



Solargiga Energy Holdings Limited 陽光能源控股有限公司

(Incorporated in the Cayman Islands with limited liability)
(於開曼群島註冊成立的有限公司)
Stock Code 股份編號 : 757

共創未來

To Create
BRIGHT FUTURE



2022
中期業績報告
Interim Report

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Corporate Information

公司資料

Board of Directors

Executive Directors

Mr. TAN Wenhua (*Chairman*)
Mr. TAN Xin
Mr. WANG Junze

Non-executive Director

Mr. HSU You Yuan

Independent Non-executive Directors

Dr. WONG Wing Kuen, Albert
Ms. FENG Wenli (resigned with effect from 11 July 2022)
Mr. LIAN Tao
Ms. CHUNG Wai Hang (appointed with effect from 11 July 2022)

Company Secretary

Mr. YEUNG Chi Tat

Audit Committee

Dr. WONG Wing Kuen, Albert (*Chairman*)
Ms. FENG Wenli (resigned with effect from 11 July 2022)
Mr. LIAN Tao
Ms. CHUNG Wai Hang (appointed with effect from 11 July 2022)

Remuneration Committee

Mr. LIAN Tao (*Chairman*)
Dr. WONG Wing Kuen, Albert
Ms. FENG Wenli (resigned with effect from 11 July 2022)
Mr. TAN Wenhua
Ms. CHUNG Wai Hang (appointed with effect from 11 July 2022)

Nomination Committee

Ms. CHUNG Wai Hang (appointed with effect from 11 July 2022)
(*Chairman*)
Ms. FENG Wenli (resigned with effect from 11 July 2022)
Dr. WONG Wing Kuen, Albert
Mr. HSU You Yuan
Mr. LIAN Tao

Auditor

Ernst & Young
Certified Public Accountants
Registered Public Interest Entity Auditor

董事會

執行董事

譚文華先生(*主席*)
譚鑫先生
王鈞澤先生

非執行董事

許祐淵先生

獨立非執行董事

王永權博士
馮文麗女士(自二零二二年七月十一日起辭任)
廉濤先生
鍾瑋珩女士(自二零二二年七月十一日起獲委任)

公司秘書

楊志達先生

審核委員會

王永權博士(*主席*)
馮文麗女士(自二零二二年七月十一日起辭任)
廉濤先生
鍾瑋珩女士(自二零二二年七月十一日起獲委任)

薪酬委員會

廉濤先生(*主席*)
王永權博士
馮文麗女士(自二零二二年七月十一日起辭任)
譚文華先生
鍾瑋珩女士(自二零二二年七月十一日起獲委任)

提名委員會

鍾瑋珩女士(自二零二二年七月十一日起獲委任)
(*主席*)
馮文麗女士(自二零二二年七月十一日起辭任)
王永權博士
許祐淵先生
廉濤先生

核數師

安永會計師事務所
執業會計師
註冊公共利益實體審計

Corporate Information 公司資料

Principal Bankers

Jinzhou Rural Commercial Bank
Bank of Jinzhou
Entie Commercial Bank
Taiwan Cooperative Bank
China Merchants Bank
China Zheshang Bank
Shanghai Pudong Development Bank
Jiangsu Jianhu Rural Commercial Bank
China Construction Bank
Industrial Bank
China CITIC Bank

Registered Office

Cricket Square
Hutchins Drive
P.O. Box 2681
Grand Cayman, KY1-1111
Cayman Islands

Head Office and Principal Place of Business in Hong Kong

Room 1402, Harbour Centre
25 Harbour Road
Wanchai
Hong Kong

Principal Share Registrar and Transfer Office

Suntera (Cayman) Limited
Suite 3204, Unit 2A, Block 3
Building D, P.O. Box 1586
Gardenia Court, Camana Bay
Grand Cayman, KY1-1100
Cayman Islands

Hong Kong Branch Share Registrar and Transfer Office

Computershare Hong Kong Investor Services Limited
Rooms 1712-16, 17th Floor
Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

Authorised Representatives

Mr. WANG Junze
Mr. YEUNG Chi Tat

Corporate Website

www.solargiga.com

主要往來銀行

錦州農村商業銀行
錦州銀行
安泰商業銀行
合作金庫銀行
招商銀行
浙商銀行
上海浦東發展銀行
江蘇建湖農村商業銀行
中國建設銀行
興業銀行
中信銀行

註冊辦事處

Cricket Square
Hutchins Drive
P.O. Box 2681
Grand Cayman, KY1-1111
Cayman Islands

香港總辦事處暨主要營業地址

香港
灣仔
港灣道25號
海港中心1402室

股份過戶登記總處

Suntera (Cayman) Limited
Suite 3204, Unit 2A, Block 3
Building D, P.O. Box 1586
Gardenia Court, Camana Bay
Grand Cayman, KY1-1100
Cayman Islands

香港股份過戶登記分處

香港中央證券登記有限公司
香港
灣仔
皇后大道東183號
合和中心
17樓1712-16室

法定代表

王鈞澤先生
楊志達先生

企業網站

www.solargiga.com



Company Profile

公司簡介

Solargiga Energy Holdings Limited (the “Company”, together with its subsidiaries, the “Group”, Hong Kong stock code: 757), is a leading supplier of solar energy services. Its products are not only sold to customers in the upstream and mid-stream industries, but also directly to end users.

During the period, the Group was mainly engaged in the following businesses:

- (a) the manufacture of, trading of and provision of processing services for monocrystalline silicon solar ingots/wafers;
- (b) the manufacture and trading of photovoltaic modules;
- (c) the construction and operating of photovoltaic power plants; and
- (d) the manufacture and trading of semiconductor, the trading of monocrystalline silicon solar cells and others.

The Group now focuses on the manufacturing and sales of upstream monocrystalline silicon ingots and wafers and downstream photovoltaic modules in the photovoltaic industry. Among them, the major customers of monocrystalline silicon ingots and wafers are large midstream solar cell manufacturers and the major customers of photovoltaic modules are large domestic state-owned enterprises, multinational corporations and other photovoltaic end-user customers. This enables the Group to fully demonstrate its current advantages in the production of such products. Moreover, the Group is engaged in the installation of photovoltaic systems and the development, design, construction, operation and maintenance of photovoltaic generation plants.

Currently, our integrated business model includes monocrystalline silicon solar ingot production with annual capacity of 6.2GW, solar wafer production with annual capacity of 4.5GW and modules production with annual capacity of 7.2GW, respectively.

陽光能源控股有限公司(「本公司」，連同其附屬公司統稱「本集團」，香港股份代號：757)為太陽能服務的領先供應商。其產品不僅向上游及中游工業客戶出售，而且直接向終端客戶出售。

回顧期內，本集團主要從事以下業務：

- (a) 太陽能單晶硅棒／硅片製造、買賣及提供加工服務；
- (b) 製造及買賣光伏組件；
- (c) 興建及經營光伏電站；及
- (d) 製造及買賣半導體以及買賣太陽能單晶硅電池及其他。

本集團現專注於光伏產業上游單晶硅棒、單晶硅片與下游光伏組件的製造及銷售，其中單晶硅棒與單晶硅片的主要客戶是位於產業中游的電池片生產大廠，而光伏組件的主要客戶則為大型央企、大型跨國企業與其他終端光伏應用客戶，充分發揮了本集團既有之產品的生產優勢。另本集團亦從事光伏系統安裝及光伏電站之開發、設計、建設、運營及維護的一站式光伏發電解決方案。

目前，本集團的整合業務模式包括年產能6.2吉瓦的太陽能單晶硅棒生產業務、年產能4.5吉瓦的太陽能硅片生產業務以及年產能7.2吉瓦的組件生產業務。



Financial Highlights

財務摘要

RMB'000
人民幣千元

For the six months ended 30 June
截至六月三十日止六個月

		2018 二零一八年 (Unaudited) (未經審核)	2019 二零一九年 (Unaudited) (未經審核)	2020 二零二零年 (Unaudited) (未經審核)	2021 二零二一年 (Unaudited) (未經審核)	2022 二零二二年 (Unaudited) (未經審核)
Revenue	收益	1,813,778	1,847,235	2,599,661	2,820,623	3,146,960
Gross profit	毛利	183,084	91,266	279,135	371,516	267,072
Profit/(loss) for the period	期間利潤/(虧損)	(103,816)	(177,111)	(42,702)	120,646	133,683
Profit/(loss) attributable to owners of the parent	歸屬於母公司股東的利潤/(虧損)	(107,280)	(184,206)	(54,493)	61,339	67,733
Basic earnings/(loss) per share attributable to ordinary equity holders of the parent (RMB cents)	歸屬於母公司普通股股東的應佔每股基本盈利/(虧損) (人民幣分)	(3.34)	(5.74)	(1.71)	1.86	2.04



Management Discussion and Analysis

管理層討論及分析

Market Overview

In the first half of 2022, global economic growth and the energy market were affected by the outbreak of the Russian-Ukrainian war and the epidemic. The World Bank released an economic forecast report in June, predicting that global economic growth will slow down from 5.7 percent in 2021 to 2.9 percent in 2022, significantly lower than 4.1 percent that was anticipated in January. The war disrupted energy supplies, causing the prices of all energy products to rise sharply. The European energy crisis has intensified, promoting the renewable energy boom. Wood Mackenzie, an international energy consultancy, expects annual global solar installed capacity additions to grow by 25% in 2022, with cumulative solar installations exceeding the 1,000 GW threshold. The World Energy Investment Report 2022, released by the International Energy Agency (IEA), also predicts that solar energy will account for 60% of the global renewable energy capacity growth this year, with new installed capacity reaching 190 GW, an increase of 25% over last year. China, the United States, Europe, and India will remain the key markets for solar energy in 2022, among which China will continue to be the market with the largest installed photovoltaic capacity in the world. To ensure energy independence and security, countries will pay more attention to the production capacity of renewable energy and the deployment of solar power during the war and the epidemic.

Entering 2022, China will continue to focus on increasing the scale of solar power generation as an essential task in the “14th Five-Year Plan”. In January 2022, the Ministry of Industry and Information Technology, together with four other departments, including the National Energy Administration and the Ministry of Housing and Urban-Rural Development, issued the “Smart Photovoltaic Industry Innovation and Development Action Plan (2021–2025)” (the “Action Plan”). During the “14th Five-Year Plan” period, it will guide the industry’s intelligent upgrade, improve the development of quality and efficiency of the photovoltaic industry, and ensure China ranks first in photovoltaic manufacturing and installation. In addition, nine departments including the National Development and Reform Commission and the National Energy Administration jointly issued the “14th Five-Year Plan for Renewable Energy Development” in June 2022, which clearly stated that by 2025, 3.3 trillion KW electricity per annum will be generated by renewable energy. The amount of wind and solar power has doubled, which shows the country’s determination and support for the development prospects of the solar industry. According to statistics released by the National Energy Administration, in the first half of 2022, the installed capacity of solar power generation was approximately 340 million KW, a year-on-year increase of 25.8%. The China Photovoltaic Industry Association also pointed out that in the first half of this year, the new installation capacity reached 30.9 GW, a year-on-year increase of 137.4%. This data has exceeded the total installed capacity of the first ten months of last year, confirming the solid domestic demand for solar energy.

市場概覽

二零二二年上半年，全球經濟增長及能源市場均受到俄烏戰爭爆發及疫情持續影響。世界銀行 (World Bank) 於六月公佈經濟預測報告，預計全球經濟增長將會放緩，二零二二年全球增長預期由二零二一年的5.7%下降至2.9%，遠低於今年一月預期的4.1%。戰爭擾亂了能源供應，導致所有能源產品的價格大幅上漲。歐洲能源危機加劇，促進可再生能源蓬勃發展。國際能源諮詢顧問公司 Wood Mackenzie 預計二零二二年全球太陽能年新增裝機容量將增長25%，累計太陽能安裝量將超過1,000吉瓦的門檻。國際能源署 (IEA) 發佈的《2022年世界能源投資報告》，亦預計太陽能將佔今年全球可再生能源產能增長的60%，新增裝機容量達到190吉瓦，比去年增長25%。中國、美國、歐洲及印度仍然是二零二二年的太陽能重點市場，其中，中國將繼續成為全球光伏裝機量最大的市場。各國為保障能源獨立和能源安全，在戰爭及疫情下將更加重視可再生能源的產能和太陽能發電的部署。

進入二零二二年，中國繼續以大力提升太陽能發電規模作為「十四五」規劃的重要任務。二零二二年一月，工業和信息化部聯合國家能源局及住房和城鄉建設部等五個部門發佈《智能光伏產業創新發展行動計劃(2021–2025年)》(「行動計劃」)，於「十四五」期間引導行業智慧升級，提升太陽能產業的發展品質和效率，確立中國繼續保持全球光伏製造和裝機應用第一大國地位。此外，國家發改委、國家能源局等九個部門於二零二二年六月聯合印發《「十四五」可再生能源發展規劃》，明確指出至二零二五年，在可再生能源年發電量達到約3.3萬億千瓦時，風電和太陽能發電量實現翻倍，可見國家對太陽能產業發展前景的決心及支持。根據國家能源局發佈的統計資料，二零二二年上半年，太陽能發電裝機容量約3.4億千瓦，同比增長25.8%。中國光伏行業協會亦指出，今年上半年太陽能新增裝機高達30.9吉瓦，同比增長137.4%，此數據已超過去年前十個月裝機之總和，印證國內太陽能需求強勁。

Management Discussion and Analysis 管理層討論及分析

Market Overview (Continued)

According to data from PVInfoLink, a research institute in the solar energy industry, in the first half of 2022, the supply of silicon material was in short supply, and the continuous increase in the price of silicon material caused the whole industry to suffer cost pressure. In terms of output, according to data from the Ministry of Industry and Information Technology of China, the development momentum of the main segments of the national solar energy industry chain remain strong, with a year-on-year increase of more than 45%. In the first half of the year, national polysilicon production totaled approximately 365,000 tons, a year-on-year increase of 53.4%; silicon wafer production was about 152.8 GW, a year-on-year increase of 45.5%; the production of monocrystalline silicon increased by 61.3% year-on-year in the second quarter of the first half of the year, accelerating from the previous quarter by 37.3percentage points. Due to the continued strong demand in the overseas solar market, the export volume of modules in the first half of the year reached 78.6 GW, a year-on-year increase of 74.3%; the total export value of solar products reached a new high of approximately US\$25.9 billion, a year-on-year increase of 113.1%. China's solar energy industry continues to proliferate, demand for products is strong, and both volume and price are rising. Therefore, the China Photovoltaic Industry Association is optimistic that China's newly installed capacity will reach 85–100 GW in 2022.

市場概覽 (續)

據太陽能行業研究機構PVInfoLink的數據顯示，二零二二年上半年硅料供不應求，硅料價格持續上漲，影響行業整個產業鏈都承受相應的成本壓力。產量方面，根據中國工業和信息化部數據，全國太陽能產業鏈主要環節的發展勢頭保持強勁，同比增幅在45%以上。上半年全國多晶硅產量約為36.5萬噸，同比增長53.4%；硅片產量約152.8吉瓦，同比增長45.5%；單晶硅的產量在上半年第二季度同比增長61.3%，較前一季度加快37.3個百分點。由於海外太陽能市場需求持續旺盛，上半年組件出口量達78.6吉瓦，同比增長74.3%；太陽能產品出口總額再創新高，達到約259億美元，同比增長113.1%。中國太陽能產業持續高增長、產品需求旺盛，量價齊升，因此中國光伏行業協會樂觀預計，二零二二年中國新增裝機全年可實現85至100吉瓦。



Management Discussion and Analysis

管理層討論及分析

Market Overview (Continued)

The solar industry in the United States faced multiple challenges in 2022, with growth slowing significantly. According to a report published by the Solar Energy Industries Association (SEIA) and Wood Mackenzie, the United States installed 3.9 GW of solar power capacity in the first quarter of 2022, bringing the total installed capacity to 126.1 GW, and solar was still the dominant energy type in the first quarter in the United States, accounting for half of the new power generation. The utility-scale solar market saw its most significant decline in the first quarter of 2022, down 41% from the same period of last year. It was the lowest quarterly installation since 2019, with new additions falling to the lowest level since 2017. In addition, the SEIA said that the United States Department of Commerce launched an anti-circumvention investigation in March. Most solar module manufacturers stopped exporting equipment to the United States to avoid tariff risks, causing industry-wide module shortages and delivering a significant blow to the solar industry. Until June, the United States had implemented a series of measures to stimulate the development of domestic clean energy manufacturing, announcing that it would suspend import tariffs on products such as solar modules and cells from Cambodia, Vietnam, Thailand, and Malaysia for two years, to alleviate the short-term module supply problem. The U.S. Department of Energy also announced an investment of US\$56 million to stimulate the domestic manufacturing and recycling of solar modules. After getting rid of the effect of the import duties of Anti-Dumping and Countervailing Duties, the demand for solar energy in the United States is expected to resume and provide a boost to the industry. The U.S. Energy Information Administration estimates that 20 GW of new solar capacity will be installed in 2022, implying an additional 31 billion kWh of power generation. In addition, U.S. President Biden signed the Inflation Reduction Act in August 2022, which includes US\$370 billion in spending on renewable energy and climate measures, a 30% subsidy for rooftop solar panels, and a requirement to reduce carbon emissions by about 40% nationwide by 2030. The Act will not only help the United States meet its climate goals, but also provide a boost to the country's solar development and manufacturing technologies.

市場概覽(續)

美國太陽能行業在二零二二年面臨多重挑戰，增長速度大幅放緩。根據太陽能工業協會(SEIA)和Wood Mackenzie發表的報告，美國在二零二二年第一季度安裝了3.9吉瓦的太陽能發電容量，總裝機容量達到126.1吉瓦，太陽能仍佔據了美國第一季度一半的新增發電量。公用事業規模的太陽能市場在二零二二年第一季度出現了最大跌幅，比去年同期下降41%，並且經歷了自二零一九年以來最低的季度安裝量，新增項目亦下降至自二零一七年以來的最低水平。此外，太陽能工業協會表示美國商務部在三月所發起反規避調查，大部分太陽能組件製造商為了避免關稅風險而停止輸出設備至美國，引發全行業組件短缺，對太陽能產業造成極大打擊。直至六月，美國推出一系列措施刺激國內清潔能源製造業發展，宣佈兩年內暫停對來自柬埔寨、越南、泰國和馬來西亞的太陽能組件和電池等產品徵收進口關稅，緩解短期組件供不應求的問題。美國能源部亦宣佈投資5,600萬美元刺激國內太陽能組件的製造和回收利用，期望在擺脫雙反關稅陰影後，美國太陽能需求重啟，有望藉此提振產業。美國能源信息署預計二零二二年太陽能新增裝機容量為20吉瓦，意味著期內將新增310億千瓦時的發電量。此外，美國總統拜登於二零二二年八月簽署《降低通膨法案》(Inflation Reduction Act)，法案包括3,700億美元的可再生能源和氣候措施支出，屋頂安裝太陽能板可享30%補貼，以及要求到二零三零年在全國範圍內將碳排放量減少約40%。法案不但有助美國實現其氣候目標，亦為該國的太陽能開發和製造技術提供了推動力。



Management Discussion and Analysis 管理層討論及分析

Market Overview (Continued)

In response to Russia's invasion of Ukraine, many European countries have boycotted oil and natural gas imported from Russia, and the energy supply has been dramatically affected. As a result, the European Commission has paid more attention to the issue of energy supply. It proposed the "REPowerEU" plan in May 2022, which aims to end Europe's dependence on Russia's fossil fuels and also addressing the climate crisis. The project sets out plans to scale up renewable energy to accelerate energy independence in Europe, including a dedicated solar plan for Europe to double installed solar capacity by 2025 to 600 GW by 2030. At the same time, the European Union decided to enact laws to make it mandatory for new public and commercial buildings, as well as residential buildings, to install solar energy systems. According to the PVInfoLink, with the exception of China, Europe is the region with the highest demand for solar energy products in 2022, and its solar energy demand will grow year by year, led by Germany. In addition, the heatwave in Europe from June to August this year further boosted solar power generation, with a quarter of the United Kingdom's electricity demand having been produced in just one day in July; and Bloomberg reported that Germany recorded the production of 38,174 MW of electricity in one day from solar energy. Solar Energy UK says more and more people are turning to solar power to save on energy bills, with figures pointing to more residential rooftop installations in the United Kingdom in the first month of 2022 than in all of 2021. With the support of Europe's renewable energy policy, the solar energy industry will flourish and maintain rapid growth.

市場概覽 (續)

歐洲多國在俄羅斯入侵烏克蘭的背景下，紛紛抵制由俄羅斯進口的石油與天然氣，能源供應大受影響。歐盟委員會因而更加重視能源供應的議題，於二零二二年五月提出《REPowerEU》計劃，旨在結束歐盟對俄羅斯化石燃料的依賴，同時應對氣候危機。計劃提出擴大可再生能源的規模，從而加速歐洲的能源獨立，包括一項專門的歐盟太陽能戰略，目標到二零二五年將太陽能裝機容量增加一倍，到二零三零年增至600吉瓦。同時，歐盟決定制定法律，強制要求新建的公共及商業建築，以及住宅建築安裝太陽能系統。根據PVInfoLink，歐洲是二零二二年除中國以外，對太陽能產品需求最高的地區，其太陽能需求在以德國為首的帶領下，將逐年成長。此外，今年六月至八月發生在歐洲的熱浪推動了太陽能的發電量，如在七月時曾於僅僅一天內生產了可滿足英國電力需求的四分之一的發電量；據彭博社報導，德國亦通過太陽能於一天內生產了約為38,174兆瓦的創紀錄的電力。英國太陽能協會(Solar Energy UK)表示越來越多人為節省能源費用而轉向太陽能發電，數據指出英國二零二二年第一個月的住宅屋頂安裝量已超過了二零二一年全年。在人們龐大的能源需求以及歐盟再生能源政策的支持下，歐洲太陽能產業相信會持續蓬勃發展，保持高速增長。



Management Discussion and Analysis 管理層討論及分析

Market Overview (Continued)

The Indian market still has solid solar demand in 2022, with steady growth. BRIDGE TO INDIA, a renewable energy market consultancy, pointed out that the first quarter of 2022 was a bumper quarter for the Indian solar market, with 4,418 MW of new solar power capacity added, representing the second highest capacity addition ever. The total installed capacity also reached 56,812 MW. According to a report jointly issued by India's Central Electricity Authority (CEA), India's Ministry of New and Renewable Energy (MNRE), and Mercom India Solar Project Tracker, India's cumulative installed renewable energy as of the end of the second quarter of 2022 reached a capacity of 159.8 GW. Solar systems continued to account for the largest share, with cumulative installed solar systems accounting for 14.2% of India's total installed capacity and 35.4% of total renewable energy capacity. However, the Indian market is also facing the challenges of soaring module prices and new tariffs on imported solar modules. As industry data provider GlobalData pointed out, India may not be able to produce 500 GW by 2030 to meet its renewable energy capacity targets. As a result, India may need to use its solar resources to increase production capacity to meet long-term climate goals.

In summary, countries around the world were affected by various unstable factors in the first half of 2022, and the economic performance may fall short of expectations. However, against this challenging backdrop, countries still maintain strong demand for solar energy, which shows a consistent global demand for solar energy. In a bid to address the climate crisis and achieve carbon neutrality, countries have made long-term and firm commitments to develop clean energy such as solar energy. Besides, the United Nations Climate Change Conference (UNFCCC COP 27) will be held in Egypt in November 2022. Countries will continue to promote global climate negotiations and help developing countries decarbonize. As they will submit long-term low-carbon development strategies for 2050 ahead of the meeting, the global solar energy industry will maintain a good growth momentum, and the prospects are promising.

市場概覽(續)

印度市場在二零二二年仍然有強勁的太陽能需求，整體穩步增長。可再生能源市場顧問公司BRIDGE TO INDIA指出，第一季度對於印度太陽能市場而言是一個豐收的季度，新增了4,418兆瓦太陽能功率容量，是有史以來第二高，總裝機容量亦達到了56,812兆瓦。此外，根據印度中央電力局(CEA)、印度新能源和可再生能源部(MNRE)及Mercom India Solar Project Tracker公司聯合發表的報告，印度截至第二季度末累計安裝的可再生能源裝機容量達到159.8吉瓦，太陽能系統繼續佔最大份額，累計安裝的太陽能系統的裝機容量佔印度總體裝機容量的14.2%，同時佔可再生能源總裝機容量的35.4%。然而，印度市場同樣面對組件價格飆升及對進口太陽能組件徵收新關稅的挑戰，因此行業數據供應商GlobalData指出，印度可能無法達到在二零三零年生產500吉瓦可再生能源產能的目標。因此，印度或需要更善用其太陽能資源的優勢，增加產能以實現長期氣候目標。

綜上所述，全球各國於二零二二年上半年雖然受各種不穩定因素影響，經濟表現或未如理想，但在這樣的局勢下，各國仍然保持強勁的太陽能需求，可見全球有一致的目標去應對氣候危機及實現碳中和，各國對於發展太陽能等潔淨能源的決心亦是長遠而堅定的。二零二二年十一月將在埃及舉行聯合國氣候變化會議(UNFCCC COP 27)，期望各國繼續推動全球氣候談判，幫助發展中國家脫碳。在各國有望在會前提交二零五零年長期低碳發展策略下，展望全球太陽能產業有望保持良好增長勢頭，前景可期。



Management Discussion and Analysis

管理層討論及分析

Operations Review

Operations Summary

Clean and renewable energy has become a new trend of the world. With a well-developed technology, photovoltaic power is now the renewable energy with the greatest development potential and the lowest cost compared with the inflated fossil fuel prices, so the rapid growth in demand for photovoltaic products in the future will be inevitable. The Group focuses on the manufacturing and sales of upstream monocrystalline silicon ingots, wafers and downstream photovoltaic modules in the photovoltaic industry. Our major customers of monocrystalline silicon ingots and wafers are large midstream solar cell manufacturers and our major customers of photovoltaic modules are large domestic state-owned enterprises in the People's Republic of China (the "PRC"), multinational corporations and other photovoltaic end-user customers. Moreover, the Group is engaged in the installation of photovoltaic systems and the development, design, construction, operation and maintenance of photovoltaic generation plants.

As the first batch of domestic photovoltaic enterprises engaged in the production of czochralski monocrystalline silicon ingots, with 20 years of experience in manufacturing monocrystalline silicon ingot, the Group now has accumulated mature experience in terms of technology, domestic and overseas market development, industrial chain cooperation, brand effect, premium services, etc. Subsidiaries of the Group have obtained 287 National patents, more than 30 provincial and municipal science and technology first prizes, second prizes, achievement awards. The awards are: National high-tech enterprise, National green factory, Provincial Enterprise Technology Center, Provincial Engineering Technology Research Center, Photovoltaic Testing Center with China National Accreditation Service for Conformity Assessment's laboratory accredited, Global Top 500 New Energy Companies (No.173), Top 100 New Energy Companies Global Competitiveness (No.92), Top 500 PRC Energy Group Companies (No.267), Top 20 PRC Comprehensive Companies in 2022 (No.19), Top 20 PRC PV Module Companies in 2022 (No.12). The Group is the vice chairman unit of PRC Photovoltaic Industry Association, vice chairman unit of Semiconductor Materials Branch of and standing council unit of China Electronic Materials Industry Association, Household Photovoltaic Professional Committee unit, Standardization Technical Committee unit and Photoelectric Building Professional Committee unit of China Photovoltaic Industry Association and expert member of Photovoltaic Professional Committee of China Renewable Energy Society. Solar photovoltaic modules are rated as national grade's green design products. The Group is also the first in the world to be SHARP'S largest ODM processing services partner for photovoltaic module for nine consecutive years, the OEM for the State Power Investment Group (one of the five major power generation groups all year round), the major supplier of double-sided double glass modules in the 2018 Front Runner Plan and the major module supplier for the power configuration project of the UHV transmission base in Hainan, Qinghai Province, a national key project in 2019.

營運回顧

業務介紹

潔淨和可再生能源已成為新的世界潮流，光伏發電技術成熟，與高漲的化石燃料價格相比，是目前最具發展潛力、成本最低的可再生能源，因此未來光伏產品需求的急速成長是既定的趨勢。本集團專注於光伏產業上游單晶硅棒、單晶硅片與下游光伏組件的製造及銷售，其中單晶硅棒與單晶硅片的主要客戶是位於產業中游的光伏電池生產大廠，而光伏組件的主要客戶則為中華人民共和國（「中國」）之大型央企、大型跨國企業與其他終端光伏應用客戶。另本集團亦從事光伏系統安裝及光伏電站之開發、設計、建設、運營及維護的一站式光伏發電解決方案。

本集團作為國內第一批從事直拉單晶硅棒的光伏企業，通過二十年來在單晶硅棒行業的深耕，當前無論在技術上積累、海內外市場開拓、產業鏈合作關係、品牌效應、優質的服務等方面均具有較為成熟的經驗積累。本集團子公司至今獲得287項國家專利，30餘項省市科學技術一等獎、二等獎、成果獎，是國家高新技術企業、國家級綠色工廠、省級企業技術中心、省級工程技術研究中心、中國合格評定國家認可委員會(CNAS)實驗室認證的光伏檢測中心、全球新能源500強企業(NO.173)、新能源企業全球競爭力100強(NO.92)、中國能源集團500強企業(NO.267)、二零二二年中國光伏企業20強綜合類(NO.19)、二零二二年中國光伏組件企業20強(NO.12)，是中國光伏行業協會副理事長單位、中國電子材料行業協會常務理事單位及其半導體材料分會副理事長單位、中國光伏行業協會戶用光伏專業委員單位、標準化技術委員單位及光電建築專業委員單位和中國可再生能源學會光伏專委會專家委員。太陽能光伏組件被評為國家級綠色設計產品。集團也是全球首家連續9年成為日本夏普最大ODM光伏組件代工廠，常年為五大發電集團之一的國家電力投資集團進行代工，二零一八年國家領跑者基地雙玻雙面組件主要供應商、也是二零一九年國家重點項目青海省海南州特高壓外送基地電源配置項目的主要組件供應商。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Operations Summary (Continued)

Currently, the Group has set the “one base, two wings” layout strategy, with Jinzhou in Liaoning as the base, Qujing in Yunnan and Yancheng in Jiangsu as two side wings. As at the end of June 2022, the total annual production capacity of our production bases were 6.2 GW of monocrystalline silicon ingot, 4.5 GW of monocrystalline silicon wafers, and 7.2 GW of modules due to the production scale, the high-efficiency and high production capacity layout of the Group. The Group has been starting to demonstrate stronger comprehensive competitiveness and further increase the market share of high quality but low-cost products.

Silicon ingot and wafer business

The Group is one of the earliest enterprises in the PRC to invest in the production of monocrystalline silicon ingots and wafers. At present, monocrystalline silicon ingot products are mostly used for the internal production of monocrystalline silicon wafers within the Group, and less engaged in external sales. Monocrystalline silicon wafer products of the Group are mostly sold to third-party large professional solar cell manufacturers. During the period, since monocrystalline products are advantageous over multicrystalline products in photovoltaic power generation, the market share of monocrystalline products has continued to increase rapidly. As such, demand for monocrystalline silicon wafers of the Group has continued to increase. With the continuing realisation of advantages such as the relating high potential for improvement in conversion efficiency of monocrystalline products and continuing reduction in unit costs due to improving technology, the monocrystalline technology, which has been the focus of the Group in the past two decades, has officially become the only mainstream in the market.

Apart from the traditional monocrystalline P-type products, the Group has monocrystalline N-type products with higher conversion efficiencies. Currently, photovoltaic cells are mainly produced by PERC (Passivated Emitter and Rear Cell) and PERC+technology with P-type silicon wafer base. TOPCon (Tunnel Oxide Passivated Contact) cells and heterojunction HJT cells with monocrystalline N-type silicon wafer base are expected to become the mainstream of next-generation photovoltaic cells. The Group has many years of experience in joint research and development with large multinational corporate customers. The Group has accomplished technical breakthrough and product marketisation of monocrystalline N-type silicon ingot at an earlier time. N-type silicon ingots and wafers have also been supplied to domestic and foreign customers at an earlier time, and N-type ingots are in a leading position in the industry in respect of various indicators having obvious advantages.

Major customers of external sales of monocrystalline silicon wafers included large-scale photovoltaic cell manufacturers and huge state-owned enterprises in China.

營運回顧 (續)

業務介紹 (續)

本集團當前已經形成以遼寧錦州為基地，雲南曲靖和江蘇鹽城為兩翼的「一基兩翼」佈局模式，於二零二二年六月底，各生產地合計擁有單晶硅棒年產能6.2吉瓦，單晶硅片年產能4.5吉瓦，組件年產能7.2吉瓦，透過生產規模，高效產能的佈局完成，已開始展現更強的綜合競爭力並進一步提升質優但低成本產品的市場份額。

單晶硅棒及單晶硅片業務

本集團為中國最早投入單晶硅棒及硅片生產的企業之一，目前單晶硅棒產品多作為集團內部生產單晶硅片之用，而較少從事外部銷售，而單晶硅片則是銷售給外部第三方之專業太陽能電池大廠。期內，由於單晶產品相較多晶產品於光伏發電上的應用更見優勢，單晶產品的市場份額持續快速增加，故本集團之單晶硅片市場需求量亦不斷成長。隨著單晶產品轉換效率的潛在提升空間較大、生產技術提升所造成的單位成本可持續大幅下降等優勢浮現，本集團過去二十年來所專注的單晶技術路線已正式成為市場唯一主流。

集團除了傳統的單晶P型產品外，亦有更高光電轉換效率的單晶N型產品。目前光伏電池主要是以P型硅片為基底的PERC (Passivated Emitter and Rear Cell)和PERC+技術為主，以單晶N型硅片為基底的穿隧氧化層鈍化電極TOPCon (Tunnel Oxide Passivated Contact)電池和異質結HJT電池有望成為下一代光伏電池的主流。本集團具備多年與大型跨國企業客戶共同研發的經驗，較早完成了單晶N型硅棒的技术突破和產品市場化驗證，N型硅棒與硅片亦較早供應給等國內外客戶，N型晶棒各項指標行業領先，優勢明顯。

單晶硅片對外銷售的主要客戶包括國內大型太陽能電池企業及國內大型央企。

Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Silicon ingot and wafer business (Continued)

The Group's production base of monocrystalline silicon ingot and monocrystalline silicon wafer located in Qujing, Yunnan, the PRC with annual production capacity of 0.9 GW project has carried out mass production since 2021. As the investment in Qujing, Yunnan not only enjoys various preferential investment policies from the local government, but more importantly, the decrease in local electricity cost (being the major manufacturing cost component of ingot-pulling) of more than 50% compared to that at previous major production base in Jinzhou, Liaoning, which will strengthen the improvement of the Group's overall gross profit margin as a result of the reduction of production cost in the long run. Therefore, the Group has been expanding the production capacity of monocrystalline silicon ingot and monocrystalline silicon wafers in Qujing, Yunnan under the rapid growth of customer demand. As of the end of June 2022, the annual production capacity of monocrystalline silicon ingots in Qujing, Yunnan, has increased to 5 GW from 4.3 GW at the end of 2021, and the annual production capacity of monocrystalline silicon wafers has also increased to 2.8 GW from 2.5 GW at the end of 2021. It is expected that by the end of 2022, the annual production capacity of monocrystalline silicon ingot and silicon wafers in Qujing, Yunnan will be increased to 6.0 GW and 3.6 GW respectively, representing 81% of the Group's total annual production capacity of monocrystalline silicon ingots of 7.4 GW and 49% of the group's total annual production capacity of monocrystalline silicon wafers of 7.4 GW, respectively. With the substantial release of this low-cost and high-efficiency production capacity, not only the gross profit margin will boost up in the future, but also the Group's self-developed technological advantages and progress can be fully unleashed.

Module businesses

In order to concentrate resources to develop other more niche products, the Group has adjusted its operating strategy by no longer manufacturing solar cells since 2020, but instead manufacturing upstream monocrystalline silicon wafers (ingot) and downstream modules as dual major products.

The Group has been engaged in module production since 2009, and has accumulated rich experience and advanced production technology and process in monocrystalline module production. The P-type PERC module of the monocrystalline products that the Group focuses on has not only become the mainstream in the market, but it also further expanded and strengthened the development and sales of monocrystalline silicon high-efficiency module products such as P-type double-sided double glass modules, half-cell photovoltaic modules, multi busbar cell module, and other high-end products.

營運回顧 (續)

單晶硅棒及單晶硅片業務 (續)

本集團生產基地位於中國雲南省曲靖市之單晶硅棒及單晶硅片年產能0.9吉瓦項目，自二零二一年起已大規模量產，由於雲南曲靖之項目投資不僅可享受當地政府各項優惠的招商政策，更重要的是作為拉晶主要生產成本組成部分的電費，於雲南曲靖當地約僅需之前主要生產基地遼寧錦州的50%，由於生產成本降低，因此從長遠來看可強化集團整體毛利率的提升，故本集團在客戶需求急速增長下，將持續於雲南曲靖擴充單晶硅棒與單晶硅片的產能。截至二零二二年六月底，雲南曲靖單晶硅棒年產能已由二零二一年底的4.3吉瓦提高至5吉瓦，單晶硅片年產能亦已由二零二一年底的2.5吉瓦提高至2.8吉瓦，預期二零二二年底時，雲南曲靖單晶硅棒與單晶硅片年產能將再分別提升至6.0吉瓦與3.6吉瓦，將分別佔有集團單晶硅棒年總產能7.4吉瓦的81%與佔有集團單晶硅片年總產能7.4吉瓦的49%，藉由該低本高效的產能大幅釋放，未來不僅可帶動毛利率攀高，亦可使得集團的自主研發技術優勢和進步更能充分發揮。

組件業務

為了集中資源以發展其他更具利基的產品，本集團調整營運策略，於二零二零年起已決定不再繼續自行生產太陽能電池，改以生產銷售上游單晶硅片(硅棒)與下游組件為雙主力產品。

本集團自二零零九年即開始從事組件生產，於單晶組件製造積累了豐富的經驗及先進的生產技術和流程。本集團所專注的單晶產品之P型PERC組件不但已成為市場主流，還致力於單晶高效組件產品的開發與銷售，如P型雙面雙玻組件、半片電池組件、多主柵電池組件等高端產品。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Module businesses (Continued)

The current main base of the Group for monocrystalline module production is located in Yancheng, Jiangsu. In addition to the various preferential investment policies from the local government, the Company can take advantage of significantly lowering the investment in capital expenditure by renting plant buildings. Moreover, the area around the Yangtze River Delta is an agglomeration area for the supply of raw and auxiliary materials which provides advantage in terms of procurement. In order to meet the needs of module customers, the Group continues to expand module production capacity in Yancheng, Jiangsu, to further strengthen the economic scale advantage of module products. As of the end of June 2022, the module production capacity of the production base in Yancheng, Jiangsu was 5.4 GW, while the total module production capacity of the Group was 7.2 GW. It is expected that by the end of 2022, the production capacity of Yancheng, Jiangsu would be increased to 6.4 GW, which would also drive the Group's overall module production capacity to 8.2 GW.

External sales of modules were mainly made to large state-owned enterprises and international multinational enterprises, such as State Power Investment Corporation (中國國家電力投資集團公司) ("SPIC"), SHARP Corporation ("SHARP"), Xinyi Glass Holdings Limited and Xinyi Solar Group (信義玻璃與信義光能集團), Sungrow Power Supply Co., Ltd (陽光電源股份有限公司), Shandong Hi-Speed New Energy Group and Astronergy etc. The Group has been SHARP's largest processing services partner for photovoltaic module for nine consecutive years and has been cooperating in continually expanding module sales for foreign customers.

The Group focuses on the manufacturing of monocrystalline silicon photovoltaic products. Currently, proportion of sales of the Group's monocrystalline silicon photovoltaic modules has reached over 98%. Further, the Group has also introduced SHARP's global leading 40-year quality assurance system for photovoltaic products. The quality of the products is stable and reliable, which could bring long-term and stable income to end-user owners.

營運回顧 (續)

組件業務 (續)

本集團目前單晶組件主要製造基地位於江蘇省鹽城市，除了可憑藉當地政府的各項優惠招商政策外，並可藉由租賃廠房方式以大幅降低資本開支的投入。此外，由於長江三角附近原本即為組件原輔材料供應的集聚區域，亦具備較好的採購優勢。因此，為了滿足組件客戶的需求，本集團在江蘇鹽城持續擴充組件產能，以再進一步強化組件產品的經濟規模優勢。截至二零二二年六月底，生產基地江蘇鹽城組件產能為5.4吉瓦，集團組件總產能則為7.2吉瓦，但預期於二零二二年底時，江蘇鹽城產能將增加至6.4吉瓦，因而也帶動集團整體組件總產能達到8.2吉瓦。

組件對外銷售的主要客戶為國內大型央企和國際跨國企業，如中國國家電力投資集團公司（「國電投」）、日本夏普（SHARP Corporation「SHARP」）、信義玻璃與信義光能集團、陽光電源股份有限公司、山高新能源集團、正泰新能源等。其中，本集團已連續9年成為日本夏普最大的光伏組件代工廠，並一同合作持續的拓展國外客戶的組件銷售。

本集團作為專注於單晶光伏產品製造商，目前單晶組件銷售比例已超過98%的水平，且本集團亦導入夏普光伏產品全球領先的40年質量保障體系，產品質量穩定可靠，可為終端電站業主帶來長期穩定的收益。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Construction and operation of photovoltaic system business

The Group has been actively expanding the end-user power plants construction and application business apart from devoting its efforts in stabilising the development of its manufacturing business, which not only drives the sales of module products in a bottom-up manner, but also it will spread the profit of construction and operation of photovoltaic system businesses so as to improve the overall profitability of the Group. The Group's photovoltaic system business includes traditional distributed power station EPC business, Building Applied Photovoltaics (BAPV) business and Building Integrated Photovoltaics (BIPV) business. With the policy background of the PRC government's vigorous advocacy of "hit peak emissions", "carbon neutrality", the construction of "green buildings", "zero energy buildings" and rooftop distributed photovoltaic trial program after "Opinions on Promoting Green Development of Urban and Rural Construction" issued by the State Council of PRC and the "Notice on the Pilot Scheme of Country-wide (City, District) Distributed Rooftop Project" published by the National Energy Administration, given the current huge building volume and a massive amount of potential distributed photovoltaic generation capacity for development in the PRC, it is anticipated that BIPV business would have broad development prospects and become a new development hotspot in the photovoltaic industry.

Relying on the rich technological experience accumulated in the photovoltaic industry, the Group is carrying out a series of research and development projects in cooperation with Shenyang Jianzhu University, the National Housing and Residential Environment Engineering Technology Research Center and other institutions, of which four series of BIPV products have passed China Compulsory Certificate ("CCC") certification, China Quality Certificate Centre ("CQC") certification, and GB8624-2012 building materials and products combustion performance test certification. The Group expects that with the continuous development of BIPV business, the photovoltaic system construction and application business would have further growth.

營運回顧(續)

興建及經營光伏系統業務

在穩固製造業務發展的同時，本集團積極多方開拓終端光伏電站建設與應用業務，不僅可由下而上拉動組件產品的銷售，亦可再分享建設及經營光伏系統業務的利潤，以提高集團整體獲利能力。本集團光伏系統業務包括傳統的分佈式電站EPC業務、附著在建築物上的光伏發電系統(BAPV)業務，以及光伏建築一體化(BIPV)業務。其中光伏建築一體化(BIPV)業務隨著中國國務院印發「關於推動城鄉建設綠色發展的意見」及國家能源局發佈「關於報送整縣(市區)屋頂分佈式光伏開發試點方案的通知」，中國政府大力倡導「碳达峰」、「碳中和」，要求建設「綠色建築」、「零能耗建築」及屋頂分佈式光伏試點計劃的政策背景下，憑藉著中國目前存有的巨大建築體量及大量潛在分佈式光伏發電量供發展，預估BIPV業務將擁有廣闊的發展前景，成為光伏行業新的發展熱點。

本集團憑藉著在光伏行業的深厚的技術積累，與瀋陽建築大學、國家住宅與居住環境工程技術研究中心等機構合作開展了多項研發項目，研發的四款系列BIPV產品均已通過CCC認證、CQC認證，以及GB8624-2012建築材料及製品燃燒性能測試認證。本集團預計隨著BIPV業務的不斷發展，光伏系統建設與應用業務將進一步增長。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Semi-conductor business

China has become the fastest growing country in the global semiconductor industry. It is also the world's largest semiconductor application market. The Group is engaged mainly in production and sales of 4-6 inches semiconductor grade monocrystalline silicon ingot with heavy doping (including arsenic, antimony and phosphorus products which are at the leading level of the industry) and 4-6 inches semiconductor grade monocrystalline silicon ingot with lightly doping. The semiconductor business has shown rapid growth since it was officially put into operation in 2019. The Group expects that in the context of the continuous growth of the Chinese semiconductor market, the semiconductor business will continue to maintain strong growth in the next few years, and will contribute profits to the Group.

Operation Strategy

With the rapid advancement of photovoltaic production technology in the past ten years, the production cost per watt of power generation has dropped sharply. Strictly speaking, the current photovoltaic application has reached the target of grid parity, and explosive sales growth is foreseeable in the future. In the premises, production related equipment also needs to be upgraded or added in order to be in line with technological development. Therefore, since 2018, the Group has been investing in upgrading and transforming existing production capacity and invest in low-cost, high-efficiency new production capacity. Mass output by comprehensive upgrade of production capacity and new high- efficiency production capacity have also been realised.

By adopting a dual-core products strategy of continuous development of upstream monocrystalline silicon ingots and wafer product as well as downstream module products, the Group effectively utilises its existing resources. Regarding the production of upstream monocrystalline silicon ingot and wafer products, the Group continued to pursue excellence in its production efficiency due to greater economies of scale. Regarding the downstream photovoltaic modules, since our photovoltaic module customers are mostly domestic state-owned enterprises or large multinational corporations, the market position and strength possessed by these module customers are the strongest in the overall photovoltaic industry chain. Therefore, the Group has established a direct supply relationship with large module customers through significant module production capacity, which maintains a more stable terminal product estuary.

營運回顧 (續)

半導體業務

中國已成為全球半導體產業發展最快的國家。它也是全球最大的半導體應用市場。本集團主要從事4-6英寸重摻半導體級單晶硅棒(包括重摻砷、重摻銻、重摻磷這些產品都是處於行業領先水平)和4-6英寸輕摻半導體級單晶硅棒的生產和銷售。半導體業務自二零一九年正式投產以來呈現快速增長。本集團預計，在中國半導體市場持續增長的背景下，未來幾年半導體業務將繼續保持強勁增長，並將為集團貢獻利潤。

營運策略

光伏產品生產技術於近十多年來日進千里下，每瓦發電的生產成本已急速大幅下降，嚴格來說，目前光伏應用已達到了市電平價的目標，爆發式的銷售增長即將到來，故在此情形下，相關的生產設備也需配合技術發展而升級改造或新增，故本集團自二零一八年起，持續投入既有產能的升級改造與低成本高效新產能的投資，目前已完成了產能全面升級與新增的高效產能大幅產出。

透過發展上游單晶硅棒／單晶硅片與下游單晶組件產品雙核心產品並進的策略，既有資源可有效集中利用。在上游單晶硅棒與單晶硅片方面，因更大的規模經濟，本集團繼續追求卓越的生產效益，在下游光伏組件方面，由於光伏組件客戶多為國內央企或是國外大型跨國企業，故在於光伏產業中，組件客戶所佔有的市場地位和實力是整體光伏產業鏈中最強大的。因此，本集團透過顯著的組件產能，已與大型組件客戶建立直接供貨關係，保有更穩固的單晶組件產品出口口。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Operating Performance

During the period, the total external shipment volume of major products, monocrystalline silicon ingots and wafers, was 2,182.3MW, similar to 2,241.9MW in the same period last year. The external shipment volume of another major product, photovoltaic modules increased from 1,085.9MW in the same period last year to 1,318.1MW during the period, representing a growth rate of 21.4%. For photovoltaic module products in the first half of this year, the external shipment volume of modules increased due to the continued growth in downstream photovoltaic demand.

The Group keeps making profit. It is not only due to the external environment of supply and demand and the release of low-cost and high-efficiency production capacity, but also necessary to maintain leading technology in the ever-advancing photovoltaic industry to build up a cost advantage in order to continuously make profits. The Group has gained success in research and development in recent years, and has overcome various production bottlenecks. The Group has successfully incorporated the most advanced production technologies into mass production, such that the production costs of our various product lines have significantly decreased. For example, in the production of monocrystalline silicon ingots, from 20 years of accumulated technology advantages, we have mastered a number of leading technologies for monocrystalline silicon ingots and silicon wafer production, such as with the upgrade of the thermal system required for the production of monocrystalline silicon ingots, the material feeding volume of monocrystalline furnace has increased by approximately 33% compared with last year which greatly reduced the production cost, the increase of growth rate of monocrystalline silicon ingot by 10% compared with last year through the research and development to design new type of the water-cooling and heat-conducting device, the long-life quartz crucible developed in cooperation with suppliers could be used for up to 500 hours, the RCZ production process which could draw 9 ingots in one pot, the weight of each silicon ingot increased by 18% compared with last year, which greatly enhanced the production capacity, etc. Various advanced production technologies significantly reduced production costs and ensured product quality and stability is in a leading position in the industry. Furthermore, for high quality N-type silicon wafers required for the next-generation N-type cell, the Group has also reached the technical position and accomplished marketisation ahead, and has achieved the development direction of leading N-type crystalline silicon products which could readily meet the market demands for shipment in large quantities at any time.

營運回顧 (續)

營運實績

主要產品單晶硅棒與硅片期內總對外付運量為2,182.3兆瓦，與去年同期的2,241.9兆瓦相若。另一主力產品光伏組件期內的對外付運量由去年同期的1,085.9兆瓦提高至期內的1,318.1兆瓦，增長幅度為21.4%。針對光伏組件產品，於今年上半年組件對外付運量增加，由於下游光伏需求的持續增長。

集團營運表現持續獲利，除了受到外部供需環境與低成本高效產能開出的影響外，在日進千里的光伏產業中亦必須保有技術領先，進而形成成本優勢，才能持續創造獲利。本集團近年研發有成並突破各項生產瓶頸，將最先進的生產技術順利運用於量產之中，各產品線的生產成本已大幅降低。例如在單晶硅棒生產方面，經過二十年來的技術迭加優勢，已掌握多項單晶硅棒及硅片製造的領先技術，如對生產單晶硅棒所需的熱場進行升級，與去年相比單晶爐投料量提升約33%，大幅降低生產成本；通過研發設計新款水冷熱屏提高單晶硅棒生產效率，與去年相比單晶硅棒生長速度提升10%；與供應商合作研發的長壽命石英坩堝使用時間長達500小時；可實現一鍋拉製9根單晶硅棒的RCZ生產工藝；同時與去年相比每根硅棒重量增加18%，大幅提升產能等。各項先進生產技術顯著降低了生產成本，並保證產品質量和穩定性均處於行業領先地位。此外，下一代N型電池所需要的優質N型硅片，本集團也已提前完成了技術卡位和市場驗證，實現了引領N型晶硅產品的發展方向，並隨時可因應市場需求而大批量出貨。



Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Operating Performance (Continued)

For the monocrystalline modules, apart from the mainstream P-type PERC monocrystalline modules, the Group devoted to the development and sales of monocrystalline high-efficiency module products, such as P-type double-sided double glass modules, half-cell photovoltaic modules, multi busbar cell module, and related high-end products. In particular, Black Solar (“BS”) module products of N-type monocrystalline Interdigitated Back Contact (“IBC”) solar cell uses the internationally leading and the first domestic FPC module packaging technology, and is in the leading position in the industry. Having a black surface with beautiful design, the products are uniquely produced as rectangular, square, triangular and other special-shaped modules. It could be connected to each other with perfectly matching roof shape to achieve efficient use of space, representing highest-end product of roof modules. The Flexible Printed Circuit (“FPC”) packaging technology of BS modules is still the packaging process with the world’s highest precision. It is the benchmark for the monocrystalline N-type IBC cell modules products, leading the monocrystalline N-type cell module industry packaging technology for 2 to 3 years. During the period, certain new multi-busbar BS module products were launched which expanded the product range, provided more choices for overseas customers, and created more benefits for the modules. Besides, the module production line of the Group can also produce multi-busbar half-cell double-sided double glass of 182mm and 210mm large-size modules which the conversion could reach more than 660 watts. In addition, the related equipment automated intelligence and packaging technology are in the leading position in the industry. According to the analysis of the recent bidding in China’s photovoltaic market, 182mm and above photovoltaic modules accounted for more than four-fifths of the bidding product specifications. Since the Group’s monocrystalline silicon ingot, monocrystalline silicon wafer and photovoltaic module production lines can all produce large-size scarce products such as 182mm and 210mm products which are mainstream products in the market, they could further enhance the Group’s ability to increase the shipment volume and provide opportunity for an increase in gross profit margin. Moreover, the Group is also carrying out a number of research projects for TOPCon modules and BIPV products, aiming to upgrade the mass production technology of TOPCon modules and BIPV products, so as to expand the market sales of corresponding products.

營運回顧(續)

營運實績(續)

在單晶組件方面，除了市場主流的P型PERC單晶組件之外，本集團還致力於單晶高效組件產品的開發與銷售，如P型雙面雙玻組件、半片電池組件、多主柵電池組件等高端產品，特別針對N型單晶交指式背電極IBC電池的BS組件產品，是運用國際領先且國內首家採用的撓性印製電路FPC組件封裝技術，居於行業領先地位，其表面全黑、設計美觀，並獨創生產矩形組件、方形、三角組件等異型組件，可透過相互拼接以完美匹配屋頂形狀來實現空間高效利用，代表屋頂組件最高端產品。BS組件的FPC封裝技術目前仍然是國際最高精度的封裝工藝，是單晶N型IBC電池組件產業化的標桿，領跑單晶N型電池組件行業封裝技術2至3年。期內，新推出多主柵BS組件，增加了產品序列，為海外客戶提供了更多選擇，為組件創造出更多效益。其次，本集團的組件產線亦可生產多主柵半片雙面雙玻182mm和210mm大尺寸組件，其組件功率可達660瓦以上，且相關設備自動化智慧化與封裝技術皆位於行業領先。根據中國光伏市場近期招標的信息分析，182mm及其以上規格之光伏組件約佔招標產品規格的4/5以上，由於本集團單晶硅棒與單晶硅片與光伏組件生產線皆均可以生產182mm和210mm等大尺寸產品，此等大尺寸硅片和大尺寸組件均為現行市場上的主流產品，故可更進一步提高本集團銷售端的出貨能力，創造毛利率提高的契機。此外，本集團還針對TOPCon組件和BIPV產品開展了多項研究項目，旨在升級TOPCon組件及BIPV產品的批量生產技術，從而擴大對應產品的市場銷量。

Management Discussion and Analysis

管理層討論及分析

Operations Review (Continued)

Operating Performance (Continued)

Looking ahead, given (a) leading technological cost advantages and large-size product lines with higher bargaining power, the Group will be able to continue to gain the market share; (b) the major production base with a lower electricity costs and more favorable production environment with policy support, the Group will be able to significantly reduce the production cost; (c) the Group continues to expand low-cost, high-efficiency new production capacity through more refined production process, and the existing production capacity has also been upgraded and transformed, and achieved stable operation, which can further demonstrate the advantages of economies of scale, such as lower procurement, logistics and production costs; (d) the long-standing diversified and accumulated technological advantages of various product lines; and (e) the strong client base in PRC and overseas, with increasing demand from new and old customers, it is expected that the Group's external shipment volume and revenue will continue to grow, and the production costs will decrease. Total gross profit and gross profit margin performance will be further improved in the long run.

Financial Review

Revenue

The revenue of the Group increased by 11.6% from approximately RMB2,820.6 million for the first half of 2021 to approximately RMB3,147.0 million for the period. The growth in external shipment volume for the period is 5.2% compared to the same period last year. The growth in revenue was mainly attributed to the increase in external shipment volume and average selling price of photovoltaic modules.

Cost of sales

Cost of sales for the period has increased from approximately RMB2,449.1 million in the first half of last year to approximately RMB2,879.9 million for the period. The increase was mainly due to growth in revenue.

Gross profit and gross profit margin

The Group recorded a gross profit of approximately RMB267.1 million and a gross profit margin of 8.5% in the first half of 2022, as compared to a gross profit of approximately RMB371.5 million and a gross profit margin of 13.2% in the corresponding period in 2021, which decreased by 28.1% and 4.7% points respectively. The drop in gross profit margin was mainly due to the increase in cost of raw materials — polysilicon and increase in sales of one of the Group's major products, photovoltaic modules, with lower gross profit margin than other products.

營運回顧 (續)

營運實績 (續)

展望未來，本集團憑藉著(a)領先的技術成本優勢與議價能力更高的大尺寸新產品線，將可不斷搶佔市場；(b)主要生產基地具有較低的電費成本與政策支持及更有利的生產環境配套，可使得生產成本降低；(c)本集團通過更精細的生產工藝，持續擴充低成本高效新產能，加上既有產能亦已升級改造完成，並實現了穩定運行，更可顯現規模經濟的優勢，例如降低採購、物流和生產成本；(d)長期以來各產品線多元化的技術迭加優勢；加上(e)國內外堅實的客戶基礎，與新舊客戶的需求增加，故預期本集團對外付運量以及營業收入應可持續維持增長，生產成本降幅，從長遠來看，毛利總額和毛利率表現將更能提升。

財務回顧

收益

本集團於期內收益錄得人民幣約3,147.0百萬元，較二零二一年同期的人民幣約2,820.6百萬元增加約11.6%，而總對外付運量較去年同期增加5.2%。期內集團整體收益增長主要皆來自於光伏組件的對外付運量及平均銷售單價的增加。

銷售成本

本集團於二零二二年上半年，銷售成本由去年上半年的人民幣約2,449.1百萬元增加至人民幣約2,879.9百萬元，銷售成本增加主要由於整體收益增加。

毛利及毛利率

本集團於二零二二年上半年錄得人民幣約267.1百萬元的毛利，毛利率為8.5%，對比二零二一年同期的毛利人民幣約371.5百萬元及毛利率13.2%，分別下降28.1%及4.7個百分點。毛利率下降的主要原因由於原材料多晶硅的成本上升及期內主力產品光伏組件銷售收入上升，而光伏組件的毛利率比其他產品較低導致整體毛利率下降。



Management Discussion and Analysis

管理層討論及分析

Financial Review (Continued)

Selling and distribution expenses

Selling and distribution expenses mainly comprised terminal handling charges, packaging expenses and other incidental expenses. Although there was an increase in external shipment volume, the selling and distribution expenses decreased from approximately RMB63.8 million in the first half of 2021 to approximately RMB1.6 million for the period. The decrease was mainly due to reversal of provision for warranty.

Administrative expenses

Administrative expenses mainly comprised of staff costs, research and development expenses and daily office expenses. The administrative expenses for the period amounted to approximately RMB130.4 million, as compared to approximately RMB135.7 million from the corresponding period of 2021. The decrease was mainly due to effective planning and control on other administrative expenses by the Group.

Finance costs

Finance costs represented mainly bank and other loan interests. The Group's finance costs increased from approximately RMB60.8 million in the first half of 2021 to approximately RMB67.2 million for the period, represented an increase of 10.6% due to increase in interest-bearing bank and other borrowings for the investments in acquiring equipment for high-efficient production capacity and purchasing raw materials for the expanded production capacity. The Group aims to lower the finance costs gradually in the future and to obtain more sources of financing.

Income tax

Income tax expense amounted to approximately RMB16.9 million in the first half of 2022, as compared to approximately RMB44.6 million in the first half of 2021. The income tax expense for the period was mainly derived from the provision of income tax for the profitable subsidiaries of the Group. The decrease in income tax expenses was mainly because the profits before tax in 2022 included more non-taxable items and adjustment of over-provision in prior years.

Profit attributable to owners of the parent

The increase in profit attributable to owners of the parent of approximately RMB67.7 million was shown in 2022, as compared to the profit attributable to owners of the parent of approximately RMB61.3 million in 2021 mainly due to increase in revenue and reversal of provision for warranty.

財務回顧(續)

銷售及分銷開支

銷售及分銷開支主要包括港口處理費、包裝開支及其他相關開支。雖然本期對外付運量較去年同期增加，但銷售及分銷開支卻由二零二一年上半年的人民幣約63.8百萬元，減低至二零二二年上半年的人民幣約1.6百萬元，主要原因為保用成本的撥備回沖。

行政開支

行政開支主要包括員工成本、研發開支及日常辦公費用。由二零二一年上半年人民幣約135.7百萬元，下降至二零二二年上半年的人民幣約130.4百萬元，下降的主要原因是公司對其他行政費用更有效地規劃和控制所致。

融資成本

融資成本主要為銀行及其他貸款的利息。本集團的融資成本由二零二一年上半年的人民幣約60.8百萬元增加至二零二二年上半年的人民幣約67.2百萬元，增加10.6%。融資成本增加主要由於銀行及其他計息借貸增加，用於持續投入高效產能的購置，並增加採購原輔材料的數量以供新增產能生產使用。本集團旨在未來逐步降低融資成本，且取得更多樣化的融資管道。

所得稅

二零二二年上半年的所得稅支出為人民幣約16.9百萬元，而二零二一年上半年的所得稅支出為人民幣約44.6百萬元。二零二二年上半年的所得稅支出乃主要為本集團盈利子公司計提所得稅所致，其下降主要是由於本期間除稅前利潤內包括更多非應稅項目收益，及沖回以前年度多計提的所得稅支出。

歸屬於母公司股東的利潤

期內歸屬於母公司股東的淨利潤達人民幣約67.7百萬元，較去年同期淨利潤人民幣約61.3百萬元增加。利潤增加主要由於收益增加及保用成本的撥備回沖。



Management Discussion and Analysis

管理層討論及分析

Financial Review (Continued)

Inventory turnover days

The Group has been focusing its efforts in raising the inventory turnover and lowering the inventory turnover days in order to mitigate the risk of rapid decline inventory prices caused by continuous technological advancement of photovoltaic products, and at the same time, reducing the backlog of funds and further strengthen the Group's operation working capital. In order to avoid the impact of price fluctuations of raw and auxiliary materials, the Group therefore increased the safety stock level of inventories. In addition, an increase amount of raw materials were purchased to cope with the utilisation of new high-efficient production capacity. Therefore, the inventory turnover days of the period increased to 38 days (31 December 2021 : 26 days).

Trade receivables turnover days

The sales of photovoltaic modules accounted for about 72% of the Group's overall sales for the period. According to the standard terms of the industry's module sales contracts, the recovery of module receivables depends on the construction progress of the photovoltaic power plant. For instance, some trade receivables can only be recovered after the customer's photovoltaic power plant is connected to the grid. Therefore, the trade receivables turnover days of module business are generally longer. Furthermore, the sales amount of photovoltaic modules accounted for a relatively high proportion of the total sales amount of that for the six months ended 30 June 2022, and most of those trade receivables were yet to be due; as a result, higher trade receivables turnover days was noted. Trade receivables turnover days for the period has increased to 110 days (31 December 2021 : 98 days), but is still at a reasonable level.

Trade payables turnover days

The trade payables turnover day was 145 days for the period, which was significantly higher comparing to 123 days as at 31 December 2021. The main reason was that the Group has completed a comprehensive upgrade on production capacity and addition of high-efficiency production capacity during the period, and hence an increased amount in raw materials were purchased for use in the expanded production capacity. As a result, the ratio of trade payables to cost of sales at the end of the period increased. In addition, the Group has formed strategic partnerships with our major suppliers. Under stable and frequent co-operations, the suppliers have gradually increased our credit lines and payment terms.

財務回顧 (續)

存貨週轉日

本集團在存貨的儲備策略上，原是提高存貨週轉率而降低存貨集團週轉天期，以避免在光伏產品因技術提升而造成售價不斷下滑的市場趨勢中，進而造成相關存貨價格快速下跌的風險，同時亦可減少資金積壓而可進一步充實營運週轉金。為避免受到原輔材料價格波動帶來的影響，本集團提高存貨的安全庫存水平。另期內新增的高效產能陸續大幅產出，繼以增加原材料準備用於新產能的生產之用。故期內存貨週轉日提高至38日（二零二一年十二月三十一日：26日）。

應收貿易賬款週轉日

由於本期來自光伏組件產品之銷售額佔集團整體銷售額約近72%，而根據行業一般組件銷售合同條款，組件應收賬款的回收需取決於電站建設的進度，例如：部分應收賬款需於客戶的電站併網後始能收回，故組件業務之應收賬款天期普遍較長。二零二二年上半年光伏組件銷售金額佔本期總銷售金額的比例較高，而該應收賬款多尚未到期，進而亦造成應收賬款週轉日提高。期內本集團應收貿易賬款週轉日雖提高至110日（二零二一年十二月三十一日：98日），但仍維持合理水平。

應付貿易賬款週轉日

本期應付貿易賬款週轉日為145日，較二零二一年的123日大幅提高，主要是本集團於期內完成了產能全面升級與新增的高效產能陸續大幅產出，繼以增加原材料的準備，以使用於已擴建的產能，故造成期末的應付貿易賬款與銷售成本比例提高。另外，本集團與主要供應商已形成策略夥伴關係，在穩定與頻繁的合作下，供應商亦逐漸提高對本集團的授信額度與賬期。



Management Discussion and Analysis

管理層討論及分析

Financial Review (Continued)

Liquidity and financial resources

The principal sources of working capital of the Group during the period were cash from bank and other borrowings. As at 30 June 2022, the current ratio (current assets divided by current liabilities) of the Group was 0.93 (31 December 2021 : 0.84). The Group had net borrowings of approximately RMB776.7 million as at 30 June 2022 (31 December 2021 : RMB941.8 million), including cash at bank and on hand of RMB500.9 million (31 December 2021 : RMB431.9 million), pledged deposits of RMB1,090.6 million (31 December 2021 : RMB751.3 million), bank and other loans due within one year of RMB1,991.1 million (31 December 2021 : RMB1,915.3 million) and non-current bank and other loans of RMB377.1 million (31 December 2021 : RMB209.7 million). The net debt to equity ratio (net debt divided by total equity) was 98.5% (31 December 2021 : 140.1%). The gearing ratio (ratio of total borrowings, less cash and cash equivalents, to the total of share capital and reserves) was 499.0% (31 December 2021: 449.8%).

Earnings before interest, taxes, depreciation and amortisation

During the period, the Group's earnings before interest, taxes, depreciation and amortisation ("EBITDA") was approximately RMB373.1 million (11.9% of the revenue) (corresponding period of 2021 : approximately RMB364.0 million, 12.9% of the revenue). The main reason for the increase in EBITDA was attributed to the increase in revenue and reversal of provision for warranty during the period.

Net cash inflow from operating activities

The Group continued to invest and upgrade the existing production capacity which, together with the economies of scale reflected in high-efficiency production capacity, resulted in an increase in operating profit. The net cash inflow from operating activities increased from approximately RMB306.9 million in the first half of 2021 to approximately RMB311.3 million for the period, representing a growth rate of 1.4%.

財務回顧(續)

流動資金及財務資源

本集團於年內主要營運資金來源為銀行及其他借貸所得款項。於二零二二年六月三十日，本集團的流動比率(流動資產除流動負債)為0.93(二零二一年十二月三十一日：0.84)。本集團於二零二二年六月三十日有借貸淨額人民幣約776.7百萬元(二零二一年十二月三十一日：人民幣941.8百萬元)，其中包括銀行及手頭現金人民幣500.9百萬元(二零二一年十二月三十一日：人民幣431.9百萬元)、已抵押存款人民幣1,090.6百萬元(二零二一年十二月三十一日：人民幣751.3百萬元)、一年內到期銀行及其他貸款人民幣1,991.1百萬元(二零二一年十二月三十一日：人民幣1,915.3百萬元)以及非流動銀行及其他貸款人民幣377.1百萬元(二零二一年十二月三十一日：人民幣209.7百萬元)。淨借貸權益比率(借貸淨額除權益總額)為98.5%(二零二一年十二月三十一日：140.1%)。資本與負債的比率(借貸總額，減現金及現金等價物，相對總股本及儲備的比率)為499.0%(二零二一年十二月三十一日：449.8%)。

未計利息、稅項、折舊及攤銷前盈利

期內，本集團錄得未計利息、稅項、折舊及攤銷前盈利(「稅息折舊及攤銷前利潤」)為人民幣約373.1百萬元(收益之11.9%)(二零二一年同期：人民幣約364.0百萬元(收益之12.9%))。稅息折舊及攤銷前利潤增加的主要原因是本集團期內的收益增加及保用成本的撥備回沖。

經營活動所得現金淨流入額

本集團期內持續將既有產能升級改造與高效產能彰顯之經濟規模致使經營利潤提升，經營活動所得現金淨流入額由二零二一年上半年的人民幣約306.9百萬元上升至二零二二年上半年的人民幣約311.3百萬元，成長幅度為1.4%。



Management Discussion and Analysis 管理層討論及分析

Financial Review (Continued)

Material acquisitions and disposals of subsidiaries, associates and joint ventures

In February 2022, Solargiga Energy (Hong Kong) Company Limited (“Solargiga Hong Kong”) entered into Equity Transfer Agreement with Qujing Yangguang New Energy Co., Ltd (“Qujing Yangguang”) (an indirect non-wholly owned subsidiary of the Company), pursuant to which Solargiga Hong Kong agreed to sell and Qujing Yangguang agreed to acquire the entire equity interest in Jinzhou Youhua Silicon Materials Co. Ltd (“Youhua Silicon”) at consideration of approximately RMB227,369,000. Upon completion, the Group’s equity interest in Youhua Silicon reduced from 100% to 53.7%. For the details of the disposal, please refer to the announcements of the Company dated 25 February 2022 and 1 March 2022.

Save as disclosed above and in this report, the Group did not have any material acquisitions and disposals of subsidiaries, associates and joint ventures during the six months ended 30 June 2022.

Foreign currency risk

The Group is exposed to foreign currency risk primarily through sales and purchases, cash, bank deposits and bank loans that are denominated in a currency other than the functional currency, Renminbi, of the operations to which they relate. The currencies giving rise to this risk are primarily the US Dollar and Euro. The Directors do not expect any significant impact from the change in exchange rates since the Group uses trade receivables in foreign currencies received from foreign customers to settle foreign loans and trade payables in foreign currencies which naturally mitigates the exchange rate risk. In addition, the Group will consider the difference in interest rates and fluctuations in the exchange rates of foreign currency denominated and local currency-denominated loan balance, and seize opportunities to mitigate the risk through low-risk forward exchange agreements, in order to strike a balance between the exposure to the variations in interest costs and fluctuations in foreign exchange rates.

Convertible Bonds

On 14 April 2022, Qujing Yangguang New Energy Co., Ltd. (“Qujing Yangguang”, an indirect non-wholly owned subsidiary of the Company), an investor, Mr. Tan Wenhua and Mr. Tan Xin entered into the subscription agreement, pursuant to which Qujing Yangguang issued the convertible bonds at a principal amount of RMB250,000,000 to the investor. For further details on the subscription agreement and the convertible bonds, please refer to the announcement of the Company dated 14 April 2022.

財務回顧(續)

重大收購及出售附屬公司、聯營公司及合營企業

於二零二二年二月，陽光能源(香港)有限公司(「香港陽光」)與本公司之間接非全資附屬公司，曲靖陽光新能源股份有限公司(「曲靖陽光」)訂立股權轉讓協議，據此，香港陽光同意出售及轉讓，而曲靖陽光同意收購錦州佑華硅材料有限公司(「佑華硅」)的全部股權，代價約為人民幣227,369,000元。完成後，本集團於佑華硅的股權由100%減至53.7%。出售事項詳見本公司日期為二零二二年二月二十五日及二零二二年三月一日的公告。

除上文及本報告所披露者外，於截至二零二二年六月三十日止的六個月內，本集團並無任何重大收購及出售附屬公司、聯營公司及合營企業。

外幣風險

本集團所承受的外匯風險主要來自以相關業務的功能貨幣人民幣以外貨幣進行的買賣交易以及現金、銀行存款及銀行貸款，當中主要來自美元及歐元。由於本集團可將自國外客戶所收取的外幣應收賬款，用以清償外幣借款和外幣應付賬款以形成匯率的自然避險，故董事預期匯率變動不會構成重大影響。此外，本集團亦會考慮外幣與本幣借款利息成本差異性及匯率變化，擇機搭配風險較低的遠期外匯合約交易來避險，在利息成本高低和匯率變化風險中取得平衡。

可換股債券

於二零二二年四月十四日，曲靖陽光新能源股份有限公司(「曲靖陽光」，本集團間接非全資附屬公司)、一位投資者、譚文華先生及譚鑫先生訂立認購協議，據此，曲靖陽光向該位投資者發行本金額人民幣250,000,000元的可換股債。有關認購協議及可換股債的更多詳情，請參閱本公司日期為二零二二年四月十四日的公告。



Management Discussion and Analysis

管理層討論及分析

Human resources

As at 30 June 2022, the Group had 4,191 employees (31 December 2021 : 3,937 employees).

Future prospects and strategies

Photovoltaic power generation is popular in recent years, so it is expected that the global newly installed capacity of photovoltaic power generation will continue to grow rapidly in 2022. Coupled with a series of government promulgated policies to support the development of the photovoltaic industry with an aim to lead the energy industry transition from traditional energy sources to renewable energy sources in an orderly manner, it is expected that PRC and the global mid and long-term demand for photovoltaic products will continue to experience robust growth. Following the grid parity, photovoltaic products will be able to move further towards full-scale marketised competition in the photovoltaic industry and away from policy subsidies, and will progress towards self sustainable development, advance technological progress, reduce cost of power generation to promote the achievement in comprehensive grid parity and will draw explosive growth in demand.

In order to grasp these historic opportunities and respond to the rapid increase in demand, the Group has been expanding production capacity of monocrystalline silicon ingot, wafer and modules to take advantage of the external production environment in different areas, enabling the Group to fully utilise its current technological advantages in production. It is estimated that the production capacity of monocrystalline silicon ingot will be expanded from 6.2GW by the end of June 2022 to 7.4GW by the end of 2022. The production capacity of monocrystalline silicon wafer will be expanded from 4.5GW by the end of June 2022 to 7.4GW by the end of 2022. The production capacity of modules will be expanded from 7.2GW by the end of June 2022 to 8.2GW by the end of 2022.

As a renewable and clean energy source, in respect of photovoltaic power generation, the road to grid parity may be a painful change, but the expected explosive growth in the market after reaching grid parity will provide an opportunity for the industry. Positioning itself as a leading supplier of monocrystalline silicon ingots/wafers and photovoltaic modules, the Group is fully prepared by relying on its existing advantages and will do its utmost, to embrace the long-term promising prospect for the photovoltaic industry, help achieve the goal of “carbon neutrality” in 2060 in China and contribute to the sustainable development of the global environment.

人力資源

於二零二二年六月三十日，本集團的僱員數目為4,191名(二零二一年十二月三十一日：3,937名)。

未來展望及策略

光伏發電近年愈見流行，因此預期二零二二年全球光伏發電新增裝機量仍將持續快速成長，加上為了引導能源產業有序從傳統能源邁入到可再生能源，各國政府頒布一系列支持光伏產業發展的政策催化下，預計中國及全球中長期光伏產品需求向上的勢頭持續強勁。緊隨平價上網，將可更進一步邁向光伏行業全面市場化競爭，以擺脫政策補貼，邁向自我穩定發展，推進技術進步，降低發電成本，以推動行業加速達至全面的平價上網的目標，並帶來爆發式的需求成長。

為了把握此歷史機遇及因應急速向上的需求，本集團持續擴充單晶硅棒與單晶硅片及組件產能，以期進一步充分利用不同地區所擁有較佳的外部生產環境，使得集團現已具有的生產技術優勢更能充分發揮，預估單晶硅棒產能將由二零二二年六月底的6.2吉瓦擴充至二零二二年底的7.4吉瓦，單晶硅片產能將由二零二二年六月底的4.5吉瓦擴充至二零二二年底前的7.4吉瓦，組件產能將由二零二二年六月底的7.2吉瓦擴充至二零二二年底前的8.2吉瓦。

作為可再生和潔淨能源的光伏發電，平價上網前的道路是痛苦蛻變，但平價上網後市場需求必定會出現爆發性的巨幅成長，這正是光伏行業新生的契機。定位為領先的單晶硅棒／硅片和光伏組件供應商及依托現有優勢，本集團已經做好準備，將全力以赴，迎接行業長期前景廣闊的美好時代，助力中國在2060年實現「碳中和」目標，為地球環境的永續發展貢獻一己之力。



Management Discussion and Analysis

管理層討論及分析

Dividend

The Directors do not recommend the payment of an interim dividend for six months ended 30 June 2022 (for six months ended 30 June 2021: Nil).

Event After Reporting Period

On 29 April 2022, Qijing Yangguang (a subsidiary of the Company) and Guotai Junan Securities Co., Ltd. (國泰君安證券股份有限公司) (“Guotai Junan”) entered into a service agreement (the “Service Agreement”), pursuant to which Guotai Junan has agreed to place, on a best-effort basis, up to 27,138,643 Qijing Shares to investors and the amount of proceeds to be raised would be no more than RMB460,000,000 (the “Capital Injection”). The Service Agreement, the Capital Injection and the transactions contemplated thereunder are subject to approval by the shareholders of the Company, which was obtained at an extraordinary general meeting of the Company held on 17 August 2022. Completion of the Capital Injection is subject to the fulfilment of the relevant conditions precedent. For further details on the Service Agreement and the Capital Injection, please refer to (i) the announcement and the circular of the Company dated 29 April 2022 and 29 July 2022, respectively; and (ii) the poll results announcement of the Company dated 17 August 2022.

股息

董事不建議就二零二二年六月三十日止六個月派發中期股息(截止二零二一年六月三十日止六個月：無)。

報告期後事項

於二零二二年四月二十九日，曲靖陽光(本公司之附屬公司)與國泰君安證券股份有限公司(「國泰君安」)訂立服務協議(「服務協議」)，據此，國泰君安同意按竭誠基準配售最多27,138,643股曲靖股份予投資者，經增資(「增資」)將募集的所得款項不會多於人民幣460,000,000元。服務協議、增資及其項下擬進行的交易須由本公司股東批准，並已於二零二二年八月十七日召開的股東特別大會上獲得本公司股東批准。增資須待相關先決條件達成後，方告完成。有關服務協議及增資的更多詳情，請參閱(i)本公司日期為二零二二年四月二十九日的公告及二零二二年七月二十九日的通函；及(ii)本公司日期為二零二二年八月十七日的股東特別大會投票表決結果。



Disclosure of Interests

權益披露

Interest and Short Positions of the Directors and the Chief Executives of the Company in the Shares, Underlying Shares and Debentures of the Company and its Associated Corporations

As at 30 June 2022, so far as the Directors are aware, the Directors and the chief executives of the Company and their associates had the following interests in the shares, underlying shares and debentures of the Company and its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (“SFO”)), as recorded in the register required to be kept under Section 352 of the SFO or as otherwise notified to the Company and the Stock Exchange pursuant to the Model Code:

董事及本公司最高行政人員於本公司及其相聯法團的股份、相關股份及債券的權益及淡倉

於二零二二年六月三十日，據董事所悉，董事及本公司最高行政人員及彼等之聯繫人士於本公司及其相聯法團（定義見證券及期貨條例（「證券及期貨條例」）第XV部）的股份、相關股份及債券中，擁有已記錄於根據證券及期貨條例第352條規定存置的登記冊或根據標準守則須另行知會本公司及聯交所的權益如下：

Name of Director 董事姓名	Nature of interest 權益性質	Number of ordinary shares held (Note 1) 所持普通股數目 (附註1)	Approximate percentage of shareholding (%) 概約持股百分比(%)
Mr. TAN Wenhua 譚文華先生	Beneficial interest (Note 2) 實益權益(附註2)	556,924,443 (L)	16.76%
	Interest of a controlled corporation (Note 2) 受控法團權益(附註2)	155,320,308 (L)	4.67%
Mr. TAN Xin 譚鑫先生	Beneficial interest 實益權益	41,762,000 (L)	1.26%
Mr. HSU You Yuan 許祐淵先生	Beneficial interest 實益權益	15,591,016 (L)	0.47%
Mr. WANG Junze 王鈞澤先生	Beneficial interest 實益權益	100,500 (L)	Less than 0.01% 少於0.01%

Notes:

- The letter “L” denotes the person’s long position in such securities.
- As at 30 June 2022, Mr. Tan Wenhua is interested in an aggregate of 712,244,751 share of the Company, of which (i) 556,924,443 share of the Company are directly held by Mr. Tan Wenhua; and (ii) 155,320,308 share of the Company are held by You Hua Investment Corporation, which is wholly-owned by Mr. Tan Wenhua.

附註：

- 字母「L」指該人士於該等證券的好倉。
- 於二零二二年六月三十日，譚文華先生合共於712,244,751股本公司股份中擁有權益，當中(i) 556,924,443股本公司股份由譚文華先生直接持有，及(ii) 155,320,308股本公司股份由譚文華先生全資擁有之佑華投資有限公司持有。

Disclosure of Interests 權益披露

Substantial Shareholders' and Other Persons' Interests and Short Positions' in Shares and Underlying Shares

As at 30 June 2022, so far as the Directors are aware, save as disclosed above, the substantial shareholders and other persons or corporations (not being a Director or chief executive of the Company) who had interest or short positions in the shares and underlying shares of the Company as recorded in the register required to be kept under section 336 of the SFO or had otherwise notified to the Company were as follows:

Name 名稱／姓名	Capacity 身分	Number of ordinary shares held (Note 1) 所持普通股數目 (附註1)	Approximate Percentage of shareholding (%) 概約持股 百分比(%)
Hiramatsu International Corp.	Beneficial owner 實益擁有人	304,261,692 (L)	9.15%
Hanako Hiramatsu (Note 2) Hanako Hiramatsu (附註2)	Beneficial interest 實益權益	304,261,692 (L)	9.15%
Madam Sze Tan Hung 施丹紅女士	Beneficial interest 實益權益	237,295,000 (L)	7.14%
Mr. Tung Ching Sai (Note 3) 董清世先生(附註3)	Interest of spouse 配偶權益	237,295,000 (L)	7.14%

Notes:

- The letter "L" denotes the person's long position in such securities.
- To the best of the Directors' knowledge, information and belief having made all reasonable enquiry, Hiramatsu International Corp. is wholly-owned by Hanako Hiramatsu as at the date of this report. By virtue of the SFO, Hanako Hiramatsu is deemed to be interested in the Shares held by Hiramatsu International Corp.
- Mr. Tung Ching Sai is the spouse of Madam Sze Tan Hung and is therefore deemed to be interested in all the shares which Madam Sze Tan Hung is interested in for the purpose of the SFO.

Save as disclosed above, as at 30 June 2022, the Directors are not aware of any other person or corporation having an interest or short position in shares and underlying shares of the Company which fall to be disclosed under the provisions of Division 2 and 3 of Part XV of the SFO.

主要股東及其他人士於股份及相關股份的權益及淡倉

截至二零二二年六月三十日，據董事所知悉，除上文披露者外，以下主要股東及其他人士或法團（並非董事或本公司最高行政人員）於本公司股份及相關股份中，擁有已記錄於根據證券及期貨條例第336條規定存置的登記冊或已另行知會本公司的權益或淡倉：

Name 名稱／姓名	Capacity 身分	Number of ordinary shares held (Note 1) 所持普通股數目 (附註1)	Approximate Percentage of shareholding (%) 概約持股 百分比(%)
Hiramatsu International Corp.	Beneficial owner 實益擁有人	304,261,692 (L)	9.15%
Hanako Hiramatsu (Note 2) Hanako Hiramatsu (附註2)	Beneficial interest 實益權益	304,261,692 (L)	9.15%
Madam Sze Tan Hung 施丹紅女士	Beneficial interest 實益權益	237,295,000 (L)	7.14%
Mr. Tung Ching Sai (Note 3) 董清世先生(附註3)	Interest of spouse 配偶權益	237,295,000 (L)	7.14%

附註：

- 字母「L」指該人士於該等證券的好倉。
- 據董事於作出一切合理查詢後所深知、全悉及確信，於本報告日期，Hiramatsu International Corp.由Hanako Hiramatsu全資擁有。根據證券及期貨條例，Hanako Hiramatsu被視為於Hiramatsu International Corp.持有的股份中擁有權益。
- 董清世先生為施丹紅女士的配偶，因此根據證券及期貨條例，彼被視為於施丹紅女士所持股份中擁有權益。

除上文披露者外，截至二零二二年六月三十日，董事並不知悉有任何其他人士或法團於本公司的股份及相關股份中擁有根據證券及期貨條例第XV部第2及3分部的條文須予披露的權益或淡倉。



Corporate Governance and Other Information

企業管治及其他資料

Corporate Governance

The Company has complied with the requirements set out in the Corporate Governance Code as set out in Appendix 14 to the Listing Rules throughout the six months ended 30 June 2022.

Model Code for Securities Transactions by Directors

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) as set out in Appendix 10 to the Listing Rules as the code of conduct regarding securities transactions by the Directors. Specific enquiries have been made by the Company to confirm that all Directors have complied with the Model Code for the six months ended 30 June 2022.

Purchase, Sale and Redemption of the Company’s Listed Securities

Neither the Company, nor any of its subsidiaries purchased, redeemed or sold any of the Company’s listed securities during the six months ended 30 June 2022 and up to the reporting date.

Audit Committee

The Audit Committee of the Company, comprising three independent non-executive Directors, has reviewed the accounting principles and practices adopted by the Group and such matters as internal controls and financial reporting with the management of the Company, including the review of the unaudited interim results and the unaudited interim condensed consolidated financial statements for the six months ended 30 June 2022.

By Order of the Board

Solargiga Energy Holdings Limited
Tan Wenhua
Chairman

Hong Kong, 26 August 2022

企業管治

本公司於截至二零二二年六月三十日止六個月一直遵守上市規則附錄十四所載企業管治守則的規定。

董事進行證券交易的標準守則

本公司已採納上市規則附錄十所載上市發行人董事進行證券交易的標準守則(「標準守則」)作為董事進行證券交易的操守守則。本公司已作出特定查詢，以確認全體董事已於截至二零二二年六月三十日止六個月遵守標準守則。

購買、出售及贖回本公司的上市證券

截至二零二二年六月三十日止六個月及截至本報告日期，本公司或其任何附屬公司概無購買、贖回或出售本公司任何上市證券。

審核委員會

本公司審核委員會(成員包括三名獨立非執行董事)已審閱本集團採納的會計原則及慣例，並已與本公司管理層檢討內部監控及財務報告等事宜，包括審閱截至二零二二年六月三十日止六個月的未經審核中期業績及未經審核中期簡明綜合財務報表。

承董事會命

陽光能源控股有限公司
主席
譚文華

香港，二零二二年八月二十六日



Independent Review Report

獨立審閱報告



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Independent review report
To the board of directors of Solargiga Energy Holdings Limited
(Incorporated in the Cayman Islands with limited liability)

Introduction

We have reviewed the interim financial information set out on pages 31 to 72, which comprises the condensed consolidated statement of financial position of Solargiga Energy Holdings Limited (the "Company") and its subsidiaries (the "Group") as at 30 June 2022 and the related condensed consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows for the six-month period then ended, and explanatory notes. The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited require the preparation of a report on interim financial information to be in compliance with the relevant provisions thereof and Hong Kong Accounting Standard 34 Interim Financial Reporting ("HKAS 34") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"). The directors of the Company are responsible for the preparation and presentation of this interim financial information in accordance with HKAS 34. Our responsibility is to express a conclusion on this interim financial information based on our review. Our report is made solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Scope of review

We conducted our review in accordance with Hong Kong Standard on Review Engagements 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity issued by the HKICPA. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Hong Kong Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

獨立審閱報告
致陽光能源控股有限公司董事會
(於開曼群島註冊成立之有限公司)

引言

我們已審閱列載於第31至72頁的陽光能源控股有限公司(「貴公司」)及其附屬公司(統稱「貴集團」)的中期財務資料，當中包括於二零二二年六月三十日的簡明綜合財務狀況表、截至該日止六個月期間的有關簡明綜合損益表、全面收入表、權益變動表及現金流量表以及附註解釋。香港聯合交易所有限公司證券上市規則規定必須遵照上市規則中的相關規定及香港會計師公會(「香港會計師公會」)頒佈的香港會計準則第34號中期財務報告(「香港會計準則第34號」)的規定編製中期財務資料報告。貴公司董事須負責根據香港會計準則第34號編製及列報該等中期簡明綜合財務報表。我們的責任是根據我們的審閱對該等中期簡明綜合財務報表作出結論。根據雙方協定的應聘條款，我們的報告僅向閣下全體作出報告。除此以外，我們的報告不可用作其他用途。我們概不就本報告的內容，對任何其他人士負責或承擔法律責任。

審閱範圍

我們已根據香港會計師公會頒佈的香港審閱委聘準則第2410號實體的獨立核數師對中期財務信息的審閱進行審閱。中期財務資料審閱工作包括主要向負責財務及會計事項的人員詢問，並作出分析和其他審閱程序。由於審閱的範圍遠較按照香港審計準則進行審核的範圍為小，所以不能保證我們會注意到在審核中可能會被發現的所有重大事項。因此，我們不會發表任何審核意見。



Independent Review Report

獨立審閱報告

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the interim financial information is not prepared, in all material respects, in accordance with HKAS 34.

Ernst & Young

Certified Public Accountants

Hong Kong

26 August 2022

結論

根據我們的審閱工作，我們並沒有注意到任何事項，使我們相信中期財務資料沒有在所有重大方面按照香港會計準則第34號編製。

安永會計師事務所

執業會計師

香港

二零二二年八月二十六日



Interim Condensed Consolidated Statement of Profit or Loss

中期簡明綜合損益表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

		Six months ended 30 June 截至六月三十日止六個月		
		Notes 附註	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Revenue	收益	4	3,146,960	2,820,623
Cost of sales	銷售成本		(2,879,888)	(2,449,107)
Gross profit	毛利		267,072	371,516
Other income and gains, net	其他收入及收益，淨額	5	84,494	63,239
Selling and distribution expenses	銷售及分銷開支		(1,605)	(63,761)
Administrative expenses	行政開支		(130,378)	(135,697)
Impairment losses on financial and contract assets, net	財務及合約資產減值損失，淨額		(860)	(9,314)
Other expenses	其他支出		(1,000)	—
Finance costs	融資成本	6	(67,182)	(60,763)
Profit before tax	除稅前利潤	7	150,541	165,220
Income tax expense	所得稅開支	8	(16,858)	(44,574)
Profit for the period	期間利潤		133,683	120,646
Attributable to:	以下人士應佔：			
Owners of the parent	母公司股東		67,733	61,339
Non-controlling interests	非控制性權益		65,950	59,307
Profit for the period	期間利潤		133,683	120,646
Basic and diluted earnings per share attributable to ordinary equity holders of the parent (RMB cents)	歸屬於母公司普通股股東的應佔每股基本及攤薄盈利 (人民幣分)	9	2.04	1.86



Interim Condensed Consolidated Statement of Comprehensive Income

中期簡明綜合全面收入表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Profit for the period	期間利潤	133,683	120,646
Other comprehensive (loss)/income for the period, after tax:	期間其他全面(虧損)/收入(扣除稅項後):		
Items that may be reclassified subsequently to profit or loss:	可於後期被重分類至損益的項目:		
— Exchange differences on translation of foreign operations	— 換算海外業務產生的匯兌差額	(12,335)	28,491
Total comprehensive income for the period, after tax	期間全面收入總額(扣除稅項後)	121,348	149,137
Attributable to:	以下人士應佔:		
Owners of the parent	母公司股東	55,398	89,830
Non-controlling interests	非控制性權益	65,950	59,307
Total comprehensive income for the period	期間全面收入總額	121,348	149,137

Interim Condensed Consolidated Statement of Financial Position

中期簡明綜合財務狀況表

As at 30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi) (以人民幣列值)

			At 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	At 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
		Notes 附註		
Non-current assets	非流動資產			
Property, plant and equipment	物業、廠房及設備	10	1,959,189	1,901,125
Long term prepayments and other receivables	長期預付款項及其他應收款項		30,539	17,211
Right-of-use assets	使用權資產		240,537	238,563
Investments in associates	於聯營公司的投資		200	200
Equity investments designated at fair value through other comprehensive income	以公允價值計量且其變動計入其他綜合收益的權益投資		190	190
Deferred tax assets	遞延稅項資產		6,675	9,065
			2,237,330	2,166,354
Current assets	流動資產			
Inventories	存貨	11	761,541	459,439
Trade and bills receivables	應收貿易賬款及票據	12	1,675,462	1,794,155
Contract assets	合約資產	13	231,597	159,049
Prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產	14	531,240	521,292
Current tax recoverable	即期可收回稅項		4,954	7,744
Financial assets at fair value through profit or loss	公允價值變動列入損益之金融資產		697	—
Pledged deposits	已抵押存款	15	1,090,571	751,278
Cash and cash equivalents	現金及現金等價物	16	500,882	431,861
			4,796,944	4,124,818
Current liabilities	流動負債			
Derivative financial instruments	衍生金融工具	17	10,623	—
Interest-bearing bank and other borrowings	銀行及其他計息借貸	18	1,991,109	1,915,279
Trade and bills payables	應付貿易賬款及票據	19	2,404,650	2,242,716
Other payables and accruals	其他應付款項及應計開支	20	458,443	543,866
Contract liabilities	合約負債		246,514	141,083
Current tax payable	即期應付稅項		32,770	25,629
Provision	撥備	22	1,336	4,700
Current portion of lease liabilities	一年內到期的租賃負債		27,816	20,270
			5,173,261	4,893,543
Net current liabilities	流動負債淨額		(376,317)	(768,725)
Total assets less current liabilities	資產總值減流動負債		1,861,013	1,397,629



Interim Condensed Consolidated Statement of Financial Position

中期簡明綜合財務狀況表

As at 30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi) (以人民幣列值)

		Notes 附註	At 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	At 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Non-current liabilities	非流動負債			
Convertible bonds	可換股債券	17	245,133	—
Interest-bearing bank and other borrowings	銀行及其他計息借貸	18	377,084	209,670
Deferred tax liabilities	遞延稅項負債		2,760	2,418
Deferred income	遞延收入	21	241,664	258,065
Lease liabilities	租賃負債		70,834	73,592
Provision	撥備	22	135,120	181,605
			1,072,595	725,350
NET ASSETS	資產淨值		788,418	672,279
EQUITY	權益			
Equity attributable to owners of the parent	歸屬於母公司股東的權益			
Share capital	股本	23	285,924	285,924
Reserves	儲備		88,290	90,490
			374,214	376,414
Non-controlling interests	非控制性權益		414,204	295,865
TOTAL EQUITY	權益總額		788,418	672,279

Interim Condensed Consolidated Statement of Changes in Equity

中期簡明綜合權益變動表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

		Equity attributable to owners of the parent 歸屬於母公司股東的權益							Non-controlling interests		Total equity
		Share capital	Share premium	General reserve fund	Capital reserve	Exchange reserve	Other reserve	Accumulated losses	Total	Non-controlling interests	Total equity
		RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
		人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元	人民幣千元
As at 1 January 2022	於二零二二年一月一日	285,924	1,752,401	238,451	34,703	825	(74,794)	(1,861,096)	376,414	295,865	672,279
Profit for the period	期間利潤	—	—	—	—	—	—	67,733	67,733	65,950	133,683
Other comprehensive income for the period:	期間其他全面收入：										
Exchange differences on translation of foreign operations	換算海外業務產生的匯兌差額	—	—	—	—	(12,335)	—	—	(12,335)	—	(12,335)
Total comprehensive income	全面收入總額	—	—	—	—	(12,335)	—	67,733	55,398	65,950	121,348
Transfer of equity under common control (*)	同一控制下的股權轉讓(*)	—	—	—	(57,598)	—	—	—	(57,598)	57,598	—
Appropriation to reserves	對儲備金的撥款	—	—	1,348	—	—	—	(1,348)	—	—	—
Capital contribution from non-controlling interests	非控制性權益出資	—	—	—	—	—	—	—	—	250	250
Dividends paid to non-controlling shareholders	支付給非控股股東的股息	—	—	—	—	—	—	—	—	(5,459)	(5,459)
As at 30 June 2022 (unaudited)	於二零二二年六月三十日 (未經審核)	285,924	1,752,401	239,799	(22,895)	(11,510)	(74,794)	(1,794,711)	374,214	414,204	788,418
As at 1 January 2021	於二零二一年一月一日	270,867	1,726,034	235,969	42,768	(18,525)	(64,722)	(2,051,836)	140,555	199,441	339,996
Profit for the period	期間利潤	—	—	—	—	—	—	61,339	61,339	59,307	120,646
Other comprehensive income for the period:	期間其他全面收入：										
Exchange differences on translation of foreign operations	換算海外業務產生的匯兌差額	—	—	—	—	28,491	—	—	28,491	—	28,491
Total comprehensive income	全面收入總額	—	—	—	—	28,491	—	61,339	89,830	59,307	149,137
Issue of shares (**)	發行股份(**)	15,057	26,367	—	—	—	—	—	41,424	—	41,424
Acquisition of non-controlling interests (***)	收購非控制性權益(***)	—	—	—	(14,218)	—	—	—	(14,218)	(27,515)	(41,733)
Capital contribution from non-controlling interests	非控制性權益出資	—	—	—	—	—	—	—	—	510	510
As at 30 June 2021 (unaudited)	於二零二一年六月三十日 (未經審核)	285,924	1,752,401	235,969	28,550	9,966	(64,722)	(1,990,497)	257,591	231,743	489,334

* In March 2022, Solargiga Energy (Hong Kong) Company Limited ("Solargiga Hong Kong", a wholly-owned subsidiary of the Company) disposed of its 100% share of Jinzhou Youhua Silicon Materials Co., Ltd. ("Youhua Silicon"), the total equity of which was RMB124,402,000, to Qujing Yangguang New Energy Co., Ltd. ("Qujing Yangguang", a partly-owned subsidiary of the Company), which was defined as business disposal under common control. The Company held 53.70% share of Qujing Yangguang, therefore, after this transaction, the share of equity interest in Youhua Silicon held by the Company was diluted from 100% to 53.70%. This transaction was considered to be an equity transaction.

* 於二零二二年三月，陽光能源(香港)有限公司(以下簡稱「陽光香港」，本公司全資附屬公司)出售其持有的錦州佑華硅材料有限公司(以下簡稱「佑華硅」)(總股本為人民幣124,402,000元)100%股權，轉讓給曲靖陽光新能源有限公司(以下簡稱「曲靖陽光」，本公司的非全資附屬公司)，被定義為同一控制下的企業出售。本公司持有曲靖陽光53.70%的股權，本次交易完成後，本公司持有的佑華硅股權由100%稀釋至53.70%。本次交易被視為股權交易。



Interim Condensed Consolidated Statement of Changes in Equity 中期簡明綜合權益變動表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

** On 21 January 2021, the Company entered into an agreement with a subscriber, pursuant to which the Company agreed to allot and issue 180,000,000 subscription shares at the subscription price of HK\$0.29 per subscription share. The total consideration payable by the subscriber under the subscription agreement amounted to HK\$52,200,000 (equivalent to RMB41,424,000).

*** In April 2021, Jinzhou Yangguang Energy Co., Ltd. ("Jinzhou Yangguang"), a subsidiary of the Company, acquired certain non-controlling shares from non-controlling shareholders of Jiangsu Yueyang Photovoltaic Technology Co., Ltd. ("Jiangsu Yueyang"). Subsequently, Jinzhou Yangguang agreed to inject capital into Jiangsu Yueyang in November 2020 and the injection was made in June and July 2021 respectively. As a result, there was an impact on capital reserves of the Company.

** 於二零二一年一月二十一日，本公司與一名認購人訂立協議，據此本公司同意以每股認購股份0.29港元的認購價配發及發行180,000,000股認購股份。認購人根據認購協議應付之總代價為52,200,000港元（相當於人民幣41,424,000元）

*** 於二零二一年四月，本公司之附屬公司，錦州陽光能源有限公司（「錦州陽光」）從江蘇悅陽光伏科技有限公司（「江蘇悅陽」）的非控股公司股東收購部分非控股股份。隨後，錦州陽光於二零二零年十一月同意向江蘇悅陽注資，並分別於二零二一年六月和七月進行注資。因此，對本公司的資本儲備造成影響。



Interim Condensed Consolidated Statement of Cash Flows

中期簡明綜合現金流量表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Cash flows from operating activities	經營活動現金流量		
Profit before tax	除稅前利潤	150,541	165,220
Adjustments for:	調整：		
Gain on disposal of property, plant and equipment	出售物業、廠房及設備的收益	(131)	(8,131)
Depreciation and amortisation	折舊及攤銷	155,373	138,059
Reversal of write-down of inventories	存貨撇減回沖	(2,404)	(10,631)
Impairment losses on trade receivables and contract assets	應收貿易賬款及合約資產減值損失	860	9,314
Finance costs	融資成本	67,182	60,763
Interest income	利息收入	(18,781)	(2,573)
Impairment of an investment in an associate	於聯營公司投資的減值	1,000	—
(Reversal of provision)/provision for warranty	保用成本的(撥備回沖)/撥備	(49,265)	5,382
Gain on disposal of a subsidiary*	出售附屬公司的收益*	(1,713)	—
Gain on acquisition of a subsidiary	收購附屬公司的收益	(1,512)	—
Fair value losses on financial instruments	金融工具公允價值的損失	2,717	—
Increase in inventories	存貨增加	(332,563)	(425,504)
Decrease in trade receivables, prepayments, other receivables and other assets	應收貿易賬款、預付款、其他應收款項及其他資產減少	132,110	25,847
Increase in contract assets	合約資產增加	(74,267)	(81,817)
Increase in trade and other payables	應付貿易賬款及其他應付款項增加	305,703	390,649
(Decrease)/increase in deferred income	遞延收入(減少)/增加	(16,401)	47,374
Foreign exchange gain	匯兌收益	(2,295)	(440)
Cash generated from operations	經營活動所得現金	316,154	313,512
Withholding tax paid	支付預扣稅	(505)	—
The PRC enterprise income tax paid	支付中國企業所得稅	(4,314)	(6,650)
Net cash flows generated from operating activities	經營活動所得現金流量淨額	311,335	306,862

* On 30 June 2022, the Group disposed of its 40% share of Liaoning Sunshine Energy Power Co., Ltd. ("Liaoning Sunshine", a subsidiary of the Group) with zero consideration, and the Group's share of equity interest in Liaoning Sunshine decreased to 30% after the disposal. From which, a gain of RMB1,713,000 was recorded by the Group in the current period.

* 於二零二二年六月三十日，本集團以零代價出售其持有的遼寧陽光能源電力有限公司(以下簡稱「遼寧陽光」，本集團的附屬公司)40%股權，出售後本集團持有的遼寧陽光股權減少至30%。期內本集團從該出售中錄得收益人民幣1,713,000元。



Interim Condensed Consolidated Statement of Cash Flows

中期簡明綜合現金流量表

For the six months ended 30 June 2022 截至二零二二年六月三十日止六個月
(Expressed in Renminbi) (以人民幣列值)

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
		Note 附註	
Cash flows from investing activities	投資活動現金流量		
Payment for the acquisition of property, plant and equipment	就購置物業、廠房及設備支付的款項	(337,508)	(115,337)
Payment for the acquisition of right-of-use assets	就購置使用權資產支付的款項	(1,011)	(1,785)
Proceeds from disposal of items of property, plant and equipment	出售物業、廠房及設備所得款項	724	12,811
Acquisition of a subsidiary	收購附屬公司	(661)	—
Purchases of financial asset at fair value through profit or loss	購買公允價值計量且其變動計入損益的金融資產	(697)	—
Disposal of a subsidiary	出售附屬公司	(313)	—
Interest received	已收利息	18,781	2,573
Net cash flows used in investing activities	投資活動所用現金流量淨額	(320,685)	(101,738)
Cash flows from financing activities	融資活動現金流量		
Subscription of new shares	認購新股份	—	41,424
Proceeds from issue of convertible bonds	發行可換股債券取得款項	249,829	—
Repayment of bank loans and other loans	償還銀行貸款及其他貸款	(998,284)	(1,684,478)
Proceeds from bank loans and other loans	銀行貸款及其他貸款所得款項	1,234,032	1,548,146
Placement of pledged bank deposits	置存已抵押銀行存款	(339,293)	(85,492)
Principal portion of lease payments	租賃付款之本金部分	(11,123)	(11,772)
Capital contribution from non-controlling interests	非控制性權益出資	250	510
Payments for acquisition of non-controlling interests in a subsidiary	收購附屬公司之非控制性權益的款項	—	(41,733)
Interest paid	已付利息	(54,973)	(58,860)
Net cash flows generated from/(used in) financing activities	融資活動所得/(所用)現金流量淨額	80,438	(292,255)
Net increase/(decrease) in cash and cash equivalents	現金及現金等價物增加/(減少)淨額	71,088	(87,131)
Effect of exchange rate changes	匯率變動的影響淨額	(2,067)	1,469
Cash and cash equivalents at 1 January	於一月一日的現金及現金等價物	431,861	456,265
Cash and cash equivalents at 30 June	於六月三十日的現金及現金等價物	500,882	370,603

Notes to Interim Condensed Consolidated Financial Statements

中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1 Corporate Information

Solargiga Energy Holdings Limited (the “Company”, together with its subsidiaries, the “Group”; Hong Kong stock code: 757) is a leading supplier of upstream and downstream vertically integrated solar energy services. During the period, the Group was mainly engaged in the following businesses:

- (a) the manufacture of, trading of and provision of processing services for monocrystalline silicon solar ingots/wafers and related products;
- (b) the manufacture and trading of photovoltaic modules;
- (c) the construction and operation of photovoltaic power plants; and
- (d) the manufacture and trading of semiconductor, the trading of monocrystalline silicon solar cells and others.

2 Basis of Preparation and Changes in Accounting Policies and Disclosures

2.1 Basis of preparation

The interim condensed consolidated financial information for the six months ended 30 June 2022 are prepared in accordance with Hong Kong Accounting Standard (“HKAS”) 34 Interim Financial Reporting. The interim condensed consolidated financial information does not include all the information and disclosures required in the annual financial statements and should be read in conjunction with the annual financial statements for the year ended 31 December 2021, which have been prepared in accordance with Hong Kong Financial Reporting Standards (“HKFRSs”).

As at 30 June 2022, the Group’s current liabilities exceeded its current assets by RMB376,317,000. The liquidity of the Group is primarily dependent on its ability to maintain adequate cash flows from operations, to renew its short-term bank loans and to obtain adequate external financing to support its working capital and meet its obligations and commitments when they become due.

1 公司資料

陽光能源控股有限公司(「本公司」，連同其附屬公司統稱「本集團」；香港股份代號：757)為上下游垂直一體化太陽能服務的領先供應商。期內，本集團主要從事以下業務：

- (a) 太陽能單晶硅棒／硅片及相關產品的製造、買賣及提供加工服務；
- (b) 製造及買賣光伏組件；
- (c) 興建及經營光伏電站；及
- (d) 製造及買賣半導體以及買賣太陽能單晶硅電池及其他。

2 編製基準及會計政策變動與披露

2.1 編製基準

截至二零二二年六月三十日止六個月的本中期簡明綜合財務報表乃根據香港會計準則(「香港會計準則」)第34號中期財務報告編製。中期簡明綜合財務報表並不包括年度財務報表規定的所有資料及披露事項，並應與根據香港財務報告準則(「香港財務報告準則」)編製的截至二零二一年十二月三十一日止年度的年度財務報表一併閱覽。

於二零二二年六月三十日，本集團的流動負債超逾其流動資產人民幣376,317,000元。本集團流動資金主要依靠其於經營中維持足夠營運現金流量、重續其短期銀行貸款及取得適合外部融資以支持其營運資金及於到期時履行其責任及承擔的能力。



Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

2 Basis of Preparation and Changes in Accounting Policies and Disclosures

(Continued)

2.1 Basis of preparation (Continued)

The Group has carried out a review of its cash flow forecast for the twelve months ending 30 June 2023. Based on such forecast, the directors believe that adequate sources of liquidity exist to fund the Group's working capital and capital expenditure requirements, and to meet its short-term debt obligations and other liabilities and commitments as they become due in the twelve months ending 30 June 2023. In preparing the cash flow forecast, management has considered historical cash requirements of the Group, as well as other key factors, including unutilised banking facilities as at 30 June 2022 from the Group's major banks with an amount of RMB2,248,744,000, which will expire on 31 December 2023.

Based on the above factors, the directors are confident that the Group will have sufficient funding to enable the Group to operate as a going concern and meet its financial obligations as and when they fall due for at least twelve months from the reporting date. Accordingly, the interim consolidated financial statements have been prepared on a going concern basis.

2 編製基準及會計政策變動與披露 (續)

2.1 編製基準(續)

本集團已對其截至二零二三年六月三十日止十二個月的現金流量預測進行審閱。按照該預測，董事認為有足夠流動資金資源可撥付本集團的營運資金及資本開支需求及於截至二零二三年六月三十日止十二個月到期時履行其短期債務責任及其他負債與承擔。就編製現金流量預測而言，管理層已考慮本集團過往現金需求及其他主要因素，包括截至於二零二二年六月三十日從本集團主要銀行獲得的未動用銀行融資為數人民幣2,248,744,000元(將於二零二三年十二月三十一日到期)。

基於上文因素，本集團董事有信心，本集團將擁有充裕資金，以讓其能持續經營，並滿足本集團於報告日期起最少十二個月的財務責任。因此，中期綜合財務報表乃按持續經營基準編製。



Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

2 Basis of Preparation and Changes in Accounting Policies and Disclosures

(Continued)

2.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the interim condensed consolidated financial statements are consistent with those applied in the preparation of the Group's annual consolidated financial statements for the year ended 31 December 2021, except for the adoption of the following revised Hong Kong Financial Reporting Standards ("HKFRSs") for the first time for the current period's financial information.

Amendments to HKFRS 3	<i>Reference to the Conceptual Framework</i>
Amendment to HKFRS 16	<i>Covid-19-Related Rent Concessions beyond 30 June 2021</i>
Amendments to HKAS 16	<i>Property, Plant and Equipment: Proceeds before Intended Use</i>
Amendments to HKAS 37	<i>Onerous Contracts — Cost of Fulfilling a Contract</i>
<i>Annual Improvements to HKFRSs 2018–2020</i>	Amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41

2 編製基準及會計政策變動與披露 (續)

2.2 會計政策變動與披露

編製未經審核中期簡明綜合財務資料所採納的會計政策與編製本集團截至二零二一年十二月三十一日止年度之全年綜合財務報表所應用者一致，惟以下就本期間財務資料首次採納的香港財務報告準則除外。

香港財務報告準則第3號的修訂	有關概念框架之提述
香港財務報告準則第16號的修訂	二零二一年六月三十日後與新型冠狀病毒相關的租金優惠
香港會計準則第16號的修訂	物業、廠房及設備 — 作擬定用途前之所得款項
香港會計準則第37號的修訂	有償合約 — 履行合約的成本
香港財務報告準則二零一八年至二零二零年之年度改進	香港財務報告準則第1號，香港財務報告準則第9號、香港財務報告準則第16號相應闡釋範例及香港會計準則第41號的修訂



Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日

(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

2 Basis of Preparation and Changes in Accounting Policies and Disclosures

(Continued)

2.2 Changes in accounting policies and disclosures (Continued)

The nature and impact of the revised HKFRSs are described below:

- (a) Amendments to HKFRS 3 replace a reference to the previous Framework for the Preparation and Presentation of Financial Statements with a reference to the Conceptual Framework for Financial Reporting issued in June 2018 without significantly changing its requirements. The amendments also add to HKFRS 3 an exception to its recognition principle for an entity to refer to the Conceptual Framework to determine what constitutes an asset or a liability. The exception specifies that, for liabilities and contingent liabilities that would be within the scope of HKAS 37 or HK(IFRIC)-Int 21 if they were incurred separately rather than assumed in a business combination, an entity applying HKFRS 3 should refer to HKAS 37 or HK(IFRIC)-Int 21 respectively instead of the Conceptual Framework. Furthermore, the amendments clarify that contingent assets do not qualify for recognition at the acquisition date. The Group has applied the amendments prospectively to business combinations that occurred on or after 1 January 2022. As there were no contingent assets, liabilities and contingent liabilities within the scope of the amendments arising in the business combination that occurred during the period, the amendments did not have any impact on the financial position and performance of the Group.

2 編製基準及會計政策變動與披露 (續)

2.2 會計政策變動與披露(續)

經修訂香港財務報告準則的性質及影響如下：

- (a) 香港財務報告準則第3號的修訂以二零一八年六月頒佈的財務報告概念框架之提述取代先前財務報表編製及呈列框架之提述，而毋須大幅更改其規定。該等修訂亦對香港財務報告準則第3號有關實體參考概念框架以釐定資產或負債之構成之確認原則加入一項例外情況。該例外情況規定，對於屬香港會計準則第37號或香港(國際財務報告詮釋委員會) — 詮釋第21號範圍內的負債及或然負債而言，倘該等負債屬單獨產生而非於業務合併中產生，則應用香港財務報告準則第3號的實體應分別參考香港會計準則第37號或香港(國際財務報告詮釋委員會) — 詮釋第21號而非概念框架。此外，該等修訂澄清或然資產於收購日期不符合確認條件。本集團已對二零二二年一月一日或之後發生的業務合併進行前瞻性應用。由於本期發生的業務合併所產生的修訂範圍內不存在或有資產、負債和或有負債，因此對本集團的財務狀況和業績沒有任何影響。

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2 Basis of Preparation and Changes in Accounting Policies and Disclosures

(Continued)

2.2 Changes in accounting policies and disclosures (Continued)

- (b) Amendments to HKAS 16 prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling any such items, and the cost of those items, in profit or loss. The Group has applied the amendments retrospectively to items of property, plant and equipment made available for use on or after 1 January 2021. Since there was no sale of items produced while making property, plant and equipment available for use on or after 1 January 2021, the amendments did not have any impact on the financial position or performance of the Group.
- (c) Amendments to HKAS 37 clarify that for the purpose of assessing whether a contract is onerous under HKAS 37, the cost of fulfilling the contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract include both the incremental costs of fulfilling that contract (e.g., direct labour and materials) and an allocation of other costs that relate directly to fulfilling that contract (e.g., an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract as well as contract management and supervision costs). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The Group has applied the amendments prospectively to contracts for which it has not yet fulfilled all its obligations at 1 January 2022 and no onerous contracts were identified. Therefore, the amendments did not have any impact on the financial position or performance of the Group.

2 編製基準及會計政策變動與披露 (續)

2.2 會計政策變動與披露(續)

- (b) 香港會計準則第16號的修訂禁止實體從物業、廠房及設備項目的成本中扣除使資產達到管理層擬定之營運狀態所需位置與條件過程中產生的項目銷售之任何所得款項。相反，實體須於損益中確認銷售任何有關項目之所得款項及該等項目之成本。本集團已對在二零二一年一月一日或之後可供使用的物業、廠房及設備項目追溯應用該修訂。由於在二零二一年一月一日或之後將物業、廠房及設備項目帶到可供使用的期間並無出售所產生的項目，該修訂對本集團的財務狀況或表現並無任何影響。
- (c) 香港會計準則第37號的修訂澄清，就根據香港會計準則第37號評估合約是否屬虧損性而言，履行合約的成本包括與合約直接相關的成本。與合約直接相關的成本包括履行該合約的增量成本(例如直接勞工及材料)及與履行合約直接相關的其他成本分配(例如分配履行合約所用物業、廠房及設備項目的折舊費用以及合約管理及監管成本)。一般及行政成本與合約並無直接關連，除非根據合約明確向對手方收取，否則不包括在內。本集團已對截至二零二二年一月一日尚未履行其所有義務的合約進行前瞻性應用而且並未發現任何虧損性合約。因此，該等修訂對本集團的財務狀況或表現並無任何影響。



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2 Basis of Preparation and Changes in Accounting Policies and Disclosures

(Continued)

2.2 Changes in accounting policies and disclosures (Continued)

(d) Annual Improvements to HKFRSs 2018–2020 sets out amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41. Details of the amendments that are applicable to the Group are as follows:

- (i) HKFRS 9 Financial Instruments: clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. The Group has applied the amendment prospectively to financial liabilities that are modified or exchanged on or after 1 January 2022. As there was no modification of the Group's financial liabilities during the period, the amendment did not have any impact on the financial position or performance of the Group.
- (ii) HKFRS 16 Leases: removes the illustration of payments from the lessor relating to leasehold improvements in Illustrative Example 13 accompanying HKFRS 16. This removes potential confusion regarding the treatment of lease incentives when applying HKFRS 16.

2 編製基準及會計政策變動與披露 (續)

2.2 會計政策變動與披露(續)

(d) 香港財務報告準則二零一八年至二零二零年週期之年度改進載列香港財務報告準則第1號、香港財務報告準則第9號、香港財務報告準則第16號隨附之說明性示例及香港會計準則第41號的修訂。預期將適用於本集團之該等修訂詳情如下：

- (i) 香港財務報告準則第9號金融工具：澄清實體於評估一項新訂或經修訂金融負債之條款是否實質上不同於原金融負債之條款時所計入之費用。該等費用僅包括借款人與貸款人之間已付或已收之費用，其中包括借款人或貸款人代表另一方支付或收取之費用。本集團已對二零二二年一月一日或之後修改或交換的金融負債進行前瞻性應用。由於本期本集團的金融負債未發生修改，本次修改對集團的財務狀況或業績沒有影響。
- (ii) 香港財務報告準則第16號租賃：於香港財務報告準則第16號隨附之第13項說明性示例中移除出租人就租賃物業裝修作出之付款說明。此舉消除了應用香港財務報告準則第16號時對租賃優惠進行處理之潛在混淆。

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3 Segment Reporting

In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has identified four reportable segments and their comparative figures:

- (i) the manufacture of, trading of, and provision of processing services for monocrystalline silicon solar ingots/wafers and related products ("Segment A");
- (ii) the manufacture and trading of photovoltaic modules ("Segment B");
- (iii) the construction and operation of photovoltaic power plants ("Segment C"); and
- (iv) the manufacture and trading of semiconductor, the trading of monocrystalline silicon solar cells and others ("Segment D").

The reportable segments had been adjusted under resources allocation reassessment during the period. Accordingly, certain prior year comparative amounts have been reclassified and restated to conform with the current year's presentation of reportable segments.

The reportable segments the Group identified in the same period prior year were as follows:

- (i) the manufacture of, trading of, and provision of processing services for monocrystalline silicon solar ingots/wafers, semiconductor and related products ("Segment A");
- (ii) the manufacture and trading of photovoltaic modules ("Segment B");
- (iii) the manufacture and trading of monocrystalline silicon solar cells ("Segment C"); and
- (iv) the construction and operation of photovoltaic power plants ("Segment D").

3 分部報告

就資源分配及表現評估而言，本集團按照與本集團最高級行政管理人員內部呈報資料一致的方式，確認四個可報告分部：

- (i) 太陽能單晶硅棒／硅片及相關產品的製造、買賣及提供加工服務(「分部A」)；
- (ii) 製造及買賣光伏組件(「分部B」)；
- (iii) 興建及經營光伏電站(「分部C」)；及
- (iv) 製造及買賣半導體以及買賣太陽能單晶硅電池及其他(「分部D」)。

可報告分部已於年內根據資源分配重新評估作出調整。因此，某些去年同期的比較金額已重新分類和重列，以符合本年度分部報告的列報。

本集團於去年同期確定的可報告分部如下：

- (i) 太陽能單晶硅棒／硅片，半導體及相關產品的製造、買賣及提供加工服務(「分部A」)；
- (ii) 製造及買賣光伏組件(「分部B」)；
- (iii) 製造及買賣太陽能單晶硅電池(「分部C」)；及
- (iv) 興建及經營光伏電站(「分部D」)。



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3 Segment Reporting (Continued)

(a) Segment results, assets and liabilities

For the purpose of assessing segment performance and allocating resources between segments, the Group's most senior executive management monitors the results, assets and liabilities attributable to each reportable segment on the basis as they are presented in the Group's financial statements. Information regarding the Group's reportable segments as provided to the Group's most senior executive management for the period is set out below:

3 分部報告 (續)

(a) 分部業績、資產及負債

為評估分部表現及於分部間分配資源，本集團最高級行政管理人員會監察各可報告分部應佔的業績、資產及負債(按照本集團財務報表呈列的基準)。期內向本集團最高級行政管理人員提供的有關本集團可報告分部的資料載列如下：

		Six months ended 30 June 截至六月三十日止六個月									
		Segment A 分部A		Segment B 分部B		Segment C 分部C		Segment D 分部D		Total 總計	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)
Sales to external customers	來自外界客戶的收益	784,018	1,134,807	2,253,135	1,634,502	86,557	32,674	23,250	18,640	3,146,960	2,820,623
Intersegment revenue	分部間收益	53,155	269,645	2,541,350	1,653,162	91,256	2,304	114,367	288,944	2,800,128	2,214,055
Reportable segment revenue	可報告分部收益	837,173	1,404,452	4,794,485	3,287,664	177,813	34,978	137,617	307,584	5,947,088	5,034,678
Reportable segment profit/(loss)	可報告分部利潤/ (虧損)	112,495	200,787	55,866	(53,967)	(7,177)	6,579	(27,501)	(32,753)	133,683	120,646

		Segment A 分部A										Segment B 分部B										Segment C 分部C										Segment D 分部D										Total 總計									
		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)		At 30 June 2022 二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)		At 31 December 2021 二零二一年 十二月三十一日 RMB'000 人民幣千元 (Restated) (已重列)																											
Reportable segment assets	可報告分部資產	1,192,223	1,267,535	4,103,815	3,895,912	244,815	211,816	1,493,421	915,909	7,034,274	6,291,172																																								
Reportable segment liabilities	可報告分部負債	855,739	1,073,342	3,848,763	3,606,280	149,446	112,771	1,391,908	826,500	6,245,856	5,618,893																																								

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3 Segment Reporting (Continued)

(a) Segment results, assets and liabilities (Continued)

Other segment information:
其他分部報告：

	Segment A 分部A		Segment B 分部B		Segment C 分部C		Segment D 分部D		Total 總計	
	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Restated) (已重列)
Interest income from bank deposits 銀行存款的利息收入	761	539	15,372	1,193	5	19	2,643	822	18,781	2,573
Finance costs 融資成本	(22,196)	(11,433)	(22,118)	(22,961)	(3,279)	(3,278)	(19,589)	(23,091)	(67,182)	(60,763)
Depreciation and amortisation 折舊及攤銷	(79,915)	(73,822)	(70,827)	(43,389)	(691)	(18)	(3,940)	(20,830)	(155,373)	(138,059)
Reversal of impairment losses/ (impairment losses) on trade receivables and contract assets 應收貿易賬款及合約資產 減值回沖/(減值損失)	(367)	999	(5,648)	(6,602)	1,748	2,086	3,407	(5,797)	(860)	(9,314)
Reversal of write-down/(write-down) of inventories 存貨撇減回沖/(撇減)	177	—	3,262	10,631	(1,035)	—	—	—	2,404	10,631
Capital expenditure 資本開支	162,514	289,675	25,204	12,894	12,179	—	3,293	97	203,190	302,666

(b) For the six months ended 30 June 2022, revenue from the major customers, each of which amounted to 10% or more of the Group's total revenue, is set out below:

3 分部報告 (續)

(a) 分部業績、資產及負債(續)

Six months ended 30 June
截至六月三十日止六個月

(b) 截至二零二二年六月三十日止六個月，各自佔總收益10%或以上的主要客戶如下：

Six months ended 30 June 截至六月三十日止六個月

		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Customer A — From segment B	客戶A — 來自分部B	601,060	319,208
Customer B — From segment A — From segment B	客戶B — 來自分部A — 來自分部B	— 166,146	30,466 561,699

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3 Segment Reporting (Continued)

(c) Geographic information

The following table sets out information about the Group's revenue from external customers by geographical location. The geographical location of a customer is based on the locations of the customers.

3 分部報告(續)

(c) 地區資料

下表載列有關本集團來自外界客戶的收益所在地的資料。客戶地理位置以客戶所在地點為依據。

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Mainland China (place of domicile)	中國大陸(註冊地點)	2,298,342	2,410,015
Export sales	出口銷售		
— Japan	— 日本	659,148	358,639
— West Asia	— 西亞地區	111,325	—
— Europe	— 歐洲	49,171	14,128
— South Asia	— 南亞地區	28,805	37,811
— Others	— 其他	169	30
Sub-total	小計	848,618	410,608
Total	總計	3,146,960	2,820,623

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4 Revenue

The principal activities of the Group are the manufacture of, trading of and provision of processing services for monocrystalline silicon solar ingots/wafers, semiconductor and related products, the manufacture and trading of photovoltaic modules, and the construction and operation of photovoltaic power plants.

Revenue represents the sales value of goods and electricity supplied to customers less value-added tax or other sales taxes and income from the provision of processing services. The amount of revenue recognised for each significant category during the period is as follows:

4 收益

本集團主要業務為太陽能單晶硅棒／硅片、半導體及相關產品的製造及買賣及提供加工服務，製造及買賣光伏組件與興建及經營光伏電站。

收益指供應予客戶貨物及電力的銷售值(減增值稅或其他銷售稅)以及提供加工服務所得收入。期內確認的各項重大收入類別的金額如下：

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Revenue	收益		
Sales of monocrystalline silicon solar ingots/wafers, semiconductor and related products	銷售太陽能單晶硅棒／硅片、半導體及相關產品	537,476	1,133,856
Sales of monocrystalline silicon solar cells	銷售太陽能單晶硅電池	9	1,146
Sales of photovoltaic modules	銷售光伏組件	2,252,522	1,621,610
Construction and operation of photovoltaic power plants	興建及經營光伏電站	86,557	32,674
Rendering of services	提供服務	270,396	31,337
		3,146,960	2,820,623



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中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日

(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

4 Revenue (Continued)

Revenue from contracts with customers

(i) Disaggregated revenue information

For the six months ended 30 June 2022

		Monocrystalline silicon solar ingots/wafers 太陽能單晶 硅棒/硅片 RMB'000 人民幣千元	Photovoltaic modules 光伏組件 RMB'000 人民幣千元	Construction and operation of photovoltaic power plants 興建及 經營光伏電站 RMB'000 人民幣千元	Semiconductor/ monocrystalline silicon solar cells/ related products 半導體/太陽能單晶 硅電池/相關產品 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
Types of goods and services	商品和服務的類型					
Sales of industrial products	銷售工業產品	514,235	2,252,522	330	23,250	2,790,337
Processing services	代工服務	269,783	613	—	—	270,396
Construction services	興建服務	—	—	86,227	—	86,227
Total	總計	784,018	2,253,135	86,557	23,250	3,146,960
Geographic markets	地區性市場					
Mainland China	中國	766,726	1,421,818	86,557	23,241	2,298,342
Japan	日本	—	659,139	—	9	659,148
West Asia	西亞地區	—	111,325	—	—	111,325
South Asia	南亞地區	—	28,805	—	—	28,805
Europe	歐洲	17,292	31,879	—	—	49,171
Others	其他	—	169	—	—	169
Total	總計	784,018	2,253,135	86,557	23,250	3,146,960
Timing of revenue recognition	收入確認時間					
Goods transferred at a point of time	貨物在某個時間點轉移	514,235	2,252,522	330	23,250	2,790,337
Service transferred over time	服務隨時間轉移	269,783	613	86,227	—	356,623
Total	總計	784,018	2,253,135	86,557	23,250	3,146,960

4 收益(續)

來自客戶合同之收入

(i) 分類收入信息

截至二零二二年六月三十日止六個月



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30 June 2022 於二零二二年六月三十日

(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

4 Revenue (Continued)

Revenue from contracts with customers (Continued)

(i) Disaggregated revenue information (Continued)

For the six months ended 30 June 2021 (Restated)

Types of goods and services	商品和服務的類型	Monocrystalline	Photovoltaic	Construction and	Semiconductor/	Total
		silicon solar		operation of	monocrystalline	
		ingots/wafers	modules	photovoltaic	silicon solar cells/	
		太陽能單晶		power plants	related products	
		硅棒/硅片	光伏組件	興建及	半導體/太陽能單晶	
		RMB'000	RMB'000	經營光伏電站	硅電池及相關產品	總計
		人民幣千元	人民幣千元	RMB'000	RMB'000	RMB'000
				人民幣千元	人民幣千元	人民幣千元
Sales of industrial products	銷售工業產品	1,116,362	1,621,610	277	18,640	2,756,889
Processing services	代工服務	18,445	12,892	—	—	31,337
Construction services	興建服務	—	—	32,397	—	32,397
Total	總計	1,134,807	1,634,502	32,674	18,640	2,820,623
Geographic markets	地區性市場					
Mainland China	中國	1,134,567	1,224,150	32,674	18,624	2,410,015
Japan	日本	—	358,625	—	14	358,639
South Asia	南亞地區	—	37,811	—	—	37,811
Europe	歐洲	226	13,900	—	2	14,128
Others	其他	14	16	—	—	30
Total	總計	1,134,807	1,634,502	32,674	18,640	2,820,623
Timing of revenue recognition	收入確認時間					
Goods transferred at a point of time	貨物在某個時間點轉移	1,116,362	1,621,610	277	18,640	2,756,889
Service transferred over time	服務隨時間轉移	18,445	12,892	32,397	—	63,734
Total	總計	1,134,807	1,634,502	32,674	18,640	2,820,623

4 收益(續)

來自客戶合同之收入(續)

(i) 分類收入信息(續)

截至二零二一年六月三十日止六個月(已重列)



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(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

5 Other Income and Gains, Net

5 其他收入及收益，淨額

Six months ended 30 June
截至六月三十日止六個月

		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Other income	其他收入		
Government grants	政府補貼	37,026	37,353
Interest income from bank deposits	銀行存款的利息收入	18,781	2,573
		55,807	39,926
Other gains, net	其他收益，淨額		
Net foreign exchange (loss)/gain	外匯(虧損)/收益淨額	994	(398)
Net gains on disposal of property, plant and equipment	出售物業、廠房及設備的收益淨額	131	8,131
Gain from sales of other materials	銷售其他材料收益	17,862	8,597
Gain on disposal of a subsidiary	出售附屬公司的收益	1,713	—
Gain on acquisition of a subsidiary	收購附屬公司的收益	1,512	—
Fair value losses on financial instruments (Note 17)	金融工具公允價值的損失(附註17)	(2,717)	—
Others	其他	9,192	6,983
		28,687	23,313
Other income and gains, net	其他收入及收益，淨額	84,494	63,239

6 Finance Costs

6 融資成本

Six months ended 30 June
截至六月三十日止六個月

		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Interest on bank and other borrowings	銀行及其他借貸利息	64,100	60,146
Interest on lease liabilities	租賃負債利息	3,082	617
		67,182	60,763

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7 Profit Before Tax

The Group's profit before tax is arrived at after charging/
(crediting):

7 除稅前利潤

本集團除稅前利潤已扣除／(轉回)：

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Salaries, wages and other benefits	薪金、工資及其他福利	149,172	117,824
Depreciation of right-of-use assets	使用權資產的折舊	10,854	6,417
Depreciation of property, plant and equipment	物業、廠房及設備的折舊	144,519	131,642
Reversal of write-down of inventories	存貨撇減回沖	(2,404)	(10,631)
Impairment of investment in an associate	於聯營公司投資的減值	1,000	—
Research and development costs	研究及開發成本	16,430	34,855
(Reversal of provision)/provision for warranty (Note 22)	保用成本的(撥備回沖)／撥備(附註22)	(49,265)	5,382
Impairment losses on trade receivables and contract assets	應收貿易賬款及合約資產減值損失	860	9,314
Gain on disposal of property, plant and equipment	出售物業、廠房及設備的收益	(131)	(8,131)
Gain on disposal of a subsidiary	出售附屬公司的收益	(1,713)	—
Gain on acquisition of a subsidiary	收購附屬公司的收益	(1,512)	—
Fair value losses on financial instruments (Note 17)	金融工具公允價值的損失(附註17)	2,717	—
Cost of inventories sold*	已售貨品成本*	2,593,219	2,402,550
Cost of services rendered*	已提供服務成本*	286,669	46,557

* Included in cost of inventories sold and cost of services rendered, amounts of RMB144,597,000 and RMB210,866,000 in aggregate for the six months ended 30 June 2022 and 2021, respectively, relating to staff costs and depreciation which are also included in the respective total amounts disclosed separately above for each of these types of expenses.

* 包含於已售貨品成本及已提供服務成本，於截至二零二二年及二零二一年六月三十日止六個月合共分別為人民幣144,597,000元及人民幣210,866,000元為員工成本及折舊的金額，此金額亦計入於上文單獨披露的該等各類別開支的各項總金額內。

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8 Income Tax Expense

8 所得稅開支

		Six months ended 30 June 截至六月三十日止六個月	
		2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Current tax — the PRC	即期稅項 — 中國		
Provision for the period	期間撥備	29,243	50,268
Provision adjustment in respect of prior years	過往年度調整	(15,117)	(3,997)
		14,126	46,271
Deferred tax	遞延稅項	2,732	(1,697)
Income tax expense for the period	期間所得稅開支	16,858	44,574

Hong Kong profits tax is calculated at 16.5% of the estimated assessable profits of the Company's subsidiaries incorporated in Hong Kong for the six months ended 30 June 2022 and 2021. No provision for Hong Kong profits tax has been made as the subsidiaries either did not have any assessable profits subject to Hong Kong profits tax or had accumulated tax losses brought forward from previous years to offset the estimated profits for the period.

The Company and its subsidiaries incorporated in the British Virgin Islands and the Cayman Islands are not subject to any income tax pursuant to the local rules and regulations.

The statutory tax rate applicable to the Company's subsidiary incorporated in Germany was 15% for the six months ended 30 June 2022 and 2021. No provision for income tax in Germany has been made as the subsidiary did not have any taxable profits for the period.

The statutory tax rate applicable to the Company's subsidiary incorporated in Japan was 15% (for taxable profits below JPY8 million) or 23.4% (for taxable profits above JPY8 million) for the six months ended 30 June 2022 and 2021. No provision for income tax in Japan has been made as the subsidiary did not have any taxable profits for the period.

截至二零二二年及二零二一年六月三十日止六個月，香港利得稅按本公司於香港註冊成立的附屬公司的估計應課稅利潤的16.5%計算。由於附屬公司並無任何應繳納香港利得稅的應課稅利潤或過往年度承前累計稅項虧損可抵銷期內估計利潤，故並無作出香港利得稅撥備。

本公司及其於英屬處女群島及開曼群島註冊成立的附屬公司毋須根據當地法律及法規繳納任何所得稅。

截至二零二二年及二零二一年六月三十日止六個月，本公司於德國註冊成立的附屬公司適用的法定稅率為15%。由於該附屬公司並無任何應課稅利潤，故並無於期內作出德國所得稅撥備。

截至二零二二年及二零二一年六月三十日止六個月，本公司於日本註冊成立的附屬公司適用的法定稅率為15%（適用於應課稅利潤日元8百萬元以下）或23.4%（適用於應課稅利潤超過日元8百萬元）。由於該附屬公司並無任何應課稅利潤，故並無於期內作出日本所得稅撥備。

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8 Income Tax Expense (Continued)

The income tax rate of the Company's PRC subsidiaries is 25% except for the subsidiaries mentioned below:

Jinzhou Yangguang has been accredited as "High and New Technology Enterprise" by the relevant government authority and has registered with the local tax authority to be eligible for a reduced income tax rate of 15% in 2012 for a term of three years and has been renewed every three years until 2020. In 2021, Jinzhou Yangguang has renewed the "High and New Technology Enterprise" certificate effective for the three years from 2021 to 2023. Accordingly, Jinzhou Yangguang was entitled to the 15% income tax rate for the six months ended 30 June 2022 and 2021.

Jiangsu Yueyang has been accredited as "High and New Technology Enterprise" by the relevant government authority in 2021 for a term of three years, and has registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Accordingly, Jiangsu Yueyang was entitled to the 15% income tax rate for the six months ended 30 June 2022 and 2021.

Qujing Yangguang has registered with the local tax authority to be eligible for a reduced income tax rate of 15% in accordance with the "Catalogue of Industries Encouraged to Develop in the Western Region". Accordingly, Qujing Yangguang was entitled to the 15% income tax rate for the six months ended 30 June 2022 and 2021.

Liaoning Boxinke Semiconductor Material Co., Ltd. ("Liaoning Semiconductor") has been accredited as "High and New Technology Enterprise" by the relevant government authority in 2021 for a term of three years, and has registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Accordingly, Liaoning Semiconductor was entitled to the 15% income tax rate for the six months ended 30 June 2022 and 2021.

Jinzhou Youhua Silicon Materials Co., Ltd. ("Youhua Silicon") has been accredited as "High and New Technology Enterprise" by the relevant government authority in 2021 for a term of three years, and has registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Accordingly, Youhua Silicon was entitled to the 15% income tax rate for the six months ended 30 June 2022 and 2021.

8 所得稅開支(續)

本公司的中國附屬公司的所得稅稅率為25%，惟下述附屬公司除外：

錦州陽光於二零一二年獲有關政府當局授予「高新科技企業」地位並已向當地稅務機關登記，符合資格減按15%的稅率繳付所得稅，為期三年，並截至二零二零年為止每隔三年更新。二零二一年，錦州陽光更新「高新科技」證書，有效期為三年，自二零二一年起至二零二三年止。因此錦州陽光於截至二零二二年及二零二一年六月三十日止六個月可按15%所得稅率繳稅。

江蘇悅陽於二零二一年獲有關政府當局授予「高新科技企業」地位，為期三年，並已向當地稅務機關登記，符合資格減按15%的稅率繳付所得稅。因此江蘇悅陽於截至二零二二年及二零二一年六月三十日止六個月可按15%所得稅率繳稅。

曲靖陽光已根據「西部地區鼓勵類產業目錄」向當地稅務機關登記，符合資格減按15%的稅率繳付所得稅。因此，曲靖陽光於截至二零二二年及二零二一年六月三十日止六個月可按15%所得稅率繳稅。

遼寧博芯科半導體材料有限公司(「遼寧半導體」)於二零二一年獲有關政府當局授予「高新科技企業」地位，為期三年，並已向當地稅務機關登記，符合資格減按15%的稅率繳付所得稅。因此，遼寧半導體於截至二零二二年及二零二一年六月三十日止六個月可按15%所得稅率繳稅。

錦州佑華硅材料有限公司(「佑華硅」)於二零二一年獲有關政府當局授予「高新科技企業」地位，為期三年，並已向當地稅務機關登記，符合資格減按15%的稅率繳付所得稅。因此，佑華硅於截至二零二二年及二零二一年六月三十日止六個月可按15%所得稅率繳稅。



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9 Basic and Diluted Earnings per Share Attributable to Ordinary Equity Holders of the Parent

(a) Basic earnings per share

The calculation of basic earnings per share is based on the earnings attributable to ordinary equity holders of the parent of RMB67,733,000 (six months ended 30 June 2021: RMB61,339,000) and the weighted average of 3,323,771,133 ordinary shares of the Company in issue during the period (six months ended 30 June 2021: 3,295,925,829).

(b) Diluted earnings per share

The Company had no dilutive potential ordinary shares in issue for the periods ended 30 June 2022 and 2021.

10 Property, plant and equipment

During the six months ended 30 June 2022, the Group acquired property, plant and equipment at a total cost of RMB203,190,000 (six months ended 30 June 2021: RMB302,666,000).

Assets with a net book value of RMB593,000 were disposed of by the Group during the six months ended 30 June 2022 (six months ended 30 June 2021: RMB4,680,000), resulting in a net gain on disposal of items of property, plant and equipment of RMB131,000 (six months ended 30 June 2021: net gain of RMB8,131,000).

9 歸屬於母公司普通股股東的每股基本及攤薄盈利

(a) 每股基本盈利

每股基本盈利乃根據歸屬於母公司普通股股東的利潤人民幣67,733,000元(截至二零二一年六月三十日止六個月：人民幣61,339,000元)及期內本公司已發行普通股加權平均股數3,323,771,133股(截至二零二一年六月三十日止六個月：3,295,925,829股)計算。

(b) 每股攤薄盈利

於截至二零二二年及二零二一年六月三十日止期間，本公司並無潛在攤薄的已發行普通股。

10 物業、廠房及設備

於截至二零二二年六月三十日止六個月，本集團以總成本人民幣203,190,000元(截至二零二一年六月三十日止六個月：人民幣302,666,000元)添置物業、廠房及設備。

本集團於截至二零二二年六月三十日止六個月期間處置賬面淨值為人民幣593,000元(截至二零二一年六月三十日止六個月：人民幣4,680,000元)的資產，因而產生出售物業、廠房及設備項目收益淨額人民幣131,000元(截至二零二一年六月三十日止六個月：收益淨額人民幣8,131,000元)。



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11 Inventories

11 存貨

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Raw materials	原材料	364,139	258,677
Work in progress	在製品	28,726	21,607
Finished goods	製成品	369,812	182,695
Less: Write-down of inventories to net realisable value	減：存貨撇減至可變現淨值	(1,136)	(3,540)
		761,541	459,439

12 Trade and Bills Receivables

12 應收貿易賬款及票據

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Trade receivables	應收貿易賬款	1,087,480	1,205,268
Bills receivable	應收票據	698,740	700,504
Less: Impairment	減：減值	(110,758)	(111,617)
		1,675,462	1,794,155



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12 Trade and Bills Receivables (Continued)

The ageing analysis of trade and bills receivables (net of allowance for doubtful debts) at the end of the reporting period based on the invoice date is as follows:

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Within 1 year	一年內	1,629,814	1,733,506
1 to 2 years	一至二年	25,440	31,686
2 to 3 years	二至三年	2,635	24,338
3 to 4 years	三至四年	16,684	3,582
4 to 5 years	四至五年	889	966
Over 5 years	超過五年	—	77
		1,675,462	1,794,155

The Group normally allows a credit period of 30 to 90 days for its customers. However, regarding domestic photovoltaic module sales, some trade receivables are granted longer credit periods of up to 180 days depending on the construction period of photovoltaic power plants.

As at 30 June 2022, bills receivable amounting to RMB346,145,000 (31 December 2021: RMB345,882,000), together with pledged deposits amounting to RMB938,753,000 (31 December 2021: RMB567,529,000) had been pledged as security to banks for issuing bills payable to suppliers amounting to RMB1,401,934,000 (31 December 2021: RMB1,315,712,000).

12 應收貿易賬款及票據(續)

於報告期間結算日，扣除呆賬撥備後的應收貿易賬款及票據的賬齡按發票日期分析如下：

本集團一般授予其客戶30至90日的信貸期。但針對國內之組件銷售，應收帳款的回收需取決於電站建設的工程週期，部分賬款信貸期較長，達180天。

於二零二二年六月三十日，應收票據人民幣346,145,000元(二零二一年十二月三十一日：人民幣345,882,000元)以及已抵押存款人民幣938,753,000元(二零二一年十二月三十一日：人民幣567,529,000元)已抵押作為銀行用以開具應付供應商的票據人民幣1,401,934,000元(二零二一年十二月三十一日：人民幣1,315,712,000元)。

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13 Contract Assets

13 合約資產

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Contract assets	合約資產	234,944	160,677
Less: Impairment	減：減值	(3,347)	(1,628)
		231,597	159,049

14 Prepayments, Other Receivables and Other Assets

14 預付款項、其他應收款項及其他資產

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Prepayments for raw materials	原材料的預付款項	352,076	314,445
Deductible value-added tax	可扣減增值稅	63,414	100,291
Other receivables	其他應收款項	115,750	106,556
Less: Impairment	減：減值	—	—
		531,240	521,292



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15 Pledged Deposits

Certain of the Group's bank deposits were pledged to secure bank loans and other banking facilities granted to the Group as follows:

15 已抵押存款

本集團若干銀行存款已就本集團獲授的銀行貸款及其他銀行融資作出抵押，載列如下：

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Pledged as security for bills payable	抵押作為應付票據的抵押品	938,753	567,529
Others	其他	151,818	183,749
		1,090,571	751,278

16 Cash and Cash Equivalents

16 現金及現金等價物

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Cash and cash equivalents	現金及現金等價物	500,882	431,861

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17 Convertible Bonds and Derivative Financial Instruments

On 27 April 2022, Qujing Yangguang issued convertible bonds with a nominal value of RMB250,000,000 (the “Convertible Bonds”) and a maturity of three years from the date of issuance. There was no movement in the number of these Convertible Bonds during the period. The bonds carried interest at a rate of 5.8% per annum, which was payable half-yearly in arrears on 30 June and 31 December. The convertible bonds were secured by certain of the Group’s property, plant and equipment with a net book value of RMB250,897,000 and guaranteed by certain directors of the Group.

The principal terms of the Convertible Bonds are as below:

(a) conversion option

The bonds are convertible at the option of the bondholders into ordinary shares on 27 April 2022 with the initial conversion price determined based on the unaudited pro forma consolidated net profit of the Qujing Yangguang with its subsidiaries (collectively “Qujing Group”), for the financial year immediately preceding the date of conversion of the Convertible Bonds and a price-to-earnings multiple of 15, subject to the minimum conversion price of RMB26.3 per Qujing Yangguang’s share (subject to adjustment events set out in and in accordance with the terms and conditions of the subscription agreement).

(b) redemption option

— Redemption at maturity

Qujing Yangguang will redeem the Convertible Bonds at outstanding principal amount in one lump sum, together with payment of the interest, on the maturity date.

— Early redemption on events of default

Upon the occurrence of an event of default, and the bondholders giving notice to Qujing Yangguang and/or any other obligors declaring, all or part of the Convertible Bonds shall be immediately redeemed.

17 可換股債券及衍生金融工具

於二零二二年四月二十七日，曲靖陽光發行本金額人民幣250,000,000元的可換股債券（「可換股債券」），期限為自發行之日起三年。期內，該等可換股債券數目並無變動。該債券的年利率為5.8%，每半年到期時支付，於六月三十日和十二月三十一日支付。可換股債券以本集團若干物業、廠房及設備作抵押，賬面淨值為人民幣250,897,000元，及由本集團若干董事提供擔保。

可換股債券的主要條款如下：

(a) 轉換選項

債券持有人可選擇於二零二二年四月二十七日將債券轉換為普通股，初始轉換價格根據曲靖陽光及其子公司（統稱「曲靖集團」）於可換股債券換股日期前一財政年度的未經審計的備考綜合淨利潤，及市盈率15倍而定，最低換股價格為每股曲靖陽光股份人民幣26.3元（視乎認購協議內的條款規定及調整事項而定）。

(b) 贖回選項

— 到期贖回

曲靖陽光將在到期日一次性贖回未償還本金的可換股債券及支付利息。

— 違約情況下的提前贖回

一旦發生違約事件，且債券持有人和／或有任何其他義務人通知曲靖陽光，可立即贖回全部或部分可換股債券。



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17 Convertible Bonds and Derivative Financial Instruments (Continued)

(b) redemption option (Continued)

— Early redemption on certain events

Upon the occurrence of certain event, and the bondholders giving written notice to Qujing Yangguang, Qujing Yangguang shall redeem all or part of the outstanding Convertible Bonds on or before the date as required by the bondholders at the outstanding principal amount with interest. Otherwise, all outstanding Convertible Bonds shall be redeemed on such date earlier than the maturity date as agreed between Qujing Yangguang and the bondholders.

— Early redemption at the option of Qujing Yangguang

Qujing Yangguang may, at its option, redeem all outstanding Convertible Bonds at principal amount with interest as set out in and in accordance with the terms and conditions of the subscription agreement.

The Convertible Bonds are comprised of two components:

The liability component is initially measured at fair value amounting approximately RMB242,094,000, which is subsequently measured at amortised cost by applying effective interest rate method, after considering the effect of transaction costs.

The derivative component is valued at fair value by the directors with reference to valuation carried out by an independent valuation firm, Masterpiece Valuation Advisory Ltd. The fair value of the derivative component is derived from removing the fair value of liability component from the fair value of Convertible Bonds as a whole. The derivative financial instrument representing the conversion and redemption option was subsequently measured at fair value.

17 可換股債券及衍生金融工具(續)

(b) 贖回選項(續)

— 特定事項下的提前贖回

特定事項發生後，債券持有人向曲靖陽光發出書面通知，曲靖陽光應於債券持有人要求的日期或之前按未償還本金加利息贖回全部或部分未償還的可轉換債券。否則，所有未償還的可換股債券應在曲靖陽光與債券持有人協商的到期日之前贖回。

— 曲靖陽光選擇提前贖回

曲靖陽光可選擇按認購協議內所載條款及條件以本金金額及利息贖回所有未償還可換股債券。

可換股債券由兩部分組成：

負債部分以公允價值進行初始計量，金額約為人民幣242,094,000元，採用實際利率法考慮交易成本的影響後以攤餘成本進行計量。

衍生工具部分由董事參考獨立評估公司睿力評估諮詢有限公司進行的估值評估。衍生工具部分的公允價值來自於從可換股債券的整體公允價值扣除負債部分的公允價值而來。代表轉換及贖回期權的衍生金融工具其後按公允價值計量。

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17 Convertible Bonds and Derivative Financial Instruments (Continued)

(b) redemption option (Continued)

The Convertible Bonds issued during the period have been split into the liability and derivative components as follows:

17 可換股債券及衍生金融工具 (續)

(b) 贖回選項 (續)

本期發行的可換股債券分為負債部分和衍生部分如下：

		2022 二零二二年 RMB'000 人民幣千元
Nominal value of convertible bonds issued during the period	本期發行的可換股債券本金金額	250,000
Liability component at the issuance date	於發行日的負債部份	242,094
Interest expense	利息支出	5,214
Interest payable	應付利息	(2,175)
Liability component on 30 June	於六月三十日的負債部份	245,133
Fair value of derivative components at the issuance date	於發行日衍生部份的公允價值	7,906
Fair value losses on financial instruments	金融工具公允價值的損失	2,717
Fair value of derivative components on 30 June	於六月三十日衍生部份的公允價值	10,623



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18 Interest-bearing Bank and Other Borrowings

18 銀行及其他計息借貸

Group	本集團	Notes 附註	30 June 2022 二零二二年六月三十日			31 December 2021 二零二一年十二月三十一日		
			Effective interest rate (%) 實際利率(%)	Maturity 到期	RMB'000 人民幣千元 (Unaudited) (未經審核)	Effective interest rate (%) 實際利率(%)	Maturity 到期	RMB'000 人民幣千元 (Audited) (經審核)
Current:	流動：							
Bank loans — secured	銀行貸款 — 有抵押	(a)	3.950-7.500	2023	541,644	3.480-7.500	2022	507,782
Bank loans — guaranteed	銀行貸款 — 已擔保	(b)	2.625-9.000	2023	1,038,011	2.585-9.000	2022	981,879
Other loans — secured	其他貸款 — 有抵押	(c)	0.000-7.500	2023	352,595	0.000-7.500	2022	410,966
Other loans — guaranteed	其他貸款 — 已擔保	(b)	5.000-5.475	2023	13,736	5.000-5.475	2022	12,299
Current portion of long-term borrowings:	長期借貸的流動 部份：							
Other loans — guaranteed	其他貸款 — 已擔保	(b)	1.600-6.000	2023	45,123	1.600-6.000	2022	2,353
Total	合計				1,991,109			1,915,279
Non-current:	非流動：							
Other loans — guaranteed	其他貸款 — 已擔保	(b)	1.600-10.000	2024-2025	377,084	1.600-7.000	2023-2024	209,670
Convertible bonds (Note 17)	可換股債券(附註17)		15.315	2025	245,133			—
Total	合計				622,217			209,670

(a) The bank borrowings were secured by certain of the Group's property, plant and equipment and right-of-use assets with a net book value of RMB555,980,000 (31 December 2021: RMB600,545,000).

(b) Certain subsidiaries' borrowings are guaranteed by other subsidiaries of the Group.

(c) Other loans of the Group are secured by the Group's bills receivable amounting to RMB352,595,000 (31 December 2021: RMB354,622,000) and the Group's trade receivables amounting to Nil (31 December 2021: RMB56,344,000).

(a) 銀行借貸以本集團賬面淨值為人民幣555,980,000元(二零二一年十二月三十一日：人民幣600,545,000元)的若干物業、廠房及設備以及使用權資產作抵押。

(b) 若干附屬公司的借貸乃由本集團其他附屬公司提供擔保。

(c) 其他借貸以本集團賬面為人民幣352,595,000元(二零二一年十二月三十一日：人民幣354,622,000元)的應收票據以及0元(二零二一年十二月三十一日：人民幣56,344,000元)的應收貿易賬款作抵押。

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19 Trade and Bills Payables

19 應付貿易賬款及票據

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Trade payables	應付貿易賬款	1,002,716	927,004
Bills payable	應付票據	1,401,934	1,315,712
		2,404,650	2,242,716

(a) The ageing analysis of trade and bills payables at the end of the reporting period based on the invoice date is as follows:

(a) 於報告期間結算日，應付貿易賬款及票據的賬齡按發票日期分析如下：

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Within 1 month	一個月內	698,002	785,573
1 to 3 months	一至三個月	932,639	712,362
4 to 6 months	四至六個月	444,479	645,239
7 to 12 months	七至十二個月	254,099	65,245
Over 1 year	超過一年	75,431	34,297
		2,404,650	2,242,716



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19 Trade and Bills Payables (Continued)

- (b) As at 30 June 2022, the Group's bills payable of RMB1,401,934,000 (31 December 2021: RMB1,315,712,000) were secured by the Group's bills receivable of RMB346,145,000 (31 December 2021: RMB345,882,000) (Note 12) and by the Group's pledged deposits of RMB938,753,000 (31 December 2021: RMB567,529,000).

19 應付貿易賬款及票據(續)

- (b) 於二零二二年六月三十日，本集團人民幣1,401,934,000元(二零二一年十二月三十一日：人民幣1,315,712,000元)的應付票據以本集團人民幣346,145,000元(二零二一年十二月三十一日：人民幣345,882,000元)的應收票據(附註12)以及人民幣938,753,000元(二零二一年十二月三十一日：人民幣567,529,000元)的已抵押存款作抵押。

20 Other Payables and Accruals

20 其他應付款項及應計開支

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Other payables and accrued expenses	其他應付款項及應計開支	406,601	512,511
Other tax payables	其他應付稅項	46,238	31,217
Dividends payable	應付股息	5,604	138
		458,443	543,866

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21 Deferred Income

Various government grants have been received by the Group for generating export sales, participating in the high-tech industry and constructing various manufacturing and photovoltaic power plants in Liaoning Province, Jiangsu Province, Yunnan Province and Qinghai Province, the PRC.

Those government grants related to assets are recognised in the statement of financial position initially as deferred income and are amortised to profit or loss as other income over the useful lives of the assets.

22 Provision

The Group's photovoltaic modules are typically sold with a 2-year or 5-year warranty for defects in materials and workmanship, and a 10-year or 25-year minimum power output warranty against declines of initial power generation capacity of more than 10% and 20%, respectively from the date of receipt. The Group has the obligation to repair or replace solar modules, under the terms of the warranty policy. The Group maintains warranty reserves to cover potential liabilities that could arise under these warranties.

The Group began to sell photovoltaic modules from the year of 2010. Up to now, the Group has continuously engaged in sales business of photovoltaic module for over 10 years. According to the mathematical statistics of quality compensation starting from selling photovoltaic modules, the Group has not made any quality compensation due to declines of initial power generation capacity of more than 10% and 20% from the date of receipt or defects in materials and workmanship.

In order to present a fairer and more appropriate view of the financial position and operating results of the Group, the Group revised its accounting estimates on the provision for warranties from 1% to 0.625% in accordance with HKAS, based on the technical assessment report prepared by the Company's management, as well as further referenced to the accounting estimation adopted by other companies in the industry. The Company obtained the approval on 26 August 2022 from the Company's board of directors and adopted this change from 1 January 2022.

If there are no changes in accounting estimates, the provision for warranties would amount to approximately RMB34,387,000 in the current period; after the change in accounting estimates, a reversal of the provision for warranties of RMB47,927,000 was recorded, which increased the total profit of the Group for the period ended 30 June 2022 by approximately RMB82,314,000.

21 遞延收入

本集團因產生出口銷售、從事高科技行業及在中國遼寧省、江蘇省、雲南省和青海省興建多個製造廠房及光伏電站而獲得不同的政府補貼。

該等與資產相關的政府補貼最初於財務狀況表中確認為遞延收入，並按資產可使用年期於損益內攤銷為其他收入。

22 撥備

本集團的光伏組件出售時一般附帶自驗收日期起2年或5年物料損壞及人工保用，以及10年及25年最低電力輸出保證，分別保證電力輸出下降幅度不會多於初步發電產能10%及20%。根據保用政策條款，本集團有責任對太陽能組件進行維修或置換。本集團設有保用儲備以覆蓋該等保用項下的潛在負債。

本集團於2010年開始銷售光伏組件，至今，本集團已連續從事光伏組件銷售業務10餘年。根據從銷售光伏組件開始的質量補償統計數據，本集團未因初步發電產能自驗收日期起下降10%以上、20%以上或物料損壞、人工保用等原因進行質量補償。

為更公允、更恰當地反映本集團的財務狀況和經營成果，本集團在編製的技術評估報告的基礎上，及參考同行業其他公司採用的會計估計，按照香港會計準則將保用成本的撥備的會計估計由1%修訂為0.625%。本公司於二零二二年八月二十六日獲得本公司董事會批准，並於二零二二年一月一日起採納此項變更。

如果不發生會計估計變更，本期保用成本的撥備約人民幣34,387,000元；會計估計變更後，保用成本的撥備回沖金額人民幣47,927,000元，使本集團截至二零二二年六月三十日止期間的利潤總額增加約人民幣82,314,000元。



Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日

(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

23 Capital, Reserves and Dividends

(a) Dividends

The directors did not recommend the payment of a dividend in respect of the six months ended 30 June 2022 (six months ended 30 June 2021: Nil).

(b) Share capital

The information about the Company's ordinary shares is set out below:

23 資本、儲備及股息

(a) 股息

董事不建議就截至二零二二年六月三十日止六個月派付股息(截至二零二一年六月三十日止六個月：無)。

(b) 股本

本公司的普通股載列如下：

		No. of shares 股份數目	Amount 金額 RMB'000 人民幣千元
As at 31 December 2021 (Audited)	於二零二一年十二月三十一日(經審核)	3,323,771,133	285,924
As at 30 June 2022 (Unaudited)	於二零二二年六月三十日(未經審核)	3,323,771,133	285,924

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30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

24 Business Combination

In March 2022, the Group acquired a 100% interest in Jinzhou Changhua Carbon Products Co., Ltd. ("Changhua Carbon") from outside the Group. The purchase consideration for the acquisition was in the form of cash, with RMB5,192,000 paid at the acquisition date in March 2022.

The fair values of the identifiable assets and liabilities of Changhua Carbon as at the date of acquisition were as follows:

24 企業合併

於二零二二年三月，本集團從集團外收購錦州昌華碳素製品有限公司「昌華碳素」100%股權。本次收購的購買代價為現金形式，於二零二二年三月的收購日支付人民幣5,192,000元。

昌華碳素於收購日可辨認資產及負債的公允價值如下：

		Fair value recognized on acquisition 收購時確認的 公允價值 RMB'000 人民幣千元 (Unaudited) (未經審核)
Property, plant and equipment	物業、廠房及設備	4,729
Cash and bank balances	現金及銀行結餘	4,531
Trade receivables	應收貿易賬款	28,951
Inventories	存貨	4,019
Prepayments and other receivables	預付款項及其他應收款項	413
Trade payables	應付貿易賬款	(13,038)
Other payables and accruals	其他應付款項及應計開支	(22,901)
Total identifiable net assets at fair value		6,704
Gains on acquisition		(1,512)
Satisfied by cash		5,192
		RMB'000 人民幣千元
Cash consideration	現金代價	(5,192)
Cash and bank balances acquired	獲得的現金及銀行結餘金額	4,531
Net outflow of cash and cash equivalents included in cash flows from investing activities	包含在投資活動現金流量的現金及現金 等價物淨流出	(661)



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30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

25 Capital Commitments

25 資本承擔

		As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Contracted but not provided for	已訂約但未計提撥備	300,563	465,020

26 Material Related Party Transactions and Balances

26 重大關連方交易及結餘

(a) Significant related party transactions

(a) 重大關連方交易

		Six months ended 30 June 截至六月三十日止六個月	
	Note 附註	2022 二零二二年 RMB'000 人民幣千元 (Unaudited) (未經審核)	2021 二零二一年 RMB'000 人民幣千元 (Unaudited) (未經審核)
Purchases of goods from: The entities controlled by the directors of the Company or close family members of the directors	向下列各方購買貨品： 本公司董事或董事的近 親所控制的實體	(i) —	96

Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

26 Material Related Party Transactions and Balances (Continued)

(b) Outstanding balances with related parties

26 重大關連方交易及結餘(續)

(b) 與關連方之間的尚未償還結餘

		Notes 附註	As at 30 June 2022 於二零二二年 六月三十日 RMB'000 人民幣千元 (Unaudited) (未經審核)	As at 31 December 2021 於二零二一年 十二月三十一日 RMB'000 人民幣千元 (Audited) (經審核)
Trade and bills receivables: Associates of the Group	應收貿易賬款及票據： 本集團聯營公司	(iii)	39,554	103
			39,554	103
Prepayments and other receivables: Entities controlled by the directors of the Company or close family members of the directors	預付及其他應收款項： 本公司董事或董事的 近親所控制的實體	(iii)	1,727	—
			1,727	—
Trade payables: Entities controlled by the directors of the Company or close family members of the directors	應付貿易賬款： 本公司董事或董事的 近親所控制的實體	(iii)	268	274
			268	274
Short-term loan: A director of a subsidiary	短期借款： 一間附屬公司之一名 董事	(ii)	10,380	8,214
			10,380	8,214



Notes to Interim Condensed Consolidated Financial Statements 中期簡明綜合財務報表附註

30 June 2022 於二零二二年六月三十日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

26 Material Related Party Transactions and Balances (Continued)

(b) Outstanding balances with related parties (Continued)

Notes:

- (i) In the opinion of the directors, the transactions between the Group and the related parties were conducted in the ordinary and usual course of business and on normal commercial terms, and the pricing terms were at the prevailing market prices.
- (ii) The Group had an outstanding balance due to a director of a subsidiary amounting to HK\$11,818,000 (equivalent to RMB10,380,000) as at the end of the reporting period. This loan was received from a director of a subsidiary, and the loan is unsecured, with a 5% annual interest rate.
- (iii) Except for the short-term loan from a director of a subsidiary, the other balances were unsecured, non-interest-bearing and repayable on demand. Trade receivables from and trade payables to related parties were repayable or to be settled on the respective credit terms.

27 Events after the Reporting Period

On 29 April 2022, Qujing Yangguang and Guotai Junan Securities Co., Ltd. ("Guotai Junan") entered into a service agreement (the "Service Agreement"), pursuant to which Guotai Junan has agreed to place, on a best-effort basis, up to 27,138,643 shares of Qujing Yangguang to investors and the amount of proceeds to be raised would be no more than RMB460,000,000 (the "Capital Injection"). The Service Agreement, the Capital Injection and the transactions contemplated thereunder are subject to approval by the shareholders of the Company, which was obtained at an extraordinary general meeting of the Company held on 17 August 2022. Completion of the Capital Injection is subject to the fulfilment of the relevant conditions precedent.

28 Approval of the Interim Condensed Consolidated Financial Statements

The interim condensed consolidated financial statements were approved and authorised for issue by the board of the directors on 26 August 2022.

26 重大關連方交易及結餘(續)

(b) 與關連方之間的尚未償還結餘(續)

附註：

- (i) 董事認為，本集團與關連方之間的交易是在一般及日常業務過程中按正常商業條款進行，定價條款乃按照當前的市場慣例。
- (ii) 於報告期末，本集團與一間附屬公司之一名董事的尚未償還結餘為11,818,000港元(相當於人民幣10,380,000元)。該貸款是從一間附屬公司的一名董事處獲得，該貸款為無抵押，年利率為5%。
- (iii) 除了從一間附屬公司之一名董事處獲得的短期貸款外，其他餘額均為無抵押、免息及須按要求償還。來自關聯方的應收貿易賬款和應付貿易賬款應根據各自的信用條件償還或結算。

27 報告期間後事項

於二零二二年四月二十九日，曲靖陽光與國泰君安證券股份有限公司(「國泰君安」)訂立服務協議(「服務協議」)，據此，國泰君安同意按竭誠基準配售最多27,138,643股曲靖股份予投資者，經增資(「增資」)將募集的所得款項不會多於人民幣460,000,000元。服務協議、增資及其項下擬進行的交易須由本公司股東批准，並已於二零二二年八月十七日召開的股東特別大會上獲得本公司股東批准。增資須待相關先決條件達成後，方告完成。

28 批准中期簡明綜合財務報表

董事會已於二零二二年八月二十六日核准並許可發出中期簡明綜合財務報表。



Solargiga Energy



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