppliers of our solar modules and key components are primarily our related parties and third-party suppliers and contractors. Our purchasing decisions may take into consideration technical specifications (including size, type and power output), bid price, warranty and insurance programs, spectral response, performance in low light, nominal power tolerance levels, degradation rate, technical support and the reputation of the supplier. We generally require warranties for defects in materials or workmanship for the components and a warranty for module capacity under normal testing conditions. Our in-house EPC team or external EPC contractors work in areas such as logistics, installation, construction and supervision. We maintain an updated list of qualified and reliable suppliers and third-party contractors with a proven track record with which we have established relationships. We choose our third-party suppliers and contractors through a bidding or quotation request process or through our affiliates or other cooperative arrangements with various manufacturers and contractors. The relevant departments of our local offices organize and collect bids and quotations, communicate with potential suppliers and contractors and coordinate with our local development teams to meet the local technical and legal requirements.

Construction

We engage third-party contractors for construction. We employ a number of measures to manage and monitor the performance of such contractors in terms of both quality and delivery time and to ensure compliance with the applicable safety and other requirements. For example, we generally have on-site supervisors and hold regular on-site meetings with the third-party contractors to monitor their work to ensure that projects progress according to schedule and adhere to quality standards. We also conduct periodic inspections to examine project implementation and quality standards compared to our project planning and prepare periodic reports for review and approval by the relevant departments in our corporate headquarters. If we identify any quality or progress issues which are attributable to the work of the third-party contractors, we will have further follow-up discussions with the third-party contractors and monitor their rectification work.

We also require our third-party contractors for construction and installation to comply with applicable laws and regulations regarding work safety as well as our own production safety rules and policies. We examine and keep records of the production-related safety documentation and insurance policies of our third-party contractors. All production-related tools and equipment used by our third-party contractors must be compliant with and certified by applicable regulatory standards. Under our third-party contracting agreements, we are generally entitled to compensation if the third-party contractors fail to meet the prescribed requirements and deadlines under their contracting agreements. In general, our contractors require us to pay all of the contract price upon completion of the solar power projects and we require the contractor to provide a performance bond, which is usually for a period of one year to two years, in respect of the warranty obligations.

Commissioning and Warranties

When the EPC contractor notifies the regional solar power project team of on-grid operation, the regional solar power project team thoroughly tests each aspect of the solar power project. Commissioning tests generally include a detailed visual inspection of all significant aspects of the plant, an open circuit voltage test and short circuit current test prior to grid connection, and a direct-current test after connecting to the power grid. These tests are conducted in order to ensure that the plant is structurally and electrically safe and is sufficiently robust to operate as designed for the specified project lifetime. We have not experienced any material delays in construction or unsatisfactory workmanship with respect to our solar power projects. Following the commissioning, the solar power projects, which are intended for sale, will be handed over to the purchasers.

In addition to the warranties provided by the manufacturers of modules, balance-of-system components and other key components, EPC contractors also typically provide a limited warranty against defects in workmanship, engineering design, and installation services under normal use and service conditions for a period of time following the energizing of a section of a solar power plant or upon substantial completion of the entire solar power plant. In resolving claims under the workmanship, design and installation warranties, the new owner has the option of remedying the defect to the warranted level through repair, refurbishment, or replacement.

Operations and Maintenance Business

Since 2016, we have been building our Operations and Maintenance (“O&M”) team to operate and maintain all of our owned and operated IPP portfolios. We utilize customized software to monitor the performance and security of our solar power projects on a real-time basis. We maintain our solar power projects to maximize the utilization rate, rate of power generation and system life of our solar power projects.

In addition to the O&M services provided by our in-house O&M team, we also engaged third-party contractors to operate and maintain substantially all of our solar power projects overseas. We are responsible for the maintenance of those projects and perform overall maintenance obligations. We subcontract certain specific O&M tasks such as security and repair to third-party contractors who are on-call to deliver such services on demand. We generally require warranties for defects in materials or components and warranties for module capacity under normal testing conditions.

Global Solar Project Development Services Business

We also provide third party renewable project development service business. In 2023, We announced our development services business with Matrix Renewables ("Matrix") to develop Battery Energy Storage Systems ("BESS") in Italy. This transaction demonstrates the Company's remarkable capability to fulfill commitments outlined in the proprietary Development Service Agreement (DSA). Within just six months, Emeren has achieved a significant milestone, delivering around 1 GW in development, approaching its 1.5 GW BESS portfolio target. This achievement represents the execution capability within the frame of the partnership with Matrix, reinforcing Emeren's position as a leading entity in the battery storage market.

Our Solar Power Projects

Since 2019, we have built our business as a project developer and have selectively owned high quality projects. We have focused on small-scale DG projects and community solar gardens with individual project size of 5 MW-25 MW. Our competitive advantages lie in small-scale projects with high PPA/FIT price in diversified jurisdictions which we believe are of attractive return and will be the trend for the development of the industry. Geographically, we are currently taking a new global expansion roadmap and strategically focusing on the promising markets in the United States and Europe.

Operating Assets	Capacity (MW)
China DG	
- Zhejiang	55
- Henan	17
- Anhui	35
- Hebei	17
- Jiangsu	16
- Shandong	5
- Fujian	8
- Other Province	8
Total in China	161
Europe	60
United States	24
Total	245

Operating Assets	Electricity Generated (GWh)
China DG	147
Europe	65
United States	35
Total	247

BESS Operating Assets	Capacity (MWh)
Europe	—
U.S.	—
China	15
Total	15

Projects for Sale

As of December 31, 2023, we completed an accumulated 1.0 GW of solar power projects and have successfully monetized about a total of 130 MW of solar projects during 2023. The sales primarily included 53.6 MW of utility solar projects in Hungary and 58 MW of community solar projects in the Poland, sales of 29 MW project in China, connected to the grid 21 MW IPP projects in China. As of December 31, 2023, we had 3.1 GW within our mid-late-stage pipeline.

Project Pipeline

Our solar power projects pipeline includes early- to mid-stage projects pipeline and mid-late-stage projects pipeline. Due to different processes of developing projects in various regions, our early- to mid-stage projects pipeline refers to projects that we have internally approved to commit operational or financial resources to develop, including projects that we have conducted internal studies and are bidding for, that we are developing the financing plans, or working to obtain external approval or permits for such projects, or for which we have agreed on preliminary terms or entered into memorandums of understanding. Mid-late-stage projects mainly refer to projects that we have the legal right to develop based on definitive agreements, including the projects held by project SPVs or joint ventured project SPVs whose controlling power belongs to us, or can be purchased by us once the late stage is reached.

As of December 31, 2023, our mid-late-stage project pipeline in the United States, Poland, Hungary, France, Spain, Germany, UK, Italy and China had an aggregate capacity of approximately 3 GW.

Global Advanced Stage Pipeline:

The following table sets forth the information of our mid-late-stage pipeline as of December 31, 2023 (excluding sold, ready for sale and delivered projects):

Project Location	Project Pipeline (MW)
USA	1,477
Poland	483
Hungary	52
France	92
Spain	216
Germany	125
U.K.	110
Italy	471
China	82
Total	3,108

Advanced Stage Pipeline

United States Pipeline:

In regards to the United States, our advanced stage projects total 1,477 MW, of which approximately 75 MW are community solar projects in Minnesota, Maine, Pennsylvania, and New York. Additionally, we have projects under development in Florida, Pennsylvania, Illinois, and California. Meanwhile, we operate 24 MW of utility scale projects in North Carolina.

Project Pipeline	Location	(DC)	Project Type	Classification	Expected COD
Portfolio 1	Illinois	23.8	Solar	Utility	2025
Portfolio 2	Illinois	18	Solar	Utility	2027
Portfolio 3	Illinois	135	Solar	Utility	2028
Portfolio 4	Alabama	75.4	Solar	Utility	2028
Portfolio 5	Alabama	104	Solar	Utility	2028
Portfolio 6	California	25	Solar	Utility	2025
Portfolio 7	Illinois	62	Solar	Utility	2025
Portfolio 8	Illinois	327	Solar	Utility	2028
Portfolio 9	Illinois	75	Solar	Utility	2028
Portfolio 10	Mississippi	155	Solar	Utility	2029
Portfolio 11	New Mex	145	Solar	Utility	2027
Portfolio 12	New York	25	Solar	Utility	2025
Portfolio 13	New York	11.8	Solar	Utility	2027
Portfolio 14	New York	88	Solar	Utility	2028
Portfolio 15	Tennessee	132	Solar	Utility	2027
Portfolio 16	Minnesota	1.4	Solar	Community	2025
Portfolio 17	Maine	2.6	Solar	Community	2024
Portfolio 18	Minnesota	1.4	Solar	Community	2025
Portfolio 19	Minnesota	1.4	Solar	Community	2025
Portfolio 20	Minnesota	1.4	Solar	Community	2025
Portfolio 21	Minnesota	1.4	Solar	Community	2025
Portfolio 22	Minnesota	1.4	Solar	Community	2026
Portfolio 23	New York	3.1	Solar	Community	2024
Portfolio 24	New York	5.0	Solar	Community	2024
Portfolio 25	New York	7.0	Solar	Community	2024
Portfolio 26	New York	6.5	Solar	Community	2024
Portfolio 27	New York	3.5	Solar	Community	2024
Portfolio 28	New York	6.5	Solar	Community	2026
Portfolio 29	Pennsylvania	6.4	Solar	Community	2027
Portfolio 30	Pennsylvania	6.5	Solar	Community	2027
Portfolio 31	Pennsylvania	6.5	Solar	Community	2027
Portfolio 32	Pennsylvania	6.5	Solar	Community	2027
Portfolio 33	Pennsylvania	6.5	Solar	Community	2027
	Total	1,477			

Poland Pipeline:

Business momentum continues in Poland. As of December 31, 2023, we had 483 MW of projects in our advanced stage pipeline.

Project Pipeline	Project Info	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Portfolio 1	Poland	18	Ground-mounted	Under Construction	2024	COD sale
Portfolio 2	Poland	8	Ground-mounted	Under Development	2024	RTB Sale
Portfolio 3	Poland	142	Ground-mounted	Under Development	2025	RTB Sale
Portfolio 4	Poland	315	Ground-mounted	Under Development	2025-2026	RTB Sale
	Total	483 MW				

Hungary Pipeline:

In Hungary, we invest in one portfolio contains 5 projects. 2 projects are RTB, bringing total capacity to 52 MW.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Portfolio 1	Hungary	35	Ground- mounted	Under Construction	2024	COD + EPC Sale
Portfolio 2	Hungary	17	Ground- mounted	Prepared for sale	2024	Sale
		52 MW				

France Pipeline:

In France, we have an advanced stage project pipeline of 92 MW, all of which are ground-mounted projects.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Portfolio 1	France	81	Ground-mounted	Under development	2025-2026	RTB Sale
Portfolio 2	France	11	Ground-mounted	Under development	2024-2025	RTB Sale
	Total	92 MW				

Spain Pipeline:

We have an advanced stage pipeline of 216 MW of ground-mounted projects located in various regions across Spain.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Portfolios	Spain	216	Ground-mounted	Under Development	2024/2025	RTB Sale
	Total	216 MW				

Germany Pipeline:

We have secured an advanced stage pipeline of 124 MW of ground-mounted projects now under development.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Project 1	Germany	30	Ground-mounted	Under development	2025	RTB Sale
Project 2	Germany	20	Ground-mounted	Under development	2025	RTB Sale
Project 3	Germany	16	Ground-mounted	Under development	2025	RTB Sale
Project 4	Germany	40	Ground-mounted	Under development	2025	RTB Sale
Project 5	Germany	19	Ground-mounted	Under development	2025/2026	RTB Sale
	Total	125 MW				

U.K. Pipeline:

We have an advanced stage pipeline of 110 MW of co-located ground-mounted / BESS projects under development.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB / Sale	Business Model
Project 1	UK	60	Ground-mounted	Under development	2026	RTB Sale
Project 2	UK	50	Ground-mounted	Under development	2025	RTB Sale
	Total	110 MW				

Italy Pipeline:

We have secured an advanced pipeline of 471 MW of ground-mounted projects now under development.

Project Pipeline	Location	MW (DC)	Project Type	Status	Expected RTB/Sale	Business Model
Portfolio 1	Italy	34	Ground-mounted	Under Development	2024	RTB Sale
Portfolio 2	Italy	148	Ground-mounted	Under Development	2024-2026	Development Services
Portfolio 3	Italy	269	Ground-mounted	Under Development	2025	RTB Sale
Portfolio 4	Italy	20	Ground-mounted	Under Development	2025-2027	Development Services
	Total	471 MW				

China

Our new asset development pipeline of 169 MW is located in various provinces across China. All projects in China are either intended to be owned and operated by us as IPP assets, Build-Transfer, or Build-Operate-Transfer. In 2023, we sold approximately 29 MW our legacy solar assets. We intend to sell more solar projects in 2024. These include the legacy projects we built before June 30, 2019 and projects we recently built since 2021. During 2023, we significantly slowed our pace of development, because target projects could not meet our IRR goals due to high material costs and other burdens. We intend to build our asset portfolio in China but will do so in a disciplined manner that ensures we meet our profit goal.

Project Pipeline	Location	(DC)	Project Type	Status	Expected COD	Model
China DG	Jiangsu	31	Net Metering	Development	2024/2025	IPP Business
China DG	Zhejiang	17	Net Metering	Development	2024/2025	IPP Business
China DG	Hubei	9	Net Metering	Development	2024/2025	IPP Business
China DG	Anhui	13	Net Metering	Development	2024/2025	IPP Business
China DG	Others	12	Net Metering	Development	2024/2025	IPP Business
	Total	82 MW				

Storage Pipeline

We also have a storage pipeline of about 5 GW in the U.S. and Europe at different development stages as of December 31, 2023.

Storage Pipeline (GW)	
U.S.	754MW
Europe	4,379MW
China	46MW
Total	5,179MW

Community Solar Gardens

As of December 31, 2023, we had community solar projects in Minnesota, Maine, Pennsylvania, Virginia and New York with the capacity of approximately 75 MW.

Utility-scale and Solar-plus-Storage Projects

In 2020, we acquired an energy storage business, including solar-plus-storage projects, from Nova Development Management. This transaction increased our development pipeline by approximately 200 MW and added an experienced solar project development team. The new team brings expertise in the development of U.S. utility scale projects, provides immediate access to battery storage, and enables us to deliver a more complete set of solution packages to our customers. Additionally, the acquisition gives us access to utility projects and development activities in several states, including Pennsylvania, California, New York, Maine, Illinois, and Arizona.

In 2021, we further expanded our development of utility scale projects in the USA into several states, including Alabama and New Mexico.

Our Sales and Customers

We selectively pursue high quality and low-risk solar power project opportunities, especially DG projects, and have been building our new solar portfolio comprised of those projects. We focus on conservative risk portfolio countries and regions where the solar power project markets are growing rapidly and expected to have sustainable growth supported by favorable government policies, including the United States, Poland, Hungary, Spain, France, Germany and the U.K. We sell our developed projects or project SPVs to purchasers, who primarily include large utility companies, other IPPs that desire to sell the electricity from the projects to local power suppliers or users, and global investors such as asset management funds, pension funds and tax equity investors. Our community solar gardens are the solutions for businesses, government entities, municipalities, schools, hospitals, residential customers, and people looking for saving money on their electricity costs.

The solar power projects for our IPP business are primarily located in China. In China, we can sell the generated electricity in gross metering to the State Grid, or in net metering to the non-State Grid power purchasers first and the remaining unpurchased electricity to the State Grid. The State Grid is an enterprise which constructs and operates power grids and is a pilot state holding company approved by the State Council of China to carry out state-authorized investment. The non-State Grid power purchasers in the net metering are primarily commercial and industrial end users. Outside of China, we sell the generated electricity primarily to the local transmission grid companies, utility companies, government entities, municipalities, community and other commercial and industrial end users.

Engineering, Procurement and Construction Business

EPC includes engineering design, procurement of solar modules, balance-of-system components and other components, and construction contracting and management. We may engage our in-house EPC team or engage external experienced and qualified EPC contractors to handle and monitor the EPC process for our developed projects. Despite that, as the developer, we may procure the key components, such as solar modules and balance-of-system components.

We typically enter into short-term contracts with our suppliers and contractors on project-by-project basis or project portfolio basis based on the market prices.

Intellectual Properties

We rely primarily on trade secrets, employee contractual protections and other contractual restrictions to establish and protect our intellectual properties and proprietary rights and maintain profitability. Nevertheless, these measures afford only limited protection and the actions we take to protect our intellectual property rights may not be adequate to provide us with meaningful protection or commercial advantage.

Quality Control

We have a risk control team to conduct comprehensive market due diligence to identify solar projects that have projected internal returns that meet our standards. We have experienced and qualified engineering teams and engage external independent experienced qualified engineering to design the projects with technical specifications that provide for the quality and performance of our solar power plants. Solar modules used in our solar power projects are from our related parties or third -party suppliers and have the certifications and meet test standards. We closely monitor and supervise construction contractors as part of the quality control process, who also typically provide warranties and performance guarantees for a period of time. Our O&M team and third party O&M service providers tests, checks and continuously monitors the quality and performance of our operating solar power projects.

Seasonality

Changes in climate, geography, weather patterns, and other phenomena in the regions where we operate may significantly affect our business. For example, solar power projects depend on the amount and intensity of sunlight, which is affected by weather and climate conditions. As a result, our IPP electricity production and amount of electricity sold and therefore our IPP revenue tend to be higher during periods or seasons when there is more irradiation. EPC construction is also affected by the weather.

Enforceability of Civil Liabilities

We are incorporated in the British Virgin Islands to take advantage of certain benefits associated with being a British Virgin Islands company, such as political and economic stability, an effective judicial system, a favorable tax system, the absence of exchange control or currency restrictions and the availability of professional and support services. However, certain disadvantages accompany incorporation in the British Virgin Islands. These disadvantages include that the British Virgin Islands has a less developed body of securities laws as compared to the United States and provides significantly less protection to investors. In addition, British Virgin Islands companies do not have standing to sue before the federal courts of the United States.

Our organizational documents do not contain provisions requiring that disputes be submitted to arbitration, including those arising under the securities laws of the United States, between us, our officers, directors and shareholders. An important part of our operations is conducted and a significant portion of our assets is located outside the United States. Some of our directors and officers are nationals or residents of jurisdictions other than the United States, and some or all of their assets are located outside the United States. As a result, it may be difficult or impossible for a shareholder to bring an original action against us or such persons in a British Virgin Islands or other foreign court in the event that a shareholder believes that his or her rights have been infringed under the U.S. federal securities laws or otherwise. It may also be difficult for a shareholder to enforce in U.S. courts judgments obtained in U.S. courts based on the civil liability provisions of the U.S. federal securities laws against us and our officers and directors, some of whom are not residents of the United States and whose assets are located outside of the United States. In addition, there is uncertainty as to whether the courts of the British Virgin Islands or other foreign jurisdictions would recognize or enforce judgments of U.S. courts against us or such persons predicated upon the civil liability provisions of the securities laws of the United States or any state. There is no statutory recognition in the British Virgin Islands of judgments obtained in the United States, although the courts of the British Virgin Islands will generally recognize and enforce a non-penal judgment of a foreign court of competent jurisdiction without retrial on the merits. It is uncertain whether British Virgin Islands or other foreign courts would be competent to hear original actions brought in the British Virgin Islands or other foreign jurisdictions against us or such persons predicated upon the securities laws of the United States or any state.

Our corporate affairs are governed by our memorandum and articles of association, or Articles, and by the BVI Business Companies Act, 2004 and common law of the British Virgin Islands. The rights of shareholders to take legal action against our directors and us, actions by minority shareholders and the fiduciary responsibilities of our directors to us under British Virgin Islands law are to a large extent governed by the common law of the British Virgin Islands. The common law of the British Virgin Islands is derived in part from comparatively limited judicial precedent in the British Virgin Islands as well as from English common law, which has persuasive, but not binding, authority on a court in the British Virgin Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under British Virgin Islands law are not as clearly established as they would be under statutes or judicial precedents in the United States. In particular, the British Virgin Islands has no securities laws as compared to the United States, and provides significantly less protection to investors. In addition, British Virgin Islands companies may not have standing to initiate a shareholder derivative action before the federal courts of the United States.

As a result of all of the above, our public shareholders may have more difficulties in protecting their interests through actions against our management, directors or major shareholders than would shareholders of a corporation incorporated in a jurisdiction in the United States.

Harney Westwood & Riegels LLP, our counsel as to British Virgin Islands law, and DeHeng Law Offices, our counsel as to PRC law, have advised us that there is uncertainty as to whether the courts of the British Virgin Islands and PRC, respectively, would:

(a) 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

(b) 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.

Harney Westwood & Riegels LLP has further advised us that the United States and the British Virgin Islands do not have a treaty providing for reciprocal recognition and enforcement of judgments of U.S. courts in civil and commercial matters and that a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the U.S. federal securities laws, would not be automatically enforceable in the British Virgin Islands. We have also been advised that any final and conclusive monetary judgment for a definite sum obtained against the company in U.S. federal or state courts would be treated by the courts of the British Virgin Islands as a cause of action in itself and sued upon as a debt at common law so that no retrial of the issues would be necessary provided that:

- the U.S. federal or state court had jurisdiction in the matter and the company either submitted to such jurisdiction or was resident or carrying on business within such jurisdiction and was duly served with process;
- the judgment given by the U.S. federal or state court was not in respect of penalties, taxes, fines or similar fiscal or revenue obligations;
- the judgment was not procured by fraud;
- recognition or enforcement of the judgment in the British Virgin Islands would not be contrary to public policy; and
- the proceedings pursuant to which judgment was obtained were not contrary to natural justice.

A British Virgin Islands court may impose civil liability on us or our directors or officers in a suit brought in the courts of the British Virgin Islands against us or these persons with respect to a violation of U.S. federal securities laws, provided that the facts surrounding any violation constitute or give rise to a cause of action under British Virgin Islands law.

There is uncertainty as to whether the courts of China would (1) recognize or enforce judgments of United States courts obtained against us or such persons predicated upon the civil liability provisions of the securities laws of the United States or any state thereof, or (2) be competent to hear original actions brought in each respective jurisdiction, against us or such persons predicated upon the securities laws of the United States or any state thereof.

The recognition and enforcement of foreign judgments are provided for under the Chinese Civil Procedure Law. Chinese courts may recognize and enforce foreign judgments in accordance with the requirements of the Chinese Civil Procedure Law based either on treaties between China and the country where the judgment is made or in reciprocity between jurisdictions. China does not have any treaties or other agreements with the British Virgin Islands or the United States that provide for the reciprocal recognition and enforcement of foreign judgments. As a result, it is uncertain whether a Chinese court would enforce a judgment rendered by a court in either of these two jurisdictions.

Regulation

Regulations in the British Virgin Islands

The British Virgin Islands Economic Substance (Companies and Limited Liability Partnerships) Act 2018, as amended, came into effect on January 1, 2019. It, together with the rules published by the BVI International Tax Authority (the "ITA") on October 9, 2019 and updated on February 10, 2020 and on February 24, 2023, set out the laws on economic substance (the "Economic Substance Laws") and their effect on legal entities formed in the British Virgin Islands like the Company. The Company is required to consider its economic substance position on an annual basis on and from June 30, 2019 and to file annual reports in the British Virgin Islands each year disclosing whether or not it is carrying out relevant activities (within the meaning of the Economic Substance Law), and if it is, it must comply with its obligations as regards economic substance. The implication for non-compliance is, broadly, that the ITA may issue penalties and, potentially, apply to court in the British Virgin Islands to liquidate non-compliant entities.

The Company has taken and will continue to take advice from its British Virgin Islands counsel as to the steps it should take to comply with the Economic Substance Law.

Regulations in the United States

On March 31, 2021, US President Joe Biden announced to include a 10-year extension for the Investment Tax Credit (ITC) for both clean power generation and energy storage as part of a $2 trillion infrastructure investment plan. It is a proposal to extend the Investment Tax Credit and Production Tax Credit schemes for clean power generation and also to extend the credit scheme for storage. The direct-pay option for the ITC will also be maintained within the extension. Credit rates will be phased down over the 10-year period. Further measures included within the plan pertaining to clean energy are the creation of an Energy Efficiency and Clean Electricity Standard, intended to cut electricity bills and carbon emissions relating to power generation, while also increasing competition in the market.

Federal government buildings will also be mandated to procure clean power for all of their supply needs on a 24/7 basis.

Grid infrastructure upgrades have also been targeted, and a further investment tax credit will be created to incentivize the development of at least 20GW of high-voltage capacity power lines, supported by a new Grid Deployment Authority at the Department of Energy, to accelerate America's clean energy transition.

The Inflation Reduction Act (IRA) was passed by Congress and signed into law by President Biden in August, 2022. The IRA extended and expanded tax credits available for solar generation projects, and includes over $300 billion allocated to spur investments in zero carbon power generation supply, emissions reduction technology and energy affordability programs. The IRA also establishes new incentives for low-carbon hydrogen production, Carbon Capture Utilization and Storage (CCUS), methane emissions reductions, and both transportation and building electrification.

Regulations in China

A description of the material government regulations on our business in China is summarized below:

Laws and Regulations Concerning the Renewable Energy

In February 2005, China enacted its Renewable Energy Law, which became effective on January 1, 2006 and as amended in December 2009. The Renewable Energy Law sets forth policies to encourage the development and use of solar energy and other non-fossil energy. The renewable energy law sets out the national policy to encourage and support the use of solar and other renewable energy and the use of on-grid generation. It also authorizes the relevant pricing authorities to set favorable prices for the purchase of electricity generated by solar and other renewable power generation systems. The law sets out the national policy to encourage the installation and use of solar energy water-heating systems, solar energy heating and cooling systems, photovoltaic, or PV, systems and other solar energy utilization systems. It also provides the general principles regarding financial incentives for the development of renewable energy projects. The projects, as listed in the renewable energy industry development guidance catalogue, may obtain preferential loans from financial institutions and can enjoy tax preferences.

On April 1, 2008, the PRC Energy Conservation Law came into effect (subsequently revised on October 26, 2018). Among other objectives, this law encourages the utilization and installation of solar power facilities in buildings for energy-efficiency purposes.

Laws and Regulations Concerning the Electric Power Industry

The regulatory framework of the PRC power industry consists primarily of the Electric Power Law of the PRC, which became effective on April 1, 1996 (lately revised effective on April 24, 2015 and on December 29, 2018) and the Electric Power Regulatory Ordinance, which became effective on May 1, 2005. One of the stated purposes of the Electric Power Law is to protect the legitimate interests of investors, operators and users and to ensure the safety of power operations. According to the Electric Power Law, the PRC government encourages PRC and foreign investment in the power industry. The Electric Power Regulatory Ordinance sets forth regulatory requirements for many aspects of the power industry, including, among others, the issuance of electric power business permits, the regulatory inspections of power generators and grid companies and the legal liabilities for violations of the regulatory requirements.

Obtaining the Construction Engineering Qualifications and Permit

Pursuant to the Construction Law which was promulgated by the Ministry of Construction on November 11, 1997 (effective on March 1, 1998) and amended on April 22, 2011, and April 23, 2019 and the Regulation on Administration on Qualifications of Construction Engineering which became effective on March 1, 2015 and amended on September 13, 2016 and December 13, 2018, an enterprise engaged in the design and engineering work for an electric power project must obtain a qualification certificate and must conduct its work within the strict design scope set forth in its certificate.

Pursuant to the Provisions on the Administration of Permits of Installation, Repair, and Test of Electric Power Facilities, which were promulgated by the NDRC on September 11, 2020 and became effective on October 11, 2020, any entity or individual engaged in installing, repairing or testing of electric power facilities in the PRC must obtain a permit unless otherwise exempted by the NEA. There are three categories of permits and each category is further subdivided into five levels. Each category represents a specific range of activity i.e., installation, repair and testing. Each level denotes the maximum voltage level of an electric facility that a permit holder may work with. To apply for a permit, an applicant must submit the application to the local branch of NEA. A permit holder may also apply to change either the permitted matter, which is the category or level of the permit, or the registered matter, which is the name, legal address, legal representative and other pertinent matters. A permit is valid for six years and can be renewed.

FIT and Subsidies

The Renewable Energy Law of the PRC, which was amended on December 26, 2009 and became effective on April 1, 2010, sets forth policies to encourage the development and utilization of solar power and other renewable energy. The Renewable Energy Law authorizes the relevant pricing authorities to set favorable prices for electricity generated from solar and other renewable energy sources.

On March 31, 2020, the NDRC issued the Notice on Relevant Matters Concerning the Feed-in Tariff Policy for Photovoltaic Power Generation in 2020, in which, among other things, the NDRC adopted the following measures: (i) the guide prices of new centralized photovoltaic power plant included in the scope of state financial subsidies I ~ III resource area shall respectively be CNY0.35/kWh (including tax, the same below), CNY0.4/kWh and CNY0.49/kWh. If the guide price is lower than the project location coal-fired power generation benchmark price (including desulfurization, denitrification, dust removal electricity prices), the guide price shall be subject to the local coal-fired power generation benchmark price. The feed-in tariff of new centralized photovoltaic power plants shall be determined through a competitive market approach, which shall not exceed the guide price of the resource area located; (ii) for the commercial and industrial distributed photovoltaic power generation projects included in the 2020 financial subsidy scale using the "self-generation, surplus online" model, the full power generation subsidy standard is adjusted to CNY0.05/kWh; for the commercial and industrial distributed photovoltaic power generation projects using the "full online" model, the subsidy shall be subject to the guide price of the resource area where the centralized photovoltaic power plant located. For all commercial and industrial distributed projects allocated by the energy authorities according to a unified market competition approach, the price formed by market competition shall not exceed the guide price of the resource area and the subsidy standard shall not exceed CNY0.05/kWh; and (iii) the full power generation subsidy standard of household distributed photovoltaic power generation included in the 2020 financial subsidy scale shall be adjusted to CNY0.08/kWh. The Notice was implemented as from June 1, 2020.

Mandatory Purchase of Renewable Energy

The Renewable Energy Law imposes mandatory obligations on grid enterprises to purchase the full amount of on-grid electricity generated by approved renewable energy plants whose power generation projects meet the grid connection technical standards in the areas covered by the grid enterprises' power grids. Grid enterprises must improve the power grid construction in order to better absorb electricity generated from renewable energy.

On March 24, 2016, the NDRC issued the Measures for the Administration of Guaranteed Purchase of Full Amount of Renewable Energy, to strengthen the administration of, and provide details for, the implementation of purchase of the full amount of renewable energy by the grid enterprises.

Regulations relating to environmental protection

Enterprises conducting manufacturing activities in China are subject to provisions under the PRC environmental laws and regulations on noise, waste water, air emission and other industrial waste. The major governing environmental laws and regulations consist of the Environmental Protection Law of the PRC, which was most recently amended on April 24, 2014 and became effective on January 1, 2015, the Law of the PRC on the Prevention and Control of Water Pollution, which was most recently amended on June 27, 2017 and became effective on January 1, 2018, the Law of the PRC on the Prevention and Control of Air Pollution, which was most recently amended and became effective on October 26, 2018, the Law of the PRC on the Prevention and Control of Solid Waste Pollution, which was most recently amended on April 29, 2020 and became effective on the September 1, 2020 and the Law of the PRC on the Prevention and Control of Noise Pollution, which was promulgated on December 24, 2021 and became effective on June 5, 2022 (collectively the "Environmental Laws"). Pursuant to the Environmental Laws, PRC enterprises shall build requisite environmental treatment facilities affiliating to the manufacturing facilities, where waste air, waste water and waste solids generated can be treated properly in accordance with the relevant provisions.

Foreign Investment in Solar Power Business and Restriction on Foreign Ownership

The principal regulations governing foreign ownership of solar power businesses in the PRC are the Encouraged Foreign Investment Industries Catalog, effective as of January 1, 2023, or the Catalogue 2022, which is a replacement of the 2007, 2011, 2015, 2017, 2019 and 2020 versions of the Foreign Investment Industrial Guidance Catalogue, and the Special Administrative Measures (Negative List) for Foreign Investment Access (Edition 2021) issued by the NDRC and the PRC Ministry of Commerce. Under the Catalog 2022, the solar power industry is classified as an "encouraged foreign investment industry." Foreign-invested enterprises in the encouraged foreign investment industry are entitled to certain preferential treatment, such as exemption from tariff on equipment imported for their operations, after obtaining approval from the PRC government authorities. Emeren PV Power was categorized in the "encouraged" industry under the Catalogue 2022.

Available Information

Emeren Group Ltd was incorporated as a limited liability company in the British Virgin Islands on March 17, 2006. Our choice of the British Virgin Islands as the jurisdiction of incorporation was motivated in part by its relatively well-developed body of corporate law, various taxes and other incentives, and its acceptance among internationally recognized securities exchanges as a jurisdiction of incorporation for companies seeking to list securities on such exchanges. As we are a limited liability company under the laws of the British Virgin Islands, the liability of our shareholders to our company is limited to (i) any amount unpaid on a share held by the shareholder and (ii) any liability to repay a distribution by our company that was not made in accordance with the laws of the British Virgin Islands.

In January 2023, we rebranded from ReneSola Ltd. and our legal and commercial name changed to Emeren Group Ltd. Emeren stands for Empowering Renewables, to symbolize our substantial progress and continued dedication to growing solar and renewable energy development globally to deliver affordable and sustainable energy. The new logo, which features a sun against a blue background, represents the sun's energy, signifies our commitment to sustainability and serves as a reminder of the importance of renewable energy.

Our principal executive offices are located at 100 First Stamford Place, Suite 302, Stamford, CT 06902, U.S.A. Our registered office is located at the offices of Harneys Corporate Services Limited, Craigmuir Chambers, P.O. Box 71, Road Town, Tortola, VG1110, British Virgin Islands. Our agent for service of process in the United States is CT Corporation System, located at 111 Eighth Avenue, New York, New York 10011. Our website address is emeren.com. The information contained on, or that can be accessed through, our website is not a part of, and shall not be incorporated by reference into, this Annual Report. We have included our website address as an inactive textual reference only. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers, such as we, that file electronically, with the SEC at http://www.sec.gov.

Item 1A. Risk Factors

Summary of Risk Factors

The following risks relate principally to the industry in which we operate our business in general. Any of these risk factors could materially and adversely affect our business, financial condition or operating results and the trading price of our common shares.

Risks Related to Our Business

1. Developing and operating solar /storage power projects exposes us to various operational risks and our result of operations may be subject to fluctuations.
2. Solar project development is challenging and may ultimately not be successful and miscalculations in planning a project may negatively affect our EPC prices, all of which could increase our costs, delay or cancel a project, and have a material adverse effect on our business, financial condition, results of operations and profit margins.
3. Expansion of the pipeline of our solar power project business exposes us to a number of risks and uncertainties.
4. We may not be able to develop or acquire additional attractive solar power projects to grow our NTP portfolio.
5. Our financial leverage may hamper our ability to expand and may materially affect our results of operations.
6. We may not be able to identify suitable sites or obtain related access and use right to expand our project pipeline.
7. We may be subject to unforeseen costs, liabilities or obligations when operating and maintaining solar power projects.
8. The delay between making significant upfront investments in our solar power projects and receiving revenue could materially and adversely affect our liquidity, business and results of operations.
9. Decreases in the FIT price, public utility price or market discount rate could harm our revenue.
10. EPC is subject to risks associated with fluctuations in the prices of solar modules and balance-of-system components or fluctuations in the costs of design, construction and labor.
11. The reduction, modification, delay or elimination of government subsidies and economic incentives for on-grid solar power applications may reduce the profitability of our business and materially adversely affect our business.
12. Concentration in a limited number of customers for the sale of our utility-scale projects may expose us to additional risks and significant fluctuations or declines in our revenues.
13. Limited number of purchasers of electricity generated by solar energy may expose us and our solar power projects to additional risk.
14. We operate in a highly competitive market and many of our competitors have greater resources than we do. We may not be able to compete successfully, and we may lose or be unable to gain market share.
15. Our project operations may be adversely affected by weather and climate conditions, pandemics, natural disasters and adverse work environments.
16. Seasonal variations may influence our results of operations.
17. Information system failures, cyber incidents or breaches in security could adversely affect us.
18. We are subject to counterparty risks under our FIT price support schemes and PPAs.
19. Restrictive covenants and undertakings under our project financing arrangements and loan arrangements may limit the manner in which we operate and an event of default under the loan may adversely affect our operations.
20. Our advance payments to our suppliers expose us to the credit risk of such suppliers, which may adversely affect our financial condition and results of operations.
21. Future acquisitions, investments or alliances may have an adverse effect on our business.
22. Problems with the quality or performance of our developed solar power projects could result in increased costs, damage to our reputation and loss of revenues and market share.

Risks Related to Doing Business in International Markets

1. We conduct our business globally and are subject to global and local risks related to economic, regulatory, social and political uncertainties.
2. Turbulence in global financial markets and economies may adversely affect the solar industry, the demand for solar project products, and our operating results, financial condition. liquidity and profitability.
3. As a British Virgin Islands corporation, our business could be harmed due to EU Finance ministers’ jurisdictional ratings.
4. Our business, prospects, financial condition, results of operations and cash flows may be adversely affected by developments that are beyond our control in other countries.
5. Fluctuations in exchange rates may have a material adverse effect on your investment.

Risks Related to Our ADSs and Shares

1. The market price for our ADSs may be volatile.
2. The NYSE may delist our ADSs from trading on its exchange.
3. We may need additional capital and may sell additional ADSs or other equity, equity-linked or debt securities or incur indebtedness, which could result in additional dilution to our shareholders or increase our debt service obligations.
4. Future issuances of shares or ADSs may adversely affect the price of the ADSs.
5. The depository for our ADSs may give us a discretionary proxy to vote our shares underlying your ADSs if you do not give voting instructions, which could adversely affect your interests.
6. You may be subject to limitations on transfer of your ADSs.
7. We may be a passive foreign investment company for U.S. Federal income tax purposes, which could result in adverse U.S. Federal income tax consequences to U.S. Holders of our ADSs or shares.
8. We face a number of risks involving EMCs, PPAs and project-level financing arrangements, including failure or delay in entering into PPAs, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration or other clauses, all of which could materially and adversely affect our business, financial condition, results of operations and cash flows.
9. Volatility in the prices of solar power projects may cause significant fluctuations or declines in our revenue.
10. If we fail to maintain an effective system of internal controls, we may be unable to accurately report our financial results or prevent fraud and investor confidence and the market price of our ADSs may be adversely impacted.
11. We have limited insurance coverage and may incur losses resulting from product liability claims or business interruptions.
12. You may face difficulties in protecting your interests, and your ability to protect your rights through the U.S. federal courts may be limited, because we are incorporated under British Virgin Islands law, conduct some of our operations in China and Europe, and some of our officers and directors reside outside the United States.
13. Our existing principal shareholders have substantial influence over our Company, and their interests may not be aligned with the interests of our other shareholders.
14. As a holder of our ADSs, you may not have the same voting rights as the holders of our shares and may not receive voting materials in time to be able to exercise your right to vote.
15. You may not be able to participate in rights offerings and may experience dilution of your holdings as a result.
16. If a United States person is treated as owning at least 10% of our ADSs or shares, such person may be subject to adverse U.S. federal income tax consequences.
17. Because we have ceased to qualify as a foreign private issuer, we are required to comply fully with the reporting requirements of the Exchange Act applicable to U.S. domestic issuers, and we will incur significant additional legal, accounting, and other expenses that we would not incur as a foreign private issuer.

Risks Related to Our Business

Developing and operating solar/storage power projects exposes us to various operational risks and our result of operations may be subject to fluctuations.

In any given period, our revenue is affected by a limited number of solar power projects that are under development and sold to third parties, and therefore subject to significant fluctuations. In order to further evolve into an asset-light solar project developer with a global presence, we will continue to develop and sell solar power projects to take advantage of attractive market opportunities. As a result, for certain periods we may generate more of our revenues from the one-time sale of solar power projects.

Development of solar power projects can take many months or years to complete and may be delayed for reasons beyond our control. These projects often require us to make some up-front payments for, among other things, land/rooftop use rights and permitting in advance of commencing construction, and revenue from these projects may not be recognized for several additional months following contract signing. Any inability or significant delays in entering into sales contracts with customers after making such up-front payments could adversely affect our business and results of operations. Furthermore, we may become constrained in our ability to simultaneously fund our other investments concurrently with such projects.

Development of solar power projects also requires significant 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. Our revenue and liquidity may be adversely affected to the extent the market for solar power projects weakens or we are not able to successfully complete the customer acceptance testing due to technical difficulties, equipment failure, or adverse weather, and we are unable to sell our solar power projects at prices and on terms and timing that are acceptable to us. operate solar power projects and sell electricity to the local or national grid or other power purchasers such as commercial and industrial end users. As a result, we are subject to a variety of risks associated with intense market competition, changing regulations and policies, insufficient demand for solar power, technological advancements, failure of our power generation facilities and credit risks related to the power purchasers. If we cannot manage these risks, our business, financial condition and results of operations may be materially adversely affected.

Solar project development is challenging and may ultimately not be successful and miscalculations in planning a project may negatively affect our EPC prices, all of which could increase our costs, delay or cancel a project, and have a material adverse effect on our business, financial condition, results of operations and profit margins.

The development of solar projects involves numerous risks and uncertainties and requires extensive research, planning and due diligence. We may be required to incur significant amounts of capital expenditure for land/rooftop use rights, interconnection rights, preliminary engineering, permits, legal and other expenses before we can determine whether a solar power project is economically, technologically or otherwise feasible. Success in developing a solar power project is contingent upon, among other things:

- securing investment or development rights;
- securing suitable project sites, necessary rights of way, satisfactory land/rooftop use or access rights in the appropriate locations with capacity on the transmission grid and related permits, including completing environmental assessments and implementing any required mitigation measures;
- rezoning land, as necessary, to support a solar power project;
- negotiating satisfactory EPC agreements;
- negotiating and receiving required permits and approvals for project development from government authorities on schedule;
- completing all required regulatory and administrative procedures needed to obtain permits and agreements;
- procuring rights to interconnect the solar power project to the electric grid or to transmit energy;
- paying interconnection and other deposits, some of which are non-refundable;

- signing grid connection and dispatch agreements, power purchase agreements, or PPAs, or other arrangements that are commercially acceptable, including adequate for providing financing;
- obtaining project financing, including debt financing and own equity contribution;
- negotiating favorable payment terms with suppliers; and
- completing construction on schedule in a satisfactory manner.

Successful completion of a particular solar project may be adversely affected by numerous factors, including without limitation:

- unanticipated changes in project plans or defective or late execution;
- difficulties in obtaining and maintaining governmental permits, licenses and approvals required by existing laws and regulations or additional regulatory requirements not previously anticipated;
- potential challenges from local residents, environmental organizations, and others who may not support the project;
- uncertainty in the timing of grid connection;
- the inability to procure adequate financing with acceptable terms, especially for EPC;
- unforeseeable engineering problems, construction or other unexpected delays and contractor performance shortfalls;
- labor, equipment and materials supply delays, shortages or disruptions, or work stoppages;
- adverse weather, environmental and geological conditions, force majeure and other events out of our control; and
- cost overruns, due to any one or more of the foregoing factors.

Accordingly, some of the solar power projects in our pipeline may not be completed or even proceed to construction. If a number of solar power projects are not completed, we may not benefit from the feed-in-tariffs, or FITs, our solar power projects are otherwise entitled to, and our business, financial condition and results of operations could be materially and adversely affected.

In addition, if we are unable to complete the development of a solar power project or we fail to meet any agreed upon system-level capacity or energy output guarantees or warranties or other contract terms, or our projects cause grid interference or other damage, we may be subject to significant damages, penalties and other obligations relating to the project, including obligations to repair, replace or supplement materials for the project.

Occasionally, we may enter into fixed-price EPC agreements in which we act as the general contractor for our customers in connection with the installation of their solar power systems. All essential costs are estimated at the time of entering into the EPC agreement for a particular project or project portfolio, and these costs are reflected in the overall fixed price that we charge our customers for the project. These cost estimates are preliminary and may or may not be covered by contracts between us and the subcontractors, suppliers and other parties involved in the project. In addition, we require qualified, licensed subcontractors to install most of our solar power systems. Shortages of skilled labor could significantly delay a project or otherwise increase our costs. Should miscalculations in planning a project occur, including those due to unexpected increases in commodity prices or labor costs, or delays in execution occur and we are unable to increase the EPC sales price commensurately, we may not achieve our expected margins or our results of operations may be adversely affected.

Expansion of the pipeline of our solar power project business exposes us to a number of risks and uncertainties.

As our net revenue is derived from our solar power project business, we will be increasingly exposed to the risks associated with solar power projects. Further, our future success largely depends on our ability to expand our solar power project pipeline. The risks and uncertainties associated with our solar power project business and our ability to expand our solar power project pipeline include:

- the need to raise funds to develop greenfield or purchase mid-late-stage solar power projects, which we may be unable to obtain on commercially reasonable terms or at all;
- the uncertainty of being able to sell the projects or secure purchasers in a timely manner, in which case we may need to operate such projects for an extended period of time;
- the uncertainty of being able to receive full payment for the sold projects upon completion or receive payment in a timely manner;
- failure of our business partners with which we work together under certain cooperation agreements to operate in a way that is satisfactory to us or any disputes with our business partners to develop projects or enter new geographic markets;
- delays and cost overruns as a result of a number of factors, many of which are beyond our control, including delays in regulatory approvals, construction, grid-connection and customer acceptance testing;
- delays or denial of required approvals, permits or licenses by relevant government authorities in connection with the construction, grid-connection and operation of solar power projects;
- failure to negotiate favorable payment terms with suppliers;
- unforeseeable engineering problems, construction or other unexpected delays and contractor performance shortfalls;
- labor, components and materials supply delays, shortages or disruptions, or work stoppages;
- failure to grid connection and dispatch agreements, execute power purchase agreements or other arrangements that are commercially acceptable to us;
- diversion of significant management attention and other resources;
- failure to execute our project pipeline expansion plan effectively; and
- changes in government regulations and policies.

If we are unable to successfully expand our solar power project business, and in particular, our solar power project pipeline, we may be unable to expand our business, maintain our competitive position, improve our profitability and generate the cash flows we have currently forecasted.

We may not be able to develop or acquire additional attractive solar power projects to grow our NTP portfolio.

Our current business strategy includes plans to further grow the solar power project portfolio for our project rights sale business, or NTP portfolio, and own and operate some of the solar power projects we develop. To develop a solar power project, we are required to enter into investment agreements, development agreements, interconnection agreements and/or other contractual agreements with the local authorities and obtain relevant permits, licenses and approvals. Whether or not we can secure an investment agreement is subject to the discretion of government bodies and utilities, and may be influenced by factors beyond our control, such as market conditions and the allocated solar power project quota in some countries, based on which the agreement can be entered into government incentive programs. Our competitors may have greater financial resources, more effective or established localized business presence or greater willingness or ability to operate with little or no operating margins for sustained periods of time. It is difficult to predict whether and when we will be awarded a new solar power project. Any increase in competition or reduction in our competitive capabilities could have a significant adverse impact on our market share and on the margins we generate from our solar power projects.

If we cannot complete an agreement on schedule, or at all, the PPA/FIT price may be reduced, our reputation may be damaged and the difficulty of winning new projects may increase. In addition, in any event the government bodies terminate an agreement with us, we will have limited recourse. Although the government bodies have historically not terminated agreements with us, there is no assurance that they would not do so in the future.

If we cannot secure the opportunities to develop new solar power projects, our business, financial position and financial conditions will be materially adversely affected.

Other difficulties executing this business strategy, particularly in new jurisdictions we may enter, include:

- accurately prioritizing geographic markets for entry, including estimates on addressable market demand;
- obtaining construction, environmental and other permits and approvals;
- securing land, rooftop or other site control;
- managing local operational, capital investment or components sourcing regulatory requirements;
- connecting to the power grid on schedule and within budget;
- connecting to the power grid if there is insufficient grid capacity;
- identifying, attracting and retaining qualified development specialists, technical engineering specialists and other personnel;
- managing any acquired assets or assets held under affiliates;
- securing cost-competitive financing on attractive terms;
- operating and maintaining solar power projects to maintain the power output and system performance; and
- collecting FIT payments and other economic incentives as expected.

Our financial leverage may hamper our ability to expand and may materially affect our results of operations.

We have relied on working capital, short-term and long-term financing, including development loan financings, construction loan financings and project financings, and capital market financings to fund our capital requirements and expect to continue to do so in the future. These financings, which consist of short-term borrowings, long-term borrowings, bond and other long-term liabilities, are primarily from financial institutions and fund investors globally, as well as financing lease companies in China. During 2023, we repaid debt totaling over $12.1 million. As of December 31, 2023, we had borrowings of $36.7 million and finance lease liabilities of $3.2 million. We had a working capital of $169.5 million as of December 31, 2023 and the amount of our borrowings and financing liabilities could constrain our operational flexibility, including requiring a substantial portion of our cash flows to be set aside to service our debt obligations, increasing our exposure to interest rate fluctuations and limiting our ability to obtain additional financing. Furthermore, governments may pass measures to tighten credit. All the above may impair our ability to obtain financing on favorable terms, or at all. In addition, we may not be able to raise necessary funding on favorable terms, or at all, to refinance our debt obligations. If our cash flows and capital resources are insufficient to service our debt obligations, our business, prospects and financial conditions may be materially and adversely affected. If we fail to obtain additional sources of financing, we may not be able to continue to fund our operations or business.

As needed, we intend to obtain additional debt obligations to finance our operations and future expansion. To the extent we are successful in obtaining additional financing, we will allocate an increasing portion of our cash flows to service our debt obligations. This could impair our ability to make necessary capital expenditures, develop business opportunities or make strategic acquisitions. Our business may not generate sufficient cash flows from operations in the future to service our debt and make necessary capital expenditures, in which case we may seek additional financing, dispose of certain assets or seek to refinance some or all of our debt. In addition, these alternatives may not be implemented on satisfactory terms, if at all. In the event we are unable to meet our debt obligations when they become due or if our creditors take legal action against us for repayment upon any default, we may have to liquidate our long-term assets to repay our creditors. Such a situation would materially and adversely affect our operations and prevent us from successfully implementing our business strategy. In addition, we may have difficulty converting our long-term assets into current assets in such a situation and may suffer losses from the sale of our long-term assets and may not be able to continue our business.

We may not be able to identify suitable sites or obtain related access and use right to expand our project pipeline.

Solar power projects require solar and geological conditions that can only be found in a limited number of geographic areas.

Our solar power projects in overseas markets are primarily ground-mounted DG projects, with a few small-scale utility-scale projects and community solar gardens. Our solar power projects in China are primarily the rooftop DG projects. There is intense competition for a limited number of project sites appropriate for solar power projects. As the solar power project market continues to evolve, the number of attractive project sites available has decreased and will continue to decrease.

Even if we sign investment or development agreements, we may not be able to find and secure the use rights to suitable project sites for the relevant projects. We generally obtain land for our ground-mounted projects through land use right granting or assignment by the government, or leasing from the land owners; and obtain the access and use rights for our rooftop DG projects through leasing from the rooftop owners. Our rights to the properties used for our solar power projects may be challenged by property owners or other third parties, in case of any disputes over the ownership or lease of the properties. It is critical to guarantee and maintain our land use right on the land parcel and access and use right on the rooftop during the life cycle of solar power projects. In case the relevant lease agreement was determined null and void by the competent authorities or our land use right and access and use right on rooftops were recouped by the government, our solar power projects may be forced to cease operations and our results of operation and financial condition will be materially adversely affected.

We require flat land parcels for our small-scale solar power projects, including ground-mounted DG projects, small-scale utility projects and community solar gardens. Also, it is crucial to have a land parcel close to the grid connection point for our ground-mounted projects for interconnection to the power grid and in order to control the cost for the construction of transmission line and avoid the electricity transmission loss. However, it is increasingly difficult to secure flat land parcels close to transmission lines. Once we have identified a suitable site, our ability to obtain requisite land use rights or access and use rights to the rooftop is subject to growing competition from other solar energy producers that may have better access to local government support, financial or other resources to locate and obtain rights of such sites. Our competitors may impede our development efforts by acquiring control of all or a portion of a solar site we seek to develop. If we were unable to find or obtain use rights for suitable solar power project sites, our ability to develop new solar power projects on a timely basis might be harmed, which could have a material adverse effect on our business, financial condition and results of operations.

We strictly check the land ownership and use and access rights to avoid agricultural land, wetland or any land which requires rezoning. However, we cannot assure you that we will not acquire land with the understanding that such land may be rezoned for solar power project development in the future. Rezoning may take longer than expected or may not been possible. Any future rezoning efforts may materially and adversely impact our business and results of operation.

We may be subject to unforeseen costs, liabilities or obligations when operating and maintaining solar power projects.

We operate and maintain the solar power projects in our IPP portfolio. In addition to the operations and maintenance, or O&M, services which our in-house O&M team provides to our developed solar power projects in China, we also enter into separate contractual agreements to operate and maintain substantially all of the solar power projects operated by us outside China. Pursuant to these agreements, we generally perform scheduled and unscheduled maintenance, and provide operating and other asset management services, and we subcontract certain O&M services, including security and repair, to third-parties that may not perform their services adequately.

If we or our third-party contractors fail to properly operate and maintain the solar power projects, the solar power projects may experience decreased performance, reduced useful life or shutdowns. Through changes in our own operation or in local conditions, the costs of operating the project may increase, including costs related to labor, equipment, insurance and taxes. If they are careless or negligent, resulting in damage to third parties, we may become liable for the consequences of any resulting damage. We may also experience equipment malfunction or failure, leading to unexpected maintenance needs, unplanned outages or other operational issues. In addition, inconsistencies in the quality of solar panels, solar modules, balance-of-system components or maintenance services for our solar power projects may affect the system efficiency of our solar power projects. We may also encounter difficulties selling electricity to the power grid due to failures in infrastructure or transmission systems. To the extent that any of the foregoing affects our ability to sell electricity to the power grid, or we incur increased costs in relation to operating and maintaining solar power projects, our business, financial condition and results of operation could be materially and adversely affected.

The delay between making significant upfront investments in our solar power projects and receiving revenue could materially and adversely affect our liquidity, business and results of operations.

There are generally many months or even years between our initial significant upfront investments in developing permits to develop solar power projects we expect to own and operate and when we commence to receive revenue from the sale of electricity generated by such solar power projects after connecting on grid. Such investments include, without limitation, consulting, legal, accounting and other third-party fees, costs associated with feasibility study, payments for land rights, government permits, large transmission and PPA deposits or other payments, which may be non-refundable. Furthermore, we historically relied on our own equity contribution, bank loans, capital market financing and third-party financing to pay for costs and expenses incurred during project development, especially to third parties for solar modules, balance-of-system components and EPC and O&M services. Solar power projects typically generate revenue only after becoming commercially operational and starting to sell electricity. There may be an especially long delay from initial land and interconnection assessments to projects becoming mid-late-stage, especially when we obtain permits directly from regulators and site control rights directly from prior rights holders under our primary permit development model. Between our initial investments in the development of permits for solar power projects and their connection to the transmission grid, there may be adverse developments to such solar power projects. Furthermore, we may not be able to obtain all of the permits as anticipated, permits that were obtained may expire or become ineffective or we may not be able to obtain financing as anticipated. In addition, the timing gap between our upfront investments and actual generation of revenue, or any added delay in between due to unforeseen events, could put strains on our liquidity and resources, and materially and adversely affect our profitability and results of operations.

Our ability to transmit and sell the electricity generated from the solar power projects operated by us relies on the grid connection, dispatch agreements, PPAs and other contractual agreements.

We sell electricity generated from our operated solar power projects, mainly in China. Before developing a solar power project for our IPP business, we have to obtain the relevant local governmental grid company's preliminary consent on our grid connection application and the final approval on the grid connection plan in order to connect our solar power projects to their power grids.

In China, we can sell the electricity in gross metering or net metering. Under gross metering, electricity is sold to The State Grid Corporation of China, or the State Grid, an enterprise which constructs and operates power grids and is a pilot state holding company approved by the State Council of China to carry out state-authorized investment. Under the net metering, we first sell the electricity to non-State Grid power purchasers and the remaining unpurchased electricity to the State Grid. Before we can supply the electricity to our power purchasers, we are required to enter into the grid connection and dispatch agreements with the grid providers and energy management contracts, or EMCs, including PPAs with the power purchasers. Grid connection and dispatch agreements generally have terms of 1 to 5 years and are, in practice, subject to renewal by the parties when original terms expire. The EMCs, which provide the terms and pricing of the sales and include the PPAs, are for 20 years and are subject to renewal by the parties when original terms expire. If we are unable to renew the agreements upon expiration, we may not be able to replace them with agreements with equivalent terms and conditions, or at all, or we may experience significant delays or costs related to securing replacements. If we are unable to agree with the grid providers on a new grid connection and dispatch agreements, the affected solar power project may temporarily or permanently cease operations, and we may not be able to operate the project beyond the initial term of the EMCs and PPAs. See also “We face a number of risks involving PPAs and project-level financing arrangements, including failure or delay in entering into PPAs, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration or other clauses, all of which could materially and adversely affect our business, financial condition, results of operations and cash flows.” In addition, if, for any reason, the grid providers are unable or unwilling to fulfill their related contractual obligations or if they refuse to accept delivery of electricity delivered thereunder or otherwise terminate such agreements prior to the expiration thereof, our business, financial condition, results of operations and cash flow could be materially adversely affected.

Decreases in the FIT price, public utility price or market discount rate could harm our revenue.

Revenues generated from our IPP business are primarily from China. Under gross metering, the revenues we can receive are fixed at the FIT price which is set by the government. Under net metering, the prices we sell the electricity to the non-State Grid power purchasers are mainly at a market discount to the public utility rate. The market price of electricity can be subject to significant fluctuations and can be affected by drivers such as the cost of traditional fossil fuels used for electricity generation, the discovery of new fossil fuel sources, additional electricity generation capacity, additional electric transmission and distribution lines, technological or regulatory changes, increased energy conservation or for a number of other reasons. However, given that China largely runs a state-led economy, the FIT price may be readily lowered by the relevant Chinese authorities with little, if any, regard to market conditions. While we may resort to domestic courts and other available forums for remedies, such actions may bear no fruit and are bound to generate extra legal costs and fees. Regardless of the rationales underlying the price adjustments, any decrease in the FIT price, market discount rate or the public utility rate may negatively affect our results of operations.

EPC is subject to risks associated with fluctuations in the prices of solar modules and balance-of-system components or fluctuations in the costs of design, construction and labor.

EPC is part of the process during the solar power projects’ development and construction. We may engage our in-house EPC team or engage external experienced and qualified EPC contractors to conduct and monitor the EPC process. Despite that, it is the market practice for us, as the developer, to procure the key components, such as solar modules and balance-of-system components. Design, construction, labor and installation costs incurred by our in-house EPC team or external EPC contracts may also vary. Any increase in the prices of solar modules or balance-of-system components or fluctuations in design, construction, labor and installation costs may increase our procurement cost for the key components or costs to engage external contractors and hence may materially and adversely affect our results of operations.

The reduction, modification, delay or elimination of government subsidies and economic incentives for on-grid solar power applications may reduce the profitability of our business and materially adversely affect our business.

We believe that the near-term growth of the market for on-grid applications continues to depend on the availability and size of government subsidies and economic incentives which can be influenced by various factors, such as national subsidy policy and the local desulphurized coal benchmark electricity price. If the reduction or elimination of government subsidies and economic incentives are not implemented prudently, such reduction or elimination may adversely affect the growth of this market or result in increased price competition, either of which could cause our revenues to decline.

When upfront system costs are factored into the cost of electricity generation, the cost of solar power substantially exceeds the cost of power generated from conventional means in many markets. As a result, national and local governmental bodies in many countries have provided subsidies and economic incentives in the form of FITs, rebates, tax credits and other incentives to end-users, distributors, system integrators and manufacturers of solar power products to promote the use of solar power and to reduce dependence on other forms of energy.

However, as the solar power industry continues to develop, these government subsidies and economic incentives have been reduced and could continue to be reduced or be eliminated altogether. For example, reductions in FIT programs in Germany have continued since 2014 and the government in China has issued various policies to control FIT for on-grid solar power projects since 2014.

Although the solar power industry is currently moving towards the economies of scale necessary for solar power to become cost-effective in a non-subsidized market, any reduction, modification, delay or elimination of government subsidies and economic incentives by the Chinese government and the governments of other countries for on-grid solar power applications could result in decreased demand and pricing of our solar power projects, which could materially and adversely affect our revenues and profitability.

Our future success substantially depends on our ability to closely monitor and accurately predict market demand which exposes us to a number of risks and uncertainties.

We intend to closely match our solar power projects and electricity to the market demand for our products. Any failure to accurately predict market demand may result in our below-supply or oversupply of our solar power projects and electricity required to meet the market demand. Our ability to achieve a balance is subject to significant risks and uncertainties, including:

- the ability to maintain existing customer relationships, attract new customers and expand our market share;
- the ability to maintain a financially healthy level of liquidity, and to manage our liquidity if we are unable to obtain additional funds and/or refinance existing debt on commercially viable terms or at all;
- the occurrence of construction delays and cost overruns;
- the occurrence of industrial disturbances, which are more likely to arise when we suffer overcapacity and our workers are not fully employed, or when our suppliers are not paid in a timely fashion;
- the ability to install and test the solar system according to the agreed time schedule;
- the delay or denial of required approvals by relevant government authorities; and
- any significant diversion of management attention.

If we are unable to successfully respond to market demand, or if we fail to resolve any of the risks and uncertainties, we may be unable to expand our business, maintain our profitability and stay competitive. Moreover, even if we are able to manage our growth, we may be unable to secure sufficient purchase orders to maintain profitability or stay competitive within the industry, which could adversely affect our business and operations.

Concentration in a limited number of customers for the sale of our utility-scale projects may expose us to additional risks and significant fluctuations or declines in our revenues.

In our project development, we may sell our utility-scale projects only to utilities companies or grid system operators. Although most of our developed solar power projects are not utility-scale projects, concentration in a limited number of customers in this utility-scale project market may, among other impacts, limit our ability to engage other purchasers, reduce our power to negotiate the pricing terms and sales terms of our agreements and increase our reliance on payment from the governmental grid companies, which may cause fluctuations or declines in our revenues.

Limited number of purchasers of electricity generated by solar energy may expose us and our solar power projects to additional risk.

Transmission and distribution of electricity is either monopolized or highly concentrated in most jurisdictions and there are a limited number of possible purchasers for electricity generated by solar power in a given geographic location, including transmission grid operators, state and investor-owned power companies, public utility districts and cooperatives. As a result, there is a concentrated pool of potential purchasers for electricity generated by our solar power plants and projects, which may restrict our ability to negotiate favorable terms under new PPAs and could impact our ability to find new customers for the electricity generated by our generation facilities should this become necessary. Furthermore, if the financial condition of these grid companies, utilities and/or power purchasers deteriorates or government policies or regulations to which they are currently subject that compel them to source renewable energy supplies change, demand for electricity produced by our plants could be negatively impacted. In addition, provisions in our PPAs or applicable laws may provide for the curtailment of delivery of electricity for various reasons, including preventing damage to transmission systems, system emergencies, force majeure or economic reasons. Such curtailment would reduce revenues to us from PPAs. If we cannot enter into PPAs on terms favorable to us, or at all, or if the purchaser under our PPAs were to exercise its curtailment or other rights to reduce purchases or payments under such arrangements, our revenues and our decisions regarding development of additional projects in the energy segment may be adversely affected.

We operate in a highly competitive market and many of our competitors have greater resources than we do. We may not be able to compete successfully, and we may lose or be unable to gain market share.

The solar market is increasingly competitive and continually evolving, which may result in price reductions, reduced profit margins or loss of market share by us. The roll-out of attractive solar energy policies around the globe may make this industry increasingly lucrative and thus intensify the competition by attracting more interested companies. Our primary competitors include local and international developers and operators of solar power projects in those markets. Some of our competitors may have integrated with upstream solar manufacturers and may have advantages over us in terms of greater operational, financial, technical, management or other resources in particular markets or in general. They may have longer operating histories, stronger market positions, larger development capabilities, operation skills, greater resources, better brand name recognition, better access to favorable prices, more established distribution networks and larger customer bases than we do. As a result, they may be able to devote greater resources to the research, development, promotion and sale of their products or respond more quickly to evolving industry standards and changes in market conditions than we can. We only started our solar power projects business in recent years. There is no guarantee that we can compete successfully in the markets where we currently operate or the markets we plan to enter in the future.

In addition, in certain of our markets, such as China, state-owned and private companies have emerged to take advantage of the significant market opportunity created by attractive financial incentives and favorable regulatory environment provided by the governments. State-owned companies may have stronger relationships with local governments in certain regions and private companies may be more focused and experienced in developing solar power projects in the markets where we compete. Accordingly, we need to continue to be able to compete against both state-owned and private companies in these markets.

Moreover, the key barriers to enter into our industry at present consist primarily of in-depth market knowledge, skilled personnel, consistent development capacity, access to capital resources and competitive cost structure. If these barriers disappear or become more easily surmountable, new competitors may successfully enter our industry. If we fail to compete successfully, our business would suffer, and we may lose or be unable to gain market share.

We also earn revenues from generation and sales of electricity. We believe that our primary competitors in these markets are the incumbent utilities companies which supply energy to our potential customers under highly regulated rate and tariff structures. We compete with these conventional utilities primarily based on price, predictability of price, reliability of delivery and the ease with which customers can switch to electricity generated by our solar power projects.

As the solar power and renewable energy industry grows and evolves, we will also face new competitors who are not currently in the market. Our competitors may also enter into strategic alliances or form affiliates with other competitors to our detriment. Suppliers or contractors may merge with our competitors which may limit our choices of contractors and hence the flexibility of our overall project execution capabilities. There can be no assurance that our current or potential competitors will not offer solar power projects or services comparable or superior to those that we offer at the same or lower prices or adapt more quickly than we do.

We also face competition from other renewable energy companies and non-renewable power industries, including nuclear energy and fossil fuels such as coal, petroleum and natural gas. Technological innovations in these other forms of energy may reduce their costs or increase their safety. Large-scale new deposits of fossil fuel may be discovered, which could reduce their costs. Local governments may decide to strengthen their support for other renewable energy sources, such as wind, hydro, biomass, geothermal and ocean power, and reduce their support for the solar industry. The inability to compete successfully against producers of other forms of power or otherwise enter into power purchase agreements favorable to us would reduce our market share, negatively affect our ability to develop and finance our projects and negatively impact our results of operations.

We operate in a highly competitive market. Increased competition may result in price reductions, reduced profit margins and loss of market share. Our market position depends on our financing, development and operation capabilities, reputation, experience and track record. Our failure to adapt to changing market conditions and to compete successfully with existing or new competitors in the solar power industry, as well as the other renewable energy companies and non-renewable power companies, will limit our growth and will have a material adverse effect on our business and prospects.

Our project operations may be adversely affected by weather and climate conditions, pandemics, natural disasters and adverse work environments.

Solar power projects depend on the amount and intensity of sunlight, which is affected by weather and climate conditions. Any change of such conditions in the areas we operate that reduces solar radiation will adversely affect our business and results of operations. In addition, we may operate in areas that are under the threat of floods, earthquakes, landslides, mudslides, sandstorms, drought, or other inclement weather and climate conditions or natural disasters. If inclement weather or climatic conditions or natural disasters occur in areas where our solar power projects and project teams are located, project development, connectivity to the power grid and the provision of O&M services may be adversely affected. In particular, materials may not be delivered as scheduled and labor may not be available. As many of our solar power projects are located in the same region, such solar power projects may be simultaneously affected by weather and climate conditions, natural disasters, adverse work environments or a pandemic, such as the COVID - 19 pandemic.

During periods of curtailed activity, we may continue to incur operating expenses. We may bear some or all of the losses associated with such unforeseen events. Moreover, natural disasters which are beyond our control may adversely affect the economy, infrastructure and communities in the countries and regions where we conduct our business. Such conditions may have an adverse effect on our work performance, progress and efficiency or even result in personal injuries or fatalities.

Seasonal variations may influence our results of operations.

Changes in climate, geography, weather patterns, and other phenomena in the regions where we operate may significantly affect our business. For example, solar power projects depend on the amount and intensity of sunlight, which is affected by weather and climate conditions. As a result, our electricity generation and amount of electricity sold and therefore the revenue generated from our IPP business tend to be higher during periods or seasons when there is more irradiation. Seasonal variations could adversely affect our results of operations and make them more volatile and unpredictable.

Information system failures, cyber incidents or breaches in security could adversely affect us.

We rely on accounting, financial, operational, management and other information systems to conduct our operations. Our information systems are subject to damage or interruption from power outages, computer and telecommunication failures, computer viruses, security breaches, including malware and phishing, cyberattacks, natural disasters, usage errors by our employees and other related risks. Any cyber incident or attack or other disruption or failure in these information systems, or other systems or infrastructure upon which they rely, could adversely affect our ability to conduct our business and could have a material adverse effect on our business, prospects, liquidity, financial condition and results of operations. Furthermore, any failure or security breach of information systems or data could result in a violation of applicable privacy and other laws, significant legal and financial exposure, damage to our reputation or a loss of confidence in our security measures, which could harm our business and could have a material adverse effect on our business, prospects, liquidity, financial condition and results of operations. Although we have implemented systems and processes intended to secure our information systems, there can be no assurance that our efforts to maintain the security and integrity of our information systems will be effective or that future attempted security breaches or disruptions would not be successful or damaging.

We are subject to counterparty risks under our FIT price support schemes and PPAs.

As an IPP, we generate revenue from the sale of electricity primarily pursuant to FIT price support schemes or PPAs, which subject us to counterparty risks with respect to regulatory regimes. Relevant regulatory authorities may retroactively alter their FIT price support regimes in light of changing economic circumstances,

Changing industry conditions or for any number of other reasons. If the relevant government authorities, the local power grid companies or other counter parties or responsible parties do not perform their obligations under the FIT price support schemes and PPAs and we are unable to enforce our contractual rights, our results of operations and financial condition may be materially and adversely affected.

Restrictive covenants and undertakings under our project financing arrangements and loan arrangements may limit the manner in which we operate and an event of default under the loan may adversely affect our operations.

We obtain financing from financial institutions and fund investors globally, as well as financing lease companies in China. These financing arrangements contain certain restrictive covenants that limit our ability to, among other things, (i) dispose of or provide guarantees, pledges or mortgages on our operating assets in any manner that will increase risk to the lenders, (ii) repay shareholders loans or loans from our related parties, (iii) distribute dividends to shareholders, (iv) enter into other financial obligations to third parties, (v) transfer shares, (vi) make investments, and (vii) take part in any mergers or acquisitions. For more information, see “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources.” With our expansion into the downstream solar power projects business, we may continue to incur additional development loans, construction loans and project financing in connection with the solar power projects. Any breach by us of the various undertakings and covenants in our existing or future financing arrangements may give such lenders the right to demand immediate repayment of the outstanding loan amounts. We cannot assure you whether we will be subject to, or be able to fulfill, such undertakings in the future. Any failure to maintain any of the above covenants or undertakings could result in an acceleration of obligations under the facility agreements, which would have a material adverse effect on our business. In addition, the breach of any of the covenants and undertakings in any loan agreement may trigger the cross-default provisions in substantially all of our financing arrangements and/or the cross-acceleration provisions in some of those financing arrangements, thereby giving the lenders the right to accelerate our loan repayment obligations. As a result, we are limited in how we conduct our business and may be unable to engage in certain business activities or finance our future operations or capital needs.

Our advance payments to our suppliers expose us to the credit risk of such suppliers, which may adversely affect our financial condition and results of operations.

We typically made advance payments in connection with our procurement agreements for our solar power project business. To the extent that there is collateral and/or security attached to the advance payments, it is uncertain whether the advance payment can be repaid in full upon enforcement on such collateral or security. Any litigation arising out of disputes relating to such prepayments could subject us to potentially significant legal expenses, distract management from the day-to-day operation of our business and expose us to risks for not being able to collect damages awarded to us, all of which could materially and adversely affect our financial condition and results of operations.

We may not be able to recover such advance payments and would suffer further losses if any supplier fails to fulfill its delivery obligations under its supply contract, which would include failure to provide sufficient quantity of materials of such quality as specified in the contract. Claims by us for advance payments or other supplier obligations under the supply contracts in the future may potentially expose us to the credit risks of the suppliers and other market risks and therefore materially and adversely affect our financial condition and results of operations.

Future acquisitions, investments or alliances may have an adverse effect on our business.

If we are presented with appropriate opportunities, we may make additional investment into our solar power projects or acquire or invest in businesses or assets that are strategically important to our business or form alliances with key players in the solar power industry to further expand our business. Such acquisitions and investments could expose us to potential risks, including risks associated with the assimilation of new operations, technologies and personnel, unforeseen or hidden liabilities, the inability to generate sufficient revenue to offset the costs and expenses of acquisitions and potential loss of, or harm to, our relationships with employees, customers and suppliers as a result of the integration of new businesses. We may not be able to maintain a satisfactory relationship with our partners or handle other risks associated with future alliances, which could adversely affect our business and results of operations. Investments in new businesses may also divert our cash flow from servicing our debt and making necessary capital expenditures. In addition, we may incur impairment losses on our acquisitions and investments in equity securities.

Problems with the quality or performance of our developed solar power projects could result in increased costs, damage to our reputation and loss of revenues and market share.

In our project development business, substantially all of our purchasers may require us to provide retention money, performance bonds or bank guarantees for a certain period of time to secure the quality and performance of our developed solar power projects. During the covered period of time, if any significant defects or efficiency problem arises from sold solar power projects, it may incur additional costs to us for providing remedial measures, divert the attention of our personnel from our operations and cause the retention money to be deducted or forfeited. Similarly, if we fail to maintain the consistent quality of our other solar power projects via effective quality control, it could also cause significant damage to our market reputation, reduce our product sales and market share and adversely affect our results of operations and business.

Risks Related to Doing Business in International Markets

We conduct our business globally and are subject to global and local risks related to economic, regulatory, social and political uncertainties.

We conduct our IPP business and/or project development business in a number of countries, such as United States, Poland, Hungary, Spain, France, UK, Germany, Italy and China. Within the United States, our business footprints spread over many states and the idiosyncrasies of those states in terms of regulatory environment and legal framework may have a material impact on our local operations. Our business is therefore subject to diverse and constantly changing economic, regulatory, social and political conditions in the jurisdictions in which we operate.

Conducting business in the international markets exposes us to a number of risks globally and in each of the jurisdictions where we operate, including, without limitation:

- economic and financial conditions, including the stability of credit markets, foreign currency controls and fluctuations;

- the supply and prices of other energy products such as oil, coal and natural gas in the relevant jurisdictions;

- changes in government regulations, policies, tax, subsidies and incentives, particularly those concerning the electric utility industry and the solar industry;

- complex regulations in numerous jurisdictions, including political risks, risks of expropriation and nationalization of assets, potential losses due to civil unrests, acts of terrorism and war, regional and global political or military tensions, strained or altered foreign relations, and protectionism;

- compliance with local environmental, safety, health and other labor laws and regulations, which can be onerous and costly, as the magnitude, complexity and continuous amendments to the laws and regulations are difficult to predict and liabilities, costs, obligations and requirements associated with these laws and regulations can be substantial;

- dependence on governments, utility companies and other entities for electricity, water, telecommunications, transportation and other utilities or infrastructure needs;

- local corporate governance and other legal requirements;

- difficulties with local operating and market conditions, particularly regarding customs, taxation and labor; and

- failure of our contractual parties to honor their obligations to us, and potential disputes with clients, contractors, suppliers or local residents or communities.

To the extent that our business operations are affected by unexpected and adverse economic, regulatory, social and political conditions in the jurisdictions in which we have operations, we may experience project disruptions, loss of assets and personnel, and other indirect losses that could adversely affect our business, financial condition and results of operations.

We are subject to numerous laws and regulations at the national, regional and local levels of government in the areas where we do business. Any changes to these regulations and policies may present technical, regulatory and economic barriers to the purchase and use of solar projects and solar electricity, which may significantly reduce demand for our products and services or otherwise adversely affect our financial performance.

We conduct our business internationally and are subject to a variety of laws and regulations, some of which may conflict with each other and all of which are subject to change, including energy regulations, tax laws and regulations, environmental regulations, labor laws and other government requirements, approvals, permits and licenses.

In countries where we do business, the market for solar power projects and solar electricity is heavily influenced by national, state and local government regulations and policies concerning the electric utility industry, as well as policies disseminated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation, and could deter further investment in the research and development of alternative energy sources as well as customer purchases of solar power technology, which could result in a significant reduction in the potential demand for our solar power projects and solar electricity.

Changes in applicable energy laws or regulations, or in the interpretations of these laws and regulations, could result in increased compliance costs or the need for additional capital expenditures. If we fail to comply with these requirements, we could also be subject to civil or criminal liability and the imposition of fines. Further, national, regional or local regulations and policies could be changed to provide for new rate programs that undermine the economic returns for both new and existing projects by charging additional, non-negotiable fixed or demand charges or other fees or reductions in the number of projects allowed under net metering policies.

National, regional or local government energy policies, laws and regulations supporting the creation of wholesale energy markets are currently, and may continue to be, subject to challenges, modifications and restructuring proposals, which may result in limitations on the commercial strategies available to us for the sale of our power.

Regulatory changes in a jurisdiction where we are developing a project may make the continued development of the project infeasible or economically disadvantageous and any expenditure we have made to date on such project may be wholly or partially written off. Any of these changes could significantly increase the regulatory related compliance and other expenses incurred by the projects and could significantly reduce or entirely eliminate any potential revenues that can be generated by one or more of the projects or result in significant additional expenses to us, our off takers and customers, which could materially and adversely affect our business, financial condition, results of operations and cash flows.

We may also face regulatory risks imposed by various transmission providers and operators, including regional transmission operators and independent system operators, and their corresponding market rules. These regulations may contain provisions that limit access to the transmission grid or allocate scarce transmission capacity in a particular manner, which could materially and adversely affect our business, financial condition, results of operations and cash flows.

We are also subject to the Foreign Corrupt Practices Act of 1977, or the FCPA, and other anti-bribery and anti-money laundering laws in the United States and the countries in which we conduct our business. We face significant liabilities if we fail to comply with the FCPA and other anti-bribery and anti-money laundering laws. We may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. For example, in China, we enter into PPAs with local subsidiaries of the State Grid to sell our solar electricity. In other countries where we develop, acquire or sell solar projects, we need to obtain various approvals, permits and licenses from the local or national governments. We can be held liable for the illegal activities of our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize such activities. Any violation of the FCPA and other applicable anti-bribery laws and anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions, which could have a material adverse effect on our business, financial condition, cash flows and reputation. In addition, responding to any enforcement action may result in the diversion of management’s attention and resources, significant defense costs and other professional fees.

Turbulence in global financial markets and economies may adversely affect the solar industry, the demand for solar project products, and our operating results, financial condition. liquidity and profitability.

Demand for solar project products is influenced by macroeconomic factors, such as global economic conditions, the supply and the prices of other energy products, such as oil, coal and natural gas, as well as government regulations and policies concerning the public utility industry. A decrease in prices of fossil fuels, for example, could reduce demand for alternative forms of energy, such as solar power. We are also affected by changes in the solar power market and solar industry trends. We may be adversely affected by a volatile solar power market and industry conditions; in particular, the demand and prices for our solar power projects and electricity generated by our solar power projects may decline, which may reduce our revenues and profitability. On June 7, 2021 the NDRC announced that commencing from 2021, the DG projects deployed in commercial and industrial sites will not be entitled to any subsidiary from the Central Government. In addition, decreases in prices of other energies, such as oil, electricity and wind power, may also negatively affect the demand for solar power projects. The solar industry is also expected to continue to be highly competitive due to more new entrants to the solar project market and upstream solar manufacturing players moving to the downstream project business. If the supply of solar projects grows faster than demand, and if governments continue to reduce financial support for the solar industry, impose trade barriers or impose curtailments in the solar industry, demand for our projects, as well as our average selling price, could be materially and adversely affected which may reduce our revenues and profitability.

There may still be substantial uncertainties in the global credit and lending environment. If the demand for solar power projects deteriorates due to these macroeconomic factors or solar market and industry trends, our liquidity and financial condition, including our ability to refinance maturing liabilities and access the capital markets to meet liquidity needs, and the liquidity and financial condition of our customers may be adversely affected. Such development would delay and lengthen our cash collection cycles and negatively affect our operating results. Additionally, our ADS price may decrease if investors have concerns that our business, financial condition and results of operations will be negatively affected by a global economic downturn.

The solar market is still in development and the extent of acceptance of solar power projects remains uncertain. Historical and current market data on the solar power industry are not as readily available as those for established industries where trends can be assessed more reliably from data gathered over a longer period of time. In addition, demand for solar power projects has not developed as fast as many market players have anticipated although the solar industry continues to experience lower costs, improved efficiency and higher electricity output. Many factors may affect the viability of widespread adoption of solar power projects technology and demand for solar power projects, including:

- cost-effectiveness, performance and reliability of solar power projects compared to conventional and other renewable energy sources and products; and the availability of grid capacity to dispatch power generated from solar power projects;
- success of other alternative energy generation technologies, such as wind power, hydroelectric power and biomass;
- environmental concerns related to solar power projects and other local permit issues;
- public perceptions of the direct and indirect benefits of adopting renewable energy technology;
- fluctuations in economic and market conditions that affect the viability of conventional and other renewable energy sources, such as increases or decreases in the prices of oil and other fossil fuels or decreases in capital expenditures by end-users of solar power projects;
- fluctuations in interest rates, which may affect the effective prices paid for solar power projects by end-users who rely on long-term loans to finance their purchases;
- the cost of capital and availability of credit, loans and other forms of financing for solar power projects;
- the availability of government subsidies and incentives to support the development of the solar industry;
- regulations and policies governing the electric utility industry that may present technical, regulatory and economic barriers to the purchase and use of solar energy; and
- deregulation of the electric power industry and the broader energy industry.

If solar power projects technology is proven not viable for widespread adoption or the demand for solar power projects fails to develop sufficiently, our revenues may suffer and we may be unable to sustain our profitability.

As a British Virgin Islands corporation, our business could be harmed due to EU Finance ministers' jurisdictional ratings.

EU Finance ministers rate jurisdictions for tax rates and tax transparency, governance and real economic activity. Countries that are viewed by such finance ministers as not adequately cooperating, including by not implementing sufficient standards in respect of the foregoing, may be put on a "grey list" or a "blacklist." We are a British Virgin Islands corporation and as of December 31, 2022, the British Virgin Islands remained "white-listed" by the EU. However, on February 14, 2023, the British Virgin Islands, among other jurisdictions, were placed on the EU list of non-cooperative jurisdictions for tax purposes. The British Virgin Islands were blacklisted due to non-compliance with the Organisation For Economic Co-operation and Development's standards on exchange of information following a review which took place during the period from 2016-2020 and which did not take into account (a) the necessary focus on the extensive reconstruction of the jurisdiction following Hurricane Irma in September 2017 nor (b) the more recent comprehensive changes to the corporate and other legislation in the British Virgin Islands designed to implement the required standards. Although we understand that the British Virgin Islands are committed to full cooperation with the EU and have secured a supplementary review which is due to take place in August 2023, following which it expects to be taken off the "blacklist" in October 2023, subject to review by the EU Council, there is no guarantee that such a reclassification will occur.

If the British Virgin Islands are not removed from the list and sanctions or other financial, tax or regulatory measures were applied by European Member States to countries on the list, our business could be harmed. Further, our leverage in negotiations with future business partners may be negatively impacted and we may experience difficulties with banking and financing in the future.

EU member states have agreed upon a set of measures, which they can choose to apply against grey- or blacklisted countries, including monitoring and audits, withholding taxes, special documentation requirements and anti-abuse provisions. The European Commission has stated it will continue to support member states' efforts to develop a more coordinated approach to sanctions for the listed countries. EU legislation prohibits EU funds from being channeled or transited through entities in countries on the blacklist. Other jurisdictions in which we operate could also be put on the blacklist in the future.

Our business, prospects, financial condition, results of operations and cash flows may be adversely affected by developments that are beyond our control in other countries.

Our business, financial condition, results of operations and cash flows depend partially on the level of economic activity, government and foreign exchange policies and political and economic developments in our other principal targeted international markets outside of China, such as the United States, Poland, Hungary, Spain, France, UK, Germany and Italy. Our business, revenues and prospects, as well as our financial condition, results of operations, cash flows and the market price of our ADSs, may also be materially and adversely affected by developments in international markets relating to inflation, interest rates, currency fluctuations, government subsidies, taxation, expropriation, as well as any protectionism, exchange control regulations, price and wage controls, social instability or other political, economic or diplomatic developments. We have no control over these conditions and developments which could adversely affect us and our business, financial condition, results of operations and cash flows or the price or market of our ADSs. See additional risks in "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business."

Fluctuations in exchange rates may have a material adverse effect on your investment.

Our sales in China are denominated in Renminbi, and our international sales are generally denominated in U.S. dollars, Euros, British pounds and other local currencies. Our costs and capital expenditures are largely denominated in Renminbi and foreign currencies, including U.S. dollars and Euros. Fluctuations in exchange rates could affect our net profit margins and could result in foreign exchange and operating gains or losses. In addition, our foreign currency exchange losses may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currencies.

The value of the Renminbi against the U.S. dollar, the Euros, British pounds and other currencies is affected by, among other things, changes in China's political and economic conditions and China's foreign exchange policies. In recent years, the exchange rates between Renminbi and U.S. dollars and other foreign currency have fluctuated, depending on the market supply and demand with reference to a basket of currencies. It is difficult to predict how long this current situation may last and when and how it may change again.

In addition, although we have not received any dividend from our operating subsidiaries in China since 2008, we may receive such dividends in the future. Any significant depreciation of the Renminbi against the U.S. dollar may have a material adverse effect on our revenues and financial condition, and the value of, and any dividends payable on, our shares. For example, to the extent that we need to convert U.S. dollars into Renminbi for our operations, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the Renminbi amount we receive from the conversion. Conversely, if we decide to convert our Renminbi into U.S. dollars for the purpose of making payments for dividends on our shares or for other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollar amount available to us. As a proportion of our revenue is paid to us in Euros and British pounds, fluctuation between the Euros and the Renminbi as well as British pounds and the Renminbi may also have a material effect on our results of operations.

Risks Related to Our ADSs and Shares

The market price for our ADSs may be volatile

The market price for our ADSs has been highly volatile and subject to wide fluctuations that are not related to the operating performance of the Company. During the period from January 29, 2008, the first day on which our ADSs were listed on the NYSE, until March 13, 2024, the market price of our ADSs ranged from $0.85 to $147.4 per ADS, after giving effect to the ADS Ratio Change. In more recent years, the market price of our ADSs was from $4.52 (closing price) as of December 31, 2022 to $2.73 (closing price) as of December 31, 2023. We cannot assure you that our share prices will not suffer from a dramatic drop in the future. If that happens, both our business operations and your interests may be adversely and materially affected. In addition, the market price of our ADSs may continue to be volatile and subject to wide fluctuations in response to a wide variety of factors including the following:

- actual or anticipated fluctuations in our operating results;
- our quarterly or annual earnings, or those of other companies in our industry;
- changes in financial estimates by securities research analysts or our ability to meet those estimates;
- changes in the economic performance or market valuations of other solar power companies;
- changes in investors’ and analysts’ perceptions of our industry, business or related industries;
- changes in accounting standards, policies, guidance, interpretations or principles;
- announcements by us or our competitors of new products, patent litigation, issuance of patents, acquisitions, dispositions, strategic partnerships, joint ventures or capital commitments;
- technological breakthroughs in the solar and other renewable energy industries;
- reduction, modification, delay or elimination of government subsidies and other economic incentives for the solar power industry;
- regulatory developments in our target markets affecting us, our customers or our competitors;
- potential litigation or administrative investigations;
- addition or departure of key personnel;
- fluctuations of exchange rates between the CNY and U.S. dollar, Euro or other foreign currencies;
- sales or anticipated sales of additional ADSs;
- release of lock-up or other transfer restrictions on our outstanding ADSs or shares or sales of additional ADSs;

- the operating and stock price performance of other comparable companies;
- general market conditions, fluctuations or other developments affecting us or our industry;
- general economic conditions and conditions in the credit markets;
- our compliance with NYSE listing standards; and
- potential litigation or regulatory investigations.

You should note that the stock prices of solar power companies have experienced wide fluctuations. Such wide market fluctuations may adversely affect the market price of our ADSs. The market price of the ADSs will likely continue to fluctuate in response to the factors discussed above, many of which are beyond our control.

In addition, the securities market has from time to time experienced significant price and volume fluctuations that are not related to the operating performance of particular companies. Such fluctuations have occurred since 2008 and have affected the trading price of our ADSs. Continued market fluctuations may materially and adversely affect the market price of our ADSs.

The NYSE may delist our ADSs from trading on its exchange which could limit investors' ability to make transactions and subject us to additional trading restrictions.

Our ADSs are currently listed on the New York Stock Exchange ("NYSE"). If the NYSE were to delist our ADSs from trading on its exchange, we could face significant material adverse consequences, including:

- a limited availability of market quotations;
- reduced liquidity;
- a determination that shares of our common stock are "penny stock" which will require brokers trading in our shares to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for our shares;
- a limited amount of news and analyst coverage; and
- a decreased ability to issue additional shares or obtain additional financing in the future.

On April 17, 2024, we received a notice from the NYSE indicating that the we were not in compliance with the NYSE's continued listing requirements under the timely filing criteria outlined in Section 802.01E of the NYSE Listed Company Manual as a result of our failure to timely file our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. If we are unable to regain and maintain compliance with the NYSE listed company rules, the market price of our securities could decline significantly.

We may need additional capital and may sell additional ADSs or other equity, equity-linked or debt securities or incur indebtedness, which could result in additional dilution to our shareholders or increase our debt service obligations.

We require a significant amount of cash to fund our operations due to changed business conditions or other future developments, including any investments or acquisitions we may decide to pursue, and repay our outstanding debt. We may issue additional equity, equity-linked or debt securities, or obtain a credit facility for a number of reasons, including to finance our operations and business strategy, to satisfy our obligations for the repayment of existing indebtedness, or for other reasons. Any future issuances of equity securities or equity-linked securities could further dilute the interests of our shareholders and may materially adversely affect the price of our ADSs. We cannot predict the timing or size of any future issuances or sales of equity, equity-linked or debt securities, or the effect, if any, that such issuances or sales may have on the market price of our ADSs. We also cannot be sure that we will not need to raise additional capital in the future as a result of continuing or worsening economic conditions or otherwise. Market conditions could require us to accept less favorable terms for the issuance of our securities in the future, which may result in the issuance of securities that have rights, preferences and privileges that are senior to those of the shares and ADSs. The incurrence of indebtedness would result in increased debt service obligations and could result in operating and financing covenants that would restrict our operations. We cannot assure you that financing will be available in amounts or on terms acceptable to us, if at all.

Future issuance of shares or ADSs may adversely affect the price of the ADSs.

We may from time to time access the capital market to raise capital. In addition, we have reserved our shares and ADSs for the holders' exercise of our share options which are granted pursuant to our 2007 share incentive plan. All ADSs sold in our initial public offering and the follow-on offerings are freely transferable without restriction or additional registration under the Securities Act of 1933, as amended, or the Securities Act. The remaining ADSs outstanding after the initial public offering and the follow-on offerings are currently available for sale, subject to volume and other restrictions as applicable under Rule 144 and Rule 701 of the Securities Act. The issuance and sale of a substantial number of shares or ADSs, or the perception that such issuances and sales may occur, could adversely affect the market price of the shares or ADSs and impair our ability to raise capital through the sale of additional equity securities.

The depository for our ADSs may give us a discretionary proxy to vote our shares underlying your ADSs if you do not give voting instructions, which could adversely affect your interests.

Under the deposit agreement for the ADSs, if we asked for your instructions but the depositary does not receive your instructions by the cutoff date it sets, the depositary will give us a discretionary proxy to vote the shares underlying your ADSs as to all matters at the shareholders' meeting unless:

- we instructed the depositary we do not wish to receive a discretionary proxy;
- we informed the depositary that there is substantial opposition to the particular matter; or
- the particular matter would have a material adverse impact on shareholders.

The effect of this discretionary proxy is that if you do not give voting instructions, you cannot prevent the shares underlying your ADSs from being voted, except in the circumstances described above. This arrangement may make it more difficult for shareholders to influence the management of our company. Holders of our shares are not subject to this discretionary proxy.

You may be subject to limitations on transfer of your ADSs.

Your ADSs represented by the ADRs are transferable on the books of the depositary. However, the depositary may close its transfer books from time to time when it deems that it is expedient for the performance of its duties. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any time if we or the depositary deem it advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

We may be a passive foreign investment company for U.S. Federal income tax purposes, which could result in adverse U.S. Federal income tax consequences to U.S. Holders of our ADSs or shares.

We will be a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for any taxable year if, applying applicable look-through rules, either (i) at least 75% of our gross income for such year is passive income or (ii) at least 50% of the value of our assets (generally determined based on an average of the quarterly values of the assets) during such year is attributable to assets that produce or are held for the production of passive income. A separate determination must be made after the close of each taxable year as to whether we were a PFIC for that year. Although the application of the PFIC rules is unclear in many important respects and the required calculations yield results very close to the line, based on the market price of our ADSs, the value of our assets, and the composition of our income and assets, we do not believe that we were a PFIC for our taxable year ended December 31, 2022, but there can be no assurances in this regard. The determination of PFIC status 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. Accordingly, we cannot guarantee that the U.S. Internal Revenue Service, or IRS, will agree with any positions that we take or that we will not be treated as a PFIC for our taxable year ended December 31, 2022, the current taxable year or any future taxable year.

While we do not expect to be or become a PFIC, no assurance can be given in this regard because the determination of whether we are or will become a PFIC for any taxable year is a fact-intensive inquiry made on an annual basis that depends, in part, upon the composition and classification of our income and assets. Fluctuations in the market prices of our ADSs and ordinary shares may cause us to be or become a PFIC for the current or subsequent taxable years because the value of our assets for the purpose of the asset test, may be determined by reference to the market price of our ADSs from time to time (which may be volatile). The composition of our income and assets may also be affected by how, and how quickly, we use our liquid assets.

We face a number of risks involving EMCs, PPAs and project-level financing arrangements, including failure or delay in entering into PPAs, defaults by counterparties and contingent contractual terms such as price adjustment, termination, buy-out, acceleration or other clauses, all of which could materially and adversely affect our business, financial condition, results of operations and cash flows.

We may not be able to enter into PPAs for our solar power projects due to intense competition, increased supply of electricity from other sources, reduction in retail electricity price, changes in government policies or other factors. There may be a limited pool of potential purchasers in some jurisdictions for electricity generated by our solar power plants due to regulatory policies. The willingness of purchasers to purchase electricity from an IPP like us may be based on a number of factors and not solely on pricing and surety of supply. If we cannot enter into PPAs on terms favorable to us, or at all, it would negatively impact our revenue and our decisions regarding the development of additional power plants. We may experience delays in entering into PPAs for some of our solar power projects or may not be able to replace an expiring PPA with a contract on equivalent terms and conditions, or otherwise at prices that permit operation of the related facility on a profitable basis. Any delay in entering into PPAs may adversely affect our cash flows generated by such projects. If we are unable to replace an expiring PPA with an acceptable new PPA, the affected site may temporarily or permanently cease operations, which could materially and adversely affect our financial condition, results of operations and cash flows.

Substantially all of the electricity generated by our solar power projects will be sold under long-term PPAs with government end users and a few to licensed suppliers or commercial and industrial users. We expect our future projects will also have long-term public PPAs or similar offtake arrangements such as tariff programs but the portion under licensed suppliers or commercial and industrial users may increase due to our focus in DG projects, and also due to the falling system cost which makes solar energy more accessible to non-State Grid users such as commercial and industrial users. If any of the purchasers of power under these contracts are unable or unwilling to fulfill their related contractual obligations, they refuse to accept delivery of power delivered thereunder, or they otherwise terminate such agreements prior to the expiration thereof, our assets, liabilities, business, financial condition, 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 PPAs are subject to price adjustments over time or to inflation and some of our long-term PPAs do not include inflation-based price increases or other price adjustment clauses. Certain of the PPAs for our projects and those for projects that we have acquired and may acquire in the future contain or may contain provisions that allow the offtake purchaser to terminate or buy out the project or require us to pay liquidated damages upon the occurrence of certain events. If the price under any of our PPAs is reduced below a level that makes a project economically viable, or if the termination, buy-out or liquidated damages provisions are exercised, our financial condition, results of operations and cash flows could be materially and adversely affected.

In addition, certain of the project-level financing arrangements for projects allow, and certain of the projects that we may acquire in the future may allow, the lenders or investors to accelerate the repayment of the financing arrangement in the event that a PPA is terminated or if certain operating thresholds or performance measures are not achieved within specified time periods if we do not timely notify the lenders and investors of such event and fail to provide any required additional guarantee. Certain of our PPAs and project-level 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 of our PPAs or the acceleration of the maturity of any of our financing arrangements as a result of a change-in-control event could have a material adverse effect on our financial condition, results of operations and cash flows.

Before we can supply the electricity to our power purchasers, we are required to enter into the grid connection and dispatch agreements with the grid providers and energy management contracts, or EMCs, including PPAs with the power purchasers. If we are unable to renew the agreements upon expiration, we may not be able to replace them with agreements with equivalent terms and conditions, or at all, or we may experience significant delays or costs related to securing replacements. If we are unable to agree with the grid providers on a new grid connection and dispatch agreements, the affected solar power project may temporarily or permanently cease operations, and we may not be able to operate the project beyond the initial term of the EMCs and PPAs. In addition, if, for any reason, the grid providers are unable or unwilling to fulfill their related contractual obligations or if they refuse to accept delivery of electricity delivered thereunder or otherwise terminate such agreements prior to the expiration thereof, our business, financial condition, results of operations and cash flow could be materially adversely affected.

Volatility in the prices of solar power projects may cause significant fluctuations or declines in our revenue.

The prices of project SPVs and solar power projects are primarily based on the electricity revenue the projects can generate and the rate of returns. The electricity price may vary. Investors may compare the rate of returns generated from solar power projects with the rate of returns in the financing or investment markets. Any significant volatility or decreases in the electricity price or rate of return may decrease the prices of solar power projects, which may subject us to significant fluctuations or declines in our revenue.

If we fail to maintain an effective system of internal controls, we may be unable to accurately report our financial results or prevent fraud and investor confidence and the market price of our ADSs may be adversely impacted.

We are subject to reporting obligations under the U.S. securities laws. The Securities and Exchange Commission, or the SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring every public company to include a management report on the effectiveness of such company's internal control over financial reporting in its annual report.

A system of financial controls and procedures is necessary to ensure that information about our financial results is recorded, processed, summarized, and reported in an accurate and timely fashion. Effective internal control over financial reporting is necessary for us to provide reliable financial reports and prevent fraud. If we cannot disclose required information or provide reliable financial reports, we may not be able to manage our business as effectively as we would if an effective control environment existed, and our business and reputation may be harmed.

In connection with management's assessment of the effectiveness of our internal control over financial reporting for the year ended December 31, 2023, our management identified material weaknesses in our internal control over financial reporting that as of December 31, 2023, our disclosure controls and procedures and our internal control over financial reporting were ineffective.

The material weaknesses identified in our internal control over financial reporting as of December 31, 2023 related to the ineffective review and approval procedures over preparation of financial reporting at certain of our subsidiary locations. In addition, we noted certain instances where some historical accounting supporting documents were not readily available. We noted that the Company improperly offset refundable deposits on leases against lease liabilities in the consolidated financial statements presentation related to Accounting Standards Codification 842, Leases ("ASC 842"), in which refundable deposits on leases should be reflected as an asset on the consolidated balance sheet. We concluded that the failure to timely identify such accounting errors constituted material weakness as defined in the SEC regulations. As such, management determined that our disclosure controls and procedures were not effective as of December 31, 2023.

We have limited insurance coverage and may incur losses resulting from product liability claims or business interruptions.

We currently maintain property insurance and machine damage insurance for all the projects we operate, and director and officer liability insurance. We may also maintain other insurance, including commercial general liability insurance, public liability insurance, construction insurance, and builder risks insurance depending on our financing needs. We do not maintain any insurance for business interruption. Any business disruption or natural disaster could result in substantial costs and a diversion of resources, which would have an adverse effect on our business and results of operations. We are also exposed to risks associated with product liability claims if the use of our solar power projects results in injury. We cannot predict whether product liability claims will be brought against us in the future or the effect of any resulting negative publicity on our business. The successful assertion of product liability claims against us could result in potentially significant monetary damages.

You may face difficulties in protecting your interests, and your ability to protect your rights through the U.S. federal courts may be limited, because we are incorporated under British Virgin Islands law, conduct some of our operations in China and Europe, and some of our officers and directors reside outside the United States.

We are incorporated in the British Virgin Islands and conduct substantially all of our operations in China, United States and Europe through our subsidiaries. Some of our directors and officers reside outside of the United States, and some or all of the assets of those persons are located outside of the United States. As a result, it may be difficult or impossible for you to bring an original action against us or against these individuals in a British Virgin Islands or China court in the event that you believe that your rights have been infringed under the U.S. federal securities laws or otherwise. It may also be difficult for you to enforce in U.S. courts judgments obtained in U.S. courts based on the civil liability provisions of the U.S. federal securities laws against us and our officers and directors. In addition, there is uncertainty as to whether the courts of the British Virgin Islands or China would recognize or enforce judgments of U.S. courts against us or such persons predicated upon the civil liability provisions of the securities laws of the United States or any state. There is no statutory recognition in the British Virgin Islands of judgments obtained in the United States, although the courts of the British Virgin Islands will generally recognize and enforce a non-penal judgment of a foreign court of competent jurisdiction without retrial on the merits. It is uncertain whether such British Virgin Islands or China courts would be competent to hear original actions brought in the British Virgin Islands or China against us or such persons predicated upon the securities laws of the United States or any state.

Our corporate affairs are governed by our memorandum and articles of association and by the BVI Business Companies Act, 2004 and common law of the British Virgin Islands. The rights of shareholders to take legal action against our directors and us, actions by minority shareholders and the fiduciary responsibilities of our directors to us under British Virgin Islands law are to a large extent governed by the common law of the British Virgin Islands. The common law of the British Virgin Islands is derived in part from comparatively limited judicial precedent in the British Virgin Islands as well as from the common law in England and other countries in the Commonwealth, which has persuasive, but not binding, authority on a court in the British Virgin Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under British Virgin Islands law are not as clearly established as they would be under statutes or judicial precedents in the United States. In particular, the British Virgin Islands has no securities laws as compared to the United States and provides significantly less protection to investors. In addition, British Virgin Islands companies may not have standing to initiate a shareholder derivative action before the federal courts of the United States.

We conduct a large portion of our business through our subsidiaries incorporated in China. These subsidiaries are generally subject to laws and regulations applicable to foreign investment in China. The PRC legal system is based on written statutes. Prior court decisions may be cited for reference but have limited precedential value. The PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involve uncertainties, which may limit legal protections available. In addition, any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention, which could adversely affect our business.

As a result of all of the above, our public shareholders may have more difficulties in protecting their interests through actions against our management, directors or major shareholders than would shareholders of a corporation incorporated in a jurisdiction in the United States.

Our existing principal shareholders have substantial influence over our Company, and their interests may not be aligned with the interests of our other shareholders.

Mr. Himanshu H. Shah, our chairman of the Board, beneficially owned about 34.15% of our shares. Mr. Shah serves as President and Chief Investment Officer of Shah Capital Management, Inc., which beneficially owned 34.02% of our shares. Shah Capital Management, Inc. serves as investment adviser to Shah Capital Opportunity Fund LP, which beneficially owned 33.34% of our shares. Additionally, under the Amended and Restated Investor Rights Agreement, Shah Capital Opportunity Fund LP has rights to nominate three designees for election and/or appointment to the Board. As such, Mr. Shah has substantial influence over our business, including decisions regarding mergers, consolidations and the sale of all or substantially all of our assets, 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 shareholders of an opportunity to receive a premium for their shares as part of a sale of our company and might reduce the price of our ADSs. For example, holders of a majority of our shares entitled to vote in a duly convened and constituted shareholders' meeting may pass a shareholders' resolution to permit the issuance of preferred shares in one or more series and to fix the powers and rights of these shares, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our existing shares. Preferred shares could thus be issued with terms that would delay or prevent a change in control. These actions may be taken even if they are opposed by our other shareholders and holders of our ADSs.

As a holder of our ADSs, you may not have the same voting rights as holders of our shares, may not receive voting materials in time to be able to exercise your right to vote and the depository may give us a discretionary proxy to vote our shares underlying your ADSs if you do not give voting instructions, which could adversely affect your interests.

ADS holders do not have the same rights as our shareholders and may only exercise voting rights with respect to underlying shares in accordance with the deposit agreement. When a general meeting is convened, ADS holders may not receive sufficient notice of a shareholders' meeting to withdraw their shares and cast their vote. In addition, the depositary and its agents may not be able to send voting instructions to ADS holders or carry out ADS holders' voting instructions in a timely manner. We will make all reasonable efforts to cause the depositary to extend voting rights to ADS holders in a timely manner. Furthermore, the depositary and its agents will not be responsible for any failure to carry out any instructions to vote, the how a vote is cast, or the effect of any such vote. As a result, you may not be able to exercise your right to vote. In addition, ADS holders are not able to call a shareholder meeting.

Further, under the deposit agreement, if we asked for the ADS holder's instructions but the depositary does not receive instructions by its cutoff date, the depositary will give us a discretionary proxy to vote the underlying shares as to all matters at the shareholders' meeting unless (i) we instructed the depositary we do not wish to receive a discretionary proxy; (ii) we informed the depositary that there is substantial opposition to the particular matter; or (iii) the particular matter would have a material adverse impact on shareholders. If you do not give voting instructions, you cannot prevent the shares underlying your ADSs from being voted, except in the circumstances described above. This arrangement may make it more difficult for shareholders to influence the management of our company. Holders of our shares are not subject to this discretionary proxy.

You may not be able to participate in rights offerings and may experience dilution of your holdings as a result.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make rights available to ADS holders in the United States 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. Under the ADS deposit agreement, the depositary will not offer those rights available to ADS holders unless the distribution to ADS holders of both the rights and any related securities are either registered under the Securities Act or exempt from registration under the Securities Act with respect to all ADS holders. We are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to cause such a registration statement to be declared effective. In addition, we may not be able to take advantage of any exemptions from registration under the Securities Act. If we conduct any future rights offering, the depositary may not make such rights available to ADS holders or may dispose of such rights and make the net proceeds available to such holders. As a result, ADS holders may be unable to participate in our rights offerings and may experience dilution in their holdings.

If a United States person is treated as owning at least 10% of our ADSs or shares, such person may be subject to adverse U.S. 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 ADSs or ordinary shares, such person may be treated as a "United States shareholder" with respect to each "controlled foreign corporation" in the Company's group. Where the Company's group includes one or more U.S. subsidiaries, in certain circumstances we could be treated as a controlled foreign corporation and certain of our non-U.S. subsidiaries could be treated as controlled foreign corporations (regardless of whether we are or are not treated as a controlled foreign corporation). A United States shareholder of a controlled foreign corporation may be required to annually report and include in its U.S. taxable income its pro rata share of "Subpart F income," "global intangible low-taxed income" and investments in U.S. property by controlled foreign corporations, whether or not we make any distributions. An individual that is a United States shareholder with respect to a controlled foreign corporation generally would not be allowed certain tax deductions or foreign tax credits that would be allowed to a United States shareholder that is a U.S. corporation. 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 U.S. federal income tax return for the year for which reporting was due. We do not intend to monitor whether we or any of our non-U.S. subsidiaries are treated as a controlled foreign corporation or whether any investor is treated as a United States shareholder with respect to us or any of our subsidiaries or to furnish to any United States shareholders information that may be necessary to comply with the aforementioned reporting and tax paying obligations. A United States investor should consult its own advisor regarding the potential application of these rules in its particular circumstances.

Because we have ceased to qualify as a foreign private issuer, we are required to comply fully with the reporting requirements of the Exchange Act applicable to U.S. domestic issuers, and we will incur significant additional legal, accounting, and other expenses that we would not incur as a foreign private issuer.

We are no longer a foreign private issuer and are no longer exempt from rules under the Exchange Act that are applicable to U.S. domestic public companies, including (i) sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act; (ii) sections of the Exchange Act requiring insiders to file public reports of their share ownership and trading activities and liability for insiders who profit from trades made in a short period of time; (iii) rules under the Exchange Act requiring quarterly reports on Form 10-Q and annual reports on Form 10-K; and (iv) Regulation FD, which is intended to prevent issuers from making selective disclosures of material information. As a result, we will incur significant additional legal, accounting, and other expenses that we would not incur as a foreign private issuer.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

For purposes of Item 106 of Regulation S-K, “cybersecurity threat” means any potential unauthorized occurrence on or conducted through a company’s information systems that may result in adverse effects on the confidentiality, integrity or availability of a company’s information systems or any information residing therein.

A “cybersecurity incident” means an unauthorized occurrence, or a series of related unauthorized occurrences, on or conducted through a company’s information systems that jeopardizes the confidentiality, integrity or availability of a company’s information systems or any information residing therein.

The term “information systems” means electronic information resources, owned or used by the company, including physical or virtual infrastructure controlled by such information resources, or components thereof, organized for the collection, processing, maintenance, use, sharing, dissemination or disposition of the company’s information to maintain or support the company’s operations.

The Company’s Board of Directors (the “Board”) recognizes the critical importance of maintaining the trust and confidence of our customers, clients, business partners and employees. The Board is actively involved in oversight of the Company’s risk management program, and cybersecurity represents an important component of the Company’s overall approach to enterprise risk management (“ERM”). The Company’s cybersecurity policies, standards, processes, and practices are fully integrated into the Company’s ERM program and are based on recognized frameworks established by the National Institute of Standards and Technology, the International Organization for Standardization and other applicable industry standards. In general, the Company seeks to address cybersecurity risks through a comprehensive, cross-functional approach that is focused on preserving the confidentiality, security and availability of the information that the Company collects and stores by identifying, preventing and mitigating cybersecurity threats and effectively responding to cybersecurity incidents when they occur.

Risk Management and Strategy

As one of the critical elements of the Company’s overall ERM approach, the Company’s cybersecurity program is focused on the following key areas:

Governance: As discussed in more detail under the heading “Governance,” The Board’s oversight of cybersecurity risk management is supported by the Risk Management Committee of the Board (the “Risk Management Committee”), which regularly interacts with the Company’s ERM function, other members of management and relevant management committees and councils, including management’s Cybersecurity Council.

Collaborative Approach: The Company has implemented a comprehensive, cross-functional approach to identifying, preventing and mitigating cybersecurity threats and incidents, while also implementing controls and procedures that provide for the prompt escalation of certain cybersecurity incidents so that decisions regarding the public disclosure and reporting of such incidents can be made by management in a timely manner.

Technical Safeguards: The Company deploys technical safeguards that are designed to protect the Company's information systems from cybersecurity threats, including firewalls, intrusion prevention and detection systems, anti-malware functionality and access controls, which are evaluated and improved through vulnerability assessments and cybersecurity threat intelligence.

Incident Response and Recovery Planning: The Company has established and maintains comprehensive incident response and recovery plans that fully address the Company's response to a cybersecurity incident, and such plans are tested and evaluated on a regular basis.

Third-Party Risk Management: The Company maintains a comprehensive, risk-based approach to identifying and overseeing cybersecurity risks presented by third parties, including vendors, service providers and other external users of the Company's systems, as well as the systems of third parties that could adversely impact our business in the event of a cybersecurity incident affecting those third-party systems.

Education and Awareness: The Company provides regular, mandatory training for personnel regarding cybersecurity threats as a means to equip the Company's personnel with effective tools to address cybersecurity threats, and to communicate the Company's evolving information security policies, standards, processes and practices.

The Company engages in the periodic assessment and testing of the Company's policies, standards, processes and practices that are designed to address cybersecurity threats and incidents. These efforts include a wide range of activities, including audits, assessments, tabletop exercises, threat modeling, vulnerability testing and other exercises focused on evaluating the effectiveness of our cybersecurity measures and planning. The Company regularly engages third parties to perform assessments on our cybersecurity measures, including information security maturity assessments, audits and independent reviews of our information security control environment and operating effectiveness. The results of such assessments, audits and reviews are reported to the Risk Management Committee and the Board, and the Company adjusts its cybersecurity policies, standards, processes and practices as necessary based on the information provided by these assessments, audits and reviews.

Governance

The Board, in coordination with the Risk Management Committee, oversees the Company's ERM process, including the management of risks arising from cybersecurity threats. The Board and the Risk Management Committee each receive regular presentations and reports on cybersecurity risks, which address a wide range of topics including recent developments, evolving standards, vulnerability assessments, third-party and independent reviews, the threat environment, technological trends and information security considerations arising with respect to the Company's peers and third parties. The Board and the Risk Management Committee also receive prompt and timely information regarding any cybersecurity incident that meets established reporting thresholds, as well as ongoing updates regarding any such incident until it has been addressed. On an annual basis, the Board and the Risk Management Committee discuss the Company's approach to cybersecurity risk management with the members of the Cybersecurity Council, which includes the Company's Information Technology Engineer ("IT Engineer").

The IT Engineer, in coordination with the Cybersecurity Council, which includes our Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO") and Compliance Director works collaboratively across the Company to implement a program designed to protect the Company's information systems from cybersecurity threats and to promptly respond to any cybersecurity incidents in accordance with the Company's incident response and recovery plans. To facilitate the success of the Company's cybersecurity risk management program, multidisciplinary teams throughout the Company are deployed to address cybersecurity threats and to respond to cybersecurity incidents. Through ongoing communications with these teams, the IT Engineer and the Cybersecurity Council monitor the prevention, detection, mitigation and remediation of cybersecurity threats and incidents in real time and report such threats and incidents to the Risk Management Committee when appropriate.

The Company's IT Engineer, CEO, CFO and Compliance Director each hold undergraduate and graduate degrees in their respective fields, and each have over 25 years of experience managing risks at the Company and at similar companies, including risks arising from cybersecurity threats.

Previous cybersecurity incidents have not materially affected us, including our business strategy, results of operations or financial condition. However, risks from cybersecurity threats could harm our business and could have a material adverse effect on our business, prospects, liquidity, financial condition and results of operations. See "Information system failures, cyber incidents or breaches in security could adversely affect us" under Item 1A Risk Factors for a discussion of cybersecurity risks.

Item 2. Properties

Our principal executive offices are located at 100 First Stamford Place, Suite 302, Stamford, CT 06902, U.S.A. Our registered office is located at the offices of Harneys Corporate Services Limited, Craigmuir Chambers, P.O. Box 71, Road Town, Tortola, VG1110, British Virgin Islands. Our agent for service of process in the United States is CT Corporation System, located at 111 Eighth Avenue, New York, New York 10011. As of December 31, 2023, we conduct our business primarily through the following subsidiaries, offices, and registered business entities:

British Virgin Islands (BVI):

- **ReneSola Investment Management Ltd.:** Our wholly owned subsidiary incorporated in the British Virgin Islands in December 2014 to engage in investments in the solar industry, as well as holding our solar power projects;

Luxembourg:

- **RE PV S.à r.l.:** A joint venture subsidiary with Eiffel Energy Transition Fund S.L.P incorporated in Luxembourg in March 2021 to conduct solar power project development business;
- **Emeren New Energy S.à r.l.:** Our wholly owned subsidiary incorporated in Luxembourg in March 2012 to engage in trading and investments in the solar industry, as well as holding our solar power projects in Europe and Canada;
- **Luxembourg Office Location:** 16A, avenue de la liberte, L-1930, Luxembourg;

United States of America (USA):

- **Emeren US, LLC:** Our wholly owned subsidiary incorporated in the United States to engage in trading and investments in the solar industry, as well as holding our solar power projects in the United States of America;
- **Stamford, Connecticut Office Location:** 100 First Stamford Place, Suite 302, Stamford, Connecticut, 06902;
- **Pleasanton, California Office Location:** 5000 Hopyard Road, Suite 302, Pleasanton, California, 94588;

Canada:

- **Emeren Power Canada.:** Our wholly owned subsidiary incorporated in Canada in October 2017 to conduct solar power project development business;

Austria:

- **Emeren New Energy Austria GmbH:** Our wholly owned subsidiary incorporated in Austria in July 2014 for the planning and construction of solar power systems, regional EPC service, and managerial support;
- **Vienna, Austria Office Location (Europe HQ):** Lothringerstrasse 16/11 1030 Vienna, Austria;

Poland:

- **Emeren Poland sp. z o.o.:** Our wholly owned subsidiary incorporated in Poland in July 2015 to conduct EPC business;
- **Warsaw, Poland Office Location:** ul. Żelazna 59, 00-848 Warsaw, Poland;

Hungary:

- **Emeren Hungary Kft:** Our wholly owned subsidiary incorporated in Hungary in December 2017 to conduct solar project development and EPC business;
- **Budapest, Hungary Office Location:** 17 Síp utca, 1075 Budapest, Hungary;

France:

- **EMEREN France S.A.R.L:** Our wholly owned subsidiary incorporated in France in October 2017 to conduct solar power project development business;
- **Lyon, France Office Location:** Wojo – Grand Hotel Dieu, 4 place Amédée Bonnet, CS 20265, 69289, Lyon Cedex 02, France;

Spain:

- **EMEREN NEW ENERGY SPAIN, S.L.:** Our wholly owned subsidiary incorporated in Spain in June 2017 to conduct solar power project development business;
- **Madrid, Spain Office Location:** Calle María de Molina, 39, 3rd Floor, 28006, Madrid Spain;

United Kingdom (UK):

- **Emeren UK LTD:** Our wholly owned subsidiary incorporated in the UK in August 2015 to conduct solar power project development business;
- **London, England Office Location:** 25 Eccleston Place, London, England, SW1W 9NF;

Italy:

- **Emeren New Energy Italy S.r.l.:** Our wholly owned subsidiary incorporated in Italy in December 2021 to conduct solar power project development business;
- **Milan, Italy Office Location:** Via Filippo Carcano 6, 20149 Milano, Italy;

Germany:

- **Emeren Germany GmbH:** Our wholly owned subsidiary incorporated in Germany in December 2021 to conduct solar power project development business;
- **Berlin, Germany Office Location:** Rosenstrasse 2, 10178 Berlin, Germany;

China:

- **Emeren (Zhejiang) PV Power Co., Ltd.:** Our wholly owned subsidiary incorporated in China in August 2017 to hold our Chinese subsidiaries;
- **Zhejiang Emeren Investment Ltd.:** Our partially owned 59.87% subsidiary, incorporated in China in February 2015 to engage in trading and investments in solar industry, as well as holding our project companies in China;
- **Emeren Power Shanghai LTD:** Our wholly owned subsidiary incorporated in China in August 2017 to engage in project management and technology support.
- **Jiaxing, Zhejiang Office Location:** Room 3, East Floor, Complex Building, No. 5, Yaozhuang Gymnasium, No. 266 and 268 Hebin Road, Yaozhuang Town, Jiashan County, Jiaxing City, Zhejiang Province;
- **Shanghai, China Office Location:** Room 9HI, Humanin Empire Plaza, No. 728, West Yan'an Road, Changing District, Shanghai, China;

Item 3. Legal Proceedings

Emeren Group Ltd. is not involved in any litigation or other legal proceedings that we believe would have a material adverse impact on our business or operations as of the date of this annual report. Emeren Group Ltd. may from time to time be subject to various judicial or administrative proceedings arising in the ordinary course of our business. While Emeren Group Ltd. does not expect the proceedings described above to have a material adverse effect on our financial position, profitability, results of operations or cash flows, the outcome of any proceedings is not determinable with certainty and negative outcomes may have a material adverse effect on our business or operations.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Price Information

Our American Depositary Shares (ADSs), each representing ten ordinary shares, were listed on the New York Stock Exchange on January 29, 2008 under the symbol “SOL”.

Holders of Common Equity

As of June 30, 2024, the Company had 512,216,222 common shares outstanding, each represented by 10 common shares per ADSs, held by 108 shareholders of record.

Dividend Policy

We have never declared or paid dividends, nor do we have any present plan to pay any cash dividends on our ordinary shares in the foreseeable future. We currently intend to retain our available funds and any future earnings to operate and expand our business.

No cash dividends were paid on our shares during the fiscal years ended December 31, 2023 and 2022.

Issuer Purchases of Registered Equity Securities

The following table sets forth purchases of our ordinary shares by us and our affiliated purchasers during the fiscal year ended December 31, 2023:

Period	(a) Total Number of Shares (or Units) Purchased	(b) Average Price Paid per Share (or Units)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs (1)	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs (in thousands)
January 1 - January 31, 2023	30,000,000	$ 0.44	63,471,750	16,800
February 1- February 28, 2023	—	—	63,471,750	16,800
March 1 - March 31, 2023	—	—	63,471,750	16,800
April 1 - April 30, 2023	—	—	63,471,750	16,800
May 1 - May 31, 2023	—	—	63,471,750	16,800
June 1 - June 30, 2023	3,746,580	0.38	67,218,330	15,377
July 1 - July 31, 2023	4,722,210	0.40	71,940,540	13,499
August 1 - August 31, 2023	4,879,630	0.34	76,820,170	11,839
September 1 - September 30, 2023	1,398,260	0.30	78,218,430	11,415
October 1 - October 31, 2023	4,366,440	0.28	82,584,870	10,182
November 1 - November 30, 2023	4,154,650	0.26	86,739,520	9,121
December 1 - December 31, 2023	3,976,250	0.27	90,715,770	8,062
Total	57,244,020			

(1) As of December 2021, the Board authorized the Company to repurchase up to $50 million of shares, which authorization does not expire. During 2021, we repurchased 30,904,110 no par value shares at the cost of $18.4 million. During 2022, we repurchased 2,567,640 no par value shares at the cost of $1.6 million. During 2023, we repurchased 57,244,020 no par value shares at the cost of $21.9 million.

In February, 2024, we announced that our Board of Directors approved an accelerated stock repurchase (ASR) program of up to $10 million, which does not expire. This accelerated stock repurchase program underscores the Board's commitment to our shareholders and confidence in the company's future growth.

Sales of Unregistered Securities

None.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following management's discussion and analysis describes the principal factors affecting our capital resources, liquidity, and results operations. This management's discussion and analysis should be read in conjunction with the accompanying Financial Statements and related notes, information about our business practices, significant accounting policies, risk factors, and the transactions that underlie our financial results, which are included in various parts of this Annual Report. Certain statements in our discussion below are forward-looking statements. These forward-looking statements involve risks and uncertainties. We caution that a number of factors could cause actual results to differ materially from those implied or expressed by the forward-looking statements. Please see "Cautionary Statement Regarding Forward-Looking Statements" and "Item 1A. Risk Factors" for further details about these statements.

Overview

You should read the following discussion and analysis in conjunction with our financial statements and the related notes appearing elsewhere in this annual report on Form 10-K. This discussion may contain forward-looking statements based on current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Item 1A.- Risk Factors" or in other parts of this annual report on Form 10-K.

We closed 2023 with $105.6 million of revenue, 23.7% gross margin and $3.2 million net loss attributed to Emeren Group Ltd. These results were below our full-year guidance primarily due to delays in closing 6 project sales developments projects in U.S. and Europe, which are now expected to close in 2024. Our 2023 results were further impacted by several one-time write-offs and continued government related delays. We continue to face disruptions due to higher interest rates, utility scale delays from transmission and Europe regulation uncertainty.

Despite these challenges, we remain focused on executing our core solar project development strategy, diversify of our global footprint and advancing our positioning as a leading global solar company. We monetized approximately 130 MW of solar projects and over 1 GWh storage projects in 2023.

- In 2023, we announced the sale of a 58 MW solar projects in Poland to Spectris Energy. The projects are a portfolio of solar farms located in Voivodship Pomorskie, Poland.

- In 2023, we sold a 410 MW battery energy storage system portfolio in Italy to Matrix Renewables. This marks a significant step in their partnership and the development of a 1.5 GW BESS portfolio. This transaction not only strengthens Emeren's partnership with Matrix but also underscores our commitment to battery storage initiatives.

- In 2023, we announced the sale of a 53.6 MWp solar project portfolio in Hungary to Kronospan / Douglas Renewables. The portfolio includes six projects at various development stages, with four already operational. This venture contributes significantly to Hungary's photovoltaic capacity and aligns with Emeren's mission to enhance solar energy infrastructure.

- In 2023, we announced the sale of an 11.5 MW solar projects in Germany to Swiss-based energy company MET Group.

- Further, in 2023, we acquired an 86 MWp solar portfolio in Spain, comprising 13 utility-scale projects, from Negratin Global Services. These projects are expected to significantly contribute to our energy production capacity, powering thousands of households and enhancing our storage capabilities.

- In 2023, Emeren Group also announced a significant achievement in its battery energy storage portfolio, reaching 1 GW in Italy through the sale of two additional Battery Energy Storage Systems to Matrix Renewables. This milestone, achieved within six months of a Development Service Agreement, underscores Emeren's execution capability and strengthens our partnership with Matrix, Enerpoint, and Kaizen Invest Holding. The joint venture aims to advance the solar plus storage strategy in Italy, with projects featuring advanced storage systems and a strategic focus on grid balancing. We believe this move positions Emeren as a leader in the Italian battery storage market as we approach our 1.5 GW portfolio target.

- Finally, in 2023, we expanded our energy storage portfolio in China by acquiring a 10.8 MWh energy storage power portfolio from Kunneng Smart Energy Service Group Co. LTD. This acquisition, comprising six energy storage power stations in Zhejiang Province, enhances Emeren's position in the Chinese energy storage market. We plan to generate returns through energy arbitrage and participation in Virtual Power Plant scenarios, leveraging the facilities connected to Huaneng Power International's VPP platform. This strategic move aligns with Emeren's global storage expansion and the growing VPP market in China. We operated now about 15MWh BESS IPP in China with VPP connection to Huaneng Power in 2023.

During 2023, we began implementing strategic cost control initiatives throughout our U.S. and European operations aimed at enhancing efficiency and optimizing resource allocation. In the United States, these measures include workforce reductions, lean management policies, and halting certain early-stage developments to concentrate efforts and resources on advanced stage projects. This shift aims to reduce overhead associated with early-stage explorations and allocate personnel more effectively towards projects with higher likelihood of success, improved profitability, and shorter development cycles.

In addition, in February, 2024, we announced that our Board of Directors approved an accelerated stock repurchase (ASR) program of up to $10 million. This accelerated stock repurchase program underscores the Board's commitment to our shareholders and confidence in the company's future growth. With our expertise in solar project development, strong industry network, and solid balance sheet, we are making significant progress towards becoming an industry leading global solar and storage developer. Our strategic focus remains on maintaining a lean cost structure and achieving sustainable profitability, while monetizing our extensive advance-stage project pipeline.

Looking Forward

Looking forward to 2024 and beyond, we believe that we are well positioned in many of the world's fastest growing solar markets that are benefiting from increasing demand for clean energy and supportive government policies and technology trends.

The solar industry continues to experience strong tailwinds, driven by the global commitment to renewable energy and sustainability. Governments and corporations worldwide are setting ambitious targets for reducing carbon emissions, which in turn fuels significant demand for solar energy solutions. This commitment is part of a broader shift towards cleaner, more sustainable energy sources, positioning solar energy as a key player in the global energy mix.

One of the most exciting developments in the renewable energy sector is the booming demand for solar power to support artificial intelligence (AI) operations. As AI technologies become increasingly integrated into our daily lives and business operations, the energy required to power these advanced systems is substantial. Solar energy, with its scalability and decreasing cost profile, is becoming a preferred source of power for these high-tech applications, further driving demand in the sector.

In conclusion, the future of solar energy is extremely promising, and we are positioned to fully capitalize on the accelerating adoption of solar technology across the globe. With our exceptional expertise in developing and operating solar projects, extensive network of industry partnerships, and strong financial position, we are making great strides towards our goal of becoming a top global solar company. We are thrilled about the bright future of solar energy and are excited to be at the forefront of this incredible transformation towards a more sustainable future.

Our net revenue increased from $61.3 million in 2022 to $105.6 million in 2023. We recorded an operating loss of $8.7 million and net loss attributed to Emeren Group Ltd of $3.2 million in 2023, compared to an operating loss of $2.6 million and net loss attributed to Emeren Group Ltd of $4.7 million in 2022. Net loss attributed to Emeren Group Ltd per ADS was $0.06 in 2023, compared to net loss attributed to Emeren Group Ltd per ADS of $0.07 in 2022.

Overview of Financial Results

Net Revenue

We are a solar/storage project developer and operator, with our revenues mainly generated from our solar/storage power projects. Set forth below is the breakdown of our net revenue by segment in absolute amount.

The Company has three reportable segments, including solar/storage power project development, EPC services and electricity generation. Ancillary revenues and expenses and other unallocated costs and expenses are recorded in other.

	Year ended December 31, 2022 in thousands				
	Solar power project development	Electricity generation	EPC services	Other	Total
Net revenue	$ 13,753	$ 21,654	$ 24,760	$ 1,124	$ 61,291
Gross profit/(loss)	$ 5,913	$ 10,488	$ (2,038)	$ 973	$ 15,336

	Year ended December 31, 2023 in thousands				
	Solar power project development	Electricity generation	EPC services	Other	Total
Net revenue	$ 25,152	$ 29,405	$ 43,902	$ 7,183	$ 105,642
Gross profit/(loss)	$ 8,804	$ 14,903	$ (1,825)	$ 3,131	$ 25,013

Geographical Distribution

We are a solar project developer and operator and function as a pure downstream player with a robust pipeline of projects around the world.

The following table summarizes the Company’s revenues generated by the geographic location of customers:

	Years ended December 31,	
	2022	2023
	in thousands	
China	$ 20,737	$ 14,803
United States	13,870	1,090
Germany	—	2,435
UK	1,079	12,754
Spain	(490)	—
France	14	9
Poland	24,850	25,655
Italy	779	6,901
Hungary	452	41,995
Total	$ 61,291	$ 105,642

We expect the revenue from solar/storage power project continue to increase generally in parallel with our business growth.

Cost of Revenue

Our cost of revenue for continuing operations consists of costs for:

A. development costs (including interconnection fees and permitting costs) of solar/storage power projects;

B. acquisition costs of solar/storage power projects, if applicable;

C. project management costs;

D. EPC costs (consisting of costs of the components of solar/storage power projects other than solar modules, such as inverters, electrical and mounting hardware, trackers, grid interconnection equipment, wiring and other devices);

E. interest costs capitalized for solar/storage power projects during construction period; and

F. site-specific costs

Gross Margin

Our gross margin is affected by changes in our net revenue and cost of revenue. Gross margin is affected by 1) the gross margin of each individual solar/storage power project we sell, which is determined by our ability to negotiate the sales price and our ability to effectively control the project acquisition and development costs, 2) the gross margin of each individual solar/storage power project we operate, which is determined by revenues from the sale of electricity generated from our operated solar/storage power projects and our ability to effectively control the operation costs, and 3) the gross margin of each individual EPC services we provide, which is determined by our ability to negotiate the sales price and our ability to effectively control the engineering, procurement and construction costs.

Our gross margin decreased to 23.7% in 2023 from 25% in 2022 primarily due to the unfavorable margin within EPC services that we provided.

Operating Expenses

Our operating expenses primarily include sales and marketing expenses, general and administrative expenses and other operating income and expenses and impairment loss of assets.

Sales and Marketing Expenses

Sales and marketing expenses consist primarily of salaries, bonuses and pensions for our sales personnel, commission paid to our sales agents, outbound freight, share-based compensation expenses and benefits, travel and other sales and marketing expenses.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries, bonuses and benefits for our administrative and management personnel, consulting and professional service fees, bad debt provision, and travel and related costs incurred by our administrative and management personnel.

Other Operating Income and Expenses

Other operating income (expenses) primarily consists of cancellation loss of project assets, disposal gain (loss) of property, plant and equipment and non FIT government grants.

Other Income and Expenses

Our other income and expenses consist primarily of interest income, interest expenses, foreign currency exchange gains or losses and investment gain.

Our interest income represents interest on our cash balances and the recognition of the discounted interest income on the feed-in tariff(s) (FIT) for the electricity sold. Our interest expenses relate primarily to our short-term and long-term borrowings from banks and other financing parties, less capitalized interest expenses to the extent they relate to our capital expenditures.

Our foreign currency exchange gain or loss results from our net exchange gains and losses on our monetary assets and liabilities denominated in foreign currencies during the relevant period. Our functional currency is the U.S. dollar. The functional currency for our subsidiaries in the PRC is Reminbi (“CNY”). The functional currency of our overseas subsidiaries normally is the local currency of the place where the subsidiary is domiciled. Foreign currency transactions have been translated into the functional currency at the exchange rate prevailing on the date of the transaction. Foreign currency denominated monetary assets and liabilities are translated into our functional currency at exchange rates prevailing on the balance sheet date. Our reporting currency is the U.S. dollar. Assets and liabilities have been translated using exchange rates prevailing on the balance sheet date. Income statement items have been translated using the weighted average exchange rate and equity is translated at historical exchange rates, except for the change in retained earnings during the year which is the result of the income or loss.

Taxation

Under the current laws of the British Virgin Islands, we are not subject to any income or capital gains tax. Additionally, dividend payments made by us are not subject to any withholding tax in the British Virgin Islands.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible for tax purposes. As a result, the Company has recognized a valuation allowance of $13.8 million and $19.2 million as at December 31, 2022 and 2023, respectively.

In 2023, we had overseas operations in the jurisdiction of the United States, the United Kingdom, Poland, Hungary, Spain, France, Germany, Italy and China. The corporate income tax rates in these jurisdictions range from 0% to 25%.

Segment Operations

We currently separate our business into three reportable segments, including solar/storage power project development, electricity generation and EPC services. Ancillary revenues and expenses and other unallocated costs and expenses are recorded in other.

Results of Operations

The following table sets forth a summary, for the periods indicated, of our consolidated results of operations with each item expressed.

	Years ended December 31,	
	2022	2023
	(In thousands, except share and per share amounts)	
Net revenues:		
Solar power project development	$ 13,753	$ 25,152
Electricity generation	21,654	29,405
EPC services	24,760	43,902
Other	1,124	7,183
Total net revenues	61,291	105,642
Cost of revenues	(45,955)	(80,629)
Gross profit	15,336	25,013
Operating (expenses)/income:		
Sales and marketing	(421)	(398)
General and administrative	(17,202)	(25,961)
Other operating expenses, net	(346)	(5,624)
Impairment loss of assets	—	(1,691)
Total operating expenses	(17,969)	(33,674)
Loss from operations	(2,633)	(8,661)
Other (expenses)/income:		
Interest income	657	1,794
Interest expense	(3,167)	(2,205)
Investment gain	898	278
Foreign exchange gains	1,614	5,892
Total other income, net	2	5,759
Loss before income tax	(2,631)	(2,902)
Income tax expense	(1,917)	(2,529)
Loss, net of tax	(4,548)	(5,431)
Less: Net income (loss) attributed to non-controlling interests	124	(2,245)
Net loss attributed to Emeren Group Ltd	$ (4,672)	$ (3,186)
Loss attributed to Emeren Group Ltd per ADS		
Basic	$ (0.07)	$ (0.06)
Diluted	$ (0.07)	$ (0.06)
Weighted average number of ADS used in computing loss per ADS*		
Basic	64,924,455	56,526,716
Diluted	64,924,455	56,526,716

Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

Net Revenue. Our net revenue increased from $61.3 million in 2022 to $105.6 million in 2023 primarily contributed from (i) revenue from solar power project development and solar power rights increased by $11.4 million; (ii) revenue from electricity generation increased by $7.8 million; (iii) Revenue from EPC services increased by $19.1 million and (iv) other services increased by $6.1 million. We monetized 41 MW Hungary projects, 58 MW Poland project and 12 MW German Project in 2023.

Cost of Revenue. Our cost of revenue increased from $46.0 million in 2022 to $80.6 million in 2023. Our cost of revenue associated with solar power project primarily consists of project development cost and acquisition cost; cost on electricity generation primarily consists of depreciation expenses arising from our solar power fixed assets and EPC cost associated with direct materials, solar modules, labor, subcontractor costs, and others indirect cost related to contract performance, such as indirect labor and supplies. The increase of our cost of revenue is primarily due to the increased revenue in 2023.

Gross Profit. Gross profit for 2023 was $25.0 million, compared to a gross profit of $15.3 million in 2022. The decreased percentage in gross margin was caused by the unfavorable margin within EPC services that we provided.

Sales and Marketing Expenses. Sales and marketing expenses was $0.4 million in 2022 and $0.4 million in 2023.

General and Administrative Expenses. General and administrative expenses increased from $17.2 million in 2022 to $26.0 million in 2023. The increase was mainly from allowance for estimated credit loss and expense early-stage project cost.

Other Operating Expenses. Other operating expense increased from $0.3 million in 2022 to $5.6 million in 2023. Our other operating income/expenses consisted primarily of cancellation loss of project assets, disposal gain or loss property, plant and equipment and non FIT government grant.

Impairment Loss of Assets. Impairment loss on assets was nil in 2022 and $1.7 million in 2023. It was mainly from the impairment of goodwill and long-lived assets.

Interest Income and Expenses. Our interest income increased from $0.7 million in 2022 to $1.8 million in 2023, primarily due to interest income received from cash deposits. Our interest expenses decreased from $3.2 million in 2022 to $2.2 million in 2023, primarily due to the decreased average outstanding principal of finance lease and failed sales leaseback in 2023.

Investment gain: Investment gain was $0.9 million in 2022, and $0.3 million in 2023. It consists of gain from U.S. treasury notes.

Foreign Exchange (Losses)/Gains. Foreign exchange gain was $1.6 million in 2022 and foreign exchange gain was $5.9 million in 2023 primarily due to the depreciation of the PLN/HUF against EUR in 2023.

Income Tax Expense. Income tax expense increased from $1.9 million in 2022 to $2.5 million in 2023. The income tax expense in 2023 mainly resulted from the taxable income from UK, Italy and Hungary.

Net loss. As a result of the foregoing, we had a net loss of $5.4 million in 2023, compared to net loss of $4.5 million in 2022.

Liquidity and Capital Resources

For the year ended December 31, 2023, we had generated negative operating cash flow of $23.5 million, and loss from operations of $8.7 million and we repaid borrowings, finance lease and failed sales leaseback financing of $12.1 million in 2023. As of December 31, 2023, we have positive working capital of $169.5 million. We believe that our cash and cash equivalents, project assets, and continued support from financial institutions, fund investors and financing lease companies, in the form of renewed and additional short-term or long-term financings (including development loans, construction loans and project financings) and equity contribution, will be sufficient to meet our working capital and capital expenditure needs that will arise in 2024 and will be sufficient for the next 12 months from the issuance date of this annual report. We intend to continue to carefully execute our operating plans and manage credit and market risk. However, if our financial results or operating plans change from our current assumptions, our liquidity could be negatively impacted.

As part of our financing policy, we expect to continue to finance our liquidity needs mainly with cash flows from our operating activities. We continuously evaluate opportunities to pursue acquisitions or engage in strategic transactions. We expect to finance any significant future transaction with a combination of cash, long-term indebtedness and the issuance of shares of our company.

As of December 31, 2023, significant components of our working capital were as follows:

- Our total current assets were $226.5 million, including cash and cash equivalents of $70.2 million.
- We had current project assets of $39.9 million in our late stage projects under development. Although we believe we will be able to sell such project assets at a profit, if we are unable to sell these project assets at reasonable prices in the near term, our liquidity may be negatively affected.

Cash generated from operations, external financing, and related party credit are our primary sources of operating liquidity, and we believe that cash flows from operations combined with our existing cash and cash equivalents, and facilities currently available, and those expected to be renewed will be sufficient to satisfy our obligations when they become due.

Borrowings

Short-term Borrowings

As of December 31, 2023, all the short-term borrowings have been fully repaid and there were no new short-term borrowings.

Bond payable

As of December 31, 2023, all bonds have been fully repaid and there was no new bond payable.

Long-term Borrowings and Other Liabilities

In January 2021, our United Kingdom ("UK") subsidiary obtained a long-term loan by a lender in the UK totaling $0.06 million. The long-term loan has a maturity date of July 2026 with an interest rate of 2.5%. The proceeds from this loan were used for general working capital purposes. The long-term borrowing was interest free for twelve months. As of December 31, 2023, the balance of this long-term borrowing was $0.04 million.

In January 2022, our Project Branston subsidiary entered into a lease loan contract with Aviva Investor Infrastructure Income No. 4 Ltd. The loan bears interest at 4% above the base rate time to time from Lloyds Bank Plc on the bank and will mature in April 2060. As a result of the acquisition of Branston, we took over the loan. As of December 31, 2023, the long-term borrowings were $23.7 million including current of $1.0 million and non-current of $22.7 million.

In September 2022, our RPZE 1 subsidiary entered into a shareholder loan contract with a minority shareholder of a subsidiary of the Company, RPZE 1, of $0.6 million. The loan bears interest at 2% per annum and will mature on December 2025. As of December 31, 2023, the shareholder loan balance was $0.1 million.

In February 2023, our Tensol 3 subsidiary entered into a shareholder loan contract with a minority shareholder of a subsidiary of the Company, Tensol 3, of $0.7 million. The loan bears interest at 2% per annum and will mature on December 2025. As of December 31, 2023, the balance of the shareholder loan was $0.03 million.

In November 2023, China subsidiary obtained a long-term loan by a bank in the RMB totally RMB 1.3 million ($0.2 million). The long-term loan bears interest at 5.2% above the base rate time to time from Loan Prime Rate on the bank and will mature in November 2033. As of December 31, 2023, the long-term borrowings were $0.2 million, including current of $0.02 million and non-current of $0.2 million.

Contractual Obligations

The following table sets forth our known contractual obligations as of December 31, 2023:

Contractual Obligations	Payments Due by Period				
	Total	less than 1 year	1-3 years	3-5 years	More than 5 years
			(in thousands)		
Operating leases	$ 40,265	$ 1,493	$ 3,598	$ 3,443	$ 31,731
Capital commitment	7,940	7,940	—	—	—
Failed sale-lease back and finance lease liabilities, including current portion	17,855	5,677	8,532	3,646	—
Long-term borrowings	45,350	1,962	2,457	2,457	38,474
Total	$ 111,410	$ 17,072	$ 14,587	$ 9,546	$ 70,205

- **Research and Development, Patents and Licenses, Etc.**

We rely primarily on trade secrets, employee contractual protections and other contractual restrictions to establish and protect our intellectual properties and proprietary rights. All of our personnel have entered into confidentiality agreements with us. These agreements address intellectual property protection issues and require our employees to assign to us all of the inventions, designs and technologies that they develop when utilizing our resources or when performing their employment-related duties. We also seek trademark protection in various places that we operate.

- **Trend Information**

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2023 to December 31, 2023 or for the current financial year that are reasonably likely to have a material adverse effect on our net revenue, income, profitability, liquidity or capital resources, or that would cause reported financial information not necessarily to be indicative of future operating results or financial conditions.

- **Critical Accounting Policies and Estimates**

We prepare our financial statements in conformity with U.S. GAAP, which requires us to make judgments, estimates and assumptions. We continually evaluate these estimates and assumptions based on the most recently available information, our own historical experience and various other assumptions that we believe to be reasonable under the circumstances. Since the use of estimates is an integral component of the financial reporting process, actual results could differ from those estimates. Information about critical estimates that have the most significant effect on the amounts recognized in the consolidated financial statements included the following:

Revenue recognition

Solar/storage power project development

- **Sale of project assets constructed by a third-party EPC contractor**

The Company recognizes revenue for sales of project assets constructed by a third-party EPC contractor over time as the Company's performance creates an energy generation asset that is owned by the customer as it is being constructed and the customer can direct all activities related to the work in progress. Furthermore, the sale of a project asset when combined with EPC services represents a single performance obligation for the development and construction of a single generation asset. The Company recognizes revenue over time for construction contracts which recognize revenue and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs of the contract. Under this business model, the EPC services are provided by a third-party service provider. In accordance with the terms and conditions of the EPC contract, the Company has the ability to direct a third party to ensure that the EPC services to the customer are performed therefore the Company acts as the principal in this arrangement and both the revenue and cost amounts paid to the EPC contractor are recognized on a gross basis.

- **Sale of project assets constructed by the Company's own EPC team**

Under this business model, the Company sells power projects after they have been completed or are near completion. The Company conducts the construction of the power plant and completes or nearly complete the project before it identifies a customer. When a customer is identified, the Company enters into two agreements through signing: Sale and Purchase Agreement ("SPA") and Operations and Maintenance ("O&M") Services Contract, which are signed on the same date. Such arrangements consist of two performance obligations: sale of solar/storage project and O&M services.

For sale of a solar/storage project, the Company recognizes revenue at a point in time once control of project company is transferred to customer as the Company has no remaining performance obligation once the control is transferred upon closing of the sale. For O&M services, the Company recognizes revenue over time, ratably over the service period, as this performance enhances an energy generation asset controlled by the customer.

- **Sale of project asset rights**

The Company sells the project rights to customers through the disposal of project companies holding the relevant permits. For these transactions, the project companies could either own the land or lease the land under the lease term that could cover the entire power plant's life.

The Company recognizes revenue for sale of project rights at a point in time once control of project rights is transferred to customer as the Company has no further obligations related to the project rights.

For sale of project asset rights, the contract arrangements may contain provisions that can either increase or decrease the transaction price. These variable amounts generally are resolved upon achievement of certain performance or upon occurrence of certain price adjustment conditions. Variable consideration is estimated at each measurement date at its most likely amount to the extent that it is probable that a significant reversal of cumulative revenue recognized will not occur and true-ups are applied prospectively as such estimates change.

Changes in estimates for sales of pre-development solar/storage projects occur for a variety of reasons, including but not limited to (i) EPC construction plan accelerations or delays, (ii) product cost forecast changes, (iii) change orders, or (iv) occurrence of purchase price adjustment conditions. The cumulative effect of revisions to transaction prices are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated.

EPC Services

The Company provides EPC services under the EPC contracts, under which the Company provides one distinct performance obligation – design and build the power plant on customer's site per customer's request.

The Company recognizes revenue for EPC services over time as the Company's performance creates or enhances an energy generation asset controlled by the customer. In recognizing revenue overtime, the Company follows the costs incurred method and uses the actual costs incurred relative to the total estimated costs (including module costs) in order to determine the progress towards completion and calculate the corresponding amount of revenue and profit to recognize. Costs incurred include direct materials, solar modules, labor, subcontractor costs, and those indirect costs related to contract performance, such as indirect labor and supplies.

The overtime revenue recognition requires the Company to make estimates of net contract revenues and costs to complete the projects. In making such estimates, significant judgment is required to evaluate assumptions related to the amount of net contract revenues, including the impact of any performance incentives, liquidated damages, and other payments to customers. Significant judgment is also required to evaluate assumptions related to the costs to complete the projects, including materials, labor, contingencies, and other system costs.

Although the EPC contract usually clearly states a fixed unit price and the estimated total contract amount, the total contract amount is subject to variable consideration due to the difference between actual grid-connection capacity and estimated grid-connection capacity. The Company usually makes a reasonable estimation of grid-connection capacity, which represents a form of variable consideration. The variable consideration is estimated at the contact inception at the best estimate based on relevant experience and historical data and updated at the end of each reporting period as additional performance data becomes available and only to the extent that it is probably that a significant reversal of any revenue will not occur.

If estimated total costs on any contract are greater than the net contract revenues, the Company recognizes the entire estimated loss in the period the loss becomes known. The cumulative effect of the revisions to estimates related to net contract revenues and costs to complete contracts, including penalties, claims, change orders, performance incentives, anticipated losses, and others are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated. The effect of the changes on future periods are recognized as if the revised estimates had been used since revenue was initially recognized under the contract. Such revisions could occur in any reporting period, and the effects may be material depending on the size of the contracts or the changes in estimates.

The Company bills the customer based on progress billing terms in the contract. Accounts receivable from EPC services (unbilled) represents revenue that has been recognized in advance of billing the customer, which is common for long-term construction contracts. The Company typically recognizes revenue from contracts for the construction over time using cost-based input methods, which recognizes revenue and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs of the contract. Accordingly, revenue could be recognized in advance of billing the customer, resulting in an amount recorded to "Accounts receivable from EPC services (unbilled)". Once the Company has an unconditional right to consideration under a construction contract, the Company typically bills the customer accordingly and reclassifies the "Accounts receivable from EPC services (unbilled)" to "Accounts receivable from EPC services (billed)." Billing requirements vary by contract but are generally structured around the completion of certain construction milestones. Certain of the EPC contracts for PV solar/storage power systems contain retainage provisions. Retainage represents contract costs for the portion of the contract price earned for work performed but held for payment by the customer as a form of security until a certain defined timeframe has been reached. The Company considers whether collectability of such retainage is reasonably assured in connection with our overall assessment of the collectability of amounts due or that will become due under the EPC contracts. After the Company has satisfied the EPC contract requirements and has an unconditional right to consideration, the retainage is billed and reclassified to "Accounts receivable from EPC services (billed)".

For EPC services, the Company provides a limited assurance only warranty for the modules, materials and construction part of the power plants. Although the Company subcontracts the construction to third party developers and purchase the raw materials and modules from third party suppliers, the Company is the primary obligor for the limited warranties such as solar module product warranty for a period of five to ten years, warranties for defects in engineering design, installation, workmanship for a period of one to two years and recorded as a liability in the Consolidated Balance Sheets. Nevertheless, the Company has a legally enforceable right to recover these warranties from the subcontractor and suppliers as these parties have contracted with the Company to assume these warranty obligations, and that the Company will also record receivables in the Consolidated Balance Sheets for expected reimbursement in amounts that the Company believe are probable. EPC warranty expenses and expected recovery amounts related to warranties are recorded net of expense in the Consolidated Statements of Operations on the basis that the amounts provided by the subcontractor and suppliers are a reimbursement of our costs.

Electricity generation

The Company recognizes electricity generation revenue generated from power plants owned and operated by the Company over time as the customer receives and consumes the benefits as the Company performs. In recognizing revenue over time, the Company follows the output method and uses the actual electricity supplied in order to calculate the corresponding amount of revenue and profit to recognize. The electricity generation records are reconciled with the power grid companies and the price of electricity is based on a fixed unit price according to the power purchase arrangement with the power grid companies. The Company is entitled to the feed-in tariff(s) (FIT) that the government guaranteed and subsidized electricity sale price at which solar/storage power projects can produce green energy. The Company recognizes the FIT as part of the electricity generation revenue when the entitlement to receipt of such FIT is fulfilled.

Accounts receivable from such FIT are expected to be collected beyond 12 months, i.e. collection are expected within 5 years from the day of recognizing the account receivable. Thus the Company considers that the settlement terms to contain significant financing component and accordingly the amount of consideration is adjusted for the effects of the time value of money taking into consideration the credit characteristics of the relevant counterparties and are discounted at an effective interest rate of 4.75% based on the average borrowing rate in accordance with the financial institution. The Company recorded discounted receivable and as a non-current asset accordingly.

As of December 31, 2023, there are $3.5 million of FIT receivables classified as current and $16.4 classified as non-current. Historically, the Company has not been exposed to material risks due to changes in interest rates and changes in estimation of collection; however, the future interest income may decrease or interest expenses on borrowings may increase due to changes in market interest rates. Also as the receivable collection relies heavily based on the PRC government policies, the estimation of collection may adjust based on the changes in government policies as well as the market conditions. Revenue recognized from electricity generation was $21.7 million and $29.4 million for the years ended December 31, 2022 and 2023, respectively.

Deferred Income Taxes

Deferred income taxes are recognized for temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements, net of operating loss carry forwards and credits by applying enacted statutory tax rates applicable to future years. Deferred tax assets are recognized to the extent that these assets are more likely than not to be realized. In making such a determination, management considers all positive and negative evidence, including future reversals of projected future taxable income and results of recent operation. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Current income taxes are provided for in accordance with the laws of the relevant taxing authorities. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. Deferred tax assets and liabilities are all classified as non-current in the consolidated balance sheets.

Impairment of long-lived assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable or that the useful life is shorter than originally estimated. The Company assesses recoverability of the long-lived assets by comparing the carrying amount of the assets to the estimated future undiscounted cash flows expected to result from the use of the assets and their eventual disposition. The Company recognizes an impairment loss in the event the carrying amount exceeds the estimated future undiscounted cash flows attributable to such assets, measured as the difference between the carrying amount of the assets and the fair value of the impaired assets.

Impairment losses of long-lived assets for the years ended December 31, 2022 and 2023 were nil and $0.7 million respectively. Impairment losses of these assets represented the difference between the carrying amount and fair value less cost to sell as a result of committed sale plans of solar power plants originally owned and operated by the Company for electricity generation.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of the identifiable assets and liabilities acquired as a result of the Company's acquisitions of interests in its subsidiaries.

Goodwill is not depreciated or amortized but is tested for impairment at the reporting unit level on an annual basis, and between annual tests when an event occurs, or circumstances change that could indicate that the asset might be impaired. Under ASC 350-20, the Company has the option to choose whether it will apply the qualitative assessment first and then the quantitative assessment, if necessary, or to apply the quantitative assessment directly. The Company first makes a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying value to determine whether it is necessary to perform a quantitative goodwill impairment test. Such qualitative impairment test considers various factors, including macroeconomic conditions, industry and market considerations, cost factors, the overall financial performance of a reporting unit, and any other relevant events affecting the Company or a reporting unit. If circumstances determine through the qualitative assessment that a reporting unit's fair value is more likely than not greater than its carrying value, the quantitative impairment test is not required. If the qualitative assessment indicates it is more likely than not that a reporting unit's fair value is less than its carrying value, the Company performs a quantitative impairment test.

The quantitative impairment test is the comparison of the fair value of a reporting unit with its carrying amount, including goodwill. Our battery storage business represents one of the Company's reporting units. The Company define the fair value of a reporting unit as the price that would be received to sell the unit as a whole in an orderly transaction between market participants at the measurement date. The Company primarily uses an income approach to estimate the fair value of our reporting unit. Significant judgment is required when estimating the fair value of a reporting unit, including the forecasting of future operating results and the selection of discount and expected future growth rates used to determine projected cash flows. If the estimated fair value of a reporting unit exceeds its carrying value, goodwill is not impaired, and no further analysis is required. Conversely, if the carrying value of a reporting unit exceeds its estimated fair value, the Company records an impairment loss equal to the excess, not to exceed the total amount of goodwill allocated to the reporting unit.

The Company performs goodwill impairment testing at the reporting unit level on December 31 annually and more frequently if indicators of impairment exist. During the year ended of December 31, 2022 and 2023, the Company recorded nil and $1.0 million as impairment loss of goodwill, respectively.

Allowance for Credit Losses

The allowance for credit losses is a valuation account that is deducted from a financial asset's amortized cost to present the net amount we expect to collect from such asset. The Company estimates allowances for credit losses using relevant available information from both internal and external sources. In establishing the allowances, management considers historical losses, the financial condition, the accounts receivables aging, the payment patterns and the forecasted information upon the use of the Current Expected Credit Loss Model ("CECL Model") in accordance with ASC topic 326, Financial Instruments - Credit Losses. The Company monitors the estimated credit losses associated with its trade accounts receivable and unbilled accounts receivable based primarily on its collection history, and the delinquency status of amounts owed to the Company, which is determined based on the aging of such receivables. Such methods and estimates are adjusted, as appropriate, for relevant past events, current conditions, and reasonable and supportable forecasts. The Company recognizes write-offs within the allowance for credit losses when cash receipts associated with its financial assets are deemed uncollectible. During the years ended December 2022, and 2023, the Company recorded credit losses of $0.6 million and $2.9 million, respectively.

Recent Accounting Pronouncements

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 about the program to allow a user of financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. The amendment in this update is expected to improve financial reporting by requiring new disclosures about the programs, thereby allowing financial statement users to better consider the effect of the programs on an entity's working capital, liquidity, and cash flows. The new standard is effective for fiscal years beginning after December 15, 2022, except for the amendment on roll forward information which is effective for fiscal years beginning after December 15, 2023. The Company adopted provisions of this ASU beginning January 1, 2023, with the exception of the amendment on rollforward information, which was adopted in January 1, 2024. Adoption of the new standard did not have a material impact on the Company's consolidated financial statements.

In March 2023, the FASB issued ASU No. 2023 - 01, Leases (Topic 842): Common Control Arrangements, which requires leasehold improvements associated with common control leases to be amortized over the useful life to the common control group. The new standard is effective for fiscal years beginning after December 15, 2023. The Company is currently evaluating the impact of adopting this new guidance and the potential effects it could have on the Company's consolidated financial statements.

In November 2023, the FASB issued ASU No. 2023 - 07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which improves reportable segment disclosure requirements, primarily through enhanced disclosures 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 is currently evaluating the impact of adopting this new guidance on disclosures in the Company's consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures" ("ASU 2023-09"), which requires disclosure of incremental income tax information within the rate reconciliation and expanded disclosures of income taxes paid, among other disclosure requirements. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024. Early adoption is permitted. The Company's Management does not believe the adoption of ASU 2023-09 will have a material impact on its consolidated financial statements and disclosures.

Management does not believe that any other recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

As a smaller reporting company, we are not required to provide the information required by this Item.

Item 8. Financial Statements and Supplementary Data

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Audited Consolidated Financial Statements

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Emeren Group Ltd

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of Emeren Group Ltd (the "Company") as of December 31, 2023, and the related consolidated statements of operations, comprehensive income (loss), changes in shareholders' equity, and cash flows for the year then ended, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides 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 consolidated 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 the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue recognition on sales of project asset rights and on EPC services

Critical Audit Matter Description

As described in Note 2 to the consolidated financial statements, the Company recognized revenue from sales of project asset rights which are recognized at a point in time once the control of the project rights is transferred to the customer. Revenue for providing engineering, procurement and construction ("EPC") services is recognized over time following the percentage completion method. For the year ended December 31, 2023, the Company recognized $25.2 million from sales of project asset rights and $43.9 million from EPC services.

We identified the revenue recognition on sales of project asset rights and on EPC services as a critical audit matter due to significant judgment made by management in estimating the variable consideration of the sales of the project asset rights as well as estimating the total cost of a project and the percentage of completion of EPC services. These management judgments in turn led to a high degree of auditor judgment, subjectivity, and effort in planning and performing procedures and evaluating audit evidence relating to management's estimate of variable consideration, total cost of a project, and percentage of completion of EPC services.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures in relation to the revenue recognition on sales of project asset rights and on EPC services included the following, among others:

- obtained an understanding and evaluated the design of controls over management's process of developing the estimated variable consideration on sales of project asset rights, the total cost of a project, and the percentage of completion of EPC services;
- performed a retrospective review of management's prior estimates to assess the historical accuracy of management's estimated variable consideration, the total actual cost of a project, and the actual collection subsequently on sales of project asset rights;
- inquired with project personnel regarding construction progress and project status;
- tested the actual costs incurred through inspection of underlying source documents;
- confirmed with external EPC subcontractors regarding construction progress; and
- tested the mathematical accuracy of management's calculation of revenue for each performance obligation that can be recognized in a given period.

/s/ UHY LLP

We have served as the Company's auditor since 2024.

New York, New York
July 31, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Emeren Group Ltd (formerly, ReneSola Ltd)

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Emeren Group Ltd (the "Company") as of December 31, 2022, and the related consolidated statements of operations, comprehensive income (loss), changes in shareholders' equity, and cash flows for the year ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022, and the results of its operations and its cash flows for the year ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("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 the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue recognition on sale of project asset rights and on EPC services

Critical Audit Matter Description

As described in Note 2 to the consolidated financial statements, the Company recognized revenue from sale of project asset rights which are recognized at a point in time once the control of the project rights is transferred to the customer. Revenue for providing EPC services is recognized over time following the percentage completion method. For the year ended December 31, 2022, the Company recognized $13.8 million from sale of project asset right, and $24.8 million from EPC services.

We identified the revenue recognition on sale of project asset rights and on EPC services as a critical audit matter is due to significant judgement made by management in estimating the variable consideration of the sales of the project asset rights as well as estimating the percentage of completion of EPC services. These management judgements in turn led to a high degree of auditor judgement, subjectivity, and effort in planning and performing procedures and evaluating audit evidence relating to management's estimate of variable consideration and percentage of completion of EPC services.

How the Critical Audit Matter was Addressed in the Audit

Our principal audit procedures in relation to the revenue recognition on sale of project asset rights and on EPC services included the followings, among others:

- obtained an understanding and evaluated the design of controls over management's process of developing the estimated variable consideration on sale of project asset rights and the percentage of completion of EPC services;
- performed a retrospective review of management's prior estimates to assess the historical accuracy of management's estimated variable consideration and the actual collection subsequently on sale of project asset rights;
- inquired with project personnel regarding construction progress and project status;
- tested the actual costs incurred through inspection of underlying source documents;
- confirmed with external EPC subcontractors regarding construction progress; and
- tested the mathematical accuracy of management's calculation of revenue for each performance obligation that can be recognized in a given period.

/s/ Marcum Asia CPAs LLP

We have served as the Company's auditor from 2022 to 2023.

New York, New York
May 16, 2023

Emeren Group Ltd
CONSOLIDATED BALANCE SHEETS
(Amounts expressed in U.S. dollars in thousands, except for number of shares and per share amounts)

	Notes	As of December 31, 2022	2023
Current assets:			
Cash and cash equivalents	2	$ 107,105	$ 70,174
Restricted cash	2	183	—
Accounts receivable trade, net	4	21,670	27,123
Accounts receivable unbilled, net	4	43,882	59,598
Advances to suppliers		1,017	4,283
Value added tax receivable		5,929	7,103
Project assets, current	6	25,969	39,914
Prepaid expenses and other current assets, net	5	14,974	18,255
Total current assets		**220,729**	**226,450**
Property, plant and equipment, net	7	170,477	163,114
Project assets, non-current	6	26,590	36,610
Goodwill	3	1,023	—
Operating lease, right-of-use assets	17	22,688	21,057
Finance lease, right-of-use assets	9	21,669	14,192
Investment in U.S. treasury notes+	2	10,047	—
Other non-current assets	4	20,627	16,928
Total assets		**$ 493,850**	**$ 478,351**

The accompanying notes are an integral part of these consolidated financial statements.

Emeren Group Ltd
CONSOLIDATED BALANCE SHEETS (Continued)
(Amounts expressed in U.S. dollars in thousands, except for number of shares and per share amounts)

	Notes	As of December 31, 2022	As of December 31, 2023
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities:			
Accounts payable		$ 7,118	$ 16,203
Advances from customers	2	3,641	5,375
Amounts due to related parties	16	1,475	4,967
Long-term borrowings, current portion	9	1,008	1,385
Income tax payable		862	2,102
Salaries payable		540	718
Operating lease liabilities, current	17	1,212	363
Failed sales-leaseback and finance lease liabilities, current	9	9,993	4,559
Other current liabilities	10	17,448	21,320
Total current liabilities		**43,297**	**56,992**
Long-term borrowings	9	22,518	22,685
Operating lease liabilities, non-current	17	20,855	20,575
Failed sales-leaseback and finance lease liabilities, non-current	9	14,963	11,258
Deferred tax liabilities	8	3,573	3,532
Total liabilities		**$ 105,206**	**$ 115,042**
Commitments and contingencies	17		
Shareholders' equity			
Common shares (1,000,000,000 shares and 1,000,000,000 shares; no par value, authorized at December 31, 2022 and 2023; 651,121,762 shares issued and 602,748,412 shares outstanding at December 31, 2022; 651,821,742 shares issued and 546,204,372 shares outstanding at December 31, 2023)		806,283	806,714
Additional paid-in capital		13,500	14,728
Treasury stock, at cost (33,471,750 and 90,715,770 shares as of December 31, 2022 and 2023, respectively)		(20,000)	(41,938)
Accumulated deficit		(437,377)	(440,563)
Accumulated other comprehensive loss		(15,113)	(13,629)
Emeren Group Ltd shareholders' equity		**347,293**	**325,312**
Noncontrolling interest		41,351	37,997
Total shareholders' equity		**388,644**	**363,309**
Total liabilities and shareholders' equity		**$ 493,850**	**$ 478,351**

The accompanying notes are an integral part of these consolidated financial statements.

Emeren Group Ltd
CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts expressed in U.S. dollars in thousands, except for number of shares and per share amounts)

	Years ended December 31,	
	2022	2023
Net revenues:		
Solar power project development	$ 13,753	$ 25,152
Electricity generation	21,654	29,405
EPC services	24,760	43,902
Others	1,124	7,183
Total net revenues	61,291	105,642
Cost of revenues	(45,955)	(80,629)
Gross profit	15,336	25,013
Operating expenses:		
Sales and marketing	(421)	(398)
General and administrative	(17,202)	(25,961)
Other operating expenses, net	(346)	(5,624)
Impairment loss of assets	—	(1,691)
Total operating expenses	(17,969)	(33,674)
Loss from operations	(2,633)	(8,661)
Other (expenses)/income:		
Interest income	657	1,794
Interest expense	(3,167)	(2,205)
Investment gains	898	278
Foreign exchange gains	1,614	5,892
Total other income, net	2	5,759
Loss before income tax	(2,631)	(2,902)
Income tax expense	(1,917)	(2,529)
Loss, net of tax	(4,548)	(5,431)
Less: Net income (loss) attributed to non-controlling interests	124	(2,245)
Net loss attributed to Emeren Group Ltd	$ (4,672)	$ (3,186)
Loss attributed to Emeren Group Ltd per ADS*		
Basic	$ (0.07)	$ (0.06)
Diluted	$ (0.07)	$ (0.06)
Weighted average number of ADS* used in computing loss per ADS*		
Basic	64,924,455	56,526,716
Diluted	64,924,455	56,526,716

* Each American depositary shares ("ADS") represents 10 common shares

The accompanying notes are an integral part of these consolidated financial statements

Emeren Group Ltd
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Amounts expressed in U.S. dollars in thousands)

	Years ended December 31,	
	2022	2023
Net loss	$ (4,548)	$ (5,431)
Other comprehensive (loss)/income, net of tax:		
Foreign currency translation adjustment	(13,675)	31
Other comprehensive (loss)/income	(13,675)	31
Comprehensive loss	(18,223)	(5,400)
Less: Comprehensive loss attributed to non-controlling interests	(3,056)	(3,354)
Comprehensive (loss)/income attributed to Emeren Group Ltd	$ (15,167)	$ (2,046)

The accompanying notes are an integral part of these consolidated financial statements

Emeren Group Ltd
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Amount expressed in U.S. dollars in thousands, except for number of shares)

	Common shares		Treasury stock		Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive income/(loss)	Equity attributable to to Emeren Group Ltd	Noncontrolling interest	Total Equity
	Number of Shares Issued	Amount	Number of Shares Issued	Amount						
Balance at December 31, 2021	717,316,622	$847,379	(30,904,110)	$(18,446)	$ 12,396	$ (432,705)	$ (4,618)	$ 404,006	$ 44,407	$ 448,413
Net income/(loss)	—	—	—	—	—	(4,672)	—	(4,672)	124	(4,548
Repurchase and retirement of common shares	(70,000,000)	(42,000)	—	—	(124)	—	—	(42,124)	—	(42,124
Stock repurchase	—	—	(2,567,640)	(1,554)	—	—	—	(1,554)	—	(1,554
Other comprehensive loss, net of tax (Notes 2 and 15)	—	—	—	—	—	—	(10,495)	(10,495)	(3,180)	(13,675
Share-based compensation	—	—	—	—	1,739	—	—	1,739	—	1,739
Stock units issued to employees for prior year performance compensations	2,405,000	—	—	—	—	—	—	—	—	—
Share exercised by employee	1,400,140	904	—	—	(511)	—	—	393	—	393
Balance at December 31, 2022	**651,121,762**	**$806,283**	**(33,471,750)**	**$(20,000)**	**$ 13,500**	**$ (437,377)**	**$ (15,113)**	**$ 347,293**	**$ 41,351**	**$ 388,644**
Net loss	—	—	—	—	—	(3,186)	—	(3,186)	(2,245)	(5,431
Contribution from non-controlling interest holders	—	—	—	—	111	—	—	111	—	111
Initial non-controlling interest of the minority shareholders	—	—	—	—	—	—	—	—	344	344
Stock repurchase	—	—	(57,244,020)	(21,938)	—	—	—	(21,938)	—	(21,938
Other comprehensive income/(loss), net of tax (Notes 2 and 15)	—	—	—	—	—	—	1,484	1,484	(1,453)	31
Share-based compensation	—	—	—	—	1,442	—	—	1,442	—	1,442
Share exercised by employee	699,980	431	—	—	(325)	—	—	106	—	106
Balance at December 31, 2023	**651,821,742**	**$806,714**	**(90,715,770)**	**$(41,938)**	**$ 14,728**	**$ (440,563)**	**$ (13,629)**	**$ 325,312**	**$ 37,997**	**$ 363,309**

The accompanying notes are an integral part of these consolidated financial statements

Emeren Group Ltd
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts expressed in U.S. dollars in thousands)

	Notes	Years ended December 31, 2022	2023
Operating activities:			
Net loss		$ (4,548)	$ (5,431)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	7	6,817	7,830
Allowances for credit losses		774	3,736
Share-based compensation		1,739	1,442
Deferred tax provision		4,349	(40)
Loss on cancellation of project assets		225	2,704
Impairment loss of assets		—	1,711
Loss on disposals of property, plant and equipment		171	2,479
Investment gains from U.S. treasury note		(174)	(278)
Changes in working capital:			
Accounts receivable, trade and unbilled		(15,373)	(27,971)
Advances to suppliers		(740)	(3,277)
Value added tax receivable		(3,136)	(1,106)
Prepaid expenses and other current assets		(1,907)	(5,751)
Project assets		(35,332)	(25,812)
Other non-current assets		1,425	4,592
Accounts payable		(2,349)	9,161
Advances from customers		3,559	1,610
Amounts due to related parties		(108)	2,661
Other current liabilities		6,373	6,840
Income tax payable		19	1,228
Salaries payable		200	184
Net cash used in operating activities		**$ (38,016)**	**$ (23,488)**

The accompanying notes are an integral part of these consolidated financial statements.

Emeren Group Ltd
CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)
(Amounts expressed in U.S. dollars in thousands)

	Notes	Years ended December 31, 2022	2023
Investing activities:			
Purchase of property, plant and equipment		$ (37,617)	$ (10,747)
Proceeds from disposals of property, plant and equipment		2,620	—
Proceeds from disposal of nonfinancial assets in subsidiary	7	—	15,896
Proceeds from lending by related parties		433	—
Purchase of U.S. treasury note		(9,985)	—
Proceeds from sale of U.S treasury note		—	9,935
Interest income from U.S. treasury note		114	225
Net cash (used in)/provided by investing activities		**(44,435)**	**15,309**
Financing activities:			
Proceeds from banks and other third-party borrowings		96	217
Repayment of banks and other third-party borrowings		(713)	(1,853)
Contribution from non-controlling interest holders of subsidiaries		—	111
Proceeds from issuance of ordinary shares		393	106
Repurchase of shares		(43,678)	(21,938)
Borrowings from related parties		203	666
Proceeds from failed sale-lease back		—	7,686
Repayment of finance lease obligations		(5,435)	(4,943)
Repayment of failed sale-lease back financing		(11,147)	(5,315)
Net cash used in financing activities		**(60,281)**	**(25,263)**
Effect of exchange rate changes		(4,363)	(3,672)
Net decrease in cash and cash equivalents and restricted cash		(147,095)	(37,114)
Cash and cash equivalents and restricted cash, beginning of year		254,383	107,288
Cash and cash equivalents and restricted cash, end of year		**$ 107,288**	**$ 70,174**
Supplemental disclosure of cash flow information			
Interest paid, net of capitalized interest		3,167	2,033
Income tax paid		1,311	1,305
Non-cash investing and financing transactions			
Payables for purchase of property, plant and equipment		(14,322)	(13,426)
Payable for finance leases		(7,598)	(3,173)
Right-of-use assets obtained in exchange for lease liabilities		5,253	—

The accompanying notes are an integral part of these consolidated financial statements.

Emeren Group Ltd
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND NATURE OF OPERATIONS

Emeren Group Ltd, rebranded from ReneSola Ltd. in January 2023, was incorporated in the British Virgin Islands on March 17, 2006. On January 29, 2008, Emeren Group Ltd and its subsidiaries (collectively, the "Company") became listed on the New York Stock Exchange ("NYSE") in the United States. The Company is a solar project developer and operator, a solar downstream player. The Company develops and sells solar power projects or sells project Special Purpose Vehicles ("SPVs") (project development business); provides engineering, procurement and construction business (EPC business); and owns and operates solar power projects and sells the electricity generated by the operated solar power plants (IPP business). The Company conducts the IPP business, EPC business and project development business in a number of countries, including United States, Poland, Hungary, Spain, France, United Kingdom (UK), Germany, Italy and China.

2. SUMMARY OF PRINCIPAL ACCOUNTING POLICIES

Basis of presentation

The consolidated financial statements have been prepared and presented in accordance with accounting principles generally accepted in the United States of America ("US GAAP").

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The realization of assets and the satisfaction of liabilities in the normal course of business are dependent on, among other things, the Company's ability to generate cash flows from operations, and the Company's ability to arrange adequate financing arrangements, to support its working capital requirements.

Basis of consolidation

The consolidated financial statements include the financial statements of Emeren Group Ltd and its subsidiaries. All inter-company transactions, balances and unrealized profits and losses have been eliminated on consolidation.

A non-controlling interest is recognized to reflect the portion of a subsidiary's equity which is not attributable, directly or indirectly, to the Company. Consolidated net income (loss) on the consolidated statements of operations and comprehensive income (loss) includes the net income (loss) attributable to non-controlling interests when applicable. The cumulative results of operations attributable to non-controlling interests are also recorded as non-controlling interests in the Company's consolidated balance sheets. Cash flows related to transactions with non-controlling interests are presented under financing activities in the consolidated statements of cash flows, when applicable.

Fair value measurement

The Company estimates fair value of financial assets and liabilities as the price that would be received from the sales of an asset or paid to transfer a liability (an exit price) on the measurement date in an orderly transaction between market participants. The Company utilizes a hierarchy for inputs used in measuring fair value that gives the highest priority to observable inputs and the lowest priority to unobservable inputs. Valuation techniques used to measure fair value maximize the use of observable inputs.

When available, the Company measures the fair value of financial instruments based on quoted market prices in active markets (Level 1 inputs), valuation techniques that use observable market-based inputs (Level 2 inputs) or unobservable inputs that are corroborated by market data. Pricing information the Company obtains from third parties is internally validated for reasonableness prior to use in the consolidated financial statements. When observable market prices are not readily available, the Company generally estimates the fair value using valuation techniques that rely on alternate market data or inputs that are generally less readily observable from objective sources and are estimated based on pertinent information available at the time of the applicable reporting periods (Level 3 inputs).

In certain cases, fair values are not subject to precise quantification or verification and may fluctuate as economic and market factors vary and as the Company's evaluation of those factors changes. Although the Company uses its best judgment in estimating the fair value of these financial instruments, there are inherent limitations in any estimation technique. In these cases, a minor change in an assumption could result in a significant change in its estimate of fair value, thereby increasing or decreasing the amounts of the Company's consolidated assets, liabilities, equity and net income or loss.

Financial asssets and liabilities held by the Company measured at fair value on a recurring basis as of December 31, 2023 and 2022 include cash and cash equivalents, accounts receivable, held-to-maturity investments, accounts payable and salaries payable.

The carrying amounts of cash and cash equivalents, accounts receivable, held-to-maturity investments, accounts payable and salaries payable approximate their fair value because of their short-term nature (classified as Level 1).

Use of estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses for the reporting periods presented. Actual results could materially differ from these estimates. Significant accounting estimates are susceptible to changes with the acquisition of the information, which include revenue recognition for sales of project asset rights, percentage of completion of EPC services, EPC warranties, allowances for credit losses, valuation of deferred tax assets, and recoverability of the carrying value of long-lived assets and project assets. Management bases its estimates and judgments on historical experience and on various other factors that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources.

Cash and cash equivalents

Cash and cash equivalents represent cash on hand and held with banks, including demand deposits and money market fund, which are unrestricted as to withdrawal and use, and which have original maturities of three months or less when purchased. The Company maintains its cash and cash equivalents in bank accounts which, at times, exceed the federally insured limites. As of December 31, 2023, the Company had $26.6 million of cash in excess of FDIC insured amount. The bank at which the Company had deposits that exceed FDIC limits is not in receivership or under the control of the FDIC. The Company has not experienced any losses in such accounts.

Restricted Cash

Restricted cash consists of cash and cash equivalents held by various banks to secure certain of our notes payable and other deposits designated for the payment of amounts related to loan interest. Restricted cash also includes cash and cash equivalents held in frozen bank accounts due to judicial property preservations.

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheets as of December 31, 2022 and 2023 to the total of such amounts as presented in the consolidated statements of cash flows:

	At December 31,	
	2022	2023
	in thousands	
Cash and cash equivalents	$ 107,105	$ 70,174
Restricted cash	183	—
Total cash, cash equivalents, and restricted cash	$ 107,288	$ 70,174

Accounts Receivable, trade and unbilled

Accounts Receivable Trade, net

The Company records trade accounts receivable for unconditional rights to consideration arising from the performance under contracts with customers. The carrying value of such receivables, net of the allowance for credit losses, represents their estimated net realizable value. Our electricity generation revenue generally includes up to 30-day payment terms following the transfer of control of the electricity generated to the customer. In addition, The Company is entitled to the feed-in tariff(s) (FIT) that the government guaranteed and subsidized electricity sale price at which solar power projects can produce green energy. The Company recognizes the FIT as part of the electricity generation revenue when the entitlement to receipt of such FIT is fulfilled. Accounts receivable from such FIT is expected to be collected beyond 12 months, which are discounted at an effective interest rate and recorded as a non-current asset.

Payment terms for sales of project assets, operations and maintenance services vary by contract but are generally due upon demand or within several months of satisfying the associated performance obligations. The Company typically does not include extended payment terms in its contracts with customers.

Accounts Receivable Unbilled, net

Accounts receivable unbilled represents a contract asset for revenue that has been recognized in advance of billing the customer, which is common for our project-related sales contracts and EPC contracts. Revenue may be recognized in advance of billing the customer, resulting in an amount recorded to “Accounts receivable unbilled” depending on the expected timing of payment for such unbilled receivables. Once the Company has an unconditional right to consideration, it typically bills the customer and reclassifies the “Accounts receivable unbilled” to “Accounts receivable trade.” Billing requirements vary by contract but are generally structured around the completion of certain development, interconnection, or other specified milestones.

Allowance for Credit Losses

The allowance for credit losses is a valuation account that is deducted from a financial asset’s amortized cost to present the net amount we expect to collect from such asset. The Company estimates allowances for credit losses using relevant available information from both internal and external sources. In establishing the allowances, management considers historical losses, the financial condition, the accounts receivables aging, the payment patterns and the forecasted information upon the use of the Current Expected Credit Loss Model (“CECL Model”) in accordance with ASC topic 326, Financial Instruments - Credit Losses. The Company monitors the estimated credit losses associated with its trade accounts receivable and unbilled accounts receivable based primarily on its collection history, and the delinquency status of amounts owed to the Company, which is determined based on the aging of such receivables. Such methods and estimates are adjusted, as appropriate, for relevant past events, current conditions, and reasonable and supportable forecasts. The Company recognizes write-offs within the allowance for credit losses when cash receipts associated with its financial assets are deemed uncollectible. During the years ended December 2022, and 2023, the Company recorded credit losses of $0.6 million and $2.9 million, respectively.

Project assets

The Company develops commercial solar power projects (“project assets”) for sale. Project assets consist primarily of costs relating to solar power projects in various stages of development that are capitalized prior to entering into a definitive sales agreement for the solar power project. These costs include certain acquisition costs, land costs and costs for developing and constructing a solar power project. Development costs can include legal, consulting, permitting, and other similar costs. Construction costs can include execution of field construction, installation of solar equipment, and solar modules and related equipment. Interest costs incurred on debt during the construction phase are also capitalized within project assets. The Company does not depreciate the project assets when they are considered held for sale. Any revenue generated from a solar power project connected to the grid would be considered incidental income and accounted for as a reduction of the capitalized project costs for development. In addition, the Company presents all expenditures related to the purchase, development and construction of project assets as a component of cash flows from operating activities.

During the development phase, these project assets are accounted for in accordance with the recognition, initial measurement and subsequent measurement subtopics of ASC 970-360, as they are considered in substance real estate. While the solar power projects are in the development phase, they are generally classified as non-current assets, unless it is anticipated that construction will be completed, and sale will occur within one year.

The Company capitalizes costs related to solar power projects in various stages of development prior to entering into a definitive sales agreement for the solar power project, and classifies these costs as project assets on the consolidated balance sheets when the criteria in ASC 360-10-45-9 are met. If criteria are not met, the Company reclassifies these capitalized costs to property, plant and equipment, unless the delay in the period required to complete the sale is caused by events or circumstances beyond the Company's control.

The Company reviews project assets and deferred project costs for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The Company considers a project commercially viable or recoverable if it is anticipated to be sold for a profit once it is either fully developed or fully constructed. The Company considers a partially developed or partially constructed project commercially viable or recoverable if the anticipated selling price is higher than the carrying value of the related project assets and the estimated costs to complete. The Company examines a number of factors to determine if the project will be recoverable, the most notable of which include whether there are any changes in environmental, ecological, permitting, market pricing or regulatory conditions that impact the project. Such changes could cause the costs of the project to increase or the selling price of the project to decrease. If a project is not considered recoverable, the Company impairs the respective project assets and adjusts the carrying value to the estimated recoverable amount, with the resulting impairment recorded within operations.

Contract costs

The Company provides EPC services including engineering design, construction contracting and management, procurement of PV modules, balance-of-system components and other components. Contract costs generally include all direct costs, such as materials, direct labor, and subcontracts, and indirect costs identifiable with or allocable to the contracts.

Contract costs also include the costs related to the design, engineering, and costs of all PV modules and materials needed for the projects for the cooperation arrangements with third party to jointly construct the power projects for sale.

Contract costs are accumulated and are charged to operations as the related revenue from contracts is recognized. Refer to note 2 Revenue recognition - Sale of project assets constructed by a third-party EPC contractor and EPC services for the corresponding revenue streams.

Advances to suppliers

In order to secure a stable supply of construction materials, the Company makes advance payments to suppliers for raw material supplies and advances for purchases of long-lived assets which are offset against future deliveries. Advances to suppliers for purchases expected within twelve months as of each balance sheet date are recorded as advances to suppliers in current assets and those associated with purchases expected over longer periods of time are recorded in non-current advances to suppliers. As of December 31, 2022 and 2023, advances to suppliers in current assets were $1.0 million and $4.3 million respectively. The Company does not require collateral or other security against its advances to suppliers. As a result, the Company's claims for such prepayments are unsecured, which exposes the Company to the suppliers' credit risk. The Company performs ongoing credit evaluations of the financial condition of its material suppliers.

Property, plant and equipment, net

Property, plant and equipment are stated at cost less accumulated depreciation and impairment. Depreciation is computed on a straight-line basis over the following estimated useful lives:

Plant and machinery	3-5 years
Motor vehicles	4-5 years
Office equipment	3-5 years
Power stations	20-40 years

Estimated useful life of land is infinite and no depreciation is provided.

Power stations represent project assets that the Company owned and operated after being placed in service. The Company reports its power stations, including battery storage station, at cost, less accumulated depreciation and impairment, if any. The Company begins depreciation for power stations when they are placed in service. The Company computes depreciation expense for the power station using the straight-line method over the shorter of the term of the related PPA or 20 to 40 years depends on the estimated useful lives of the project assets.

Construction in progress represents mainly the construction of solar power projects the Company will own and operate for electricity generation. Costs incurred in the construction are capitalized and transferred to property, plant and equipment upon completion, at which time depreciation commences.

Expenditures for repairs and maintenance are expensed as incurred. The gain or loss on disposals of property, plant and equipment, if any, is the difference between the net sales proceeds and the carrying amount of the disposed assets and is recognized in the consolidated statements of operations upon disposal.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of the identifiable assets and liabilities acquired as a result of the Company's acquisitions of interests in its subsidiaries.

Goodwill is not depreciated or amortized but is tested for impairment at the reporting unit level on an annual basis, and between annual tests when an event occurs, or circumstances change that could indicate that the asset might be impaired. Under ASC 350-20, the Company has the option to choose whether it will apply the qualitative assessment first and then the quantitative assessment, if necessary, or to apply the quantitative assessment directly. The Company first makes a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying value to determine whether it is necessary to perform a quantitative goodwill impairment test. Such qualitative impairment test considers various factors, including macroeconomic conditions, industry and market considerations, cost factors, the overall financial performance of a reporting unit, and any other relevant events affecting the Company or a reporting unit. If circumstances determine through the qualitative assessment that a reporting unit's fair value is more likely than not greater than its carrying value, the quantitative impairment test is not required. If the qualitative assessment indicates it is more likely than not that a reporting unit's fair value is less than its carrying value, the Company performs a quantitative impairment test.

The quantitative impairment test is the comparison of the fair value of a reporting unit with its carrying amount, including goodwill. Our battery storage business represents one of the Company's reporting units. The Company defines the fair value of a reporting unit as the price that would be received to sell the unit as a whole in an orderly transaction between market participants at the measurement date. The Company primarily uses an income approach to estimate the fair value of our reporting unit. Significant judgment is required when estimating the fair value of a reporting unit, including the forecasting of future operating results and the selection of discount and expected future growth rates used to determine projected cash flows. If the estimated fair value of a reporting unit exceeds its carrying value, goodwill is not impaired, and no further analysis is required. Conversely, if the carrying value of a reporting unit exceeds its estimated fair value, the Company records an impairment loss equal to the excess, not to exceed the total amount of goodwill allocated to the reporting unit.

The Company performs goodwill impairment testing at the reporting unit level on December 31 annually and more frequently if indicators of impairment exist. During the year ended of December 31, 2022 and 2023, the Company recorded nil and $1.0 million as impairment loss of goodwill, respectively.

Held-to-maturity

The Company's held-to-maturity investments consist of investment-grade interest bearing instruments, such as the U.S. Treasury notes, which are stated at amortized cost. The Company does not intend to sell these investment securities. Those with maturities less than twelve months are included in investment securities in the current assets section of the Company's consolidated balance sheets. Those with remaining maturities in excess of twelve months are included in investment securities in the non-current assets section of its consolidated balance sheets. As of December 31, 2022 and 2023, held-to-maturity investments balance were $10.0 million and nil, respectively. During the years ended December 31,2022 and 2023, the investment gain was $0.2 million and $0.1 million, respectively.

The Company reviews its investments for other-than-temporary impairment ("OTTI") based on the specific identification method. The Company considers available quantitative and qualitative evidence in evaluating potential impairment of its investments. If the cost of an investment exceeds the investment's fair value, the Company considers, among other factors, general market conditions, expected future performance of the investees, the duration and the extent to which the fair value of the investment is less than the cost, and the Company's intent and ability to hold the investment. OTTI is recognized as a loss in the consolidated statements of operations.

Asset acquisition

When the Company acquires other entities, if the assets acquired and liabilities assumed do not constitute a business, or if all the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar assets, the transaction is accounted for as an asset acquisition. Assets are recognized based on the cost, which generally includes the transaction costs of the asset acquisition, and no gain or loss is recognized unless the fair value of noncash assets given as consideration differs from the assets' carrying amounts on the Company's books. If the consideration given is not in the form of cash (that is, in the form of noncash assets, liabilities incurred, or equity interest issued), measurement is based on either the cost to the acquiring entity or the fair value of the assets (or net assets) acquired, whichever is more clearly evident and, thus, more reliably measurable. The cost of a group of assets acquired in an asset acquisition is allocated to the individual assets acquired or liabilities assumed based on their relative fair value and does not give rise to goodwill.

Assets and liabilities held-for-sale

Assets and asset disposal groups are classified as held-for-sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when management has committed to a plan of sale and the sale is highly probable, the assets are available for immediate sale in their present condition, and they are expected to qualify for recognition as a completed sale within one year from the date of classification. Assets and liabilities classified as held for sale are measured at lower of their carrying amount or fair value less costs to sell.

Long-lived assets to be sold are classified as held for sale considering the recognition criteria in ASC 360-10-45-9 in which all of the following criteria are met:

- Management, having the authority to approve the action, commits to a plan to sell the asset,
- The asset is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets;
- An active program to locate a buyer and other actions required to complete the plan to sell the asset have been initiated;
- The sale of the asset is probable, and transfer of the asset is expected to qualify for recognition as a completed sale, within one year;
- The asset is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and
- Actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Interest capitalization

The Company capitalizes interest costs as part of the costs of constructing certain assets during the period of time required to get the assets ready for their intended use. The Company capitalizes interest to the extent that expenditures to construct an asset have occurred and interest costs have been incurred. The interest capitalized for project assets forms part of the cost of revenues when such project assets are sold, and all revenue recognition criteria are met. Interest is capitalized for solar power projects that are classified as property, plant and equipment and built for the Company to own and operate for electricity generation before the projects are completed and put into operation. Interest capitalization ceases once a project is substantially complete or no longer undergoing construction activities to prepare it for its intended use.

Impairment of long-lived assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable or that the useful life is shorter than originally estimated. The Company assesses recoverability of the long-lived assets by comparing the carrying amount of the assets to the estimated future undiscounted cash flows expected to result from the use of the assets and their eventual disposition. The Company recognizes an impairment loss in the event the carrying amount exceeds the estimated future undiscounted cash flows attributable to such assets, measured as the difference between the carrying amount of the assets and the fair value of the impaired assets.

Impairment losses of long-lived assets for the years ended December 31, 2022 and 2023 were nil and $0.7 million, respectively. Impairment losses of these assets represented the difference between the carrying amount and fair value less cost to sell as a result of committed sale plans of solar power plants originally owned and operated by the Company for electricity generation.

Leases

Leases are classified as finance or operating leases. A lease that transfers to the lessee substantially all the benefits and risks incidental to ownership is classified as a finance lease. At inception, a finance lease is recorded at the lower of the present value of minimum lease payments or the fair value of the asset. Assets under finance leases are amortized on a basis consistent with that of similar useful life of fixed assets or the end of lease term, whichever is earlier. If the lease transfers ownership or contains an option to purchase the asset that the lessee is reasonably certain to exercise, the finance leases should be amortized over the useful life of the asset.

At the inception of each lease arrangement, the Company determines if the arrangement is a lease or contains an embedded lease and reviews the facts and circumstances of the arrangement to classify lease assets as operating or finance leases under ASU 2016-02, Leases (Topic 842). The Company has elected not to record any leases with terms of 12 months or less on the consolidated balance sheets.

Balances related to operating leases are included in operating lease right-of-use ("ROU") assets, operating lease liabilities current and operating lease liabilities non-current on the consolidated balance sheets. Finance leases represent a portion of the active lease agreements and are included in finance lease ROU assets, failed sales-leaseback and finance lease liabilities current and non-current on the consolidated balance sheets. The ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the obligation of the Company to make minimum lease payments arising from the lease for the duration of the lease term.

Operating lease costs are recognized on a straight-line basis over the lease term. From time to time, the Company's subsidiaries are asked to prepay the lease costs for over one year. As of December 31, 2022 and 2023, the prepaid rental fees of $0.9 million and $1.0 million respectively, were recorded in operating lease right-of-use assets.

To determine the present value of future minimum lease payments, the Company uses the implicit rate when readily determinable. Presently, because many of the leases do not provide an implicit rate, the Company applies its incremental borrowing rate, which is considered as the rate that the Company would negotiate when financing for a similar period, and with a similar guarantee, to obtain an asset of a similar value to the lease asset to determine the present value of minimum lease payments. The operating and finance lease ROU assets include any lease payments made and exclude lease incentives.

For a sale-leaseback transaction, when the transaction involves real estate or integral equipment, sale-leaseback accounting shall be used by a seller-lessee only if the transaction includes all of the following a) normal leaseback; b) payment terms and provisions that adequately demonstrate the buyer-lessor's initial and continuing investment in the property; and c) payment terms and provisions that transfer all of the other risks and rewards of ownership as demonstrated by the absence of any other continuing involvement by the seller-lessee.

Equipment is determined to be integral when the cost to remove the equipment from its existing location, ship and reinstall at a new site, including any diminution in fair value, exceeds 10% of the fair value of the equipment at the time of original installation.

If a sale-leaseback of real estate qualifies for sale-leaseback accounting, an analysis is performed to determine if the Company can record a sale and remove the assets from the balance sheet and recognize the lease; and if so, to determine whether to record the lease as either an operating or finance lease.

If a sale-leaseback transaction does not qualify for sale-leaseback accounting because of any form of continuing involvement by the seller-lessee other than a normal leaseback, it is accounted for as a financing arrangement and recorded as failed sales-leaseback and finance lease liabilities, current and non-current on the consolidated balance sheet.

Contingencies

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, and penalties and other sources are recorded when it is probable that a liability will be 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 the amount cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material, is disclosed. Legal costs incurred in connection with loss contingencies are expensed as incurred.

Deferred income taxes

Deferred income taxes are recognized for temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements, net of operating loss carry forwards and credits by applying enacted statutory tax rates applicable to future years. Deferred tax assets are recognized to the extent that these assets are more likely than not to be realized. In making such a determination, management considers all positive and negative evidence, including future reversals of projected future taxable income and results of recent operation. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Current income taxes are provided for in accordance with the laws of the relevant taxing authorities. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. Deferred tax assets and liabilities are all classified as non-current in the consolidated balance sheets.

Revenue recognition

Solar power project development

Sale of project assets constructed by a third-party EPC contractor

The Company recognizes revenue for sales of project assets constructed by a third-party EPC contractor over time as the Company's performance creates an energy generation asset that is owned by the customer as it is being constructed and the customer can direct all activities related to the work in progress. Furthermore, the sale of a project asset when combined with EPC services represents a single performance obligation for the development and construction of a single generation asset. The Company recognizes revenue over time for construction contracts which recognize revenue and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs of the contract. Under this business model, the EPC services are provided by a third-party service provider. In accordance with the terms and conditions of the EPC contract, the Company has the ability to direct a third party to ensure that the EPC services to the customer are performed therefore the Company acts as the principal in this arrangement and both the revenue and cost amounts paid to the EPC contractor are recognized on a gross basis.

Sale of project assets constructed by the Company's own EPC team

Under this business model, the Company sells power projects after they have been completed or are near completion. The Company conducts the construction of the power plant and completes or nearly completes the project before it identifies a customer. When a customer is identified, the Company enters into two agreements through signing: Sale and Purchase Agreement ("SPA") and Operations and Maintenance ("O&M") Services Contract, which are generally signed on the same date. Such arrangements consist of two performance obligations: sale of solar project and O&M services.

For sale of a solar project, the Company recognizes revenue at a point in time once control of project company is transferred to the customer as the Company has no remaining performance obligation once the control is transferred upon closing of the sale. For O&M services, the Company recognizes revenue over time, ratably over the service period, as this performance enhances an energy generation asset controlled by the customer.

Sale of project asset rights

The Company sells the project rights to customers through the disposal of project companies holding the relevant permits. For these transactions, the project companies could either own the land or lease the land under the lease term that could cover the entire power plant's life.

The Company recognizes revenue for sale of project rights at a point in time once control of project rights is transferred to customer as the Company has no further obligations related to the project rights.

For sale of project asset rights, the contract arrangements may contain provisions that can either increase or decrease the transaction price. These variable amounts generally are resolved upon achievement of certain performance or upon occurrence of certain price adjustment conditions. Variable consideration is estimated at each measurement date at its most likely amount to the extent that it is probable that a significant reversal of cumulative revenue recognized will not occur and true-ups are applied prospectively as such estimates change.

Changes in estimates for sales of pre-development solar projects occur for a variety of reasons, including but not limited to (i) EPC construction plan accelerations or delays, (ii) product cost forecast changes, (iii) change orders, or (iv) occurrence of purchase price adjustment conditions. The cumulative effect of revisions to transaction prices are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated.

EPC Services

The Company provides EPC services under the EPC contracts, under which the Company provides one distinct performance obligation – design and build the power plant on customer's site per customer's request.

The Company recognizes revenue for EPC services over time as the Company's performance creates or enhances an energy generation asset controlled by the customer. In recognizing revenue over time, the Company follows the costs incurred method and uses the actual costs incurred relative to the total estimated costs (including module costs) in order to determine the progress towards completion and calculate the corresponding amount of revenue and profit to recognize. Costs incurred include direct materials, solar modules, labor, subcontractor costs, and those indirect costs related to contract performance, such as indirect labor and supplies.

The over time revenue recognition requires the Company to make estimates of net contract revenues and costs to complete the projects. In making such estimates, significant judgment is required to evaluate assumptions related to the amount of net contract revenues, including the impact of any performance incentives, liquidated damages, and other payments to customers. Significant judgment is also required to evaluate assumptions related to the costs to complete the projects, including materials, labor, contingencies, and other system costs.

Although the EPC contract usually clearly states a fixed unit price and the estimated total contract amount, the total contract amount is subject to variable consideration due to the difference between actual grid-connection capacity and estimated grid-connection capacity. The Company makes a reasonable estimation of grid-connection capacity, which represents a form of variable consideration. The variable consideration is estimated at the contact inception at the best estimate based on relevant experience and historical data and updated at the end of each reporting period as additional performance data becomes available and only to the extent that it is probably that a significant reversal of any revenue will not occur.

If estimated total costs on any contract are greater than the net contract revenues, the Company recognizes the entire estimated loss in the period the loss becomes known. The cumulative effect of the revisions to estimates related to net contract revenues and costs to complete contracts, including penalties, claims, change orders, performance incentives, anticipated losses, and others are recorded in the period in which the revisions to estimates are identified and the amounts can be reasonably estimated. The effect of the changes on future periods are recognized as if the revised estimates had been used since revenue was initially recognized under the contract. Such revisions could occur in any reporting period, and the effects may be material depending on the size of the contracts or the changes in estimates. As of December 31, 2022 and 2023, the Company recorded a liability associated with the loss contract of $0.7 million and nil, respectively.

The Company bills the customer based on progress billing terms in the contract. Accounts receivable from EPC services (unbilled) represents revenue that has been recognized in advance of billing the customer, which is common for long-term construction contracts. The Company typically recognizes revenue from contracts for the construction over time using cost-based input methods, which recognizes revenue and gross profit as work is performed based on the relationship between actual costs incurred compared to the total estimated costs of the contract. Accordingly, revenue could be recognized in advance of billing the customer, resulting in an amount recorded to "Accounts receivable from EPC services (unbilled)". Once the Company has an unconditional right to consideration under a construction contract, the Company typically bills the customer accordingly and reclassifies the "Accounts receivable from EPC services (unbilled)" to "Accounts receivable from EPC services (billed)." Billing requirements vary by contract but are generally structured around the completion of certain construction milestones. Certain of the EPC contracts for PV solar power systems contain retainage provisions. Retainage represents contract costs for the portion of the contract price earned for work performed but held for payment by the customer as a form of security until a certain defined timeframe has been reached. The Company considers whether collectability of such retainage is reasonably assured in connection with our overall assessment of the collectability of amounts due or that will become due under the EPC contracts. After the Company has satisfied the EPC contract requirements and has an unconditional right to consideration, the retainage is billed and reclassified to "Accounts receivable from EPC services (billed)". As of December 31, 2022 and 2023, the balance of accounts receivable from EPC services (unbilled) were $26.4 million and $51.9 million, respectively. And there were no retainages in Accounts receivable or Accounts receivable (unbilled) as of December 31, 2022 and 2023.

For EPC services, the Company provides a limited assurance only warranty for the modules, materials and construction part of the power plants. Although the Company subcontracts the construction to third party developers and purchases the raw materials and modules from third party suppliers, the Company is the primary obligor for the limited warranties such as solar module product warranty for a period of five to ten years, warranties for defects in engineering design, installation, workmanship for a period of one to two years and recorded as a liability in the Consolidated Balance Sheets. Nevertheless, the Company has a legally enforceable right to recover these warranties from the subcontractor and suppliers as these parties have contracted with the Company to assume these warranty obligations, and that the Company will also record receivables in the Consolidated Balance Sheets for expected reimbursement in amounts that the Company believe are probable. The EPC warranty expenses and expected recovery amounts related to warranties are recorded net of expense in the Consolidated Statement of income on the basis that the amounts provided by the subcontractor and suppliers are a reimbursement of the Company's costs. As of December 31, 2022 and 2023, the warranty liabilities and the related warranty receivables are not material and the related expenses for the years ended December 31, 2022 and 2023 are not material.

Electricity generation

The Company recognizes electricity generation generated from power plants owned and operated by the Company over time as the customer receives and consumes the benefits as the Company performs. In recognizing revenue overtime, the Company follows the output method and uses the actual electricity supplied in order to calculate the corresponding amount of revenue and profit to recognize. The electricity generation records are reconciled with the power grid companies and the price of electricity is based on a fixed unit price according to the power purchase arrangement with the power grid companies. The Company is entitled to the feed-in tariff(s) (FIT) that the government guaranteed and subsidized electricity sale price at which solar power projects can produce green energy. The Company recognizes the FIT as part of the electricity generation revenue when the entitlement to receipt of such FIT is fulfilled.

Accounts receivable from such FIT are expected to be collected beyond 12 months, i.e. collection are expected within 5 years from the day of recognizing the account receivable. Thus the Company considers that the settlement terms to contain significant financing component and accordingly the amount of consideration is adjusted for the effects of the time value of money taking into consideration the credit characteristics of the relevant counterparties and are discounted at an effective interest rate of 4.75% based on the average borrowing rate in accordance with the financial institution. The Company recorded discounted receivable and as a non-current asset accordingly.

As of December 31, 2023, there are $3.5 million of FIT receivables classified as current and $16.4 million classified as non-current. Historically, the Company has not been exposed to material risks due to changes in interest rates and changes in estimation of collection; however, the future interest income may decrease or interest expenses on borrowings may increase due to changes in market interest rates. Also as the receivable collection relies heavily based on the People's Republic of China (PRC) government policies, the estimation of collection may adjust based on the changes in government policies as well as the market conditions. Revenue recognized from electricity generation was $21.7 million and $29.4 million for the years ended December 31, 2022 and 2023, respectively.

Revenue from green certificates

The Company receives green energy certificates based on electricity generated from the power plants in a Romanian subsidiary. The Company sells these certificates to buyers who can then meet the mandatory government quota per year for green energy produced. The Company believes that these green certificates are a government incentive and the sale of green energy certificates does not fall into derivative and lease accounting scope. The Company recognizes revenue for the sale at a point in time once the control of green certificates has been transferred to the buyers according to the green certificate purchase arrangement. The consideration of selling green certificates sold is fixed as stated in the purchase arrangement.

For the years ended December 31, 2022 and 2023, revenues from green certificates were nil and nil, respectively, and are included in electricity generation revenue. In 2022 and 2023, the Company did not generate revenue from green certificates mainly due to the disposal of the Company's power plants in a Romanian subsidiary that previously sold green certificates. The Company does not anticipate generating revenue from the sale of green certificates in foreseeable future.

Contract liability

Advances from customers, which represent contract liabilities, are unrecognized revenue received from customers. Advances from customers are recognized as the Company performs under the contract. During the years ended December 31, 2022 and 2023, the Company recognized nil and $0.4 million as revenue that was included in the balance of advances from customers at January 1, 2022 and 2023, respectively.

Disaggregation of Revenue

Revenues from sales of project right and green certificates are recognized at a point in time whereas other revenues are recognized over time. The following tables summarizes the Company's revenues by recognition points:

	Years ended December 31,	
	2022	2023
	in thousands	
Solar power project development	$ 13,753	$ 25,152
Revenue recognized at the point in time	**13,753**	**25,152**
EPC Services	24,760	43,902
Electricity generation	21,654	29,405
Others	1,124	7,183
Revenue recognized over time	**47,538**	**80,490**
Total	**$ 61,291**	**$ 105,642**

The following table summarizes the Company's revenues generated by the geographic location of customers:

	Years ended December 31,	
	2022	2023
	in thousands	
China	$ 20,737	$ 14,803
United States	13,870	1,090
Germany	—	2,435
UK	1,079	12,754
Spain	(490)	—
France	14	9
Poland	24,850	25,655
Italy	779	6,901
Hungary	452	41,995
Total	$ 61,291	$ 105,642

See Note 18. SEGMENT REPORTING for further details.

Value added tax ("VAT")

Value added tax ("VAT") at differentiated rates on invoice amount is collected on behalf of the tax authorities in respect of the different types of revenues and is not recorded as revenue. VAT paid for purchases, net of VAT collected from customers, is recorded as an asset.

Other operating income (expenses)

Other operating income (expenses) primarily consists of cancellation loss of project assets, disposal gain (loss) of property, plant and equipment and non-FIT government grants.

Government grants

A government grant is recognized when there is reasonable assurance that the Company will comply with the conditions attached to it and the grant will be received. A government grant received for the purpose of giving immediate financial support to the Company with no future related costs or obligation is recognized in the Company's consolidated statements of operations when the grant becomes receivable. The Company collected government grants of $12.2 million and $5.9 million from feed-in tariff(s) (FIT) for the electricity sold to the state grid companies in the PRC for the years ended December 31, 2022 and 2023, respectively. The Company recognized government grants of attracting foreign investment of $0.05 million and $0.2 million in other operating income and expense, net for the years ended December 31, 2022 and 2023, respectively.

Foreign currency

The functional currency of Emeren Group Ltd is the United States Dollar ("U.S. dollar"). The functional currency of Emeren Group's subsidiaries in the People's Republic of China ("PRC") is Renminbi ("RMB"). The functional currency of the overseas subsidiaries normally is the local currency in the country where the subsidiary is domiciled.

Foreign currency transactions have been translated into the functional currency at the exchange rates prevailing on the date of transactions. Foreign currency denominated monetary assets and liabilities are remeasured into the functional currency at exchange rates prevailing on the balance sheet date. Exchange gains and losses have been included in the determination of net income.

The Company has chosen the U.S. dollar as its reporting currency. Assets and liabilities have been translated using exchange rates prevailing on the balance sheet date. Income statement items have been translated using the weighted average exchange rate and equity is translated at historical exchange rates, except for the change in retained earnings during the year which is the result of the income or loss. Translation adjustments have been reported as a component of other comprehensive income/loss in the consolidated statement of comprehensive income/(loss).

The RMB is not a freely convertible currency. The PRC State Administration for Foreign Exchange, under the authority of the People's Bank of China, controls the conversion of RMB into foreign currencies. The value of the RMB is subject to changes in central government policies and to international economic and political developments affecting supply and demand in the China foreign exchange trading system market. The Company's cash and cash equivalents and restricted cash denominated in RMB amounted to RMB147.5 million ($21.4 million) and RMB 138.1 million ($19.5 million) on December 31, 2022 and 2023, respectively.

Earnings (loss) per ADS

Basic earnings (loss) per ADS is computed by dividing income (loss) attributable to holders of ADS by the weighted average number of ADS outstanding during the year. Diluted earnings (loss) per ADS reflects the potential dilution that could occur if securities or other contracts to issue ADS were exercised or converted into ADS.

Share-based compensation

The Company recognizes expenses for services received in exchange for awards of equity instruments based on the grant-date fair value of the award as determined by the Black-Scholes option pricing model, net of estimated forfeitures. The estimated compensation cost is recognized ratably over the period the grantee is required to provide services per the conditions of the award.

For stock option modifications, the Company measures the incremental compensation cost which should be measured as the excess, if any, of the fair value of the modified award determined over the fair value of the original award immediately before its terms are modified, which is measured based on the share price and other pertinent factors at that date.

See Note 12, "Share Based Compensation" for further details.

Comprehensive income (loss)

Comprehensive income (loss) is the change in equity during a period from transactions and other events and circumstances from non-shareholder sources and included net income (loss) and foreign currency translation adjustments. As of December 31, 2023, accumulated other comprehensive income (loss) is composed of foreign currency translation adjustments and 2.5% capital distribution to non-controlling interest of $0.4 million, respectively.

Concentrations of credit risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable, advances to suppliers and other receivables. The Company places its cash and cash equivalents with reputable financial institutions. The Company conducts credit evaluations of customers and generally does not require collateral or other security from its customers. The Company monitors the financial condition of customers and performs credit evaluations whenever considered necessary.

Segment Reporting

The Company uses the management approach in determining its operating segments. The Company's chief operating decision maker ("CODM") identified as the Company's Chief Executive Officer, relies upon the consolidated results of operations as a whole when making decisions about allocating resources and assessing the performance of the Company. As a result of the assessment made by CODM, the Company only reports the segment information of net revenue and gross profit, to conform to the information the CODM receives to assess the financial performance and allocate resources. There are no differences between the measurements of the Company's reportable segment's gross profit and the Company's consolidated gross profit, as the Company uses the same profit measurement for all of the reportable segments and the consolidated entity. Furthermore, the Company's CODM is not provided with asset information by segment. As such, no asset information by segment is presented.

The Company separated the solar power project segments into three reportable segments, including solar power project development, EPC services and electricity generation ancillary revenues and expenses and other unallocated costs and expenses are recorded in others.

Business Combinations

The Company accounts for its business combinations using the purchase method of accounting in accordance with ASC Topic 805, Business Combinations. The purchase method of accounting requires that the consideration transferred to be allocated to the assets, including separately identifiable assets and liabilities the Company acquired, based on their estimated fair values. The consideration transferred in an acquisition is measured as the aggregate of the fair values at the date of exchange of the assets given, liabilities incurred, and equity instruments issued as well as the contingent considerations as of the acquisition date. The costs directly attributable to the acquisition are expensed as incurred. Identifiable assets, liabilities and contingent liabilities acquired or assumed are measured separately at their fair value as of the acquisition date, irrespective of the extent of any noncontrolling interests. The excess of (i) the total cost of acquisition, fair value of the noncontrolling interests and acquisition date fair value of any previously held equity interests in the acquiree over (ii) the fair value of the identifiable net assets of the acquiree, is recorded as goodwill. If the cost of acquisition is less than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in earnings.

In a business combination achieved in stages, the Company remeasures its previously held equity interest in the acquiree immediately before obtaining control at its acquisition-date fair value and the re-measurement gain or loss, if any, is recognized in "others operating income and expenses, net" in the consolidated statements of comprehensive income.

The determination and allocation of fair values to the identifiable assets acquired, liabilities assumed and noncontrolling interests is based on various assumptions and valuation methodologies requiring considerable judgment from management. The most significant variables in these valuations are discount rates, the number of years on which to base the cash flow projections, as well as the assumptions and estimates used to determine the cash inflows and outflows. The Company determines discount rates to be used based on the risk inherent in the related activity's current business model and industry comparisons.

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 about the program to allow a user of financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. The amendment in this update is expected to improve financial reporting by requiring new disclosures about the programs, thereby allowing financial statement users to better consider the effect of the programs on an entity's working capital, liquidity, and cash flows. The new standard is effective for fiscal years beginning after December 15, 2022, except for the amendment on roll forward information which is effective for fiscal years beginning after December 15, 2023. The Company adopted provisions of this ASU beginning January 1, 2023, with the exception of the amendment on rollforward information, which was adopted in January 1, 2024. Adoption of the new standard did not have a material impact on the Company's consolidated financial statements.

In March 2023, the FASB issued ASU No. 2023 - 01, Leases (Topic 842): Common Control Arrangements, which requires leasehold improvements associated with common control leases to be amortized over the useful life to the common control group. The new standard is effective for fiscal years beginning after December 15, 2023. The Company is currently evaluating the impact of adopting this new guidance and the potential effects it could have on the Company's consolidated financial statements.

In November 2023, the FASB issued ASU No. 2023 - 07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which improves reportable segment disclosure requirements, primarily through enhanced disclosures 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 is currently evaluating the impact of adopting this new guidance on disclosures in the Company's consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures" ("ASU 2023-09"), which requires disclosure of incremental income tax information within the rate reconciliation and expanded disclosures of income taxes paid, among other disclosure requirements. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024. Early adoption is permitted. The Company's Management does not believe the adoption of ASU 2023-09 will have a material impact on its consolidated financial statements and disclosures.

Management does not believe that any other recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on our financial statements.

3. ACQUISITIONS

On September 30, 2022, the Company purchased 100% of the equity interest and obtained control of Branston Solar Farm Limited ("Project Branston") from P&T Global Renewable Energy Ltd. Project Branston is located in Branston, Lincoln, United Kingdom and it owned a 50 MWp operational solar farm which has been operational since October 12, 2020. The output of the plant is contracted under a 40-year Purchase Price Agreement ("PPA") which began on the commercial operation date. The acquisition was in accordance with the Company's overall growth strategy.

The cash consideration for acquiring Project Branston was $21.6 million (GBP 17.9 million) which has been fully paid as of September 30, 2022. Meanwhile, the Company took over a lease loan contract with Aviva Investor Infrastructure Income No.4 Ltd. of $22.5 million (GBP 18.7 million) and received other net assets of $2.3 million (GBP 1.9 million). This acquisition also recognized $1.0 million of deferred tax liabilities due to fair value adjustment of Project Branston upon acquisition. There was no other noncash or contingent consideration. The acquisition was accounted as an asset acquisition according to ASC 805 since substantially all the fair value of the gross assets acquired were concentrated in a single identifiable asset. The excess of consideration over fair value was allocated to property, plant and equipment.

On October 11, 2022, the Company entered into a Shares Purchase Agreement to acquire of Emeren Ltd, a United Kingdom-based utility-scale solar power and battery projects developer in Europe. The acquisition transaction was completed on October 11, 2022 through an all-cash deal with an earn-out provision. This earn-out provision provides $5.0 million (EUR 5.1 million) deferred consideration with target of output power for Italy projects within eight months after the acquisition and $6.8 million (EUR 6.9 million) management incentive for the specific performance conditions for the following two years.

The cash consideration for Emeren Ltd is $5.0 million (EUR 5.1 million) with earn-out provision of $5.0 million (EUR 5.1 million). The Company initially assessed the potential output power on the Italy projects and concluded it is probable that the output power agreed in the earn-out provision can be reached. Therefore, such relevant deferred consideration was recorded at fair value of $5.0 million (EUR 5.1 million) by the Company at the point of the acquisition date. Meanwhile, there was Management Incentive of $6.8 million (EUR 6.9 million) which was for specific performance conditions for certain periods ended December 31, 2022, 2023 and 2024. The acquisition is accounted as an asset acquisition according to ASU 2017-01 since substantially all the fair value of the gross assets acquired is concentrated in a group of similar assets. The excess of consideration over fair value of the assets was allocated to each specific project within project assets.

During the year ended December 31, 2023, the Company received parts of deferred consideration of $2.0 million (EUR 1.8 million), and this consideration reduced project assets.

During the year ended December 31, 2022 and 2023, the Company recorded $0.05 million (EUR 0.05 million) and $0.6 million (EUR 0.6 million) compensation cost for management incentive, respectively.

On November 17, 2020 (the “acquisition close date”), the Company acquired a 100% of the equity interests of ET Cap PA Holdings LLC (“PA Holdings”) and ET Cap CA Holdings LLC (“CA Holdings”), a utility project with battery storage business under solar power project development stream from Nova Development Management, for a cash consideration totaling $3.9 million. The Company acquired PA Holdings and CA Holdings to enhance its ability to provide a more diverse product portfolio such as battery storage around the world.

The Company accounted for the acquisition described above in accordance with ASC 805, “*Business Combinations*”. The result of the acquiree’s operation has been included in the consolidated financial statements since the acquisition date. The excess of the fair value of the acquired entity over the fair value of net tangible and intangible assets acquired was recorded as goodwill, which is not deductible for corporate income taxation purposes.

The final allocation on the purchase price to the fair value of the net assets acquired is as follows:

	As of acquisition close date In thousands
Project assets[(1)]	$ 2,874
Net assets acquired	2,874
Goodwill	1,023
Total consideration transferred/Net cash paid	$ 3,897

(1) Included in project assets are incurred cost such as consultant fee, legal fee and salaries which have been capitalized in accordance with ASC 970-360, as they are directly attributable and incurred in the development phase.

The Company performed annual impairment analysis on December 31 of each year. ASC 350-20 allows companies to perform a qualitative assessment of whether it is more likely than not that a reporting unit’s fair value is less than its carrying value to determine whether it is necessary to perform a quantitative goodwill impairment test. Such qualitative assessment considers various factors, including macroeconomic conditions, industry and market considerations, cost factors, the overall financial performance of a reporting unit, and any other relevant events affecting the Company or a reporting unit.

The Company performed a qualitative and a quantitative assessment for battery storage reporting unit in each respective period and concluded that it was likely that the fair value of the reporting unit was less than its carrying amount. During the year-ended December 31, 2023, the Company fully impaired the goodwill.

4. ACCOUNTS RECEIVABLE TRADE, NET

	At December 31,	
	2022	2023
	in thousands	
Accounts receivable trade		
– from EPC services	$ 2,430	$ 7,304
– from solar power project assets	8,608	15,055
– from electricity generation (1)	12,669	9,596
Total accounts receivable trade	23,707	31,955
Less: allowance for credit losses	(2,037)	(4,832)
Accounts receivable trade, net	$ 21,670	$ 27,123

(1) Accounts receivable from electricity generation were mainly due from China’s state grid companies. The amounts included the portion of feed-in tariff(s) (FIT) for the electricity sold to the state grid companies in the PRC in which the relevant on-grid solar power stations are still pending for registration to the Renewable Energy Subsidy Catalog, which the Company has submitted the application for its solar power stations started operation before July 2017 to be registered on the Catalog. The Company expects that a certain part of the FIT receivables will be recovered after twelve months from the reporting date, which are discounted at an effective interest rate. As of December 31, 2023, there are $3.5 million of FIT receivables classified as current and $16.4 million classified as non-current, which is included in the other non-current assets on the consolidated balance sheets.

Accounts receivable trade, net and and its allowance for credit losses as of December 31, 2021 amounted to $34.3 million and $2.1 million, respectively.

ACCOUNTS RECEIVABLE UNBILLED, NET

	At December 31,	
	2022	2023
	in thousands	
Accounts receivable unbilled		
–from solar power project assets	$ 18,152	$ 8,088
–from EPC services	26,442	51,881
Total accounts receivable unbilled	44,594	59,969
Less: allowance for credit losses	(712)	(371)
Accounts receivable unbilled, net	$ 43,882	$ 59,598

During the year ended December 31, 2022 and 2023, the Company's contract assets classified as "Accounts receivable unbilled" are primary due to billing of certain project sales and EPC services where the Company has the right to consideration in exchange of the project sales transferred and EPC services performed.

Accounts receivable unbilled, net and its allowance for credit losses as of December 31, 2021 amounted to $11.5 million and nil, respectively.

ALLOWANCE FOR CREDIT LOSSES

The Company establishes an allowance for expected credit losses based on historically observed default rates over the expected life of the receivable balance and are adjusted for forward-looking information available without undue cost of effort. The Company's management regularly reviews the allowance for credit losses to ensure relevant information about specific debtors is updated.

The following table shows the movement in lifetime expected credit losses that has been recognized for trade receivable under the simplified approach.

	At December 31,	
	2022	2023
	in thousands	
At beginning of year	$ 2,136	$ 2,749
Allowance for credit losses	613	2,925
Written off	—	(471)
At end of year	$ 2,749	$ 5,203

CONCENTRATION OF CREDIT RISK AND MAJOR CUSTOMERS

As of December 31, 2022, receivables from a solar power customer amounted to $30.4 million, including billed receivable of $3.9 million and unbilled receivable of $26.4 million which accounts for 44% of the Company's total receivables, excluding FIT receivables in the other non-current assets, which are due from government. As of December 31, 2023, receivables from a solar power customer amounted to $44.9 million, including billed receivable of $6.3 million and unbilled receivable of $38.6 million which accounts for 49% of the Company's total receivables, excluding FIT receivables in the other non - current assets, which are due from government.

For the years ended December 31, 2022 and 2023, revenue from this solar power customer accounted for 41% ($24.9 million) and 12% ($12.4 million) of the Company's total net revenues, respectively.

5. PREPAID EXPENSES AND OTHER CURRENT ASSETS

	At December 31,	
	2022	2023
	in thousands	
Receivables from disposal of property, plant and equipment (1)	$ 554	$ 1,885
Deposits (2)	11,522	13,727
Others (3)	4,085	4,577
Total prepaid expenses and other current assets	16,161	20,189
Allowance for credit losses (4)	(1,187)	(1,934)
Total prepaid expenses and other current assets	$ 14,974	$ 18,255

(1) Receivables from disposal of property, plant and equipment mainly represented disposal of Company's solar power stations assets which were primarily for electricity generation revenue segment.

(2) As of December 31, 2023 and 2022, deposits mainly represented deposits made for interconnection, and the bidding of project asset construction rights and rooftop leases.

(3) As of December 31, 2023, others mainly included $1.8 million deferred cost for Hungary projects, $0.8 million prepayment on Korea project development (the Company has recorded 100% allowance for credit losses associated with such prepayment), and $0.7 million prepaid for UK project. As of December 31, 2022, others mainly included $1.1 million prepayment for purchasing Italy projects, $0.8 million prepayment on Korea project development (among which, the Company has recorded 50% of prepayment as allowance for credit losses during the year ended December 31, 2021), and $0.2 million receivable for compensation from the insurance provider for China projects. During the year ended December 2022, the Company wrote off $0.2 million other receivable.

(4) Allowance for credit losses mainly represented the portion of compensation receivable from Canadian authorities on closure of a certain project in Canada that the Company believes is not recoverable, unrecoverable collection from sold entities in China, and allowance for the Korea project's prepayment which the Company deemed not recoverable.

6. PROJECT ASSETS

Project assets consisted of the following at December 31, 2022 and 2023, respectively:

	At December 31,	
	2022	2023
	in thousands	
Project assets - Development and construction cost	$ 51,613	$ 75,277
Project assets - Others	946	1,247
Total project assets	$ 52,559	$ 76,524
Current portion	25,969	39,914
Non-current portion	26,590	36,610

7. PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment, net:

	At December 31,	
	2022	2023
	in thousands	
Land	$ 275	$ 275
Plant and machinery	781	768
Motor vehicles	95	91
Office equipment	381	307
Power stations[1]	191,011	187,518
Less: Accumulated depreciation	(25,438)	(27,125)
	167,105	161,834
Construction in progress	3,372	1,280
Property, plant and equipment, net	$ 170,477	$ 163,114

(1) All power stations were self-constructed, except for Project Branston that the Company acquired on September 30, 2022 with an original cost of $42.8 million (as discussed in Note 3). During 2023, the Company sold power stations in Henan, China and recorded loss of $2.1 million.

Construction in progress mainly represents solar power projects which are under development for self-electricity generation in China.

Depreciation expense for the years ended December 31, 2022 and 2023 was $6.8 million and $7.8 million, respectively.

8. INCOME TAXES

The Company and its subsidiaries file separate income tax returns.

British Virgin Islands

Under the current laws of the British Virgin Islands (“BVI”), the Company’s subsidiary in BVI is not subject to tax on its income or capital gains. In addition, upon any payment of dividends by the Company, no British Virgin Islands withholding tax is imposed.

People’s Republic of China

On March 16, 2007, the National People’s Congress approved the Corporate Income Tax Law of the People’s Republic of China (the “CIT Law”) with an effective date of on January 1, 2008. The CIT Law enacted a statutory income tax rate of 25%. Pursuant to PRC tax laws, certain PRC domiciled subsidiaries of the Company are solar power generation enterprises, which are entitled to a three-year tax exemption from Corporate Income Tax (“CIT”) from first operation year and a 50% CIT reduction for the succeeding three years thereafter.

United States of America

Emeren Group US is incorporated in California, United States. It is subject to a federal corporate income tax rate of 21% for 2018, 2019, and 2020, effective from January 1, 2018 under the 2017 Tax Cuts and Jobs Act. In addition, Emeren Group US is subject to California state franchise tax of 8.84% for 2022 and 2023, and Connecticut state income tax of 7.5% for 2022 and 2023, which are deductible for federal corporate income tax purpose.

The tax expense from continuing operations comprises:

	Years ended December 31,	
	2022	2023
	in thousands	
Income (loss) before income tax		
PRC	$ 4,108	$ (2,611)
Other jurisdictions	(6,739)	(291)
Total	(2,631)	(2,902)
Current tax expense		
PRC	(733)	(269)
Other jurisdictions	(467)	(2,301)
Subtotal	(1,200)	(2,570)
Deferred tax benefit (expense)		
PRC	(717)	—
Other jurisdictions	—	41
Subtotal	(717)	41
Total income tax expense	$ (1,917)	$ (2,529)

The Company classifies interest and penalties related to income tax matters in income tax expense. As of December 31, 2022 and 2023, there were no interest and penalties related to uncertain tax positions. As of December 31, 2022 and 2023, there was no accrual of uncertain tax benefits recognized by the Company. The Company does not anticipate significant increases or decreases to its liabilities for unrecognized tax benefits within the next twelve months.

According to the PRC Tax Administration and Collection Law, the statute of limitations is three years if the underpayment of taxes is due to computational errors made by the taxpayer. The statute of limitations will be extended to five years under special circumstances, which are not clearly defined, but an underpayment of taxes exceeding RMB100,000 (approximately $0.01 million) is specifically listed as a special circumstance. In the case of a transfer pricing related adjustment, the statute of limitations is ten years. There is no statute of limitations in the case of tax evasion.

The principal components of deferred income tax assets and liabilities are as follows:

	At December 31,	
	2022	2023
	in thousands	
Deferred tax assets:		
Accrued expenses	$ 44	$ 329
Net operating losses	11,672	16,850
Unrealized internal profit	717	169
Allowances for credit losses	1,209	1,582
Impairment loss of assets	126	69
Other	82	241
Total gross deferred tax assets	13,850	19,240
Valuation allowance on deferred tax assets	(13,850)	(19,212)
Net deferred tax assets	$ —	$ 28
Deferred tax liabilities:		
Asset acquisitions	(3,573)	(3,532)
Other	—	(28)
Deferred tax liabilities	$ (3,573)	$ (3,560)

As of December 31, 2023, the subsidiaries of the Company in PRC had net operating loss carry forwards of $18.7 million, of which $4.5 million, $3.4 million, $1.2 million, $1.6 million and $8.0 million will expire in 2024, 2025, 2026, 2027 and 2028 respectively.

The Company considers positive and negative evidence to determine whether some portion or all of the deferred tax assets will not be realized. This assessment considers, among other matters, the nature, frequency and severity of recent losses, forecasts of future profitability, the duration of statutory carry forward periods, the Company's experience with tax attributes expiring unused and tax planning alternatives.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible for tax purposes. As a result, the Company has recognized a valuation allowance of $13.8 million and $19.2 million as at December 31, 2022 and 2023, respectively.

Reconciliation between the applicable statutory income tax rate and the Company's effective tax rate for the years ended December 31, 2022 and 2023 is as follows:

	Years ended December 31,	
	2022	2023
PRC applicable income tax rate	25 %	25 %
Change in deferred tax valuation allowance	(146)%	(185)%
Preferential tax rate[1]	30 %	20 %
Tax effect of non-deductible expenses	(15)%	(40)%
Effect of different tax rate of subsidiaries	(27)%	8 %
Non-taxable income	67 %	91 %
Other	(7)%	(6)%
Effective income tax rate	(73)%	(87)%

The following table sets forth the effect of preferential tax on China operations for the years ended December 31, 2022 and 2023, respectively:

	Years ended December 31,	
	2022	2023
	in thousands	
Preferential tax effect[1]	$ 797	$ 575

(1) Certain solar power project entities are fully exempted from the PRC CIT for three years starting from the year in which such project generates revenue from the sale of electricity and is 50% exempted from PRC CIT for another three years.

9. BORROWINGS AND OTHER FINANCING ARRANGEMENTS

Borrowings from banks and other third parties

The Company's borrowings from banks and other third parties consist of the following:

	At December 31,	
	2022	2023
	in thousands	
Long-term borrowings, current portion	$ 1,008	$ 1,385
Long-term borrowings	22,518	22,685
Total borrowings from bank and other third parties	$ 23,526	$ 24,070

As of December 31, 2023, the long-term borrowings of $24.1 million were jointly guaranteed by the Company and its subsidiaries.

i) Long-term borrowings

In January 2021, the Company's United Kingdom ("UK") subsidiary obtained a long-term loan by a lender in the UK totaling £0.05 million ($0.06 million). The long-term loan has a maturity date of July 2026 with an annual interest rate of 2.5%. The proceeds from this loan were used for general working capital purposes. The long-term borrowing was interest free for twelve months. As of December 31, 2023, the balance of this long-term borrowings was $0.04 million.

In January 2022, Project Branston subsidiary entered into a lease loan contract with Aviva Investor Infrastructure Income No.4 Ltd. The loan bears interest at 4% above the base rate time to time from Lloyds Bank Plc on the bank and will mature on April 2060. As a result of the acquisition of Branston (Note 3), the Company took over the loan. As of December 31, 2023, the long-term borrowings were $23.7 million, including current of $1.1 million and non-current of $22.7 million.

As of December 31, 2023, future minimum payments required under the lease loan contract are:

	USD in thousands
Years ended December 31,	
2024	$ 1,962
2025	1,228
2026	1,228
2027	1,228
2028	1,228
2029 and later	38,476
Total minimum lease loan payments	45,350
Less: Amount representing interest	(21,634)
Present value of net minimum lease loan payments	$ 23,716

In September 2022, the Company's RPZE 1 subsidiary entered into a shareholder loan contract with a minority shareholder of a subsidiary of the Company, RPZE 1, of $0.6 million. The loan bears interest at 2% per annum and will mature in December 2025. As of December 31, 2023, the balance of the shareholder loan was $0.1 million.

In February 2023, the Company's Tensol 3 subsidiary entered into a shareholder loan contract with a minority shareholder of a subsidiary of the Company, Tensol 3, of $0.7 million. The loan bears interest at 2% per annum and will mature in December 2025. As of December 31, 2023, the balance of the shareholder loan was $0.03 million.

In November 2023, the Company's China subsidiary obtained a long-term loan by a bank totaling RMB 1.3 million ($0.2 million). The long - term loan bears interest at 5.2% above the base rate time to time from Loan Prime Rate on the bank and will mature on November 2033. As of December 31, 2023, the long - term borrowings were $0.2 million, including current of $0.02 million and non - current of $0.2 million.

Financing associated with failed sale-lease back transactions

In 2019, certain subsidiaries of the Company (the "seller-lessee") sold self-built solar projects ("leased assets") with a carrying amount of $4.0 million to different domestic financial leasing companies (the "buyer-lessors") for cash consideration of $2.8 million, and simultaneously entered into the contracts to lease back the leased assets from the buyer-lessors for 5 to 10 years. These arrangements are guaranteed by other subsidiaries of the Company and are also pledged by the shares and rights to the future power generation income of the seller-lessee. Pursuant to the terms of the agreements, the seller-lessee is required to make lease payments to the buyer-lessors over the lease period and is entitled to obtain ownership of the equipment at a nominal price upon the expiration of the lease.

As the leased assets are considered integral with real estate under ASC 360, the sale-leaseback rules related to real estate are applied. The lease transactions do not qualify as a sale-leaseback transaction as these solar projects are initially invested and built up by the seller-lessee with expected useful life of 25 years and are continuingly maintained by the seller-lessee. The seller-lessee has an obligation to repurchase the leased assets upon the expiry of the lease. In addition, after the lease period, the seller-lessee will keep using the assets and has no plans to sell or for early-disposal.

Accordingly, these transactions are accounted for as financing transactions in accordance with ASC 840. Internal rate of return is used in the computation of interest cost. The assets remain in the property, plant and equipment ("PPE") and continue to be depreciated.

During the years ended December 31, 2022 and 2023, the Company paid for amount of financing lease associated with failed sales-lease back transactions of $16.6 million and $5.3 million, respectively. As of December 31, 2022 and 2023, the Company recorded $11.7 million, and $9.1 million under failed sales leaseback liabilities as non-current portion and $5.7 million and $3.6 million as the current portion, which represents principal to be paid in the next year. The weighted average effective interest rate of the financing was 6.67% and 6.74% and interest costs incurred during the years ended December 31, 2022 and 2023 were $1.8 million and $1.1 million, respectively. These failed sales-leaseback financings were collateralized by the underlying assets of the solar projects.

Finance lease

The Company leased module, inverter and other materials from different financial leasing companies in China. Pursuant to the terms of the contracts, the Company is required to make lease payments to the finance lease companies and is entitled to obtain the ownership of this machinery and equipment at a nominal price upon the expiration of the lease. These arrangements are guaranteed by other subsidiaries of the Company and are also pledged by the shares and rights for the future power generation income of the leased assets. The lease is classified as finance lease. As of December 31, 2022 and 2023, the carrying amount is included in finance lease right-of-use assets that is being depreciated over lives of 25 years. The payable related to these contracts as of December 31, 2022 and 2023 was $7.6 million and $3.2 million, respectively.

As of December 31, 2023, future minimum payments required under the finance lease are:

	USD in thousands
Years ended December 31,	
2024	$ 1,350
2025	971
2026	799
2027	516
Total minimum lease payments	3,636
Less: Amount representing interest	(463)
Present value of net minimum lease payments	$ 3,173
Current portion	970
Non-current portion	$ 2,203

As of December 31, 2023, future minimum payments required under the failed sale-lease back are:

	USD in thousands
Years ended December 31,	
2024	$ 4,327
2025	4,123
2026	2,640
2027	1,879
2028	1,146
2029 and later	104
Total minimum lease payments	14,219
Less: Amount representing interest	(1,575)
Present value of net minimum lease payments	$ 12,644
Current portion	3,589
Non-current portion	$ 9,055

	At December 31,	
	2022	2023
	in thousands	
Current portion of finance lease	$ 4,337	$ 970
Current portion of failed sale and lease back	5,656	3,589
Total current portion of failed sale-lease back and finance lease	$ 9,993	$ 4,559
Non-current portion for finance lease	$ 3,260	$ 2,203
Non-current portion for failed sale and lease back	11,703	9,055
Total non-current portion of failed sale-lease back and finance lease	$ 14,963	$ 11,258

Total finance lease liabilities are net of total deposits of $0.8 million as of December 31, 2023. Total failed sale and lease back are net of total deposits of $0.7 million as of December 31, 2023.

Interest expense

Interest expenses incurred for the years ended December 31, 2022 and 2023 was $3.5 million and $2.2 million of which $0.4 million and nil has been capitalized in the carrying value of PPE and project assets, respectively.

10. OTHER CURRENT LIABILITIES

The Company's other current liabilities are summarized below:

	At December 31,	
	2022	2023
	in thousands	
Payables for purchase of property, plant and equipment[(1)]	$ 14,322	$ 13,426
Other tax payables	157	271
Deferred revenue[(3)]	—	3,177
Other [(2)]	2,969	4,446
	$ 17,448	$ 21,320

(1) Payable for purchase of property, plant and equipment as of December 31, 2023 included as payable to ReneSola Singapore Pte Ltd.'s subsidiaries.

(2) Other as of December 31, 2022 and 2023 mainly includes the payables for claims, audit fees and other professional service fees.

(3) Deferred revenue as of December 31, 2023 is mainly related to Hungary project.

11. COMMON SHARES

During 2022, the Company repurchased 2,567,640 no par value shares at the cost of $1.6 million. During 2023, the Company repurchased 57,244,020 no par value at the cost of $21.9 million. All repurchased shares under the repurchase program are classified as treasury shares of the Company until they are retired or reissued.

On September 30, 2022, the Company repurchased 70,000,000 no par value shares at the cost of $42.1 million, including a $0.1 million commission fee, from its prior shareholder ReneSola Singapore. The Company retired these shares on the same day.

As of December 31, 2022 and 2023, the number of total issued shares of the Company were 651,121,762 shares and 651,821,742 shares, respectively.

12. SHARE BASED COMPENSATION

2007 Share Incentive Plan

On September 27, 2007, the Company adopted the Emeren Group Ltd 2007 Share Incentive Plan (the "Plan") that provides for grant of share options, restricted shares and restricted share units to employees in the Plan. A maximum of 7,500,000 authorized but unissued shares of the Company have been reserved and allocated to the Plan, whose shares were subsequently registered and are issuable upon exercise of outstanding options granted under the Plan. The Plan shall be administered by the Compensation Committee of the Board of Directors (the "Committee"). On July 27, 2010, the Company has amended the Plan so as to increase the maximum number of authorized but unissued shares of the Company to 12,500,000 in accordance with the rules of the 2007 Share Incentive Plan. On December 21, 2020, the Company has amended the Plan to increase the number of authorized but unissued shares of the Company to 22,500,000 in accordance with the rules of the 2007 Share Incentive Plan. On December 29, 2021, the Company has amended the Plan to increase the maximum number of authorized but unissued shares of the Company to 42,500,000 in accordance with the rules of the 2007 Share Incentive Plan.

Except as otherwise noted in the award agreements with the employee or consultant, the options can be exercised within six years from the award date, except for participant's termination of employment or service. The vesting schedule and the exercise price per share will be determined by the Committee and set forth in the individual award agreement. In the event of any distribution, share split, or recapitalization of the Company, the Committee shall make such proportionate and equitable adjustments, if any, to reflect such change with respect to (a) the aggregate number and type of shares that may be issued under the Plan and (b) the terms and conditions of any outstanding awards. Except as may otherwise be provided in any award agreement, if a change of control occurs and a participant's awards are not converted, assumed, or replaced by a successor, such awards shall become fully exercisable and all forfeiture restrictions on such awards shall lapse.

Options to Employees

From January to December 2022, the Company granted 6,500,000 share options to certain employees with an exercise price of $0.41, $0.30, $0.46 on the grant date with expected vesting periods within three years. During 2023, no options were granted to employees.

The fair value of each option grant, as well as the fair value of option immediately before and after the aforementioned modification, is estimated on the date of grant or modification using the Black-Scholes option pricing model using the assumptions noted below.

	Average risk-free rate of return	Weighted average expected option life	Volatility rate	Dividend yield
Granted in 2022	2.87-3.98 %	3 years	129.34-132.67 %	0 %
Granted in 2023	N/A	N/A	N/A	N/A

Expected volatilities based on the average of the standard deviation of the daily stock prices of the Company and other selected comparable companies in the same industry. The expected term of options represents the period of time that options granted are expected to be outstanding. The risk-free rate of return is based on the US Treasury bond yield curve in effect at the time of grant for periods corresponding with the expected term of the option.

A summary of the option activity is as follows:

	Number of Options		Weighted Average Exercise Prices		Aggregate Intrinsic Value
Outstanding on December 31, 2021	15,643,340	$	0.43		—
Granted	6,500,000		0.40		—
Exercised	(1,400,000)		0.27		—
Forfeited	(5,350,020)		0.58		—
Outstanding on December 31, 2022	15,393,320		0.38		—
Granted	—				—
Exercised	(699,980)		0.15		—
Forfeited	(1,333,340)		0.45		—
Outstanding on December 31, 2023	13,360,000		0.39	$	624,234
Expected to vest at December 31, 2023	2,253,400		0.42	$	7,534
Exercisable at December 31, 2023	11,106,600		0.38	$	616,700

As of December 31, 2023, there was 13,360,000 outstanding options with weighted average contractual period of 2.61 years under the Plan.

The weighted average grant date fair value of options granted during the years ended December 31, 2022 and 2023 was $0.48 and nil, respectively.

Total proceeds from options exercised were $0.4 million and $0.1 million for the years ended December 31, 2022 and 2023, respectively.

Compensation costs of $1.7 million and $1.4 million have been charged against income during the years ended December 31, 2022 and 2023, respectively. As of December 31, 2023, there was $0.6 million in total unrecognized compensation expense related to unvested options granted under the Plan, which is expected to be recognized over a weighted-average period of 1.32 years.

During the year ended of December 31, 2022, the Company issued 1,400,000 ordinary shares for the share options exercised by employees and also released 2,405,140 performance share units for prior year performance based compensations. During the year ended of December 31, 2023, the Company issued 699,980 ordinary shares for the share options exercised by employees and also granted 1,000,000 ordinary shares of restricted stock units.

13. EMPLOYEE BENEFITS

North America

Emeren extends a 401(k) plan to eligible employees based in the United States. Through our 401(k) plan, eligible employees have the flexibility to defer up to 100% of their Plan Compensation on a pre-tax basis or opt for Voluntary Contributions, such as Roth contributions, on an after-tax basis. We ensure compliance with Internal Revenue Service (IRS) regulations, which stipulate limits on the amount an employee may defer under this plan or any other retirement plan allowing Elective Deferral Contributions during a calendar year. Emeren provides an Employer Match percentage formula, with vesting determined by the length of service with the Company. In the 2023 Plan year, our matching contributions totaled approximately $0.1 million.

Emeren has implemented a voluntary Registered Retirement Savings Plan (RRSP) tailored for eligible employees based in Canada. This initiative aims to empower our Canadian workforce in achieving their long-term financial objectives in a tax-efficient manner. Under the RRSP program, eligible employees immediately vest in the plan, ensuring immediate access to the benefits it offers. Moreover, the Company provides a structured Employer Match percentage formula, which depends on the percentage of earnings contributed by the Employee. In the 2023 plan year, the Company's matching contributions amounted to approximately $0.001 million.

In the fiscal year 2023, eligible employees based in the United States and Canada could enroll in the Company's comprehensive supplemental benefits plans, comprising health insurance, dental and vision coverage, life insurance, and a flexible spending account. During this period, the Company incurred expenses of $0.3 million for benefits provided to employees in the United States and $0.01 million for those in Canada. Furthermore, the Company ensured full compliance with state, provincial, and federal laws and regulations, guaranteeing that all social benefits pertinent to North American employees were provided in accordance with applicable legal frameworks.

Europe

Emeren Group is committed to providing a comprehensive range of benefits to its employees in Europe, maintaining careful adherence to the framework of local laws and regulations governing social welfare. Across the majority of European countries, the cornerstone elements of the social benefit system encompass pension, healthcare, accident, and unemployment insurances. Eligibility criteria, utilization guidelines, and benefit amounts are dictated by relevant local legislation, ensuring compliance and equitable distribution. In alignment with statutory obligations, our company carefully fulfills the provision of all supplementary social benefits mandated by law in each respective country. Furthermore, beyond the statutory offerings, our company extends additional support through supplementary benefits, including private medical insurance, meal vouchers, and commuting allowances. In 2023, Emeren's social and supplemental benefit cost was around $1.1 million for our employees based in 9 European countries.

China

In the fiscal year 2023, our operations in China continued to uphold our commitment to the welfare of our employees through participation in the benefit plans administered by the government of the People's Republic of China (PRC). These plans encompass essential aspects such as pension, medical insurance, housing funds, unemployment, and workplace injury insurance, ensuring comprehensive coverage for our workforce.

Both the company and our employees actively contribute to these plans, with the company assuming the responsibility of withholding the employees' portion from their salaries and remitting the contributions to the local government on a monthly basis. During the fiscal year 2023, our expenditure on these benefit plans amounted to approximately RMB 3.5 million ($0.5 million USD).

14. EARNINGS/ (LOSS) PER ADS

Basic and diluted earnings per ADS have been calculated as follows:

	For the years ended December 31,	
	2022	2023
	in thousands, except number of shares and per share amounts	
Numerator:		
Net loss	$ (4,548)	$ (5,431)
Less: Net income/(loss) attributed to noncontrolling interests	124	(2,245)
Total net loss attributed to Emeren Group Ltd	$ (4,672)	$ (3,186)
Numerator for diluted loss per ADS	$ (4,672)	$ (3,186)
Denominator:		
Denominator for basic loss per ADS - weighted average number of ADS outstanding*	64,924,455	56,526,716
Dilutive effects of share options*	—	—
Denominator for diluted calculation - weighted average number of ADS outstanding*	64,924,455	56,526,716
Basic loss per ADS	$ (0.07)	$ (0.06)
Diluted loss per ADS	$ (0.07)	$ (0.06)

* All shares are converted to ADS, each ADS represents 10 common shares

The Company issues ordinary shares to its share depository bank which will be used to settle stock option awards upon their exercise. Any ordinary shares not used in the settlement of stock option awards will be returned to the Company. As of December 31, 2022 and 2023, there are 11,096,460 and 10,396,480 ordinary shares, respectively, legally issued to the share depository bank but are treated as escrowed shares for accounting purposes and therefore, have been excluded from the computation of earnings (loss) per ADS.

The Company uses the treasury method in determining whether those potential common shares are dilutive or antidilutive. That is, the number of potential common shares, after considering the shares repurchased used in computing the diluted per-share amount for income/(loss).

The following ordinary share equivalents were excluded from the computation of diluted net earnings/(loss) per share for the periods presented because including them would have been anti-dilutive:

	For the years ended December 31,	
	2022	2023
Share options	5,441,650	3,353,126

15. NON-CONTROLLING INTEREST

On September 15, 2021, the Company, Emeren Group Ltd, received contributions from selling 49% of certain Company subsidiaries shares to non-controlling interest holders of subsidiaries, Eiffel Energy Transition Fund S.L.P, for consideration of $2.1 million. Net proceeds were used for capital expenditures to construct solar energy projects.

16. RELATED PARTY BALANCES AND TRANSACTIONS

(a) Related party balances

During the years ended December 31, 2022 and 2023, related party balances with ReneSola Singapore Pte., Ltd and its subsidiaries and with other related parties were as follows:

	At December 31,	
	2022	2023
	in thousands	
Due from ReneSola Singapore [1] and its subsidiaries	$ —	$ —
Due from other related party [2]	—	30
Due from Related Party balances, net	—	30
Due to ReneSola Singapore [1] and its subsidiaries	—	—
Due to other related party [2]	1,475	4,997
Due to related party balances, net	$ 1,475	$ 4,997

(b) Related party transactions

During the years ended December 31, 2022 and 2023, related party transactions with ReneSola Singapore Pte., Ltd and its subsidiaries and other related parties were as follows:

	Years ended December 31,	
	2022	2023
	in thousands	
Payable to related party services [5]	$ 9	$ 2,719
Payment for service [4]	97	—
Bond issued to [3]	203	666
Interest expense [3]	33	38

(1) ReneSola Singapore Pte., Ltd and its subsidiaries (ReneSola Singapore) was a related party of the Company in that both ReneSola Singapore and the Company are under common control of Mr. Li Xianshou. The balances due from ReneSola Singapore and its subsidiaries were mainly for rendering service to them. The balances due to ReneSola Singapore and its subsidiaries were mainly for modules, raw materials that the Company purchased from them and borrowings from them. In September 2022, the Company entered into a shares repurchase agreement with ReneSola Singapore Pte. As of December 31, 2022, ReneSola Singapore owned 8.33% of the outstanding equity in the Company. Affiliates of ReneSola Singapore resigned from their offices as legal representatives, directors, and officers of the Company and its subsidiaries shortly after the closing of the repurchase transaction. Ms. Crystal (Xinhan) Li and Ms. Maggie (Yuanyuan) Ma resigned from the Board of the Company immediately upon closing of the repurchase transaction. Ms. Crystal (Xinhan) Li also resigned from her executive role as the vice president of investment of the Company simultaneously. The Company assessed and concluded they were no longer classified as a related party, as ReneSola Singapore's only connection with the Company was through its ownership of shares. Subsequent to January 2023, the Company repurchased the rest of its shares owned by ReneSola Singapore Pte. As a result of ReneSola Singapore ceases to be a related party as of December 31, 2022, the amount due from and due to ReneSola Singapore of $0.07 million and $8.0 million were reclassified into other receivable and other current liabilities.

(2) During 2021, the Company entered into an agreement with Eiffel Energy Transition Fund S.L.P ("Eiffel") with the intention to develop solar projects in Europe. The Company also transacted with Eiffel's non-controlling interest's subsidiary company of Solar Nexus Limited. The balances due from other related party mainly represented borrowing provided to Solar Nexus Limited for working capital purpose. In the first quarter of 2022, the Company sold the equity interest of Solar Nexus Limited to a third party and Solar Nexus Limited is no longer a related party to the Company. The Company reclassed due from Solar Nexus Limited to other receivables. In May 2022, the Company received the full payment from Solar Nexus Limited for the due from balance. The balances due to other related party were convertible bond issued to Eiffel Investment Group for solar power development purpose. In addition, during 2023 the Company transacted with its non - controlling interest's subsidiary company of Gravel A. The balance due to other related party also included the outstanding service cost that minority controller of Gravel A provided to the Company.

(3) Represents the convertible bond issued to Eiffel Investment Group up to EUR 7.03 million ($8.0 million) with an annual interest rate of 2%. The bond has a maturity date of September 2031. During the convertible period and when there is an Event of Default and Acceleration Event (failure to redeem, a material misrepresentation by the Company, or misuse of the proceeds), the bond holder shall have the right to convert the issued convertible bonds at the conversion price into shares of the Company. The conversion price is determined as per evaluation equal to 70% of the purchase price of the Shares. The Company accounts for convertible bond as a single debt instrument at amortized cost. In April 2022 and March 2023, a subsidiary of the Company withdrew $0.2 million (EUR 0.3 million) and $0.7 million (EUR 0.6 million) from Eiffel Investment Group, respectively. As of December 31, 2023, the outstanding convertible bond was $2.3 million (EUR 2.1 million). During the years ended December 31, 2022 and 2023, interest expense due to convertible bond was $0.03 million and $0.4 million, respectively.

(4) Represents the amount that the Company paid the cash to ReneSola Singapore and its subsidiaries for settling historical payable balance and current year service provided to the Company before October 1, 2022.

(5) Transactions during 2023 which represents the payable amount of Gravel A to Enerpoint and Kaizen for project services regarding Italy projects.

17. COMMITMENTS AND CONTINGENCIES

Operating lease accounting

The Company leases rooftop, land, other property, and equipment under non-cancellable operating leases whose initial terms are typically 3 to 25 years, with some having a term of 40 years or more, along with options that permit renewals for additional periods. At the inception of each lease, the Company determines if the arrangement is a lease or contains an embedded lease and reviews the facts and circumstances of the arrangement to classify leased assets as operating or finance under Topic 842. The Company has elected not to record any leases with terms of 12 months or less on the balance sheet.

As this time, a certain portion of active leases within the Company portfolio are classified as operating leases under the new standard. Operating leases are included in ROU assets, operating lease current liabilities, and operating lease non-current liabilities in the consolidated balance sheet. The ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent our obligation to make minimum lease payment arising from the lease for the duration of the lease term.

Most leases include one or more options to renew, with renewal terms that can extend the lease term from 1 year to 5 years or greater. The exercise of the lease renewal option is typically at our discretion. Additionally, many leases contain early termination clauses, however early termination typically requires the agreement of both parties to the lease. At the lease inception, all renewal options reasonably certain to be exercised are considered when determining the lease term. At this time, the Company does not have operating leases that include options to purchase or automatically transfer ownership of the lease property to the Company. The depreciable life of leased assets is limited by the expected lease term.

To determine the present value of future minimum lease payments, the Company use the implicit rate when readily determinable. At this time, many of the Company's leases do not provide an implicit rate; therefore, to determine the present value of minimum lease payments, the Company use its incremental borrowing rate based on the information available at lease commencement date. The ROU assets also include any lease payments made and exclude lease incentives.

The components of lease expenses consisted of the following:

Lease cost	Classification	Year Ended December 31, 2023
		in thousand
Operating lease cost	Operating expenses: General and administrative	$ 1,943
Short-term lease cost	Operating expenses: General and administrative	42
Net lease cost		$ 1,985

Lease Term and Discount Rate	December 31, 2023
Weighted-average remaining lease term (years)	
Operating leases	23.5 years
Weighted-average discount rate (%)	
Operating leases	6.07 %

Other information	Year Ended December 31, 2022	Year Ended December 31, 2023
	in thousands	
Cash paid for amount included in the measurement of lease liabilities		
Operating cash flows from operating leases	$ 2,720	$ 2,018
Cash paid for short-term leases	—	42

As of December 31, 2023, future minimum payments required under the operating lease are:

	USD in thousands
Year ended December 31,	
2024	$ 1,493
2025	1,719
2026	1,879
2027	2,026
2028	1,417
2029 and later	31,731
Total minimum lease payments	40,265
Less: Amount representing interest	(19,327)
Present value of net minimum lease payments	$ 20,938

Capital commitments

As of December 31, 2023, the Company had capital commitments of approximately $7.9 million. These capital commitments were solely related to contracts signed with vendors for procurement of services or PV related products used for the construction of solar PV systems being developed by the Company.

The capital commitments as at balance sheet date disclosed above do not include those incomplete purchases or acquisitions as at balance sheet dates as the agreements could either be terminated unconditionally without any penalty or cancelable when the closing conditions as specified in the agreements could not be met.

Legal matters

In the ordinary course of business, the Company may be subject to legal proceedings regarding contractual and employment relationships and a variety of other matters. The Company records contingent liabilities resulting from such claims, when a loss is assessed to be probable and the amount of the loss is reasonably estimable.

The Company is a party to legal matters and claims in the normal course of its operations. While the Company believes that the ultimate outcome of these matters will not have a material adverse effect on its financial position, results of operations or cash flows, the outcome of these matters is not determinable with certainty and negative outcomes may adversely affect the Company.

18. SEGMENT REPORTING

The Company separated the solar power project segment into three reportable segments, including solar power project development, EPC services and electricity generation. Ancillary revenues and expenses and other unallocated costs and expenses are recorded in other.

The chief operating decision maker is the chief executive officer of the Company.

The Company only reports the segment information of net revenue and gross profit, to conform to the information the chief operating decision maker receives to assess the financial performance and allocate resources. There are no differences between the measurements of the Company’s reportable segments’ gross profit and the Company’s consolidated gross profit, as the Company uses the same profit measurement for all of the reportable segments and the consolidated entity. Furthermore, the Company’s chief operating decision maker is not provided with asset information by segment. As such, no asset information by segment is presented.

The following table summarizes the Company's revenues generated from each segment:

	Year ended December 31, 2022 in thousands				
	Solar power project development	Electricity generation	EPC services	Other	Total
Net revenue	$ 13,753	$ 21,654	$ 24,760	$ 1,124	$ 61,291
Gross profit/(loss)	$ 5,913	$ 10,488	$ (2,038)	$ 973	$ 15,336

	Year ended December 31, 2023 in thousands				
	Solar power project development	Electricity generation	EPC services	Other	Total
Net revenue	$ 25,152	$ 29,405	$ 43,902	$ 7,183	$ 105,642
Gross profit/(loss)	$ 8,804	$ 14,903	$ (1,825)	$ 3,131	$ 25,013

The following table summarizes the Company's revenues generated by the geographic location of customers:

	Years ended December 31,	
	2022	2023
	in thousands	
China	$ 20,737	$ 14,803
United States	13,870	1,090
Germany	—	2,435
UK	1,079	12,754
Spain	(490)	—
France	14	9
Poland	24,850	25,655
Italy	779	6,901
Hungary	452	41,995
Total	$ 61,291	$ 105,642

19. SUBSEQUENT EVENTS

On February 12, 2024, the Company announced that it approved an accelerated stock repurchase program ("ASR") of up to $10 million. As of June 30, 2024, the Company repurchased 33,988,150 common shares with the cost of $7.2 million.

The Company has evaluated subsequent events through the date of issuance of the consolidated financial statements, there were no other subsequent events occurred that would require recognition or disclosure in the consolidated financial statements.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

The Company appointed Grant Thornton US ("Grant Thornton US"), headquartered in Chicago, Illinois, as the Company's independent registered public accounting firm for the fiscal year ended December 31, 2023, effective August 1, 2023. On March 29, 2024, the Company was notified by Grant Thornton US of its decision to resign as the Company's independent registered public accounting firm effective as of that date. On May 7, 2024, the Company engaged UHY LLP, located in New York, NY, as the Company's independent registered public accounting firm for the fiscal year ended December 31, 2023.

The Company engaged with Marcum Asia CPAs LLP ("Marcum Asia") as Emeren's independent registered public accounting firm for the fiscal year ended December 31, 2022, on December 7, 2022.

Marcum Asia accepted the engagement and after careful consideration and evaluation, the Company's Board of Directors and Audit Committee finally approved on January 31, 2023. On January 31, 2023, the Company dismissed Grant Thornton Zhitong Certified Public Accountants LLP ("Grant Thornton Zhitong"), the Company's former independent auditor.

Grant Thornton Zhitong's audit reports on the Company's consolidated financial statements for the years ended December 31, 2020 and 2021 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principles.

During each of the years ended December 31, 2020 and 2021, and in the subsequent interim period through January 31, 2023, there were (i) no disagreements (as defined in Item 16F(a)(1)(iv) of Form 20-F and the related instructions thereto) with Grant Thornton Zhitong on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Grant Thornton Zhitong, would have caused Grant Thornton Zhitong to make reference to the subject matter of the disagreements in connection with its reports on the consolidated financial statements for such years, and (ii) no reportable events (as defined in Item 16F(a)(1)(v) of Form 20-F). The Company has authorized Grant Thornton to respond fully to inquiries of the successor accountant.

On July 25, 2023, the Company dismissed Marcum Asia. Marcum Asia's audit report on the Company's consolidated financial statements for the year ended December 31, 2022 did not contain an adverse opinion or a disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope, or accounting principles.

During the year ended December 31, 2022 and in the subsequent interim period through July 25, 2023, there have been (i) no disagreements (as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions thereto) with Marcum Asia on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Marcum Asia, would have caused Marcum Asia to make reference to the subject matter of the disagreements in connection with its reports on the consolidated financial statements for such periods, and (ii) there were no reportable events (as defined in Item 304(a)(1)(v) of Regulation S-K) in such periods other than the material weakness identified as of December 31, 2022 as reported in the Company's 2022 annual report on Form 20-F filed with the U.S. Securities and Exchange of Commission (the "SEC") on May 16, 2023. The Company has authorized Marcum Asia to respond fully to inquiries of the successor accountant.

During the Company's two most recent fiscal years ended December 31, 2021, and in the subsequent interim period prior to the engagement of Marcum Asia on December 7, 2022, neither the Company nor anyone acting on its behalf consulted with Marcum Asia on either (a) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on the Company's financial statements, and neither a written report nor oral advice was provided to the Company that Marcum Asia concluded was an important factor considered by the Company in reaching a decision as to any accounting, auditing or financial reporting issue, or (b) any matter that was the subject of a disagreement, as that term is defined in Item 16F(a)(1)(iv) of Form 20-F (and the related instructions thereto) or a reportable event as set forth in Item 16F(a)(1)(v) of Form 20-F.

The Company provided Marcum Asia with a copy of the disclosures contained in this annual report on Form 10-K to disclose this change in registrant's certifying accountant, Marcum Asia furnished a letter addressed to the Securities and Exchange Commission stating whether and Marcum Asia, agrees with the statements made by the Company and, if not, stating the respects in which it does not agree. A copy of such letter from Marcum Asia is filed as Exhibit 16.2 to this annual report on Form 10-K.

Item 9A. Controls and Procedures.

(a) Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and our chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this annual report, as required by Rule 13a-15(b) under the Exchange Act.

Based upon that evaluation, our management has concluded that, as of December 31, 2023, our disclosure controls and procedures were not effective.

(b) Management Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Our 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 for external purposes in accordance with generally accepted accounting principles and 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 a company's assets, (2) 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 (3) 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.

We have identified material weaknesses in our internal control over financial reporting as of December 31, 2023 relating to the ineffective review and approval procedures over preparation of financial reporting at certain of our subsidiary locations. In addition, we noted certain instances where some historical accounting supporting documents were not readily available. We noted that the Company improperly offset refundable deposits on leases against lease liabilities in the consolidated financial statements presentation related to Accounting Standards Codification 842, Leases ("ASC 842"), in which refundable deposits on leases should be reflected as an asset on the consolidated balance sheet. We concluded that the failure to timely identify such accounting errors constituted material weakness as defined in the SEC regulations. As such, management determined that our disclosure controls and procedures (as defined in Rules 13a-15 (e) and 15d-15 (e) under the Exchange Act) were not effective as of December 31, 2023.

To respond to this material weakness, we have devoted, and plan to continue to devote, significant effort and resources to the remediation and improvement of our internal control over financial reporting. While we have processes to identify and appropriately apply applicable accounting requirements, we plan to enhance our system of evaluating and implementing the complex accounting standards that apply to our financial statements. Our plans at this time include providing enhanced access to accounting literature, research materials and documents and increased communication among our personnel and third-party professionals with whom we consult regarding complex accounting applications. Although we have taken measures and plan to continue to take measures to remedy the material weakness, the implementation of these measures may not fully address the material weakness in our internal control over financial reporting, and we may not conclude that they have been fully remedied. The process of designing and implementing an effective financial reporting system is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain a financial reporting system that satisfies our reporting obligations.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance with respect to consolidated financial statement preparation and presentation and 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 SEC, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2023, 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 has concluded that our internal control over financial reporting were not effective as of the end of the fiscal year to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements.

This annual report on Form 10-K does not include an attestation report of the Company's independent registered public accounting firm because the Company is neither an accelerated filer nor a large, accelerated filer, as such terms are defined in Rule 12b-2 under the Exchange Act. As a non-accelerated filer, we are not required to provide an attestation on the effectiveness of our internal control by our independent registered public accounting firm under the Sarbanes-Oxley Act or the requirements of the SEC promulgated thereunder.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting that that occurred during the quarter ended December 31, 2023, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the fourth quarter of 2023, none of our directors or Section 16 officers adopted or terminated any "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement" (as each term is defined in Item 408(a) of Regulation S-K).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The following table sets forth information regarding our directors and executive officers as of July 15, 2024. There are no family relationships among any of our officers or directors.

Executive Officers and Directors	Age	Position/Title
Yumin Liu	60	Chief Executive Officer and Director
Martin Bloom	72	Director
Ramnath Iyer	55	Director
Himanshu Harshad Shah	58	Chairman and Director
Julia Xu	52	Director
Ke Chen	50	Chief Financial Officer
Enrico Bocchi	52	Executive Vice President, Europe
KaiKai Zhang	39	Executive Vice President, China
Cameron (Mac) Moore	61	Executive Vice President, North America

Mr. Yumin Liu has been our Chief Executive Officer since December 2019 and our director since September 2022. Mr. Liu is a member of the ESG committee. Mr. Liu brings to Emeren more than 20 years of experience in energy management, power generation and solar technology. Most recently, Mr. Liu served as Vice President of the EMEA region at Canadian Solar, a leading global manufacturer of solar photovoltaic modules and provider of solar energy solutions. Previously, Mr. Liu was the President of Recurrent Energy, a U.S. subsidiary of Canadian Solar and also a leading solar developer in the U.S. He spearheaded market development in the U.S. and project development across various international markets and had full P&L responsibility for the EMEA region as well as for Recurrent Energy. Prior to Canadian Solar, Mr. Liu served as President at GCL Solar Energy, one of the largest polysilicon and wafer producers in the world. Mr. Liu held various senior leadership positions at GCL, including the management of solar project development activities in overseas markets. Mr. Liu holds a master’s degree in International Commerce from University of Kentucky, and both M.S. and B.S. degrees in Mechanical Engineering from Northeast University in Shenyang, China.

Mr. Martin Bloom has been an independent director since July 2006 and is currently the chairman of the audit committee, and a member of the compensation committee, nominating and corporate governance committee, and the ESG committee. Mr. Bloom served as the chairman of the audit committee between September 2006 and March 2016. Mr. Bloom currently serves on the Boards of Emblem Ventures, Emblem Technology Partners, Eton Court and Bloom Arts Ltd. Mr. Bloom is also the chair of Precision Cardiovascular, a private company in the field of medical implants until July 31, 2023. In addition, he has been a corporate advisory board member of Seraphim Space, an investment fund for space and related activities and was the chairman and director of Represent Group Limited until March 2021. He served on the Board of Sunamp Limited, a thermal storage company, from March 2019 to April 2020. Mr. Bloom served as a member of board of directors of LB-Shell plc., formerly known as Intelligent Energy (then listed on the Main Market of the London Stock Exchange), a British fuel cell company, from 2012 to December 2017, the group chief executive officer from June 2016 to December 2017, and the chairman of its nomination committee and a member of its audit committee and remuneration committee from 2014 to 2016. Mr. Bloom was the chairman of the board of directors of MayAir Group, a Malaysian air purification company listed on the London AIM, from May 2015 to March 2018. He was a member of the board of directors of Green & Smart, a Malaysian biogas producer listed on the London AIM, and chairman of its audit committee from May 2016 to September 2017. Mr. Bloom was a member of the board of directors of Starcom plc, an asset tracking company listed on London AIM, and a member of its audit committee from January 2013 to October 2015. Mr. Bloom has almost 50 years of experience in strategic partnering, technology commercialization and business strategy. He has built businesses in the United States, Europe and Asia. In 2005, Mr. Bloom was appointed to serve as the UK chairman of the China-UK Venture Capital Joint Working Group, launched by the then-Chancellor of the United Kingdom, Gordon Brown, in February 2005, to foster collaboration between the venture capital and private equity industries in China and the United Kingdom. Mr. Bloom worked at Coopers & Lybrand (now PricewaterhouseCoopers) from 1996 to 1997 and was the project manager of a series of technology transfer schemes between the United Kingdom and Japan on behalf of the Department of Trade & Industry of the United Kingdom from 1992 to 1997. Mr. Bloom worked as a corporate strategist at Unilever between 1973 and 1981. Mr. Bloom became a CEDR Accredited Mediator as of January 2022 for purposes of commercial mediation. Mr. Bloom has a bachelor’s degree with honors in economics from the University of Southampton and a master’s degree in the history of science jointly from Imperial College and University College, London.

Mr. Ramnath Iyer has been our independent director since April 2022. Mr. Iyer is the chairman of the ESG committee, chairman of the compensation committee and a member of the audit committee. Mr. Iyer brings extensive capital markets experience from his prior roles as portfolio manager to multiple international asset management firms and strategist role at investment banks. He also brings significant knowledge and expertise on sustainability & environmental, social, and governance (ESG) expertise from his previous role as the Head of ESG, Asia at Invartis Consulting where he helped institutional investors integrate ESG and sustainability practices. Mr. Iyer is deeply involved in the renewables sector at the Institute for Energy Economics and Financial Analysis, a global think tank, where he currently is the Lead, Sustainable Finance Asia. Mr. Iyer holds a post graduate diploma in Management from Indian Institute of Management.

Mr. Himanshu Harshad Shah has been our director since March 2022. Mr. Shah is the chairman of the board and chair of the nominating and corporate governance committee. Mr. Shah is the Founder, President, and CIO of Shah Capital Management. Mr. Shah brings over thirty years of experience in global capital markets and entrepreneurial business acumen. Over the years, he has successfully advised many portfolio companies on both pragmatic strategy and disciplined execution. In addition, Mr. Shah has served on the Board of Directors for Vitamin Shoppe. Currently, he is also the Executive Chairman of Marius Pharmaceuticals. Shah Capital is a long-term stakeholder and has over 34% ownership of Emeren. Mr. Shah holds his Bachelor of Commerce in Accounting from Gujarat University, India and holds an MBA from University of Akron, Ohio.

Ms. Julia Xu has been an independent director since March 2016. Ms. Xu is a member of the audit committee, nominating and corporate governance committee, and ESG committee. Ms. Xu is the founder and currently the managing director of Oravida, a New Zealand-based group specializing in the branding and promotion of New Zealand's premium food products primarily for the Chinese market. Ms. Xu has served on the boards of Oravida N.A. since September 2016, Oravida Ltd since May 2016, Oravida Waters Limited since March 2015, and Oravida NZ Limited since December 2009. Ms. Xu is also the Managing Director for Kauri NZ investment, a company that invests in New Zealand's property and primary industries. Ms. Xu has served on the boards of Kauri BB5 Limited Since October 2018, Kauri Waikite Limited Since October 2018, Kauri Papamoa Limited since April 2018, Kauri Drury Limited since April 2018, Kauri Retirement Limited since December 2017, Kauri Tauriko Limited since April 2017, Kauri Karaka Limited since April 2017, Kauri Outlooks Management Ltd since March 2017, Kauri Partners Limited since February 2017, Kauri Outlooks Ltd since February 2017, Kauri Ardmore Limited since February 2016, Kauri McArthur Ridge Limited since December 2015, Kauri Orewa Limited since December 2012, Kauri Ruakaka Limited since August 2011, Kauri Connect Limited since July 2011 and Kauri 139 Limited since December 2009. Prior to establishing Oravida in New Zealand, Ms. Xu was the chief financial officer of the Company from April 2010 to June 2011 and the vice president of international corporate finance and corporate communications of the Company from March 2009 to March 2010. Ms. Xu also has served on the boards of Musket Holdings Limited since February 2017, Mauri Bay of Plenty Aquaculture Limited since December 2016, Jumar Limited since August 2016, and Ardmore Airport Limited, Ardmore Unicom Services Limited and Ardmore Utilities Limited since June 2016. She has served on the boards of NZG 2010 Limited since September 2011 and NZG Limited since May 2006. Ms. Xu has extensive financial markets experience, including earlier roles at Deutsche Bank Hong Kong, Bankers Trust and Lehman Brothers. Ms. Xu obtained her bachelor's degree in biology from Cornell University in 1995 and received her MBA from Johnson School of Management of Cornell University in 2004.

Mr. Ke Chen served as our executive director from October 2019 to April 2022, and has been our chief financial officer since November 2019. Mr. Chen is a member of the ESG committee. He has over 17 years of experience in the global capital markets, including investing in solar industry globally. Ke brings both capital market insight and strategic expertise to his role as our chief financial officer. Mr. Chen was a Director at Shah Capital and a director at iTV Media. Prior to joining Shah Capital, Ke worked in the pharmaceutical and biotech industries, and was an inventor who holds four patents. Ke holds an MBA from the Kenan-Flagler Business School at UNC Chapel Hill. He also holds an M.S. in Chemistry from the University of Florida and earned a B.S. from the University of Science and Technology of China.

Mr. Enrico Bocchi joined the Company in October 2022 as our Country Director of Italy. As of July, 2024, Mr. Bocchi has been promoted to Executive Vice President, Europe. Mr. Bocchi was the co-founder of the Italian branch of Emeren which was incorporated through acquisition. He has many years of experience in building and developing solar projects, battery storage projects, renewable energy industry and diverse experience in blue chip companies including Apple and Cisco. Enrico holds an MBA in Bocconi Business School and a B.S. engineering in high technology.

Mr. KaiKai Zhang brings to Emeren China more than 20 years of experience in renewable energy, investments and financing. Mr. Zhang joined Emeren China in January 2017 and has been responsible for domestic power station investment and financing business for 7 years, with a cumulative 15 years of investment and financing experience and served as a Cosco financing specialist; Manager of XMXYG Asset Management; Senior Manager of XMXYG Financial Holdings, XMXYG Guarantee, XMXYG Pawn; Deputy General Manager of Huiji Fund; Deputy General Manager of Huixin Minrong. Familiar with banking, financial leasing, securities, funds and other financing and credit business. Mr. Zhang graduated from Zhejiang University of Science and Technology in 2007, majoring in international economics and trade.

Mr. Mac Moore joined the Company in November 2021. He has over 25 years' experience in the renewable energy industry, including solar and storage project development, M&A, construction, and asset management. Before joining Emeren North America, he was Vice President, Business Development at GCL Solar Energy leading a team that developed over 1 GW of solar projects currently in operation. In addition, he held management roles at other leading solar energy companies such as BP Solar, Conergy, and Schott Solar. Mac has BA degrees in Mathematics and Anthropology from Middlebury College, and an MBA in Finance from NYU's Stern School of Business.

Board Committees

The Board has a standing Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, and Environmental, Social, and Governance Committee (ESG). Each of these committees has the responsibilities set forth in formal written charters adopted by the Board. The Company makes available copies of each of these charters (other than the Environmental, Social, and Governance Committee charter) free of charge on its website located at www.emeren.com. Other than the text of the charters, the Company is not including the information contained on or available through its website as a part of, or incorporating such information by reference into, this Annual Report. The Company's memorandum of association and articles of association provide that the minimum number of directors is one and the maximum number of directors is eight, with the directors generally serving three-year terms. Currently the number of directors is set at five.

Audit Committee

The Audit Committee assists the Board in fulfilling the oversight responsibilities the Board has with respect to (i) the integrity of our financial statements, (ii) our compliance with legal and regulatory requirements, (iii) the qualifications and independence of our independent registered public accounting firm and (iv) the performance of our internal audit function and our independent registered public accounting firm. The Audit Committee has responsibility for the appointment, compensation, retention, removal and oversight of our independent registered public accounting firm, which reports directly to the Audit Committee. The Audit Committee is also responsible for preparing an audit committee report to be included in our annual proxy statement, and reviews, approves and oversees on an on-going basis any related party transactions. The Audit Committee has authority to preapprove all auditing and permitted non-audit services to be performed by our independent registered public accounting firm, subject to the de minimis exceptions provided under the Exchange Act. The Audit Committee will establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting and auditing matters. The Audit Committee presently consists of Mr. Martin Bloom (Chairperson), Mr. Ramnath N. Iyer, and Ms. Julia Xu. The Board has determined that each member of the Audit Committee qualifies as an "audit committee financial expert" (as defined in Item 407(d)(5) of Regulation S-K) and that all of the members are independent (as defined in Rule 10A-3 of the Exchange Act and under the listing standards of the NYSE). The Audit Committee held 4 meetings in 2023.

Compensation Committee

The purposes of our Compensation Committee are to (i) assist the board of directors in discharging its responsibilities relating to compensation of the Company's directors and executive officers, including reviewing and evaluating and, if necessary, revising the compensation plans, policies and programs of the Company adopted by management and (ii) review and approve certain disclosures filed with the Securities and Exchange Commission.

Our Compensation Committee approves the compensation of our executive officers, including the Chief Executive Officer. Our Compensation Committee also manages and annually reviews all annual bonus, long-term incentive compensation, stock option, employee pension and welfare benefit plans. It has authority to retain or obtain the advice of compensation consultants to assist with regard to any of its activities. Our Compensation Committee presently consists of Mr. Ramnath N. Iyer (Chairperson) and Mr. Martin Bloom, each of whom meets the independence standards of the New York Stock Exchange and the Securities and Exchange Commission for compensation committee members. The Compensation Committee held two meetings in 2023.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee assists our Board discharge its responsibilities, including: (i) the identification of qualified candidates to become Board members; (ii) the selection or recommendation as director nominees for election at the next annual meeting of shareholders; (iii) identification and recommendation of qualified candidates to fill any vacancies on the Board and its committees; (iv) annual review of the composition of the Board and its committees in light of the characteristics of independence, qualification, experience and availability of the Board members; (v) the development and recommendation to the Board of a set of corporate governance guidelines and principles; (vi) oversight of the evaluation of the Board and management; and (vii) monitoring of compliance with the Company's code of business conduct and ethics, including reviewing the adequacy and effectiveness of the Company's internal rules and procedures to ensure compliance with applicable laws and regulations.

The Nominating and Corporate Governance Committee presently consists of Ms. Julia Xu (Chairperson), Mr. Ramnath N. Iyer, and Mr. Martin Bloom, each of whom meets the independence standards of the New York Stock Exchange for Nominating and Corporate Governance Committee members. The Nominating and Corporate Governance Committee held no meetings in 2023.

Environmental, Social and Governance Committee

Our environmental, social, and governance committee consists of Mr. Ramnath Iyer, Mr. Martin Bloom, Ms. Julia Xu, Mr. Ke Chen, and Mr. Yumin Liu. Mr. Ramnath Iyer is currently the chairman of the environmental, social, and governance committee. Mr. Ramnath Iyer, Mr. Martin Bloom and Ms. Julia Xu all satisfy the independence requirements of the NYSE Listing Rules and SEC regulations. The environmental, social, and governance committee oversees environmental, social, and governance matters. The environmental, social, and governance committee is responsible for, among other things:

- reviewing and evaluating at least annually and, if necessary, revising the environmental, social, and governance plans, policies and programs;

- reviewing the results of the Company's important environmental, social, and governance issues, and providing references for corporate governance and risk management; and

- supervising an environmental, social, and governance working group, making recommendations and conducting unbiased evaluation and supervision of environmental, social, and governance activities.

Board Oversight of Risk

Our Board, as a whole and through its committees, has responsibility for the oversight of risk management at the Company. In its risk oversight role, our Board has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed. Our Board receives reports from management on financial, operational, legal compliance, reputation risks, internal controls and the degree of exposure to those risks. Our Board helps ensure that management is properly focused on risk by, among other things, reviewing and discussing the performance of senior management and business units of the Company.

Our Board oversees an enterprise-wide approach to risk management, which is designed to (i) support the achievement of organizational objectives, including strategic objectives, (ii) improve long-term organizational performance and (iii) enhance shareholder value. Our Board routinely evaluates specific risks related to: (i) our business, (ii) doing business in international markets, and (iii) our capital structure. The Board relies on its Audit Committee to address significant financial risk exposures and the steps management has taken to monitor, control and report such exposures to the full Board, including the Company's risk assessment and risk management guidelines and policies. Our Board's role in the Company's risk oversight has not affected our Board's leadership structure.

Corporate Governance Guidelines

The Board has adopted Corporate Governance Guidelines to assist the Board and its committees in the exercise of their responsibilities. The Corporate Governance Guidelines set forth guiding principles and provide a flexible framework for the governance of the Company. The Nominating and Corporate Governance Committee and the Board are responsible for regularly reviewing and revising the Corporate Governance Guidelines and related documents as and when appropriate. The Company has posted a copy of the Corporate Governance Guidelines on its website at www.emeren.com.

Nominations of Directors

The Nominating and Corporate Governance Committee will consider persons recommended by shareholders to become nominees for election as directors. Recommendations for consideration by the Nominating and Corporate Governance Committee should be sent to the Secretary of the Company in writing together with appropriate biographical information concerning each proposed nominee.

In identifying and evaluating nominees for director, the Nominating and Corporate Governance Committee seeks to ensure that the Board possesses, in the aggregate, the strategic, managerial and financial skills and experience necessary to fulfill its duties and to achieve its objectives, and seeks to ensure that the Board is comprised of directors who have broad and diverse backgrounds, possessing knowledge in areas that are of importance to the Company. The Nominating and Corporate Governance Committee looks at each nominee on a case-by-case basis regardless of who recommended the nominee. In looking at the qualifications of each candidate to determine if their election would further the goals described above, the Nominating and Corporate Governance Committee will consider areas of expertise and competencies that candidates may have to offer as well as the overall composition and diversity of the Board. Under British Virgin Islands law, our directors have a duty to act honestly and in good faith with a view to our best interests. Our directors also have a duty to exercise the skill they actually possess with such care and diligence that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association.

The Nominating and Corporate Governance Committee also believes that nominees for director should possess these attributes:

- Team player/collaborative;
- Ability and willingness to challenge and probe;
- Candor and willingness to share opposing viewpoints;
- Common sense and sound judgment;
- Integrity and high ethical standards;
- Interpersonal skills;
- Ability to listen;
- Oral communication skills;
- Understanding of effective decision-making processes; and
- Willingness and ability to devote time and energy to the role.

Independent Directors and Annual Meeting Attendance

Of the five directors currently serving on the Board, the Board has determined that all of the directors except for Mr. Liu and Mr. Shah are "independent directors" as that term is defined in the listing standards of the New York Stock Exchange.

Code of Ethics

Our board of directors has adopted a code of business conduct and ethics ("Code of Conduct") that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officer, chief financial officer, controller, chief operating officer, chief technology officer, vice presidents and any other persons who perform similar functions for us. We have posted a copy of our Code of Conduct on the "Investor Relations – Compliance and Policy" section of our website at www.emeren.com. We are not including the information contained on our website as part of, or incorporating it by reference into, this report. 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 11. Executive Compensation

The information required by Part III, Item 11 is incorporated by reference to the information set forth in our definitive proxy statement for our 2024 annual meeting of shareholders.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by Part III, Item 12 is incorporated by reference to the information set forth in our definitive proxy statement for our 2024 annual meeting of shareholders.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Part III, Item 13 is incorporated by reference to the information set forth in our definitive proxy statement for our 2024 annual meeting of shareholders.

Item 14. Principal Accounting Fees and Services

The information required by Part III, Item 14 is incorporated by reference to the information set forth under in our definitive proxy statement for our 2024 annual meeting of shareholders.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) List of documents filed as part of this report:

(1) Financial Statements

Consolidated Statements of Operations and Comprehensive Income for the years ended December 31, 2023 and 2022

Consolidated Balance Sheets as of December 31, 2023, and 2022

Consolidated Statements of Cash Flows for the years ended December 31, 2023 and 2022

Consolidated Statements of Changes in Equity for the years ended December 31, 2023 and 2022

Notes to Consolidated Financial Statements

(2) Financial Statement Schedule.

None.

(3) Exhibits

The exhibits listed in the accompanying exhibit index are filed as part of this Annual Report on Form 10-K.

EXHIBIT INDEX

Exhibit Number	Exhibit Description
3.1	Memorandum and Articles of Association, as amended (incorporated by reference to Exhibit 1.1 to the Company's Annual Report on Form 20-F (File No. 333-162257) filed with the Securities and Exchange Commission on May 16, 2023)
4.1	Company's Specimen American Depositary Receipt (incorporated by reference to Exhibit 1 from our post-effective amendment No. 1 to Form F-6 registration statement (File No. 333-162257), as amended, initially filed with the Securities and Exchange Commission on August 24, 2011)
4.2	Company's Specimen Certificate for Shares (incorporated by reference to Exhibit 4.2 from our Form F-1 registration statement (File No. 333-151315) filed with the Securities and Exchange Commission on May 30, 2008)
4.3	Form of Deposit Agreement among the Company, the depositary and holder of the American Depositary Receipts (incorporated by reference to Exhibit 1 from our post-effective amendment No. 1 to the Form F-6 registration statement (File No. 333-162257) filed with the Securities and Exchange Commission on August 24, 2011)
4.4	Description of Securities (incorporated by reference to Exhibit 2.1 to the Company's Annual Report on Form 20-F (File No. 333-162257) filed with the Securities and Exchange Commission on May 16, 2023)
10.1	2007 Share Incentive Plan, amended and restated as of December 10, 2021 (incorporated by reference to Exhibit 10.1 of our registration statement on Form S-8 (File No. 333-261933) filed with the Securities and Exchange Commission on December 29, 2021)
10.2	Form of Indemnification Agreement with the Registrant's Directors (incorporated by reference to Exhibit 10.2 from our Form F-1 registration statement (File No. 333-151315) filed with the Securities and Exchange Commission on May 30, 2008) https://www.sec.gov/Archives/edgar/data/1089872/000110465910014317/a09-35992_1ex10d15.htm
10.3*	English Translation of the Form of Employment Relationship Adjustment Agreement among ReneSola Shanghai Ltd., ReneSola Consulting (Shanghai) Co., Ltd. and our executive officers (incorporated by reference to Exhibit 4.3 of our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2018)
10.4*	English translation of Service Agreement among ReneSola Shanghai Ltd. and its executive officers (incorporated by reference to Exhibit 4.4 of our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2018)
10.5*	Form of Service Agreement between Emeren US LLC (f/k/a ReneSola Power Holdings, LLC) and its executive officers (incorporated by reference to Exhibit 4.5 of our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2018)
10.6*	Form of Service Agreement between ReneSola Engineering International GmbH and its executive officers (incorporated by reference to Exhibit 4.6 of our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2018)
10.7	Securities Repurchase Agreement by and between Emeren Group Ltd (f/k/a ReneSola Ltd) and ReneSola Singapore Pte. Ltd. dated as of January 4, 2023 (incorporated by reference to Exhibit 10.1 of the Report of Foreign Private Issuer on Form 6-K (File No. 001-33911) filed with the Securities and Exchange Commission on January 4, 2023)

Exhibit Number	Exhibit Description
10.8	Securities Repurchase Agreement by and between Emeren Group Ltd (f/k/a ReneSola Ltd) and ReneSola Singapore Pte. Ltd. dated as of September 2, 2022 (incorporated by reference to Exhibit 10.1 of the Report of Foreign Issuer on Form 6-K (File No. 001-33911) filed with the Securities and Exchange Commission on September 6, 2022)
10.9	Amended and Restated Investor Rights Agreement by and between Emeren Group Ltd (f/k/a ReneSola Ltd) and Shah Capital Opportunity Fund LP dated as of September 9, 2022 (incorporated by reference to Exhibit 99.1 of the Report of Foreign Private Issuer on Form 6-K (File No. 001-33911) filed with the Securities and Exchange Commission on September 15, 2022
10.10#	The Sale Purchase Agreement in relation to 100% of the Shares of Lucas EST S.R.L and Ecosfer Energy S.R.L dated December 22, 2020 among Emeren New Energy S.à r.l. (f/k/a Renesola New Energy S.à r.l), Solis Bond Company Designated Activity Company and Alternus Energy Group Plc (incorporated by reference to Exhibit 4.10 of our Annual Report on Form 20-F (File No. 001-33911) filed with the Securities and Exchange Commission on April 28, 2021)
10.11#	Amendment Agreement dated March 16, 2021 to the Sale Purchase Agreement in relation to 100% of the Shares of Lucas EST S.R.L and Ecosfer Energy S.R.L dated December 22, 2020 among Emeren New Energy S.à r.l. (f/k/a Renesola New Energy S.à r.l), Solis Bond Company Designated Activity Company and Alternus Energy Group Plc (incorporated by reference to Exhibit 4.11 of our Annual Report on Form 20-F (File No. 001-33911) filed with the Securities and Exchange Commission on April 28, 2021)
10.12#	The Bond Subscription Agreement dated July 21, 2020 between Emeren New Energy S.à r.l. (f/k/a Renesola New Energy S.à r.l) and Eiffel Energy Transition Fund S.L.P. (incorporated by reference to Exhibit 4.12 of our Annual Report on Form 20-F (File No. 001-33911) filed with the Securities and Exchange Commission on April 28, 2021)
10.13#	Joint Venture Agreement dated March 31, 2021 between the Company and Eiffel Essential Group (incorporated by reference to Exhibit 4.14 of our amendment to Annual Report on Form 20-F/A (File No. 001-33911) filed with the Securities and Exchange Commission on August 23, 2022)
10.14#	Share Purchase Agreement by and between ReneSola Power UK Ltd and P&T Global Renewable Energy Limited dated as of September 30, 2022 (incorporated by reference to Exhibit 4.13 to the Company's Annual Report on Form 20-F (File No. 333-162257) filed with the Securities and Exchange Commission on May 16, 2023)
14.1	Code of Business Conduct and Ethics
16.1	Letter of Grant Thornton Zhitong Certified Public Accountants LLP to the U.S. Securities and Exchange Commission, dated February 7, 2023 (incorporated by reference to Exhibit 16.1 of the Company's Amended Report of Foreign Issuer on Form 6-K/A (File No. 001-33911) filed with the Securities and Exchange Commission on February 8, 2023)
16.2	Letter of Marcum Asia CPAs LLP to the U.S. Securities and Exchange Commission, dated July 31, 2024
21.1	Subsidiaries of Emeren Group Ltd
23.1	Consent of Independent Registered Accounting Firm (Marcum Asia CPAs LLP)
23.2	Consent of Independent Registered Accounting Firm (UHY LLP)
31.1	Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of the Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Exhibit Number	Exhibit Description
32.2	Certification of the Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
97	Compensation Recovery Policy
101	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2023 are filed herewith, formatted Inline in eXtensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets; (ii) Consolidated Statements of Operations; (iii) Consolidated Statements of Comprehensive Income/(Loss); (iv) Consolidated Statements of Changes in Equity; (v) Consolidated Statements of Cash Flows; (vi) Notes to the Consolidated Financial Statements; and (vii) the information included in Part II, Item 9B(b)
104	Cover Page Interactive Data File

* Indicates management contract or compensatory plan or arrangement.

Portions of the exhibit have been omitted pursuant to SEC confidential treatment under 17 C.F.R. Section 229.601(b)(10)(iv).

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on July 31, 2024.

EMEREN GROUP LTD.

By: /s/ Yumin Liu
Yumin Liu
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Yumin Liu Yumin Liu	Chief Executive Officer and Director (Principal Executive Officer)	July 31, 2024
/s/ Himanshu H. Shah Himanshu H. Shah	Chairman of the Board	July 31, 2024
/s/ Martin Bloom Martin Bloom	Director	July 31, 2024
/s/ Julia Xu Julia Xu	Director	July 31, 2024
/s/ Ramnath N. Iyer Ramnath N. Iyer	Director	July 31, 2024
/s/ Ke Chen Ke Chen	Chief Financial Officer (Principal Financial and Accounting Officer)	July 31, 2024

Exhibit 14.1

EMEREN GROUP LTD

CODE OF BUSINESS CONDUCT AND ETHICS

I. Purpose

This Code of Business Conduct and Ethics contains general guidelines for conducting the business of the Company consistent with the highest standards of business ethics. To the extent this Code requires a higher standard than required by commercial practice or applicable laws, rules or regulations, we adhere to these higher standards.

This Code applies to all of our directors, officers and employees. We refer to all persons covered by this Code as "Company employees" or simply "employees." We also refer to our principal financial officer and our controller as our "principal financial officers."

II. Seeking Help and Information

This Code is not intended to be a comprehensive rulebook and cannot address every situation that you may face. If you feel uncomfortable about a situation or have any doubts about whether it is consistent with the Company's ethical standards, seek help. We encourage you to contact your supervisor for help first. If your supervisor cannot answer your question or if you do not feel comfortable contacting your supervisor, contact Compliance Director Chris Wang via Xin.wang@emeren.com or Human Resources Director Jake Snow via Jake.snow@emeren.com directly.

III. Reporting Violations of the Code

All employees have a duty to report any known or suspected violation of this Code, including any violation of the laws, rules, regulations or policies that apply to the Company. If you know of or suspect a violation of this Code, immediately report the conduct to your supervisor. Your supervisor will contact the Compliance Director/Human Resources Director which will work with you and your supervisor to investigate your concern. If you do not feel comfortable reporting the conduct to your supervisor or you do not get a satisfactory response, you may contact Compliance Director Chris Wang via Xin.wang@emeren.com directly. All reports of known or suspected violations of the law or this Code will be handled sensitively and with discretion. Your supervisor, Internal Audit, Human Resources and the Company will protect your confidentiality to the extent possible, consistent with law and the Company's need to investigate your concern.

It is Company policy that any employee who violates this Code will be subject to appropriate discipline, which may include termination of employment. This determination will be based upon the facts and circumstances of each particular situation. An employee accused of violating this Code will be given an opportunity to present his or her version of the events at issue prior to any determination of appropriate discipline. Employees who violate the law or this Code may expose themselves to substantial civil damages, criminal fines and prison terms. The Company may also face substantial fines and penalties and many incur damage to its reputation and standing in the community. Your conduct as a representative of the Company, if it does not

comply with the law or with this Code, can result in serious consequences for both you and the Company.

IV. Policy Against Retaliation

The Company prohibits retaliation against an employee who, in good faith, seeks help or reports known or suspected violations. Any reprisal or retaliation against an employee because the employee, in good faith, sought help or filed a report will be subject to disciplinary action, including potential termination of employment.

V. Waivers of the Code

Waivers of this Code for employees may be made only by an executive officer of the Company. Any waiver of this Code for our directors, executive officers or other principal financial officers may be made only by our Board of Directors or the appropriate committee of our Board of Directors and will be disclosed to the public as required by law or the rules of the New York Stock Exchange.

Conflicts of Interest

I. Identifying Potential Conflicts of Interest

A conflict of interest can occur when an employee's private interest interferes, or appears to interfere, with the interests of the Company as a whole. You should avoid any private interest that influences your ability to act in the interests of the Company or that makes it difficult to perform your work objectively and effectively.

Identifying potential conflicts of interest may not always be clear-cut. The following situations are examples of conflicts of interest:

- Outside Employment. No employee should be employed by, serve as a director of, or provide any services not in his/her capacity as a Company employee to a company that is a material customer, supplier or competitor of the Company.

- Improper Personal Benefits. No employee should obtain any material (as to him or her) personal benefits or favors because of his or her position with the Company. Please see "Gifts and Entertainment" below for additional guidelines in this area.

- Financial Interests. No employee should have a significant financial interest (ownership or otherwise) in any company that is a material customer, supplier or competitor of the Company. A "significant financial interest" means (i) ownership of greater than 1% of the equity of a material customer, supplier or competitor or (ii) an investment in a material customer, supplier or competitor that represents more than 5% of the total assets of the employee.

- Loans or Other Financial Transactions. No employee should obtain loans or guarantees of personal obligations from, or enter into any other personal financial

transaction with, any company that is a material customer, supplier or competitor of the Company. This guideline does not prohibit arms-length transactions with banks, brokerage firms or other financial institutions.

- Service on Boards and Committees. No employee should serve on a board of directors or trustees or on a committee of any entity (whether profit or not-for- profit) whose interests reasonably would be expected to conflict with those of the Company.

- Actions of Family Members. The actions of family members outside the workplace may also give rise to the conflicts of interest described above because they may influence an employee's objectivity in making decisions on behalf of the Company. For purposes of this Code, "family members" include your spouse or life-partner, brothers, sisters and parents, in-laws and children whether such relationships are by blood or adoption.

If you are uncertain whether a particular company is a material customer, supplier or competitor, please contact the Compliance Director or Human Resources Director for assistance.

II. Disclosure of Conflicts of Interest

The Company requires that employees disclose any situations that reasonably would be expected to give rise to a conflict of interest. If you suspect that you have a conflict of interest, or something that others could reasonably perceive as a conflict of interest, you must report it to your supervisor or the Internal Audit &Internal Control Department. We will work with you to determine whether you have a conflict of interest and, if so, how best to address it. Although conflicts of interest are not automatically prohibited, they are not desirable and may only be waived as described in "Waivers of the Code" above.

Corporate Opportunities

As an employee of the Company, you have an obligation to advance the Company's interests when the opportunity to do so arises. If you discover or are presented with a business opportunity through the use of corporate property, information or because of your position with the Company, you should first present the business opportunity to the Company before pursuing the opportunity in your individual capacity. No employee may use corporate property, information or his or her position with the Company for personal gain or should compete with the Company.

You should disclose to your supervisor the terms and conditions of each business opportunity covered by this Code that you wish to pursue. Your supervisor will contact the Legal Department and the appropriate management personnel to determine whether the Company wishes to pursue the business opportunity. If the Company waives its right to pursue the business opportunity, you may pursue the business opportunity on the same terms and conditions as originally proposed and consistent with the other ethical guidelines set forth in this Code.

Confidential Information

Employees have access to a variety of confidential information while employed at the Company. Confidential information includes all non-public information that might be of use to competitors, or, if disclosed, harmful to the Company or its customers. Employees have a duty to safeguard all confidential information of the Company or third parties with which the Company conducts business, except when disclosure is authorized or legally mandated. An employee's obligation to protect confidential information continues after her or she leaves the Company. Unauthorized disclosure of confidential information could cause competitive harm to the Company or its customers and could result in legal liability to you and the Company.

Any questions or concerns regarding whether disclosure of Company information is legally mandated should be promptly referred to the Internal Audit&InternalControl Depart ment.

Competition and Fair Dealing

All employees should endeavor to deal fairly with fellow employees and with the Company's customers, suppliers and competitors. Employees should not take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair-dealing practice.

Protection and Use of Company Assets

Employees should protect the Company's assets and ensure their efficient use for legitimate business purposes only. Theft, carelessness and waste have a direct impact on the Company's profitability. The use of Company funds or assets, whether or not for personal gain, for any unlawful or improper purpose is prohibited.

To ensure the protection and proper use of the Company's assets, each employee should:

- Exercise reasonable care to prevent theft, damage or misuse of Company property.
- Report the actual or suspected theft, damage or misuse of Company property to a supervisor.
- Use the Company's telephone system, other electronic communication services, written materials and other property primarily for business-related purposes.
- Safeguard all electronic programs, data, communications and written materials from inadvertent access by others.
- Use Company property only for legitimate business purposes, as authorized in connection with your job responsibilities.

Employees should be aware that Company property includes all data and communications transmitted or received to or by, or contained in, the Company's electronic or telephonic systems. Company property also includes all written communications. Employees and other users of this property should have no expectation of privacy with respect to these communications and data. To the extent permitted by law, the Company has the ability, and

reserves the right, to monitor all electronic and telephonic communication. These communications may also be subject to disclosure to law enforcement or government officials.

Gifts and Entertainment

The giving and receiving of gifts is common business practice. Appropriate business gifts and entertainment are welcome courtesies designed to build relationships and understanding among business partners. However, gifts and entertainment should never compromise, or appear to compromise, your ability to make objective and fair business decisions.

It is the responsibility of employees to use good judgment in this area. As a general rule, employees may give or receive gifts or entertainment to or from customers or suppliers only if the gift or entertainment could not be viewed as an inducement to any particular business decision. All gifts and entertainment expenses made on behalf of the Company must be properly accounted for on expense reports.

Employees may only accept appropriate gifts. We encourage employees to submit gifts received to the Company. While it is not mandatory to submit small gifts, gifts of over US$50 (approximately RMB 360) must be submitted immediately to the administration department of the Company.

Our business conduct is founded on the principle of “fair transaction.” Therefore, no employee may receive kickbacks, bribe others, or secretly receive commissions or any other personal benefits.

Company Records

Accurate and reliable records are crucial to our business. Our records are the basis of our earnings statements, financial reports and other disclosures to the public and guide our business decision-making and strategic planning. Company records include booking information, payroll, timecards, travel and expense reports, e-mails, accounting and financial data, measurement and performance records, electronic data files and all other records maintained in the ordinary course of our business.

All Company records must be complete, accurate and reliable in all material respects. Undisclosed or unrecorded funds, payments or receipts are inconsistent with our business practices and are prohibited. You are responsible for understanding and complying with our record keeping policy. Ask your supervisor if you have any questions.

Accuracy of Financial Reports and Other Public Communications

As a public company we are subject to various securities laws, regulations and reporting obligations. Both federal law and our policies require the disclosure of accurate and complete information regarding the Company’s business, financial condition and results of operations. Inaccurate, incomplete or untimely reporting will not be tolerated and can severely damage the Company and result in legal liability.

The Company's principal financial officers and other employees working in the Accounting Department have a special responsibility to ensure that all of our financial disclosures are full, fair, accurate, timely and understandable. These employees must understand and strictly comply with generally accepted accounting principles and all standards, laws and regulations for accounting and financial reporting of transactions, estimates and forecasts.

Compliance with Laws and Regulations

Each employee has an obligation to comply with all laws, rules and regulations applicable to the Company operates. These include, without limitation, laws covering bribery and kickbacks, copyrights, trademarks and trade secrets, information privacy, insider trading, illegal political contributions, antitrust prohibitions, foreign corrupt practices, offering or receiving gratuities, environmental hazards, employment discrimination or harassment, occupational health and safety, false or misleading financial information or misuse of corporate assets. You are expected to understand and comply with all laws, rules and regulations that apply to your job position. If any doubt exists about whether a course of action is lawful, you should seek advice from your supervisor or the Legal Department.

I. Insider Trading

Company employees are prohibited from trading in the stock or other securities of the Company while in possession of material, nonpublic information about the Company. In addition, Company employees are prohibited from recommending, "tipping" or suggesting that anyone else buy or sell stock or other securities of the Company on the basis of material, nonpublic information. Company employees who obtain material nonpublic information about another company in the course of their employment are prohibited from trading in the stock or securities of the other company while in possession of such information or "tipping" others to trade on the basis of such information. Violation of insider trading laws can result in severe fines and criminal penalties, as well as disciplinary action by the Company, up to and including termination of employment. You should see the Company's Insider Trading Policy for detailed guidelines on insider trading.

Conclusion

This Code of Business Conduct and Ethics contains general guidelines for conducting the business of the Company consistent with the highest standards of business ethics.We expect all Company employees, to adhere to these standards.

Exhibit 16.2

July 31, 2024

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Commissioners:

We have read the statements made by Emeren Group Ltd under Item 9 of its Form 10-K dated July 31, 2024. We agree with the statements concerning our Firm in such Form 10-K; we are not in a position to agree or disagree with other statements of Emeren Group Ltd contained therein.

Very truly yours,

/s/ Marcum Asia CPAs LLP

Marcum Asia CPAs LLP

NEW YORK OFFICE • 7 Penn Plaza • Suite 830 • New York, New York • 10001
Phone 646.442.4845 • Fax 646.349.5200 • www.marcumasia.com

Exhibit 21.1

Subsidiaries of Emeren Group Ltd

As of December 31, 2023, we conduct our business primarily through the following subsidiaries:

- Emeren New Energy S.à r.l., incorporated in Luxembourg;
- ReneSola Investment Management Ltd., incorporated in the British Virgin Islands;
- Emeren US LLC, incorporated in the United States;
- Emeren Power Canada, incorporated in Canada;
- Emeren Poland sp. z o.o., incorporated in Poland;
- Emeren Hungary Kft, incorporated in Hungary;
- EMEREN France S.A.R.L, incorporated in France;
- EMEREN NEW ENERGY SPAIN, S.L., incorporated in Spain;
- Emeren UK LTD, incorporated in the United Kingdom;
- Emeren New Energy Italy S.r.l., incorporated in Italy;
- Emeren Germany GmbH, incorporated in Germany;
- RE PV S.à r.l., incorporated in Luxembourg;
- Emeren New Energy Austria GmbH, Incorporated in Austria;
- Emeren (Zhejiang) PV Power Co., Ltd., incorporated in China;
- Zhejiang Emeren Investment Ltd., incorporated in China; and
- Emeren Power Shanghai LTD, incorporated in China.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statement of Emeren Group Ltd on Form S-8 (File No. 333-261933, 333-260373, 333-153647 and 333-175479) of our report dated May 16, 2023, with respect to our audit of the consolidated financial statements of Emeren Group Ltd as of December 31, 2022 and for the year ended December 31, 2022, which report is included in this Annual Report on Form 10-K of Emeren Group Ltd for the year ended December 31, 2023.

/s/ Marcum Asia CPAs LLP

Marcum Asia CPAs LLP
New York, NY
July 31, 2024

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the registration statements of Emeren Group Ltd on Form S-8 (File No. 333-261933, 333-260373, 333-153647 and 333-175479) of our report dated July 31, 2024, with respect to our audit of the consolidated financial statements of Emeren Group Ltd as of and for the year ended December 31, 2023, appearing in this Annual Report on Form 10-K of Emeren Group Ltd for the year ended December 31, 2023.

/s/ UHY LLP

New York, NY

July 31, 2024

Exhibit 31.1

Certification of the Principal Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Yumin Liu, certify that:

1. I have reviewed this Annual Report on Form 10-K of Emeren Group Ltd:

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 registrant as of, and for, the periods presented in this report;

4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: July 31, 2024

By: /s/ Yumin Liu
Name: Yumin Liu
Title: Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of the Principal Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Ke Chen, certify that:

1. I have reviewed this Annual Report on Form 10-K of Emeren Group Ltd:

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 registrant as of, and for, the periods presented in this report;

4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: July 31, 2024

By: /s/ Ke Chen
Name: Ke Chen
Title: Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

**Certification of the Principal Executive Officer
Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Yumin Liu, the Chief Executive Officer of Emeren Group Ltd (the “Company”), hereby certify, that, to my knowledge:

1. The Annual Report on Form 10-K for the year ended December 31, 2023 (the “Report”) of the Company 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: July 31, 2024

By:	/s/ Yumin Liu
Name:	Yumin Liu
Title:	Chief Executive Officer (Principal Executive Officer)

Exhibit 32.2

Certification of the Principal Financial Officer
Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Ke Chen, the Chief Financial Officer of Emeren Group Ltd (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 10-K for the year ended December 31, 2023 (the "Report") of the Company 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: July 31, 2024

By: /s/ Ke Chen
Name: Ke Chen
Title: Chief Financial Officer
(Principal Financial Officer)

EMEREN GROUP LTD

Compensation Recovery Policy

1. Purpose. The purpose of this Compensation Recovery Policy (this "Policy") is to describe the circumstances under which Emeren Group Ltd (the "Company") is required to recover certain compensation paid to certain employees. Any references in compensation plans, agreements, equity awards or other policies to the Company's "recoupment", "clawback" or similarly-named policy shall be deemed to refer to this Policy with respect to Incentive-Based Compensation Received on or after the Effective Date. With respect to Incentive-Based Compensation Received prior to the Effective Date, such references to the Company's "recoupment", "clawback" or similarly-named policy in compensation plans, agreements, equity awards or other policies shall be deemed to refer to the Company's "recoupment," "clawback" or similarly-named policy, if any, in effect prior to the Effective Date.

2. Mandatory Recovery of Compensation. In the event that the Company is required to prepare an Accounting Restatement, the Company shall recover reasonably promptly the amount of Erroneously Awarded Compensation.

3. Definitions. For purposes of this Policy, the following terms, when capitalized, shall have the meanings set forth below:

    (a) "*Accounting Restatement*" shall mean any accounting restatement required due to material noncompliance of the Company with any financial reporting requirement under the securities laws, including to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period.

    (b) "*Covered Officer*" shall mean the Company's president; principal financial officer; principal accounting officer (or if there is no such accounting officer, the controller); any vice-president of the Company in charge of a principal business unit, division, or function (such as sales, administration, or finance); any other officer who performs a significant policy-making function; or any other person who performs similar significant policy-making functions for the Company.

    (c) "*Effective Date*" shall mean October 2, 2023.

    (d) "*Erroneously Awarded Compensation*" shall mean the excess of (i) the amount of Incentive-Based Compensation Received by a person (A) after beginning service as a Covered Officer, (B) who served as a Covered Officer at any time during the performance period for that Incentive-Based Compensation, (C) while the Company has a class of securities listed on a national securities exchange or a national securities association and (D) during the Recovery Period; over (ii) the Recalculated Compensation. For the avoidance of doubt, a person who served as

a Covered Officer during the periods set forth in clauses (A) and (B) of the preceding sentence shall continue to be subject to this Policy even after such person's service as a Covered Officer has ended.

(e) "*Incentive-Based Compensation*" shall mean any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a financial reporting measure. A financial reporting measure is a measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures, regardless of whether such measure is presented within the financial statements or included in a filing with the Securities and Exchange Commission. Each of stock price and total shareholder return is a financial reporting measure. For the avoidance of doubt, incentive-based compensation subject to this Policy does not include stock options, restricted stock, restricted stock units or similar equity-based awards for which the grant is not contingent upon achieving any financial reporting measure performance goal and vesting is contingent solely upon completion of a specified employment period and/or attaining one or more non-financial reporting measures.

(f) "*Recalculated Compensation*" shall mean the amount of Incentive-Based Compensation that otherwise would have been Received had it been determined based on the restated amounts in the Accounting Restatement, computed without regard to any taxes paid. For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of the Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in an Accounting Restatement, the amount of the Recalculated Compensation must be based on a reasonable estimate of the effect of the Accounting Restatement on the stock price or total shareholder return, as the case may be, on the compensation Received. The Company must maintain documentation of the determination of that reasonable estimate and provide such documentation to the national securities exchange or association on which its securities are listed.

(g) Incentive-Based Compensation is deemed "*Received*" in the Company's fiscal period during which the financial reporting measure specified in the award of such Incentive-Based Compensation is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period.

(h) "*Recovery Period*" shall mean the three completed fiscal years of the Company immediately preceding the date the Company is required to prepare an Accounting Restatement; provided that the Recovery Period shall not begin before the Effective Date. For purposes of determining the Recovery Period, the Company is considered to be "required to prepare an Accounting Restatement" on the earlier to occur of: (i) the date the Company's Board of Directors, a committee thereof, or the Company's authorized officers conclude, or reasonably should have concluded, that the Company is required to prepare an Accounting

Restatement, or (ii) the date a court, regulator, or other legally authorized body directs the Company to prepare an Accounting Restatement. If the Company changes its fiscal year, then the transition period within or immediately following such three completed fiscal years also shall be included in the Recovery Period, provided that if the transition period between the last day of the Company's prior fiscal year end and the first day of its new fiscal year comprises a period of nine to 12 months, then such transition period shall instead be deemed one of the three completed fiscal years and shall not extend the length of the Recovery Period.

4. Exceptions. Notwithstanding anything to the contrary in this Policy, recovery of Erroneously Awarded Compensation will not be required to the extent the Company's committee of independent directors responsible for executive compensation decisions (or a majority of the independent directors on the Company's board of directors in the absence of such a committee) has made a determination that such recovery would be impracticable and one of the following conditions have been satisfied:

(a) The direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered; provided that, before concluding that it would be impracticable to recover any amount of Erroneously Awarded Compensation that was Incentive-Based Compensation based on the expense of enforcement, the Company must make a reasonable attempt to recover such Erroneously Awarded Compensation, document such reasonable attempt(s) to recover, and provide that documentation to the national securities exchange or association on which its securities are listed.

(b) Recovery would violate home country law where, with respect to Incentive-Based Compensation, that law was adopted prior to November 28, 2022; provided that, before concluding that it would be impracticable to recover any amount of Erroneously Awarded Compensation that was Incentive-Based Compensation based on violation of home country law, the Company must obtain an opinion of home country counsel, acceptable to the national securities exchange or association on which its securities are listed, that recovery would result in such a violation, and must provide such opinion to the exchange or association.

(c) Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

5. Manner of Recovery. In addition to any other actions permitted by law or contract, the Company may take any or all of the following actions to recover any Erroneously Awarded Compensation: (a) require the Covered Officer to repay such amount; (b) offset such amount from any other compensation owed by the Company or any of its affiliates to the Covered Officer, regardless of whether the contract or other documentation governing such other compensation specifically permits or specifically prohibits such offsets; and (c) subject to Section 4(c), to the extent the Erroneously Awarded

Compensation was deferred into a plan of deferred compensation, whether or not qualified, forfeit such amount (as well as the earnings on such amounts) from the Covered Officer's balance in such plan, regardless of whether the plan specifically permits or specifically prohibits such forfeiture. If the Erroneously Awarded Compensation consists of shares of the Company's common stock, and the Covered Officer still owns such shares, then the Company may satisfy its recovery obligations by requiring the Covered Officer to transfer such shares back to the Company.

6. Other.

(a) This Policy shall be administered and interpreted, and may be amended from time to time, by the Company's board of directors or any committee to which the board may delegate its authority in its sole discretion in compliance with the applicable listing standards of the national securities exchange or association on which the Company's securities are listed, and the determinations of the board or such committee shall be binding on all Covered Officers.

(b) The Company shall not indemnify any Covered Officer against the loss of Erroneously Awarded Compensation.

(c) The Company shall file all disclosures with respect to this Policy in accordance with the requirements of the Federal securities laws, including disclosure required by the Securities and Exchange Commission filings.

(d) Any right to recovery under this Policy shall be in addition to, and not in lieu of, any other rights of recovery that may be available to the Company.