



Solargiga Energy

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

2019 年報
Annual Report

To Create
BRIGHT FUTURE
共創 **未來**

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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. FU Shuangye
Mr. ZHANG Chun (retired with effect from 18 June 2019)
Ms. FENG Wenli (appointed with effect from 18 June 2019)

Company Secretary

Mr. YUEN Kin Shan

Audit Committee

Dr. WONG Wing Kuen, Albert (*Chairman*)
Ms. FU Shuangye
Mr. ZHANG Chun (retired with effect from 18 June 2019)
Ms. FENG Wenli (appointed with effect from 18 June 2019)

Remuneration Committee

Ms. FU Shuangye (*Chairman*)
Dr. WONG Wing Kuen, Albert
Mr. TAN Wenhua
Mr. ZHANG Chun (retired with effect from 18 June 2019)
Ms. FENG Wenli (appointed with effect from 18 June 2019)

Nomination Committee

Ms. FENG Wenli (appointed with effect from 18 June 2019)
(*Chairman*)
Mr. ZHANG Chun (retired with effect from 18 June 2019)
Dr. WONG Wing Kuen, Albert
Ms. FU Shuangye
Mr. HSU You Yuan

Auditor

Ernst & Young
Certified Public Accountants

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
符霜葉女士
張椿先生(自二零一九年六月十八日起退任)
馮文麗女士(自二零一九年六月十八日起委任)

公司秘書

袁建山先生

審核委員會

王永權博士(*主席*)
符霜葉女士
張椿先生(自二零一九年六月十八日起退任)
馮文麗女士(自二零一九年六月十八日起委任)

薪酬委員會

符霜葉女士(*主席*)
王永權博士
譚文華先生
張椿先生(自二零一九年六月十八日起退任)
馮文麗女士(自二零一九年六月十八日起委任)

提名委員會

馮文麗女士(自二零一九年六月十八日起委任)
(*主席*)
張椿先生(自二零一九年六月十八日起退任)
王永權博士
符霜葉女士
許祐淵先生

核數師

安永會計師事務所
執業會計師



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

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

SMP Partners (Cayman) Limited
3rd Floor, Royal Bank House
24 Shedden Road, P.O. Box 1586
Grand Cayman, KY1-1110
Cayman Islands

Hong Kong Share Registrar

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. YUEN Kin Shan

Corporate Website

www.solargiga.com

主要往來銀行

錦州農村商業銀行股份有限公司
錦州銀行
安泰商業銀行
合作金庫銀行
招商銀行
浙商銀行

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

SMP Partners (Cayman) Limited
3rd Floor, Royal Bank House
24 Shedden Road, P.O. Box 1586
Grand Cayman, KY1-1110
Cayman Islands

香港股份過戶登記處

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
袁建山先生

企業網站

www.solargiga.com



COMPANY PROFILE

公司簡介

Solargiga Energy Holdings Limited (the “Company” or “Solargiga”, together with its subsidiaries, the “Group”, Hong Kong stock code: 757) is a leading supplier of upstream and downstream vertically integrated 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 year, the Group was mainly engaged in four main businesses:

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

Currently, our integrated business model includes monocrystalline silicon solar ingot production with annual capacity of approximately 3.6GW, solar wafer production with annual capacity of approximately 3.6GW, as well as photovoltaic cells production and modules production with annual capacity of approximately 400MW and 2.3GW, respectively.

Through vertical integration and strategic partnerships, the Group actively expanded the business of end-user market apart from its efforts in stabilizing its upstream and midstream business development, direct contact with end-users, thereby driving demand for products from downstream to upstream, covering the entire industry chain of the photovoltaic sector.

陽光能源控股有限公司（「本公司」或「陽光能源」，連同其附屬公司統稱「本集團」，香港股份代號：757）為上下游垂直整合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。

年內，本集團主要從事的四項主要業務分別為：

- (a) 太陽能單晶硅棒／硅片的製造、買賣及提供太陽能單晶硅棒／硅片加工服務；
- (b) 製造及買賣太陽能單晶硅電池；
- (c) 製造及買賣光伏組件；及
- (d) 興建及經營光伏電站。

目前，本集團的整合業務模式包括年產能約3.6吉瓦的太陽能單晶硅棒生產業務、年產能約3.6吉瓦的太陽能硅片生產業務以及年產能分別約400兆瓦及2.3吉瓦的光伏電池及組件生產業務。

通過垂直整合及戰略夥伴關係的優勢，在穩固上中游業務發展的同時，本集團積極開拓終端業務，直接接觸終端客戶，由下而上拉動產品需求，從而覆蓋整個光伏產業鏈。



FINANCIAL HIGHLIGHTS

財務摘要

Five-Year Financial Summary

五年財務概要

RMB'000	人民幣千元	2015 二零一五年	2016 二零一六年	2017 二零一七年	2018 二零一八年	2019 二零一九年
Revenue	收入	2,899,550	3,020,976	3,999,616	4,022,452	4,425,552
Gross profit	毛利	242,538	329,077	657,873	397,550	341,368
Operating profit/(loss)	經營利潤/(虧損)	152,548	(74,289)	251,595	(95,271)	(184,107)
Profit/(loss) attributable to equity shareholders	權益股東應佔利潤/(虧損)	15,653	(239,149)	107,462	(222,402)	(355,492)
Basic earnings/(loss) per share (RMB cents)	每股基本盈利/(虧損) (人民幣分)	0.49	(7.45)	3.35	(6.92)	(11.07)
Non-current assets	非流動資產	2,158,228	1,990,045	1,789,319	1,811,054	1,606,272
Current assets	流動資產	2,554,539	2,284,503	2,821,891	2,754,947	2,822,908
Current liabilities	流動負債	2,949,853	2,937,233	3,170,491	3,431,772	3,578,792
Non-current liabilities	非流動負債	600,051	458,627	405,290	326,238	394,822
Net assets	資產淨值	1,162,863	878,688	1,035,429	807,991	455,566



Sustainable
GROW TO

Development
**ACHIEVE
SUCCESS**

持續發展 創建成就



Dear honourable shareholders,

On behalf of the board of directors (the "Board") of Solargiga Energy Holdings Limited, I hereby present the annual report of the Company for the year ended 31 December 2019.

各位尊敬的股東：

本人謹代表陽光能源控股有限公司董事會同仁，向各位股東提呈本公司截至二零一九年十二月三十一日止年度之業績報告。

TAN Wenhua,

Executive Director and Chairman
譚文華，執行董事兼主席

CHAIRMAN'S STATEMENT

主席報告書

Asia is still the main source of demand in the photovoltaic industry, in which China continues to lead the market. China's installed capacity surged far beyond expectations and has ranked first in the world for six consecutive years. 2019 was the first year for the new photovoltaics subsidy bidding mechanism in China's photovoltaics market. It was also the first year of parallel development of grid parity and bidding projects. The industry was gradually shifting from bidding photovoltaics to grid parity. The market is undergoing a structural transformation. Industry players generally hold a wait-and-see attitude, resulting in a year-on-year decrease in Chinese domestic photovoltaic installation. Demands in 2019 is expected to be

亞洲地區續為光伏行業的主要需求來源，中國繼續為市場主導，中國裝機量大幅增長遠超預期，連續六年位居世界第一。二零一九年是中國光伏市場實行光伏補貼競價新機制的第一年，也是平價上網和競價項目並行發展的第一年，行業逐漸從競價光伏轉向平價上網。市場正在經歷一個結構性的轉變，業內人士普遍抱持觀望態度，造成年內中國國內光伏新增裝機同比下降，預估中國



deferred to 2020. However, due to epidemic of the new coronavirus, this deferred demand may not be immediately apparent in early 2020. It is judged that the impact of the short-term deferral caused by the new coronavirus should be limited.

二零一九年的需求將會遞延至二零二零年。然而，因為受到新冠病毒疫情蔓延影響，此遞延的需求也許未能立即於二零二零年初顯現，但判斷因為新冠病毒所造成之需求短暫遞延的影響應屬有限。

The monocrystalline technology has been regarded by the market as the mainstream of the future. Effective cost reduction has led to the rapid reduction of monocrystalline costs and the strong demand has driven the expansion of production capacity. The future development trend of monocrystalline is becoming clearer. Demand is increasing and the market share continues to grow rapidly. In the future, as the Group focuses on monocrystalline photovoltaic products, and manufacturing high-quality upstream monocrystalline silicon ingots and wafers in-house, the Group will continue to develop the Chinese, Japanese and other overseas markets, and vigorously promote the Group's monocrystalline photovoltaics product.

單晶技術路線已被市場視為未來主流，有效降低成本的技術路線令單晶成本快速降低、需求旺盛驅動擴產規模效應，單晶主導未來發展趨勢越加清晰，全球市場對單晶產品的需求增加，其市場份額不斷快速增長。未來，作為專注於單晶光伏產品企業，並且配套著高品質自家生產的上游單晶硅棒和硅片，集團將會繼續開發中國、日本以及其他海外市場，並大力推廣集團單晶光伏產品。



Chairman's Statement

主席報告書

With regard to our capacity allocation strategy, after the continuous adjustment of new capacity during the year and the technical transformation of existing capacity, from 2020, the Group has increased its annual production capacity of mono-crystalline silicon ingots and mono-crystalline wafers to 3.6GW. The annual production capacity of photovoltaic modules has also been increased to 3.5GW through an equity cooperation in 2020. Through focusing on upstream mono-crystalline silicon ingots and wafers and increasing downstream module production capacity, the Group has formed strategic partnership between the Group and large manufacturers focusing on the production of mid-stream solar cells. These external solar cell manufacturers purchase mono-crystalline silicon wafers from the Group and in turn sell the solar cells they manufactured to the Group for the Group's manufactures the downstream modules for external customers. This will drive the demand for upstream niche self-produced mono-crystalline silicon ingots and wafers.

In 2019, total shipment increased from 2,797MW last year to 4,134MW, a growth of around 48%, of which external shipments of the main products of mono-crystalline silicon wafers and photovoltaic modules of the year increased by 137% and 27% respectively. Revenue increased from RMB4,022 million last year to RMB4,425 million, a growth of around 10%. Yet, an increased loss of RMB355 million was recorded, as compared to the RMB222 million in 2018. The main reason of the loss was (1) unit selling prices has dropped rapidly during 2019 and China's photovoltaic power subsidy policy was introduced later than expected, industry players generally hold a wait-and-see attitude, resulting in a year-on-year decrease in Chinese domestic photovoltaic installation; (2) Further, despite the significant increase in module external shipment, adjustment phase of the Group's low-cost and high-efficiency production capacity located in Yunnan Qujing was only completed at the end of 2019, where the mass production was not achieved during the year; (3) the Group's production equipment was committed to the technological upgrading and transformation. While they were completed by the end of 2019, it has affected production efficiency and economy of scale was not demonstrated.

During the year, except for the above-mentioned capacity utilisation rate affecting the gross profit margin leading to the Group's loss, the Group's inventory turnover has continued to improve, receivables turnover day has decreased, and financing costs have decreased. In addition, the net cash inflow from operating activities during the year was RMB411 million, and the year-end cash balances has also been improved for two consecutive years, rising to RMB397 million, which will help the Group cope with the sudden market changes.

關於本集團產能配置策略方面，經過年內新增產能的不斷調適，加上既有產能的技術改造，自二零二零年起，本集團已將單晶硅棒和硅片年產能提升至3.6吉瓦，而光伏組件年產能則透過股權合作於二零二零年起亦提升至3.5吉瓦，集團著重於上游單晶硅棒與單晶硅片及下游組件產能增加的配置策略，透過與大型專業的中游電池廠策略合作，即由該等外部電池廠向本集團購買單晶硅片，再銷售其所製造的電池片予本集團，以滿足本集團可生產下游組件給外部客戶，亦進而拉動上游利基型自產單晶硅棒／單晶硅片的需求。

二零一九年，雖然對外總出貨量雖然由去年2,797兆瓦增加為4,134兆瓦(成長約48%)，其中主力產品單晶硅片與光伏組件年內出貨量分別較去年增長了137%與27%，收益則由去年約人民幣4,022百萬元增加為人民幣4,425百萬元(成長約10%)，但卻錄得虧損約人民幣355百萬元，比較二零一八年度虧損約人民幣222百萬元上升，虧損的主要原因為：(1)二零一九年銷售單價快速下滑及中國光伏電價補貼政策出台較預期晚，業內人士普遍抱持觀望態度，造成中國年內光伏新增裝機同比下降；(2)此外，儘管組件對外付運量顯著增加，雲南曲靖所新建低本高效之單晶硅棒與硅片產能於二零一九年底才調適完成，故年內未能大量投產；(3)原遼寧錦州生產基地既有產能設備於年內持續進行技術改造與提升，雖然亦已於二零一九年底完成，但卻降低了全年度原有生產效益，經濟規模優勢未能充分顯現。

年內，除了上述產能利用率影響到毛利率至令集團錄得虧損，日常運營上，集團存貨週轉持續改善、應收賬款週轉日減少、融資成本下降。另外，年內經營活動產生淨現金流入為人民幣411百萬元，年終現金金額亦連續兩年得到改善，上升至人民幣397百萬元，將有利於集團應付市場突變環境。



Chairman's Statement 主席報告書

Although the average unit selling price of the product in the future is still expected to gradually decline with the advent of grid parity, the Group can rely on (1) the new production base having low external electricity costs, which directly and indirectly reduces the production costs; (2) the commencement of mass production by the new equipment and the completion of upgrades to the old equipment; (3) technological integration advantages of its various product lines; and (4) strong client base in China and overseas. It is expected to lead to continuous growth in the Group's future external shipment volume and revenue, it is also expected that the magnitude of decrease in cost of the Group's products will be greater than that of the decrease in unit selling price, hence driving the Group's gross profit ratios to return to a normal level.

As a clean energy source, photovoltaic power generation replacing traditional petrochemical energy sources has become a global trend. Even though the current coronavirus epidemic has delayed demands temporarily, the trend of rapid growth in the demand for photovoltaic products is unwavering. 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. The Group is fully prepared and will do its utmost, to embrace the growth and development in the photovoltaic industry in the good times after reaching grid parity.

雖然未來市場平均產品銷售單價仍將隨著全面平價上網的來臨而逐漸降低，但憑藉著(1)新生產基地具有較低的外部電費成本所帶動的直接與間接的生產成本大幅降低 (2)新設備已投入量產，舊設備亦已改造完成 (3)長期以來各產品線多元化的技術疊加優勢，加上(4)國內外堅實的客戶基礎，本集團預期未來對外付運量以及銷售總額都將再持續增長，且產品成本下降幅度可較銷售價格的降幅更低，毛利率亦將會回歸於正常水平。

清潔能源的光伏發電取代傳統的石化能源已成為世界的潮流，即使目前受到新冠病毒的影響而造成部分需求的短暫遞延，但未來光伏產品需求的急速成長仍是既定的趨勢。平價上網前是痛苦蛻變，但平價上網後市場需求必定會出現爆發性的巨幅成長，這正是行業新生的契機，本集團已經做好準備，將全力以赴，擁抱平價上網後光伏行業蓬勃發展的美好時代。



MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析



Market Overview

2019 was the first year for the new photovoltaics subsidy bidding mechanism in China's photovoltaics market. It was also the first year of parallel development of grid parity and bidding projects. The industry was gradually shifting from bidding photovoltaics to grid parity. The market is undergoing a structural transformation, improving production capacity and product quality, encouraging high-end and high-efficiency products, promoting technological progress, reducing power generation costs, reducing subsidy dependence, promoting the industry to high-quality development, and accelerating the achievement of comprehensive affordable grid parity.

However, the bidding policy has led to a temporary slowdown in the deployment of the photovoltaic market. Looking back at 2019, the cumulative installed capacity of photovoltaic power generation in China was 204.3GW, which continues to maintain its number one position in the world. However, due to the above market policies, China's photovoltaic market had fallen rapidly and product prices had fallen. The industry had gradually pursued the development of scale and refinement, pursued of quality transformation, and continued steady development trend. IHS Markit said that despite the decline in installations in China in 2019, other international markets such as Netherlands, Spain, Germany, Italy, Turkey or Ukraine are growing faster than expected. It is initially estimated that global solar installations will reach 129GW in 2019 (a 25% increase from 103.3GW in 2018).

市場概覽

二零一九年是中國光伏市場實行光伏補貼競價新機制的第二年，也是平價上網和競價項目並行發展的第一年，行業逐漸從競價光伏轉向平價上網。市場正在經歷一個結構性的轉變，產能和產品提質增效，鼓勵高端高效產品，推進技術進步，降低發電成本，減少補貼依賴，推動行業向高質量發展，並加速達至全面的平價上網。

但競價政策卻導致光伏市場的部署步伐暫時放緩。回顧二零一九年，中國累計光伏發電裝機容量204.3吉瓦，仍繼續保持全球第一。但受上述市場政策影響，中國光伏市場快速下滑，產品價格下降，行業逐步追求規模向精細化發展，追求質量轉變，持續穩步發展趨勢。IHS Markit表示儘管二零一九年中國的安裝量下降，但其他國際市場如荷蘭、西班牙、德國、意大利、土耳其或烏克蘭等的增長速度快於預期。初步預計二零一九年全球太陽能安裝量達到129吉瓦(比二零一八年103.3吉瓦增長25%)。



Management Discussion and Analysis

管理層討論及分析



Market Overview (Continued)

According to the latest data from the China Photovoltaic Industry Association (CPIA), the newly installed capacity of China's photovoltaic industry in 2019 was 30.1GW (a decrease of 32% compared to 44.26GW in 2018), of which the newly-installed capacity of centralised photovoltaic was 17.9GW (down 23% year-on-year), and the newly-installed capacity of distributed photovoltaic was 12.2GW (down 41% year-on-year). In 2019, with the significant decrease in newly-installed capacity, the production scale of photovoltaic manufacturing has increased significantly. Polysilicon production was 342,000 tonnes (up 32% year-on-year), wafer production was 134.6GW (up 25.7% year-on-year), which mono-crystalline wafers accounted for about 65%, cell production reached 108.6GW (up 27.8% year-on-year), module production 98.6GW (17% year-on-year increase). In 2019, China's total export of photovoltaic products (wafers, cells, modules) reached USD20.78 billion, the second highest in history.

市場概覽 (續)

根據中國光伏行業協會(CPIA)最新的數據顯示，二零一九年中國光伏的新增裝機容量30.1吉瓦(比二零一八年44.26吉瓦下降32%)，其中，集中式光伏新增裝機容量17.9吉瓦(同比下降23%)，分佈式光伏新增裝機容量12.2吉瓦(同比下降41%)。二零一九年在新增裝機大幅下降的情況下，光伏製造端生產規模出現大幅增長。多晶硅產量34.2萬噸(同比增長32%)，硅片產量134.6吉瓦(同比增長25.7%)，其中單晶硅片約佔65%，電池片產量達108.6吉瓦(同比增長27.8%)，組件產量98.6吉瓦(同比增長17%)。二零一九年中國光伏產品(硅片、電池片、組件)出口總額達到美元207.8億，創歷史第二高。

* for identification only



Management Discussion and Analysis

管理層討論及分析

Market Overview (Continued)

In 2019, the energy poverty alleviation work was carried out steadily and effectively. According to the report of the National Energy Administration, 4.07 million poverty-stricken households across the country obtained stable income through photovoltaic poverty alleviation projects, with a cumulative scale of 19.1GW. “The First Batch of Photovoltaic Poverty Alleviation Projects of the “13th Five-Year Plan”” (《“十三五”第一批光伏扶貧項目計劃》) with a total installed capacity of 4.186GW (3.85GW after revision), and “The Second Batch of Photovoltaic Poverty Alleviation Projects of the “13th Five-Year Plan”” (《“十三五”第二批光伏扶貧項目計劃》) with a total of 1.67GW, jointly issued and distributed by The National Energy Administration and The State Council Leading Group Office of Poverty Alleviation and Development* (國家能源局及國務院扶貧開發領導小組辦公室), should be completed and connected to the grid by the end of 2019. The National Energy Administration expected to establish the “14th Five-Year Plan” and subsequent energy development plans as soon as possible in 2020.

According to the U.S. Solar Market Insight Report jointly issued by Wood Mackenzie Power & Renewables and the Solar Energy Industries Association, in the third quarter of 2019, the United States solar market installed 2.6GW of photovoltaic capacity (up 45% year-on-year), the cumulative installed capacity increased to 71.3GW. The U.S. residential solar market reached record high in the third quarter of 2019 with an installation of 712MW, of which California, the largest residential solar market, installed nearly 300MW, breaking its quarterly record. The total installed photovoltaic capacity in the United States in 2019 is expected to reach 13GW, an increase of 23% over 10.6GW in 2018. Although the United States finally decided to waive the 201 tariff on bifacial solar modules at the end of 2019, due to sensitive China-US trade relationship and strong opposition from American domestic manufacturing companies, uncertainty hovers over the waiver decision. With the declining cost and gradual reduction of the investment tax credit policy (“ITC policy”) for residential systems, the total installed capacity of photovoltaics in the United States will more than double in the next five years. By 2021, the installed capacity will reach 20.1GW before the expiration of the ITC policy.

市場概覽(續)

二零一九年能源扶貧工作紮實有效開展，根據國家能源局報告，全國407萬貧困戶通過光伏扶貧項目獲得穩定收益，規模累計涉及19.1吉瓦。國家能源局及國務院扶貧開發領導小組辦公室聯合印發《「十三五」第一批光伏扶貧項目計劃》總裝機量4.186吉瓦(更正後為3.85吉瓦)，以及《「十三五」第二批光伏扶貧項目計劃》總裝機量1.67吉瓦，應在二零一九年年底全容量建成並網。國家能源局預計將於二零二零年盡快確立「十四五」規劃及後續能源發展規劃。

根據Wood Mackenzie Power & Renewables與美國太陽能產業協會(SEIA:Solar Energy Industries Association)聯合發布的美國太陽能市場深度報告(U.S. Solar Market Insight Report)顯示，美國於二零一九年第三季度光伏裝機新增2.6吉瓦(同比增長45%)，總裝機容量增加到71.3吉瓦。美國住宅太陽能市場在今年第三季度安裝量達到712兆瓦創下歷史新高，其中，最大的住宅太陽能市場加利福尼亞州安裝量近300兆瓦，打破了自己的季度記錄。預計二零一九年美國安裝的太陽能總量將達到13吉瓦，比二零一八年10.6吉瓦增長23%。美國雖然在二零一九年底最終決定豁免雙面太陽能組件的201關稅，但由於中美貿易的敏感關係和美國本土製造企業的強烈反對，豁免決定仍存變數。隨著成本下降和住宅系統的投資稅收抵免政策(「ITC政策」)逐步減少，在未來五年中，美國光伏總裝機容量將增長一倍以上，到二零二一年，在ITC政策到期之前裝機容量將達到20.1吉瓦。



Management Discussion and Analysis

管理層討論及分析

Market Overview (Continued)

2019 was a challenging year for India, with the Prime Minister election in the first half and religious riots in the second half. In addition to the impact of political instability on the Indian photovoltaic market, factors such as falling power demand, financing difficulties, tax ceilings, land acquisition issues, weak power infrastructure, rising solar module prices, and high bidding costs leading to reduction in the number of bids, have affected the growth of the photovoltaic market in 2019. According to the Indian photovoltaic market report released by Mercom India Research, India's new photovoltaic installed capacity in 2019 was 7.3GW (a 12% decrease from 8.3GW in 2018), and the cumulative photovoltaic installed capacity reached 35.7GW. To expedite the completion of the 100GW installation target by 2022, the Indian government has vigorously promoted the development of the solar manufacturing industry by putting on place a more investor-friendly mechanism and also adjusting the bidding prices. The Indian government has also launched several large flagship projects that require the use of domestic solar photovoltaic modules. In addition, the government has approved a grid-connecting photovoltaic plan proposed by the Ministry of New and Renewable Energy to complete photovoltaic power generation projects of 12GW between 2019 and 2023.

2019 was the strongest year for solar energy growth in the European Union. According to data from SolarPower Europe, the newly-installed capacity reached 16.7GW, a 104% increase from 8.2GW in 2018. The main markets include Spain 4.7GW, Germany 4GW, Netherlands 2.5GW, France 1.1GW and Poland 784MW. It is expected that the overall newly-installed capacity in the European Union will continue to grow, reaching 21GW in 2020, 21.9GW in 2021, 24.3GW in 2022, and 26.8GW in 2023.

市場概覽 (續)

二零一九年對於印度是充滿挑戰的一年，上半年的總理大選及下半年的宗教暴亂。印度光伏市場除了受到政治不穩定性影響外，電力需求下降、融資困難、稅率上限、土地收購問題、電力基礎設施薄弱、太陽能組件價格上漲和招標成本高導致招標數量減少等的因素影響今年光伏市場的增長。根據Mercom India Research發布的印度光伏市場報告顯示，二零一九年印度新增光伏裝機容量7.3吉瓦(比二零一八年8.3吉瓦下降12%)，累計光伏裝機容量為35.7吉瓦。為促進在二零二二年完成100吉瓦的裝機目標，印度政府通過制定更有利於投資者的機制及調整招標價格，大力推動太陽能製造業的發展，印度政府更推出幾個要求使用國產太陽能光伏組件規定的大型旗艦項目。另外，政府批准印度新能源和可再生能源部 (Ministry of New and Renewable Energy)提出的一項並網光伏計劃，在二零一九至二零二三年期間建成12吉瓦光伏發電項目。

二零一九年是歐盟太陽能增長最強勁的一年，根據SolarPower Europe的數據顯示，新增裝機量達16.7吉瓦比二零一八年(8.2吉瓦)增長104%。主要市場包括西班牙佔4.7吉瓦，德國佔4吉瓦，荷蘭佔2.5吉瓦，法國佔1.1吉瓦及波蘭佔784兆瓦。預計歐盟整體新增裝機量將繼續增長，二零二零年達21吉瓦，二零二一年達21.9吉瓦，二零二二年達24.3吉瓦，二零二三年達26.8吉瓦。



Management Discussion and Analysis

管理層討論及分析

Market Overview (Continued)

Looking ahead to 2020, according to the PV-Magazine, due to the impact of a new Coronavirus outbreak in China, the Chinese government has adopted measures in extending the New Year holidays in some affected provinces and shutting down major global solar production areas in order to control the spread of the epidemic. The epidemic has severely affected productivity, resulting in a shortage of solar wafers and glass for modules. Solar prices, including the cost of photovoltaic modules, may rise in the short term. The Chinese Photovoltaic Industry Association (CPIA) has urged the government to delay the deadline for large-scale solar projects to 31 March and 30 June 2020. If the virus is brought under control in the first half of 2020, recovery may begin in the third quarter. At present, the Chinese market is in the transitional stage to the development of unsubsidised solar energy, compounding the impact of the virus epidemic, the CPIA estimates that China's new photovoltaic installations in 2020 will be between 35 and 45GW, lower than the 40–50GW forecast in early 2019.

According to EnergyTrend analysis, although the domestic demand is weaker than before, overseas demand has grown steadily. Domestic companies have accelerated their overseas deployment. With the recovery of the European market, and the rise of emerging photovoltaic markets in Southeast Asia, the global market will become more decentralized, which may help upturn the demand of the entire photovoltaic industry in 2020, driving a significant increase in the export volume of Chinese photovoltaic manufacturing enterprises. It is estimated that the global newly-installed capacity will reach 125GW in 2020. The top five global photovoltaic markets are: China continues to rank first, followed by the United States, India, Japan and the Netherlands. The global photovoltaic market will show a slight growth from 2020 to 2025, with an annual growth rate of about 7%.

市場概覽(續)

展望二零二零年，根據PV-Magazine報導，由於中國受到新型冠狀病毒爆發的影響，中國政府為了控制疫情的傳播，採取延長部分受感染省份的新年假期措施，其中包括全球主要的太陽能生產地區需要停工。疫情嚴重影響了生產率，導致太陽能硅片和組件玻璃的短缺，包括光伏組件成本在內的太陽能價格在短期內可能會上漲。中國光伏行業協會(CPIA)已催促政府將大型太陽能項目的截止日期延遲至二零二零年三月三十一日和六月三十日。如果病毒能在二零二零年上半年受到控制，那麼恢復工作可能會在第三季度開始。目前中國市場正處於向無補貼的太陽能發展的過渡階段，加上受病毒疫情蔓延影響，中國光伏行業協會(CPIA)預計二零二零年中國的光伏新增裝機在35–45吉瓦之間，低於二零一九年初預測的40–50吉瓦。

根據集邦新能源網(EnergyTrend)分析，雖然國內需求較之前疲弱，海外需求穩定增長，國內企業加速往海外佈局。隨著歐洲市場的復甦，東南亞新興光伏市場的崛起，將使全球市場更趨分散化，或有助二零二零年整個光伏行業需求反轉，帶動中國光伏製造企業產品出口量大幅增加，預計二零二零年全球新增裝機容量將達到125吉瓦。全球前五大光伏市場依次為：中國繼續位居第一，隨後為美國，印度，日本與荷蘭。全球光伏市場將於二零二零年至二零二五年呈現微幅增長，每年增長幅度約在7%。



Management Discussion and Analysis

管理層討論及分析

Operations Review

The Group focuses on the vertical integration for photovoltaic mono-crystalline products, providing one-stop solutions for the photovoltaic industry ranging from the manufacturing and sales of silicon ingots and wafers, photovoltaic cells and photovoltaic modules, the installation of photovoltaic system and the development, design, construction, operation and maintenance of photovoltaic generation plants. Apart from not self-manufacturing polysilicon, the scope of its business covers the whole industry chain of the photovoltaic industry.

Although the Group possesses the capacities to manufacture the aforementioned mono-crystalline silicon ingots, mono-crystalline silicon wafers, solar cells and modules, the production capacity of each is not exactly the same.

After the continuous adjustment of new capacity during the year and the technical transformation of existing capacity, from 2020, the Group has increased its annual production capacity of mono-crystalline silicon ingots and mono-crystalline wafers to 3.6GW. The annual production capacity of photovoltaic modules has also been increased to 3.5GW through an equity cooperation in 2020. Under the consideration of limited resources that need to be coordinated and allocated, the annual production capacity of mono-crystalline silicon solar cells remains unchanged at 400MW. However, through the strategies of focusing on upstream mono-crystalline silicon ingots and wafers and increasing downstream module production capacity, the Group forms strategic partnership between the Group and large manufacturers focusing on the production of mid-stream solar cells. These external solar cell manufacturers purchase mono-crystalline silicon wafers from the Group and in turn sell the solar cells they manufactured to the Group for the Group's manufactures the downstream modules for external customers. This will drive the demand for upstream niche self-produced mono-crystalline silicon ingots and wafers.

營運回顧

本集團專注於光伏單晶產品垂直一體化整合，提供單晶硅棒、單晶硅片、單晶電池、光伏組件之製造及銷售、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行業解決方案，除了未自行生產化工類產品多晶硅原料之外，其業務範圍覆蓋光伏產業全產業鏈。

雖然本集團具有單晶硅棒、單晶硅片、單晶電池、與光伏組件等各項產品的生產製造能力，但各產品環節的產能配置卻不盡相同。

經過年內新增產能的不斷調適，加上既有產能的技術改造，自二零二零年起，本集團已將單晶硅棒和單晶硅片年產能提升至3.6吉瓦，而光伏組件年產能則透過股權合作於二零二零年起亦提升至3.5吉瓦，而集團在有限資源需統籌分配的考量下，雖然單晶電池年產能仍維持400兆瓦不變，但透過著重於上游單晶硅棒與單晶硅片及下游組件產能增加的配置策略，將可與大型專業的中游電池廠策略合作，即由該等外部電池廠向本集團購買單晶硅片，再銷售其所製造的電池片予本集團，以滿足本集團可生產下游組件給外部客戶，亦進而拉動上游利基型自產單晶硅棒／單晶硅片的需求。



Management Discussion and Analysis

管理層討論及分析

Operations Review (continued)

Secondly, the Group's vertical integration of upstream and downstream capacities, by adopting a dual-track strategy of continuous development of upstream mono-crystalline silicon ingots, silicon wafer niche products and downstream module products, while not proactively expanding the capacity for the mid-stream solar cell, effectively focuses the Group's resources and withstands the fluctuations in upstream mono-crystalline silicon wafer market or mitigate any instability in the supply of mid-stream solar cells. For example, strategic partnership formed between the Group and external manufacturers focusing on the production of mid-stream solar cells, where in the event of a poor sales market for mono-crystalline silicon wafers, the Group can outsource these mono-crystalline silicon wafers to these strategic partners and work them into solar cells, which is then returned to the Group for continued production into modules, and then sold to downstream third-party large module customers. On the other hand, if the sales market for mono-crystalline silicon wafers is good, the Group can directly sell the mono-crystalline silicon wafers to these strategic partners, and then purchase solar cells from these strategic partners in order to meet the production needs of the downstream modules of the Group. Therefore, in the market situation where the industry is changing drastically, the Group can properly arrange the use of self-produced mono-crystalline silicon wafers, and the solar cells required for the Group's module production can also be fully guaranteed. In summary, the Group can not only give full demonstrate to the existing manufacturing advantages of upstream mono-crystalline silicon ingots and silicon wafers niche products, but also establish a stable sales channel for the terminal module market, so that the advantages of vertical integration of mono-crystalline products can be fully realised.

Regarding the production of upstream mono-crystalline silicon ingot and wafer products, the Group's low-cost high-efficiency production capacity located in Yunnan Qujing has completed its adjustment phase in 2019. Its results are now showing gradually. With the lower local electricity cost in Yunnan Qujing, its gross profit margins are recorded at 15% and is expected to reach improved levels. After the Group's transformation and upgrading work performed on the original production bases in Jinzhou, Liaoning and Xining, Qinghai during the year, they are expected to demonstrate their advantages in production capacity increase and cost reduction from 2020 onwards, which can further improve the Group's overall gross profit margin.

營運回顧 (續)

其次，由於本集團上下游垂直整合是採取持續發展上游單晶硅棒／單晶硅片利基產品與下游組件產品之雙軌並進策略，並不再積極擴充中游電池片產能，除了使得集團既有資源可有效集中利用之外，亦可抵禦上游單晶硅片市場銷售波動或降低中游電池片供給不穩定的風險。例如，本集團與專注於生產中游電池片的外部大廠形成策略夥伴關係，若遇單晶硅片銷售市場不佳時，本集團可將所生產的單晶硅片委由該等策略夥伴代工為電池片，再交回予本集團以繼續生產為組件後，始銷售給下游第三方大型組件客戶。反之，若遇到單晶硅片銷售市場較好時，本集團則可直接銷售單晶硅片給該等策略夥伴，再同時自該等策略夥伴採購電池，藉以因應本集團生產下游組件產品所需。因此，在產業劇烈變化的市場情勢下，本集團皆可妥善安排自產之單晶硅片的運用，且對於集團生產組件時所需的電池片，亦可得到充分的供貨保障。綜上所述，本集團不但可充分發揮上游單晶硅棒與單晶硅片利基產品之既有製造優勢，亦可建立穩固的組件終端市場之銷售管道，使得單晶產品垂直整合的優勢得以充分發揮。

在上游單晶硅棒與單晶硅片方面，本集團於雲南曲靖所新建的低本高效單晶硅棒與單晶硅片生產基地，經過二零一九年的生產調適後，目前已開始陸續展現成效，加之雲南曲靖當地較低的電費優勢，正常毛利率現已達約15%，且預期將再持續提高。而原遼寧錦州與青海西寧的生產基地，則經本集團於年內改造與提升後，預期亦可於二零二零年起彰顯其產量提升與成本降低的優勢，皆可進一步改善集團整體毛利率。



Management Discussion and Analysis 管理層討論及分析

Operations Review (continued)

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 most powerful 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 not only maintains a more stable terminal product estuary, but also drives the utilisation rate of each production segment of the Group from the bottom up. As such, in order to meet the needs of module customers, in addition to the 2.3GW module capacity owned by its wholly-owned subsidiaries, the Group has participated in a newly-established module manufacturing base of 1.2GW in Yancheng, Jiangsu. It only invested a small amount of cash for a direct equity investment of 15%, however, through strategic alliances among strategic investors and employees of the Group, the 1.2GW module capacity will co-ordinate with the manufacturing needs of the Group and it has already begun production in 2020. The Group's effective module production capacity has been increased to 3.5GW in 2020, which can greatly increase the economic scale advantage of module products.

In terms of operating results, reaping the benefits of the results from strengthening the customer relationship of downstream module products over the years, the Group's high-end photovoltaic products continued to be welcomed by domestic state-owned enterprises and multinational corporations. Total shipment increased from 2,797MW in 2018 to 4,134MW in 2019, a growth reaching 48%. However, unit selling prices has dropped rapidly during 2019 and China's photovoltaic power subsidy policy was introduced later than expected, industry players generally hold a wait-and-see attitude, resulting in a year-on-year decrease in Chinese domestic photovoltaic installation. Further, since the production capacity of the Group's new low-cost high-efficiency mono-crystalline silicon ingots and wafers was in adjustment phase most time during the year, production capacity has not been fully utilised, the advantages of its economy of scale has not yet been displayed. This forced the Group to continue to rely heavily on the monocrystalline ingot and wafer products from its production base in Liaoning Jinzhou. While the local electricity cost in Liaoning Jinzhou is more than double that of Yunnan Qujing, it has directly and indirectly contributed to higher production cost of monocrystalline silicon ingots and wafers. As such, the Group's overall gross profit was greatly compressed. Further, although external shipments of the main products of monocrystalline silicon wafers and photovoltaic modules of the year increased by 137% and 27% respectively compared to last year, the Group was committed to the technical transformation and upgrading of the existing production equipment for mono-crystalline silicon ingots and mono-crystalline silicon wafers and also modules in Jinzhou, Liaoning. It affected the utilisation rate of production capacity during the year and hence led to the benefits of economy of scale not being fully demonstrated. In summary, the gross profit margin was therefore reduced from 9.9% in 2018 to 7.7% in 2019, which resulted in an operating loss of RMB184.107 million in 2019, compared to an operating loss of RMB95.271 million in 2018.

營運回顧(續)

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，不僅可保有更穩固的終端產品出海口，亦可自下而上帶動集團每個生產環結的產能利用率。因此，為了滿足組件客戶的需求，本集團除了由遼寧錦州全資子公司所擁有的2.3吉瓦組件產能之外，年內已於江蘇鹽城參與新設1.2吉瓦組件製造基地，雖然僅透過少量現金投資以直接持有其15%股權，但透過策略投資者與本集團員工的策略聯盟，此1.2吉瓦組件產能將可配合集團需求生產，並已於二零二零年開始量產，故本集團有效使用組件產能已於二零二零年起提升至3.5吉瓦，可大幅增加組件產品的經濟規模優勢。

在具體的營運實績方面，本集團憑藉著多年來深化下游組件產品客戶群合作關係的成果，高端光伏產品受國內央企及海外跨國企業歡迎，年內總出貨量由二零一八年的2,797兆瓦提高至二零一九年的4,134兆瓦，成長幅度達48%。然而，由於二零一九年銷售單價快速下滑及中國光伏電價補貼政策出台較預期晚，業內人士普遍抱持觀望態度，造成中國年內光伏新增裝機同比下降。而且由於年內本集團於雲南曲靖所新建的低本高效產能仍處於調試階段，產能未能全面開出，故其效益未能於年內充分體現，這也使得集團大部分單晶硅棒和硅片產品仍需仰賴原來的遼寧錦州基地來生產，而遼寧錦州當地電費卻較雲南曲靖高出一倍有餘，故在主要成本電費較高的外部因素影響與下，直接與間接地造成年內單晶硅棒與硅片之生產成本較高，而影響了集團整體毛利。其次，雖然主力產品單晶硅片與光伏組件年內出貨量分別較去年同期增長了137%與27%，但因為本集團致力於遼寧錦州基地單晶硅棒與單晶硅片及組件的既有產能設備的技術改造和提升，因此亦影響了產能利用率，造成經濟規模優勢未能充分顯現。綜上，毛利率因而由二零一八年的9.9%下調至二零一九年的7.7%，進而造成二零一九年產生經營虧損人民幣184.107百萬元，而二零一八年則錄得經營虧損人民幣95.271百萬元。



Management Discussion and Analysis

管理層討論及分析

Operations Review (continued)

As a clean energy source, photovoltaic power generation replacing traditional petrochemical energy sources has become a global trend. Even though the current coronavirus epidemic has delayed demands temporarily, the trend of rapid growth in the demand for photovoltaic products is unwavering. During the year, due to the comprehensive upgrade of existing production capacity and the efficient adjustment of new equipment in 2019, benefits of production efficiencies could not be fully displayed, resulting in an increased operating losses. In 2020, relying on (1) the new production base having low external electricity costs, which directly and indirectly reduces the production costs; (2) the commencement of mass production by the new equipment and the completion of upgrades to the old equipment; (3) technological integration advantages of its various product lines; and (4) strong client base in China and overseas, the Group expects its gross profits to return to a normal level.

While maintaining its own leading technological advantage in mono-crystalline products, and adhering to the vertical integration strategy, through external customer demand for the Group's downstream modules driving the internal demand of its upstream mono-crystalline wafers, also through further strengthening its strategic partnerships with third party mid-stream solar cell manufacturers, the Group and its partners will be able to leverage their respective strengths and experiences in laying a solid foundation for broader co-operation in the future.

營運回顧 (續)

清潔能源的光伏發電取代傳統的石化能源已成為世界的潮流，即使目前受到新冠病毒的影響而造成部分需求的短暫遞延，但未來光伏產品需求的急速成長仍是既定的趨勢。年內本集團雖因二零一九年既有產能的全面升級與新設備的高效調適而使得生產效益無法充分顯現，而造成經營虧損擴大，但二零二零年起本集團憑藉著(1)新生產基地具有較低的外部電費成本所帶動的直接與間接的生產成本大幅降低；(2)新設備已投入量產，舊設備亦已改造完成；(3)長期以來各產品線多元化的技術疊加優勢；加上(4)國內外堅實的客戶基礎，預期可透過經濟規模的生產優勢與新舊客戶的穩定需求，使得集團毛利回歸於正常水平。

本集團將繼續保持自身在單晶產品中的技術領先優勢，深入貫徹垂直整合，依靠下游組件客戶的外部需求進而拉動上游單晶硅片的產出，且透過深化與中游電池片的第三方大廠所形成之戰略夥伴關係，利用各自的長處及經驗為未來更廣泛的合作奠定穩固基礎。



Management Discussion and Analysis 管理層討論及分析

Operations Review (continued)

Silicon ingot and wafer business

Apart from not producing its own polysilicon, a chemical product, in the scope of its business, the Group covers an all-rounded photovoltaic industry production chain under its vertically integrated business model. Among this model, mono-crystalline silicon ingot products are mostly used for the internal production of mono-crystalline silicon wafers within the Group, and are less engaged in external sales. In addition, due to insufficient production capacity of the Group's midstream solar cell production, mono-crystalline silicon wafer products of the Group are mostly sold to third-party professional solar cell manufacturers. During the year, with the advantages in application of mono-crystalline products over multi-crystalline products in photovoltaic power generation, the market share of mono-crystalline products has continued to increase rapidly. As such, demand for what the Group has been focusing on all along, mono-crystalline products, has continued to increase. Its market share is fast growing. Further, in addition to the traditional mono-crystalline P-type products, shipment volume of mono-crystalline N-type products with higher conversion efficiencies are also increasing. With the continued realisation of advantages in better improvement in conversion efficiency, more stable decay rate in its photovoltaic systems, continued reduction in unit costs, etc. of mono-crystalline products, it is expected that the advantages of mono-crystalline products will become more obvious in the field of photovoltaic power generation. Guided by this advantageous environment in the industry, through its long-term strategic partnerships with well-known solar cell-focused manufacturers, not only enjoys priority distribution channels for the sales of its mono-crystalline wafers, but also ensures the long-term stable utilisation of the Group's capacity and shipment volume. The benefits of the Group's upstream and downstream vertical integration are fully realised.

The Group have consolidated its leading position in the mono-crystalline silicon solar ingot and wafer manufacture industry in terms of technology and product quality. The quality stability of its mono-crystalline silicon products is amongst those of the industry leaders. During the year, since most of the ingot products have been reserved for internal use, the external shipment volume of mono-crystalline silicon ingots has dropped to 204.2MW (413.8MW in 2018). Conversely, external shipment volume of mono-crystalline silicon wafers has rose significantly to 2,014.6MW (850.3MW in 2018). Major customers of external sales included Aikosolar Group (愛旭太陽能集團), TW Solar Group (通威太陽能集團), Sumin New Energy Group (蘇民新能源集團) and huge state-owned enterprises in China, such as State Power Investment Corporation (中國國家電力投資集團公司) ("SPIC").

營運回顧 (續)

硅棒及硅片業務

本集團業務範圍除了不自行生產化工類產品多晶硅原料之外，係為上下游垂直一體化生產以貫徹全光伏產業鏈，其中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，另因集團的中游電池片生產環節產能不足，故本集團單晶硅片產品則多銷售給外部第三方專業電池大廠。年內，由於單晶產品相比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已持續的快速增加，故本集團所一直專注的單晶硅片需求量持續增加，市場份額快速成長。此外，集團除了傳統的單晶P型產品外，亦有更高轉換效率的單晶N型產品出貨。隨著單晶產品光電轉換效率的潛在提升空間較大、光伏系統衰減率較穩定、生產技術大幅提升所造成的單位成本持續下降等等優勢已浮現，在此有利的產業環境引領下，本集團透過長期戰略聯盟，與專注於生產電池片的大廠形成戰略夥伴，除了集團所生產的單晶硅棒與單晶硅片將可得到優先的出貨口之外，亦可由該等戰略夥伴取得更穩定的電池片以作為集團生產下游組件，使得本集團上下游垂直整合效益得以充分發揮。

本集團擁有行業領先的太陽能單晶硅棒及硅片製造技術，其產品品質優良及質量穩定皆位於同業領先位置。年內，由於大部分的硅棒都留著內部自用，單晶硅棒對外付運量下跌至為204.2兆瓦(二零一八年為413.8兆瓦)。反之，硅片對外付運量則大幅上升，為2,014.6兆瓦(二零一八年為850.3兆瓦)。對外銷售的主要客戶為愛旭太陽能集團、通威太陽能集團、蘇民新能源集團及國內大型央企，如中國國家電力投資集團公司(「國電投」)。



Management Discussion and Analysis

管理層討論及分析

Operations Review (continued)

Silicon ingot and wafer business (continued)

In addition, the Group has completed the testing and adjustments of its newly invested low-cost high-efficiency mono-crystalline silicon solar ingot and wafer project, located in Qujing City, Yunnan Province, China. It has not only enabled manufacturing in scale from 2020 onwards. With the lower local electricity costs, being lower than that at previous major production base in Jinzhou, Liaoning, by more than 50%, it will lift the Group's overall gross profit and gross profit margin. Therefore, The Group is currently actively planning the expansion of the mono-crystalline silicon solar ingot and wafer capacities in Yunnan, Qujing, in order to take advantage of the local external production environment, and enable the Group to fully demonstrate its current technological advantages in production.

Solar cell and module businesses

The Group's production lines of solar cells are located at the Group's manufacturing base in Jinzhou, Liaoning. During the year, the annual production capacity of solar cells was maintained at 400MW (2018: 400MW). Apart from providing internally to the downstream module manufacturing subsidiaries of the Group, the solar cells are also sold to our selected customers in China and Japan. In order to keep abreast of the latest trends in the photovoltaic industry, the Group has also been collaborating with university teams of the highest levels in the field of global perovskite (鈣鈦礦) research in projects to jointly develop perovskite solar cells, paving the way for the development of upstream and downstream products in the next decade.

Regarding photovoltaic module business, during the year, the Group recorded external shipments of photovoltaic modules of 1,855.7MW, which grew by 27% when compared to external shipments of 1,466.2MW in 2018. Although the market prices has continued to drop from that of previous years, the Group's module sales of the year still increased from RMB3,070.65 million last year to RMB3,199.10 million in 2019. Even with this significant increase in shipments of photovoltaic modules, the production has been in fact hindered by the technical transformation and equipment upgrades on the existing module manufacturing capacity during the year, the advantages of economy of scale have hence not been fully realised. However, after the completion of the comprehensive technical upgrade, with the excellent product quality and price competitiveness, the Group is expected to continue to record rapid growth in external shipments and total sales, and to make full use of the expected economies of scale. External sales was mainly made to huge Chinese state-owned enterprises and Japanese multinational enterprises, such as SPIC, China Huadian Corporation (中國華電集團公司) ("Huadian"), Beijing Enterprises Holdings Limited (北京控股集團有限公司) ("BEGCL"), SHARP Corporation ("SHARP") and SANSHIN ELECTRONICS CO., LTD., etc.

營運回顧 (續)

硅棒及硅片業務(續)

其次，本集團位於中國雲南省曲靖市新增投資之低本高效單晶硅棒及硅片項目，於年內已調適完畢，自二零二零年起則可大規模量產，加之當地電費較原遼寧錦州生產基地降低達50%以上，皆可帶動集團整體毛利金額與毛利率的提升。此外，目前集團亦正積極籌備於雲南曲靖再持續擴充單晶硅棒與硅片產能，以期進一步充分利用當地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。

電池及組件業務

本集團的太陽能電池生產線設於遼寧錦州生產基地。年內，太陽能電池的年產能維持400兆瓦(二零一八年：400兆瓦)，產品除了提供給本集團下游的組件子公司使用之外，也銷售給中國及日本的客戶。此外，為了及時掌握光伏產業的最新發展趨勢，本集團亦與全球鈣鈦礦研究領域中最高水平的國外大學團隊合作，共同研發鈣鈦礦太陽能電池項目，為未來十年的光伏上下游產品發展做好鋪墊。

關於組件業務方面，回顧全年，本集團對外付運量為1,855.7兆瓦，較二零一八年對外付運量1,466.2兆瓦增長27%，縱使年內市場價格較去年同期持續下滑，但集團今年組件銷售總額仍由去年同期的人民幣3,070.65百萬元上升至二零一九年的人民幣3,199.10百萬元。雖然組件產品出貨量顯著增加，但由於年內組件原有產能進行技術改造與設備升級的因素而影響實際產出，經濟規模優勢未能充分顯現，然而，本集團憑藉著優良的產品品質與價格競爭力，隨著設備全面技術升級改造完成後，預期應可使得對外付運量以及銷售總額都再持續錄得快速增長，並得以發揮預期的經濟規模效益。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」)、中國華電集團公司(「華電」)、北京控股集團有限公司(「北控」)、SHARP Corporation、SANSHIN ELECTRONICS CO., LTD. 等。



Management Discussion and Analysis 管理層討論及分析

Operations Review (continued)

Solar cell and module businesses (continued)

On the other hand, following the increasing awareness of the benefits of higher conversion efficiency and more competitive costs offered by the Group's focused monocrystalline photovoltaic modules, and responding to the opportunity offered by grid parity, market share of monocrystalline module products continues to grow quickly. Demand for N-type mono-crystalline and P-type PERC photovoltaic modules have surged. In addition to flexibly supporting the manufacturing of mono- and multi-crystalline photovoltaic modules, the Group will continue to expand and strengthen the development and sales of monocrystalline silicon high-efficiency module products such as N-type double-sized glass photovoltaic modules, half-cell photovoltaic modules, P-type monocrystalline solar cell Passivate Emitter and Rear Cell (PERC), smart photovoltaic modules, and related high-end products. Among them, installation of the new production lines of our BS modules of N-type monocrystalline IBC solar cell, which produces higher current output, open circuit voltage, fill factor and other electrical performance advantages, have been completed. Product quality and conversion has been stable. External sales has been recorded since the first half of 2019. BS modules utilises, first in the country, this internationally-leading FPC manufacturing technique, with SHARP, the Group's key strategic partner, being its major sales customer.

As a company focusing on monocrystalline silicon photovoltaic products, equipped with high-quality, self-produced upstream monocrystalline silicon ingots and mono-crystalline silicon wafers, customers' demand for the Group's mono-crystalline modules has always remained high. Currently, proportion of sales of the Group's mono-to-multi-crystalline silicon photovoltaic modules has remained at 85:15 and the market share of mono-crystalline silicon photovoltaic products is expected to rise continuously.

營運回顧(續)

電池及組件業務(續)

跟隨市場意識到本集團所專注的光伏單晶組件產品的光電轉換效率較高且成本較有競爭力之利基，呼應著平價上網的機遇，單晶組件產品的市場份額不斷快速提升，N型單晶及P型PERC等組件等高端組件產品市場需求亦水漲船高。本集團除靈活配套單多晶光伏組件生產，亦將持續拓展並強化單晶高效組件產品的開發與銷售，如N型雙面玻璃組件、半片電池組件、P型PERC (Passivated Emitter and Rear Cell)組件、智能光伏組件等等相關高端產品。其中，可令組件呈現出較高的輸出電流、開路電壓、填充因子等電性能優勢的N型單晶IBC電池產品BS組件，其新產線已完成安裝，產品工藝與功率穩定，並於二零一九年開始對外銷售。BS組件採用國際領先且國內首家率先採用的FPC組件封裝技術，主要銷售客戶為本集團重要戰略夥伴日本夏普(SHARP Corporation「SHARP」)。

本集團作為專注於單晶光伏產品製造商，配套著高品質自家生產的上游單晶硅棒和單晶硅片，使得客戶對本集團的單晶組件的需求高企，目前單多晶組件銷售比例約為85%單晶對15%多晶的水平，預期單晶組件市場份額會持續上揚。



Management Discussion and Analysis

管理層討論及分析

Operations Review (continued)

Solar cell and module businesses (continued)

In summary, through customer demand for the Group's downstream modules, it has not only driven the demand for the Group's upstream mono-crystalline ingots and mono-crystalline wafers, but also helps to realise the benefits arising from the Group's vertical integration strategy, and to better mitigate the market risks arising from fluctuant sales of upstream silicon wafers or unstable supply of mid-stream solar cells.

Construction and operation of photovoltaic system business

To consolidate its advantages of the business model of vertical integration, the Group actively expanded the business of end-user market apart from its efforts in stabilising its upstream and midstream business development, thereby driving demand for products from downstream to upstream. As such, in respect of the business opportunity derived from the construction of distributed power plants, apart from establishing internal photovoltaic power plant system companies of the Group, the Group also plans to establish joint venture companies with companies from other industries in order to share the profits and also provide extra distribution channels for the Group's module sales.

營運回顧 (續)

電池及組件業務(續)

綜上所述，本集團藉由下游組件客戶需求的拉動，不僅可帶動了本集團上游單晶硅棒與單晶硅片的需求，而有助於本集團垂直整合效益的體現，亦可增強抵禦上游硅片銷售波動或中游電池片供給不穩定的風險。

興建及經營光伏系統業務

為強化垂直一體化業務模式的優勢，在穩固上中游業務發展的同時，本集團積極多方開拓終端電站建設業務，期以由下而上拉動產品需求。因此，針對分布式電站建設商機，除了透過集團內部光伏電站系統開發的子公司之外，本集團亦計劃透過合資方式與異業合作而設立新的系統開發公司，以擴展各地區的分布式光伏系統建設商機，分享系統開發業務利潤，亦可增加本集團組件銷售的出口渠道。



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Financial Review

Revenue

The cost of photovoltaic power generation must continue to decline as technology continues to improve in order to replace traditional petrochemical energy in a larger scale and to effectively achieve the goal of green and clean energy. As such, although the average selling price during the year declined substantially over last year, as a result of successful customer development, the size of the customer base and the purchases by individual customers are showing continuous growing trends. The external shipment volume increased significantly by 48% compared to last year. The Group has also continued to maintain its growing trend and recorded revenue of RMB4,425.552 million for the year ended 31 December 2019, a 10% increase from RMB4,022.452 million in 2018.

Cost of sales

Up to 31 December 2019, cost of sales increased from RMB3,624.902 million last year to RMB4,084.184 million, representing an increase of 12.7%, which was mainly resulted from the increase in shipment volume. Cost of sales represented 92.3% of total revenue, representing an increase of 2.2 percentage points from 2018. The increase in this ratio was mainly due to the continuous decline in market prices during the year compared to last year, and the failure to mass-produce as a result of the testing and adjustment of new production capacity, and the fact that the existing production capacity was upgraded, which affected the actual output, hindering the demonstration of the Group's advantages of economy of scale.

財務回顧

收益

光伏發電成本必須隨著技術不斷創新而持續下降，才能大規模取代傳統石化能源，以有效實現綠色清潔能源的目標。因此，雖然年內銷售單價較去年持續下降，但因為客戶開發有成，客戶總數及單一客戶採購量平均皆繼續成長，不僅總出貨量較前一年同期成長48%，亦使得截至二零一九年十二月三十一日止年度，本集團的收益為人民幣4,425.552百萬元，較二零一八年人民幣4,022.452百萬元增加約10%，繼續維持穩定成長趨勢。

銷售成本

截至二零一九年十二月三十一日，銷售成本由去年的人民幣3,624.902百萬元增加至人民幣4,084.184百萬元，升幅為12.7%，主要原因為出貨量增加所致。銷售成本佔總營業額的92.3%，較二零一八年上升2.2%。比例的上升主要是年內市場價格較去年同期持續下滑，且由於新產能調適而未能大幅量產，與既有產能升級改造而影響實際產出的情形下，集團經濟規模優勢未能展現所致。



Management Discussion and Analysis

管理層討論及分析

Financial Review (continued)

Gross profit and gross profit margin

The Group recorded a gross profit of RMB341.368 million and a gross profit margin of 7.7% in 2019, as compared to a gross profit of RMB397.55 million and a gross profit margin of 9.9% in 2018. Both gross profit and the gross profit margin recorded declines. The main reason was unit selling prices has dropped rapidly during 2019 and China's photovoltaic power subsidy policy was introduced later than expected, industry players generally hold a wait-and-see attitude, resulting in a year-on-year decrease in Chinese domestic photovoltaic installation. Further, despite the significant increase in module external shipment, the Group's low-cost and high-efficiency production capacity located in Yunnan Qujing was still in adjustment phase during the year, production capacity was not fully utilised. This forced the Group to continue to rely heavily on the mono-crystalline ingot and wafer products from its production base in Liaoning Jinzhou. While the local electricity cost in Liaoning Jinzhou is more than double that of Yunnan Qujing, it has directly and indirectly contributed to higher production cost of monocrystalline silicon ingots and wafers. As such, the Group's overall gross profit was being affected. Further, although the main products shipment of mono-crystalline silicon wafers and photovoltaic modules during the year increased by 137% and 27% respectively compared with last year, the Group was committed to the technological upgrading and transformation of production equipment has affected production efficiency and led to gross profit performance to be below expectation.

Selling and distribution expenses

Selling and distribution expenses mainly comprised packaging expenses, freight charges and insurance expenses. Selling and distribution expenses increased to RMB84.583 million in 2019 from RMB77.447 million in 2018. The increase in selling and distribution expense was mainly due to the increase in volume of external shipment in 2019.

Administrative expenses

Administrative expenses mainly comprised staff costs and research and development expenses. The administrative expenses in 2019 amounted to RMB409.458 million, as compared to RMB377.609 million in 2018. The increase was mainly due to the commissioning of the new Yunnan Qujing project in 2019 and continued investment in related research and development expenses.

財務回顧(續)

毛利及毛利率

本集團二零一九年錄得人民幣341.368百萬元的毛利，毛利率為7.7%，對比二零一八年的9.9%毛利率及人民幣397.55百萬元毛利，毛利總額與毛利率皆錄得下降，主要因為二零一九年銷售單價快速下滑及中國光伏電價補貼政策出台較預期晚，業內人士普遍抱持觀望態度，造成中國年內光伏新增裝機同比下降。而且，雖然主力組件產品出貨量顯著增加，由於年內本集團於雲南曲靖所新建的低本高效產能仍處於調試階段，產能於年內未能全面開出，這也使得集團大部分單晶硅棒和硅片產品仍需仰賴原來的遼寧錦州基地來生產，而遼寧錦州當地電費卻較雲南曲靖高出一倍有餘，故在主要成本電費較高的外部因素影響下，直接與間接地造成集團年內單晶硅棒與硅片之生產成本較高，而影響了整體毛利績效。其次，雖然主力產品單晶硅片與光伏組件年內出貨量分別較去年同期增長了137%與27%，但因本集團亦致力於遼寧錦州基地單晶硅棒與單晶硅片及組件之既有產能設備的技術提升與改造，因而影響了生產效率使得毛利表現不如預期。

銷售及分銷開支

銷售及分銷開支主要包括包裝開支、運費及保險費。銷售及分銷開支由二零一八年的人民幣77.447百萬元，增加至二零一九年的人民幣84.583百萬元。銷售及分銷開支上升主要是二零一九年對外付運量大幅上升所致。

行政開支

行政開支主要包括員工成本及研發開支。由較二零一八年人民幣377.609百萬元，增加至二零一九年的人民幣409.458百萬元，上升主要原因是二零一九年雲南曲靖新項目的投產與相關研發費用的持續投入所致。



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Financial Review (continued)

Finance costs

Finance costs represented mainly bank loan interests. The Group's finance costs decreased from RMB136.012 million in 2018 to RMB123.13 million in 2019, a decrease of 9.5%. As mentioned above, external shipment of the Group has grown significantly by 48%. With an increase in amount of relevant purchases, the Group's finance cost, however, did not increase correspondingly. This was due to the Group's continued better financial control on the use of funds during the year. Our banks were also showing greater confidence in the Group and have increased their facilities during the year respectively, which included China Zheshang Bank increasing its facilities of pledged borrowings for the Group to RMB800 million. The Group expects to control its finance costs effectively, and will obtain various different financing channels in the future.

Income tax

Income tax expense was RMB41.308 million in 2019, while an income tax credit amounted to RMB12.157 million was recorded in 2018. The income tax expense recorded in 2019 was mainly due to the Group reversing the recognition of deferred tax assets in previous years.

Loss attributable to the equity holders

In 2019, the Group recorded a loss attributable to the equity shareholders of RMB355.492 million, as compared to a loss attributable to the equity shareholders of RMB222.402 million in 2018.

Inventory turnover days

In order to replace traditional petrochemical energy in a larger scale and to effectively achieve the ultimate goal of green and clean energy, continuous technological advancement has driven down the prices of photovoltaic products over the years. This led to declining trends in prices of many related raw and auxiliary materials for production and finished products. Hence, in terms of inventory reserve strategy, the Group has been focusing its efforts in raising inventory turnover and lowering the inventory turnover days in order to mitigate the risk of a sudden decline in inventory prices, help reduce committed capital and, at the same time, further strengthen the Group's operation working capital. As a result, the Group's inventory turnover days has been lowered to 33 days during the year (31 December 2018: 37 days).

財務回顧(續)

融資成本

融資成本主要為銀行貸款的利息。本集團的融資成本由二零一八年的人民幣136.012百萬元下降至二零一九年的人民幣123.13百萬元，下降9.5%。然而，誠如前述所提，本集團出貨總量成長48%，故在其相應的採購金額亦有所增長之下，本集團融資成本總額卻無同步增加，其原因係為年內集團對資金用途繼續保持較佳財務控制，而各銀行亦對集團顯示出更大的信心，分別於年內對額度作出不同程度的增加，其中包括浙商銀行將其對本集團資產質押借款額度增加至人民幣8億元。本集團未來將可持續有效控管融資成本，且取得更多不同的融資管道。

所得稅

二零一九年的所得稅支出為人民幣41.308百萬元，而二零一八年的所得稅抵免為人民幣12.157百萬元。二零一九年所錄得的所得稅支出乃主要由於本集團回沖以前年度認列遞延稅項資產所致。

權益持有人應佔虧損

二零一九年，本集團錄得權益股東應佔虧損人民幣355.492百萬元，二零一八年，本集團錄得權益股東應佔虧損人民幣222.402百萬元。

存貨週轉日

為了快速取代傳統石化能源，以有效實現綠色清潔能源的最終目標，光伏產品售價近年來隨著技術不斷創新而持續下降，致相關生產所需的原輔材料和製成品的價格也大多呈現走跌的趨勢，因此，本集團在存貨的儲備策略上，主要是提高存貨周轉率而降低存貨集團周轉天期，以期避免存貨價格快速下跌的風險，同時亦可減少資金積壓而進一步充實營運周轉金，故年內本集團存貨周轉日繼續降低至33日(二零一八年：37日)。



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Financial Review (continued)

Trade receivable turnover days

The Group completed the vertical integration of upstream and downstream mono-crystalline silicon products since 2011. Apart from not producing polysilicon in-house, the scope of the Group's business covers self-production of mono-crystalline silicon ingots, mono-crystalline silicon wafers, solar cells and solar modules. However, due to the large capacity of upstream products in earlier years, external sales were at the time dominated by mono-crystalline silicon wafers. Hence, to get closer to the customer needs of the module end-user market, the capacity of module production rapidly increased from 400MW in 2013 to 2.3GW in 2019. Under the rapid growth of the capacity of module production, the solar modules sales accounted for over 70% of the Group's overall sales.

According to the terms of the industry's general module sales contract, the recovery of module receivable 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. In addition, 10% of the total amount of receivables are retained as warranties. These warranties will generally be recovered in around one year. As a result, the trade receivables turnover days of module business are generally longer. Even so, due to the continuously effective management of accounts receivable, the collection has been improved, resulting in the Group's trade receivables turnover days being reduced to 113 days in 2019 (2018: 141 days).

Trade payable turnover days

The trade payables turnover day was 130 days, which rose comparing to 124 days of last year, was mainly due to the strategic partnerships established with our major suppliers, under stable and frequent co-operations, and the suppliers have gradually increased our lines of credits and payment terms.

財務回顧(續)

應收貿易賬款週轉日

本集團於二零一一年即完成了單晶產品上下游垂直整合一體化整合生產能力，其業務範圍除了未自行生產多晶硅外，單晶硅棒、單晶硅片、電池、組件皆有自行生產，但初期由於上游產品環節產能較大，故當時對外銷售仍以單晶硅片為主。然而，為了更接近終端光伏組件市場的客戶需求，組件產能由二零一三年400兆瓦的組件產能快速提升至二零一九年底的2.3吉瓦，在組件產能的大幅成長下，目前組件銷售比重已佔集團整體銷售之70%以上。

根據行業一般組件銷售合同條款，組件應收帳款的回收需取決於電站建設的進度，例如：部分應收帳款不僅需於客戶的電站並網後始能收回，且尚需留有應收帳款總額的10%以上作為質保金，而此質保金則需於一年後才能回收，故組件業務應收貿易帳款週轉日普遍較長。即使如此，憑藉著持續應收帳款的有效管理，收款情況因而得到優化，造成二零一九年本集團應收貿易賬款週轉日下調至113日(二零一八年：141日)。

應付貿易賬款週轉日

本年應付貿易賬款週轉日為130日較去年124日提高，主係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，供應商逐漸提高對本集團的授信額度與帳期。



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 year were cash flows from bank borrowings. As at 31 December 2019, the current ratio (current assets divided by current liabilities) of the Group was 0.79 (31 December 2018: 0.80). The Group had net borrowings of RMB1,010.194 million as at 31 December 2019 (31 December 2018: RMB1,125.436 million), including cash in bank and on hand of RMB396.854 million (31 December 2018: RMB239.712 million), pledged deposits of RMB403.191 million (31 December 2018: RMB425.309 million), bank loans due within one year of RMB1,680.914 million (31 December 2018: RMB1,773.140 million) and non-current bank and other loans of RMB129.325 million (31 December 2018: RMB17.317 million). The net debt to equity ratio (net debt divided by total equity) was 221.7% (31 December 2018: 139.3%).

Earnings before interest, taxes, depreciation and amortisation ("EBITDA")

During the period, earnings before interest, taxes, depreciation and amortisation ("EBITDA") was RMB49.126 million (1.11% to revenue) (2018: RMB136.938 million, 3.4% to revenue). The main reason for the decrease in EBITDA was due to the Group's net loss during the year.

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 foreign currencies received from customers to settle the amounts due to suppliers 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 the need to mitigate the risk through low-risk forward contracts, in order to strike a balance between the exposure to the variations in interest costs and fluctuations in foreign exchange rates.

Human resources

As at 31 December 2019, the Group had 4,036 (31 December 2018: 3,669) employees.

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借貸所得款項。於二零一九年十二月三十一日，本集團的流動比率(流動資產除流動負債)為0.79(二零一八年十二月三十一日：0.80)。本集團於二零一九年十二月三十一日有借貸淨額人民幣1,010.194百萬元(二零一八年十二月三十一日：人民幣1,125.436百萬元)，其中包括銀行及手頭現金人民幣396.854百萬元(二零一八年十二月三十一日：人民幣239.712百萬元)、已抵押存款人民幣403.191百萬元(二零一八年十二月三十一日：人民幣425.309百萬元)、一年內到期銀行貸款人民幣1,680.914百萬元(二零一八年十二月三十一日：人民幣1,773.140百萬元)以及非流動銀行及其他貸款人民幣129.325百萬元(二零一八年十二月三十一日：人民幣17.317百萬元)。淨借貸權益比率(借貸淨額除權益總額)為221.7%(二零一八年十二月三十一日：139.3%)。

未計利息、稅項、折舊及攤銷前盈利(「稅息折舊及攤銷前利潤」)

年內，本集團錄得未計利息、稅項、折舊及攤銷前盈利為人民幣49.126百萬元(收益之1.11%)(二零一八年：人民幣136.938百萬元(收益之3.4%))。稅息折舊及攤銷前利潤下降的主要原因是本集團年內虧損所致。

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。由於本集團以從客戶所收取的外幣清償來應付予供應商款額形成匯率自然避險，故董事預期匯率變動不會構成任何重大影響。此外，本集團會考慮外幣與本幣借款利息成本差異性及匯率變化，並進一步考量搭配風險較低的遠期合約交易來避險，使得於利息成本高低和外幣匯率變化風險中取得平衡。

人力資源

於二零一九年十二月三十一日，本集團的僱員數目為4,036名(二零一八年十二月三十一日：3,669名)。

Management Discussion and Analysis

管理層討論及分析

Future prospects and strategies

As a clean energy source, photovoltaic power generation replacing traditional petrochemical energy sources has become a global trend. The market is now undergoing a structural transformation. In addition to the technological advantages of mono-crystalline silicon products, which has been the Group's focus, being proven to be superior to multi-crystalline products, through the continued reduction of government subsidies, or even without subsidies, it is also advancing technological progress and reducing power generation costs, to promote the acceleration of the industry in the achievement of comprehensive grid parity.

After years of rapid development, the Chinese photovoltaic industry is leading its peers in the world. Its annual output in China has exceeded RMB400 billion, and it has provided millions of jobs. It has made a significant contribution to China's economic growth. It is expected that the Chinese government will continue its long-term support to the photovoltaic industry. Year 2019 is the first year of implementing a new mechanism for photovoltaic subsidy bidding, and it is also the first year of parallel development of grid parity and bidding projects. Compounded with the effect of the later-than-expected introduction of China's photovoltaic power subsidy policy during the year, industry players generally hold a wait-and-see attitude, resulting in a year-on-year decrease in domestic photovoltaic installation of 30.1GW in China compared with last year. This is expected to be a short term response. Demands in 2019 is expected to be deferred to 2020. However, due to epidemic of the new coronavirus, this deferred demand may not be immediately apparent in early 2020, but it is estimated that the global new photovoltaic installation in 2020 may still reach 140 to 150GW. Among them, China is expected to account for around 40GW. It is judged that the impact of the short-term deferral caused by the new coronavirus should be limited.

As for the technology of photovoltaic products, due to the advantages of high conversion ratios, stable decay rate in its photovoltaic systems, continued reduction in unit cost, etc. of mono-crystalline products are highlighted, market share of monocrystalline products will continue to rise. Therefore, monocrystalline products has become the popular choice in solar project. Hence, the proportion of solar plants installing mono-crystalline photovoltaic systems and the mono-crystalline products used by distributed power plants have been increasing as a result.

未來展望及策略

作為清潔能源的光伏發電大幅取代傳統石化能源是全世界未來的趨勢，而現階段光伏市場正在經歷一個結構性的轉變，除了我集團所專注的單晶產品技術路線已證明優於多晶產品之外，而藉由政府補貼的持續降低，甚至沒有補貼，更是推進技術進步，降低發電成本，以推動行業加速達至全面的平價上網的方式。

經過多年的快速發展，光伏產業是中國具有全球領先優勢的行業之一，其在中國的年產值已超過人民幣4,000億，並帶動百萬人就業，對中國經濟成長有重大的貢獻，中國政府對於光伏產業將會繼續給予長遠的支持。然而，由於二零一九年是中國實行光伏補貼競價新機制的第一年，也是平價上網和競價項目並行發展的第一年，加之年內光伏新政出台較晚，業內人士普遍抱持觀望態度，造成年內中國國內光伏新增裝機30.1吉瓦較同比下降，但此應為短期現象，預估中國二零一九年的需求將會遞延至二零二零年。然而，因為受到新冠病毒疫情蔓延影響，此遞延的需求也許未能立即於二零二零年初顯現，但預估全球二零二零年光伏新增裝機量仍可有140至150吉瓦，其中中國裝機量約有40吉瓦，判斷因為新冠病毒所造成之需求短暫遞延的影響應屬有限。

至於光伏產品技術路線方面，由於單晶產品高轉換率及系統衰減率較穩定、單位成本持續下降等優點備受關注，單晶產品市場份額將持續快速擴張。因此，單晶產品已成為太陽能項目的熱門選擇，安裝單晶產品的光伏系統與分布式電站皆不斷增加。



Management Discussion and Analysis 管理層討論及分析

Future prospects and strategies (continued)

The Group focuses on mono-crystalline silicon products in photovoltaic products and has industry-leading production technology of mono-crystalline products. In the upstream and downstream of the vertical integration of the photovoltaic industry, while not producing chemical raw material polysilicon, its business form covers the entire photovoltaic industry. The chain can fully leverage the synergies between the Group's businesses. The focus is on the production of upstream mono-crystalline silicon ingots and silicon wafers, and planning the downstream module production capacity, in order to focus on the production of upstream niche products, mono-crystalline silicon ingots and wafers, retaining only a small scale solar cell manufacturing capacity, and through significant module production capacity, the Group not only maintains direct contact with downstream module customers with huge market power, establishes stable supply and demand relations but also keeps a finger on the pulse of the end-user market, and can also bring out the upstream high-end mono-crystalline silicon ingot and wafer products. Through the potential of continuous improvement in production costs of the upstream high-end mono-crystalline ingot and wafer products, the Group's innate advantage will be demonstrated. As such, in order to meet the needs of module customers, in addition to the 2.3GW module capacity owned by its wholly-owned subsidiaries, the Group has participated in a newly-established module manufacturing base of 1.2GW in Yancheng, Jiangsu. It only invested a small amount of cash for a direct equity investment of 15%, however, through strategic alliances among strategic investors and employees of the Group, the 1.2GW module capacity will co-ordinate with the manufacturing needs of the Group and it has already begun production in 2020. The Group's effective module production capacity has been increased to 3.5GW in 2020, which can greatly increase the economic scale advantage of module products, and also provide a more stable outlet of the Group's 3.6GW upstream mono-crystalline silicon ingots and wafers production capacity.

未來展望及策略(續)

本集團專注於單晶產品製造，擁有行業領先的單晶產品生產技術，於光伏產業垂直整合的上下游裡，除了未自行生產化工類的多晶硅原材料之外，其業務形態覆蓋全光伏產業鏈，可以充分發揮本集團業務間之協同效應。本集團整體策略為：重點投資於上游利基產品單晶硅棒／單晶硅片的生產製造，並拓展下游組件產能，只保留小幅中游電池片製造能力，透過顯著的組件產能，不但已與更具規模與市場影響力的下游組件客戶建立了直接且穩定的供銷關係，以緊貼終端市場脈搏，亦可將上游高端單晶硅棒與單晶硅片產品帶出，通過單晶硅棒與單晶硅片來自外部生產條件與內部技術提升的成本改善空間，以顯示本集團既有優勢。此外，為了滿足組件客戶的需求，本集團除了由全資子公司所擁有的2.3吉瓦組件產能之外，年內已於江蘇鹽城參與新設1.2吉瓦組件製造基地，雖然僅透過少量現金投資以直接持有其15%股權，但透過策略投資者與本集團員工的策略聯盟，此1.2吉瓦組件產能將可配合集團需求生產，並已於二零二零年開始量產，故本集團有效使用組件產能已於二零二零年起提升至3.5吉瓦，可大幅增加組件產品的經濟規模優勢，亦可使得本集團上游單晶硅棒與硅片之3.6吉瓦產能有更穩定的出口。



Management Discussion and Analysis

管理層討論及分析

Future prospects and strategies (continued)

Although the average unit selling price of the product in the future is still expected to gradually decline with the advent of grid parity, the Group can rely on (1) the new production base having low external electricity costs, which directly and indirectly reduces the production costs; (2) the commencement of mass production by the new equipment and the completion of upgrades to the old equipment; (3) technological integration advantages of its various product lines; and (4) strong client base in China and overseas. It is expected to lead to continuous growth in the Group's future external shipment volume and revenue, it is also expected that the magnitude of decrease in cost of the Group's products will be greater than that of the decrease in unit selling price, hence driving the Group's gross profit ratios to return to a normal level.

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. The Group is fully prepared and will do its utmost, to embrace the growth and development in the photovoltaic industry in the good times after reaching grid parity.

Event after reporting period

Given the dynamic circumstances and uncertainties across the global markets to be recovered from the outbreak of the coronavirus disease 2019 ("COVID-19"), as of the reporting date, there was no material adverse effect on the financial statement as a result of the outbreak. However, the Group will continue to closely monitor the development of the situation and accordingly evaluate the impact on the financial position and performance, which will be reflected in the Group's 2020 interim and annual financial statements.

Audit Committee

The Company's Audit Committee has reviewed the accounting principles and practices adopted by the Group and the Group's consolidated financial results for the year ended 31 December 2019, and has discussed and reviewed the risk management, internal control and reporting matters.

Dividend

No final dividend was paid in 2019 (2018: Nil). The Directors do not recommend the payment of a final dividend for 2019 (2018: Nil).

未來展望及策略 (續)

雖然未來市場平均產品銷售單價仍將隨著全面平價上網的來臨而逐漸降低，但憑藉著(1)新生產基地具有較低的外部電費成本所帶動的直接與間接的生產成本大幅降低(2)新設備已投入量產，舊設備亦已改造完成(3)長期以來各產品線多元化的技術疊加優勢，加上(4)國內外堅實的客戶基礎，本集團預期未來對外付運量以及銷售總額都將再持續增長，且產品成本下降幅度可較銷售價格的降幅更低，毛利率亦將會回歸於正常水平。

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，這正是行業新生的契機，本集團已經做好準備，將全力以赴，擁抱平價上網後光伏行業蓬勃發展的美好時代。

報告期後事項

鑒於新型冠狀病毒(「COVID-19」)爆發中可恢復的全球市場的動態情況及不確定性，截至報告日並未對本集團產生顯著重大不利影響，惟本集團將繼續密切關注其發展並評估其對財務狀況及表現的影響，以反映於本集團後續二零二零年的中期及年度財務報表中。

審核委員會

本公司審核委員會已審閱本集團採納的會計原則及常規以及本集團截至二零一九年十二月三十一日止年度的綜合財務業績，及就風險管理、內部監控及匯報事宜進行討論及審閱。

股息

二零一九年內並無派付末期股息(二零一八年：無)。董事不建議就二零一九年派發末期股息(二零一八年：無)。



Management Discussion and Analysis

管理層討論及分析

Delisting of Taiwan Depositary Receipts

The Company received a notice from the Taiwan Stock Exchange on 2 October 2019, whereby the Taiwan Stock Exchange indicated that it shall require the TDRs to be delisted with effect from 12 November 2019 pursuant to the relevant rules of the Taiwan Stock Exchange as the net assets value of the Group fell below one-third of the sum of the share capital and the share premium of the Company as set out in the unaudited consolidated interim financial results of the Company for the six months ended 30 June 2019. As such, the last trading day of the TDRs shall fall on 11 November 2019.

Closure of Register of Members

The register of members of the Company will be closed from 23 June 2020 to 30 June 2020, both days inclusive, during which period no transfer of shares will be effected. In order to be eligible to attend and vote at the forthcoming annual general meeting of the Company, all transfers accompanied by the relevant share certificates must be lodged with the branch share registrar of the Company in Hong Kong, Computershare Hong Kong Investor Services Limited at Rooms 1712-16, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong not later than 4:30 p.m. on 22 June 2020.

臺灣存託憑證退市

本公司已於二零一九年十月二日收到根據臺灣證券交易所發出的通知，臺灣證券交易所於通知中指明，根據本公司截至二零一九年六月三十日止六個月未經審核的中期合併財務報告，由於本集團淨值已低於本公司股本及股份溢價之和的三分之一，故其得依臺灣交易所的相關規則要求臺灣存託憑證於二零一九年十一月十二日起終止上市。因此，臺灣存託憑證的最後交易日為二零一九年十一月十一日。

暫停辦理股份過戶登記

本公司將由二零二零年六月二十三日至二零二零年六月三十日(首尾兩天包括在內)暫停辦理股份過戶登記手續，期間不會登記股份過戶。如欲符合資格出席本公司應屆股東週年大會並於會上表決，所有股份過戶文件連同有關股票必須於二零二零年六月二十二日下午四時三十分前，交回本公司之股份過戶登記處香港分處香港中央證券登記有限公司(地址為香港灣仔皇后大道東183號合和中心17樓1712-16室)。



CORPORATE GOVERNANCE REPORT

企業管治報告

Overview

The board of Directors (the “Board”) strived to uphold good corporate governance and adopted sound corporate governance practices. This report outlines the principles and the code provisions set out in the Corporate Governance Code (the “Code”), as contained in Appendix 14 of the Rules (the “Listing Rules”) Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “Stock Exchange”) which have been adopted by the Group.

The Company has established the audit committee (the “Audit Committee”) in compliance with the Code to oversee the financial reporting procedures and internal controls of the Group so as to ensure compliance with the Listing Rules. The Company has also established a nomination committee (the “Nomination Committee”) and a remuneration committee (the “Remuneration Committee”) (collectively, the “Board Committees”) with defined terms of reference. The terms of reference of the Board Committees have been posted on the websites of Stock Exchange and the Company.

The Group has implemented a compliance manual which covers areas such as ongoing compliance obligations of the Company and the Directors, business operations of the Group, financial management systems, human resources management systems, internal control systems, quality assurance and property management systems. In the opinion of the Board, all the code provisions set out in the Code were met by the Company throughout the financial year ended 31 December 2019.

Compliance with the Model Code for Directors’ Securities Transactions

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) as set out in Appendix 10 of the Listing Rules as the standard for securities transactions entered into by Directors. The Company has made specific enquiries of all the Directors and all the Directors confirmed that they have complied with the required standards as set out in the Model Code and its code of conduct regarding Directors’ securities transactions throughout the financial year ended 31 December 2019.

概覽

董事會致力維持良好的企業管治，採納理想的企業管治常規。本報告簡述已獲本集團採納香港聯合交易所有限公司（「聯交所」）證券上市規則（「上市規則」）附錄十四載列之企業管治守則（「守則」）所載之原則及守則條文。

本公司已根據守則的規定成立審核委員會（「審核委員會」）監督本集團財務報告程序及內部監控，確保遵守上市規則。本公司亦已成立提名委員會（「提名委員會」）及薪酬委員會（「薪酬委員會」）（統稱「董事委員會」），均具有界定的職權範圍。董事委員會的職權範圍已刊登於聯交所及本公司網站。

本集團亦制定遵例手冊，範圍涵蓋本公司及董事的持續遵例責任、本集團的業務營運、財務管理制度、人力資源管理制度、內部監控制度、質量保證及物業管理制度等方面。董事會認為，本公司於截至二零一九年十二月三十一日止財政年度內一直遵守守則載列的全部守則條文。

遵守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載列的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準則。本公司已特別向全體董事查詢，全體董事確認，於截至二零一九年十二月三十一日止財政年度內，彼等均已符合標準守則及其有關董事進行證券交易操守守則規定的準則。



Corporate Governance Report 企業管治報告

The Board of Directors

The Board takes the responsibility to oversee all major matters of the Company, including the formulation and approval of overall business strategies, internal control and risk management systems, and monitoring the performance of the senior management. The Directors have the responsibility to act objectively in the interests of the Company. The Directors also assume the following responsibilities for corporate governance as set out in code provision D3.1 of the Code:

- (a) to develop and review an issuer's policies and practices on corporate governance and make recommendations to the Board;
- (b) to review and monitor the training and continuous professional development of directors and senior management;
- (c) to review and monitor the issuer's policies and practices on compliance with legal and regulatory requirements;
- (d) to develop, review and monitor the code of conduct and compliance manual (if any) applicable to employees and directors; and
- (e) to review the issuer's compliance with the code and disclosure in the Corporate Governance Report.

As at 31 December 2019, the Board comprises seven Directors, including three executive Directors: Mr. TAN Wenhua (Chairman), Mr. TAN Xin (Chief Executive Officer) and Mr. WANG Junze (Chief Financial Officer), one non-executive Director: Mr. HSU You Yuan, and three independent non-executive Directors: Dr. WONG Wing Kuen, Albert, Ms. FU Shuangye and Ms. FENG Wenli. The names and biographical details of the Directors are set out on pages 44 to 49 of the annual report. The Board has a strong independent element in its composition with over half of the board members being non-executive Directors to ensure that all decisions of the Board are made in the best interest of the Group's long-term development.

The Board has delegated various responsibilities to the Board Committees. Further details of these committees are set out below on pages 38 to 40.

董事會

董事會負責監督本公司所有重要事宜，包括制定及批准整體業務策略、內部監控及風險管理制度、監察高級管理層表現。董事有責任以本公司利益按客觀標準行事。董事亦承擔載於守則之守則條文第D3.1條有關企業管治之以下責任：

- (a) 發展及檢討有關企業管治之發行人政策及常規並向董事會提供意見；
- (b) 檢討及監察董事及高級管理人員之培訓及持續專業發展；
- (c) 檢討及監察有關遵守法律及法規規定之發行人政策及常規；
- (d) 發展、檢討及監察適用於僱員及董事之操守及遵守手冊之守則(如有)；及
- (e) 檢討發行人是否遵守企業管治報告之守則及披露。

於二零一九年十二月三十一日，董事會現時由七名董事組成，包括三名執行董事(即譚文華先生(主席)、譚鑫先生(首席執行官)及王鈞澤先生(首席財務官))、一名非執行董事許祐淵先生及三名獨立非執行董事(即王永權博士、符霜葉女士及馮文麗女士)。本年報內第44頁至第49頁載有董事的姓名及履歷詳情。董事會的組成具高度獨立成份，過半數董事會成員為非執行董事，確保董事會以本集團長遠發展的最佳利益，作出所有決策。

董事會已委派董事委員會履行各種職責。有關該等委員會的進一步詳情，載於下文第38頁至第40頁。



Corporate Governance Report

企業管治報告

Board Meetings

The Company holds Board meetings regularly, at least four times a year at approximately quarterly intervals. Ad-hoc meetings will also be convened if necessary to discuss the overall strategy as well as the operation and financial performance of the Group. Notice of Board meeting will be sent to all Directors at least 14 days prior to a regular Board meeting. Reasonable notices will be given to the Directors for ad-hoc Board meetings. Directors may participate either in person or through electronic means of communications. The Company will provide relevant materials to all the Directors relating to the matters brought before the meetings. All the Directors will be provided with sufficient resources to discharge their duties, and, upon reasonable request, the Directors will be able to seek independent professional advice in appropriate circumstances, at the Company's expenses. All Directors will have the opportunity to include matters in the agenda for Board meetings.

During the year ended 31 December 2019, 8 Board meetings and 1 Shareholders meeting were held and the attendance of individual Directors at these meetings is set out below:

Name of Directors	Attendance/Number of Meetings		董事姓名	出席率／會議次數	
	Board meetings	Shareholders meetings		董事會會議	股東大會
Executive Directors			執行董事		
Mr. TAN Wenhua (<i>Chairman</i>)	8/8	1/1	譚文華先生(主席)	8/8	1/1
Mr. TAN Xin	8/8	1/1	譚鑫先生	8/8	1/1
Mr. WANG Junze	8/8	1/1	王鈞澤先生	8/8	1/1
Non-executive Director			非執行董事		
Mr. HSU You Yuan	8/8	1/1	許祐淵先生	8/8	1/1
Independent non-executive Directors			獨立非執行董事		
Dr. WONG Wing Kuen, Albert	8/8	1/1	王永權博士	8/8	1/1
Ms. FU Shuangye	8/8	1/1	符霜葉女士	8/8	1/1
Mr. ZHANG Chun (retired with effect from 18 June 2019)	3/3	0/1	張椿先生 (自二零一九年六月 十八日起退任)	3/3	0/1
Ms. FENG Wenli (appointed with effect from 18 June 2019)	5/5	0/1	馮文麗女士 (自二零一九年六月 十八日起委任)	5/5	0/1

董事會會議

本公司的董事會會議每年定期最少舉行四次，大約每季舉行一次，在有需要時亦會召開臨時會議，商討整體策略以及本集團的營運及財務表現。全體董事將於舉行定期董事會會議前最少14天獲發董事會會議通告，而臨時董事會會議通告亦會於事前合理時間內送交予董事。董事可選擇親身或以電子通訊方式出席會議。本公司將於會議前向所有董事提供有關會議上討論事項的資料。所有董事將獲得充份資源以履行其職責，並可提出合理要求，按合適情況徵求獨立專業意見，費用由本公司承擔。所有董事均可將其關注的事宜加入董事會會議議程。

截至二零一九年十二月三十一日止年度內，董事會曾舉行8次董事會會議及1次股東大會，而個別董事出席有關會議的情況載列如下：



Corporate Governance Report 企業管治報告

Independent Non-executive Directors

All independent non-executive Directors possess a wealth of professional and industry expertise and management experience and have provided their professional advices to the Board. They have played a significant role in the Board by virtue of their independent judgment and their views carry significant weight in the Board's decision. In particular, they bring impartial views to the Board on issues of the Company's strategy, performance and control. The Board also considers that independent non-executive Directors provide independent advice on the Company's business strategy, results and management so that all interests of shareholders are taken into consideration, and the interests of the Company and its shareholders are taken into account in all business decisions. The Company has received from each of the independent non-executive Directors an annual confirmation of his/her independence pursuant to the criteria Rule 3.13 of the Listing Rules. The Company considers that all the independent non-executive Directors are independent in accordance with the Listing Rules.

Any re-election of an independent non-executive director who has served the Board for more than nine years, his/her further appointment should be subject to a separate resolution to be approved by shareholders.

Where an individual is proposed to be elected as an Independent Non-executive Director at the general meeting, the circular to shareholders and/or explanatory statement accompanying the notice of the relevant general meeting will include:

- the process used for identifying the individual and why the Board believes the individual should be elected and the reasons why it considers the individual to be independent;
- if the proposed Independent Non-executive Director will be holding their seventh (or more) listed company directorship, why the Board believes the individual would still be able to devote sufficient time to the Board;
- the perspectives, skills and experience that the individual can bring to the Board; and
- how the individual contributes to diversity of the Board.

Each of Dr. WONG Wing Kuen, Albert and Ms. FU Shuangye has served as an Independent Non-executive Director of the Company for more than ten years. As Independent Non-executive Directors with extensive experience and knowledge and in-depth understanding of the Company's operations and business, each of them has expressed objective views and given independent guidance to the Company over the past years, and they continue to demonstrate a firm commitment to their role.

The Nomination Committee and the Board consider that the long service of Dr. WONG Wing Kuen, Albert and Ms. FU Shuangye would not affect their exercise of independent judgement and are satisfied that each of Dr. WONG Wing Kuen, Albert and Ms. FU Shuangye has the required character, integrity and experience to continue fulfilling the role of an Independent Non-executive Director.

獨立非執行董事

所有獨立非執行董事均具備豐富的業界專業知識及管理經驗，能為董事會提供專業意見。彼等能提供獨立判斷，董事會作出決定時多會考慮彼等的意見，故在董事會中擔當重要的角色。尤其在本公司策略、業績及監控方面，他們可向董事會提出無偏私的觀點。董事會亦認為，獨立非執行董事能就本公司的業務策略、業績及管理提供獨立意見，因此，股東的所有利益已獲考慮，而所有商業決定亦已顧及本公司及其股東的利益。本公司已自各獨立非執行董事收獲彼根據上市規則第3.13條作出之年度獨立性之確認。本公司認為，所有獨立非執行董事根據上市規則均為獨立人士。

凡服務董事會超過九年的獨立非執行董事，須獲股東以獨立決議案批准方可續任。

倘擬於股東大會上建議選任某人士為獨立非執行董事，則有關股東大會通告所隨附的致股東通函及／或說明函件中將包括：

- 用以物色該名人士的流程，董事會認為應選任該名人士的理由以及彼等認為該名人士屬獨立人士的原因；
- 倘候任獨立非執行董事將出任第七間(或以上)上市公司的董事，董事會認為該名人士仍可投入足夠時間履行董事責任的原因；
- 該名人士可為董事會帶來的觀點與角度、技能及經驗；及
- 該名人士如何促進董事會成員多元化。

王永權博士及符霜葉女士各自擔任本公司獨立非執行董事超過十年，各自具有豐富經驗、見識深廣，對本公司的業務營運有透徹瞭解，於過去數年一直以獨立非執行董事的身份向本公司表達客觀見解並給予獨立指導，對本身角色持續表現堅定的承擔。

提名委員會及董事會認為王永權博士及符霜葉女士的長期服務不會影響彼等作出獨立的判斷，並確信王永權博士及符霜葉女士各自具備繼續履行獨立非執行董事一職所需的品格、誠信及經驗。

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Appointments, Re-election and Removal of Directors

Each of Mr. TAN Wenhua and Mr. TAN Xin has been appointed as an executive Director for a specific term of three years commencing from 18 June 2019 and 28 June 2017 respectively. Mr. WANG Junze has been appointed as an executive Director for a specific term of three years commencing from 21 June 2018. Such terms are subject to re-appointment by the Company at an annual general meeting upon retirement.

Mr. HSU You Yuan has been appointed as non-executive Director for a specific term of three years commencing from 21 June 2018. Such terms are subject to re-appointment by the Company at an annual general meeting upon retirements.

Ms. FU Shuangye has been appointed as an independent non-executive Director for a specific term of three years commencing from 21 June 2018, Dr. WONG Wing Kuen, Albert and Ms. Feng Wenli has been appointed as an independent non-executive Director for a specific term of three years commencing from 18 June 2019. Such terms are subject to retirement by rotation and re-election in accordance with the articles of association of the Company.

Mr. ZHANG Chun, being in advanced age, did not offer himself for re-election at the AGM held on 18 June 2019 and will retire as an independent non-executive Director, a member of the audit committee and remuneration committee of the Board and chairman of the nomination committee of the Board with effect from the close of the AGM held on 18 June 2019. Mr. ZHANG confirmed that he has no disagreement with the Board of Directors and is not aware of any matters relating to his resignation that need to be brought to the attention of the shareholders.

In accordance with the provisions of the Company's articles of association, Mr. TAN Xin, Mr. WANG Junze and Mr. HSU You Yuan will retire by rotation at the forthcoming annual general meeting and being eligible, and will offer themselves for re-election at the annual general meeting.

Training and Professional Development

All Directors should participate in continuous professional development to develop and refresh their knowledge and skills. The Directors have been given relevant guideline materials to ensure that they are apprised of the latest changes in the commercial, legal and regulatory requirements in relation to the Company's businesses, and to refresh their knowledge and skills on the roles, functions and duties of a listed company director.

委任、重選及罷免董事

譚文華先生及譚鑫先生各自獲委任為執行董事，分別自二零一九年六月十八日及二零一七年六月二十八日起，特定年期為三年，而王鈞澤先生獲委任為執行董事，自二零一八年六月二十一日起，特定年期為三年。董事須於股東週年大會上退任後由本公司再度委任。

許祐淵先生獲委任為非執行董事，自二零一八年六月二十一日起，特定年期為三年。董事須於股東週年大會上退任後由本公司再度委任。

符霜葉女士獲委任為獨立非執行董事，自二零一八年六月二十一日起，特定年期為三年，而王永權博士及馮文麗女士各自獲委任為獨立非執行董事，自二零一九年六月十八日起，特定年期為三年。有關任期須根據本公司的組織章程細則輪值告退並接受重選。

張椿先生因為年事已高，並沒有於二零一九年六月十八日的股東週年大會重選連任，由二零一九年六月十八日的股東周年大會結束起退任獨立非執行董事、董事會審核委員會及薪酬委員會委員及董事會提名委員會主席之職務。張椿先生先生確認其與董事會並無意見分歧，且不知悉任何與其辭職有關的事宜須提請股東注意。

根據本公司組織章程細則的條文，譚鑫先生、王鈞澤先生及許祐淵先生將於應屆股東週年大會輪值退任，且均合資格並將於股東週年大會重選連任。

培訓及專業發展

所有董事均需參與持續專業發展，以發展及更新彼等之知識及技能。董事已獲發有關指引資料，確保彼等知悉與本公司業務相關之最新商業、法律和監管要求變動，並增進彼等對上市公司董事之職位、職能和職責之知識和技能。



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Training and Professional Development

(continued)

All Directors had provided a record of training they received during the year to the Company. According to the training records provided by the Directors, the trainings attended by them during the reporting period is summarised as follows:

Directors	Trainings on corporate governance and regulatory development	董事	企業管治及監管發展之培訓
Executive Directors			
Mr. TAN Wenhua (<i>Chairman</i>)	✓	執行董事 譚文華先生 (<i>主席</i>)	✓
Mr. TAN Xin	✓	譚鑫先生	✓
Mr. WANG Junze	✓	王鈞澤先生	✓
Non-executive Director			
Mr. HSU You Yuan	✓	非執行董事 許祐淵先生	✓
Independent Non-executive Directors			
Dr. WONG Wing Kuen, Albert	✓	獨立非執行董事 王永權博士	✓
Ms. FU Shuangye	✓	符霜葉女士	✓
Ms. FENG Wenli	✓	馮文麗女士	✓

Chairman and Chief Executive Officer

Under code provision A.2.1 of the Code, the roles of the Chairman and the Chief Executive Officer (“CEO”) should be separated and should not be performed by the same individual.

The role of the Chairman was performed by Mr. TAN Wenhua. Mr. TAN Wenhua is an executive Director who is responsible for the management of the Board and he also involves in the day-to-day management of the Group’s business. The role of CEO is performed by Mr. TAN Xin.

The overall management of the Company was performed by the CEO, executive Directors and senior management of the Company. The executive Directors (Mr. TAN Wenhua, Mr. TAN Xin and Mr. WANG Junze) who have extensive experience in the solar energy industry and their respective areas of profession, spearhead the Group’s overall development and business strategies.

培訓及專業發展 (續)

全體董事已向本公司提供年內彼等已接受之培訓記錄。根據董事提供之培訓記錄，彼等於報告期間參加之培訓概述如下：

主席及行政總裁

根據守則條文第A.2.1條，主席及行政總裁（「行政總裁」）的角色應分立，不應由同一人擔任。

譚文華先生擔任主席一職。譚文華先生為執行董事，負責管理董事會及參與本集團業務之日常管理事宜。行政總裁之角色由譚鑫先生擔任。

行政總裁、本公司執行董事及高級管理層管理本公司整體運作。執行董事譚文華先生、譚鑫先生及王鈞澤先生，於太陽能產業及各自專業領域中擁有豐富的經驗，為本集團整體發展及業務策略擔當領導角色。



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Board Committees

Audit Committee

The Company has established the Audit Committee with written terms of reference in compliance with Rules 3.21 to 3.23 of and Appendix 14 to the Listing Rules. The primary duties of the Audit Committee include overseeing the financial reporting processes and internal control procedures of the Group, reviewing the financial information of the Group and considering issues relating to the external auditor. Currently, the Audit Committee consists of three independent non-executive Directors, namely, Dr. WONG Wing Kuen, Albert (Chairman), Ms. FU Shuangye and Ms. FENG Wenli.

In 2019, the Audit Committee met 2 times and the attendance of individual Directors at these meetings is set out below:

Name of Directors	Attendance/ Number of meetings
Independent non-executive Directors	
Dr. WONG Wing Kuen, Albert (<i>Chairman</i>)	2/2
Ms. FU Shuangye	2/2
Mr. ZHANG Chun (retired with effect from 18 June 2019)	1/1
Ms. FENG Wenli (appointed with effect from 18 June 2019)	1/1

The Audit Committee has reviewed the Group's interim financial report for the six months ended 30 June 2019 and annual consolidated financial statements for the year ended 31 December 2019, including the accounting principles and practices adopted by the Group, and has also discussed auditing, internal control and financial reporting matters with the management. The Audit Committee also monitored the Company's progress in implementing the Code as required under the Listing Rules.

Remuneration Committee

The Company established the Remuneration Committee pursuant to a resolution of the Directors passed on 27 February 2008 pursuant to Rules 3.25 to 3.27 of and Appendix 14 to the Listing Rules. The primary duties of the Remuneration Committee include making recommendations to the Board on the Company's structure for remuneration of Directors and senior management and on the establishment of a formal and transparent procedure for developing policy on such remuneration. Currently, the Remuneration Committee consists of four members; three of whom are independent non-executive Directors, namely, Ms. FU Shuangye (Chairman), Dr. WONG Wing Kuen, Albert and Ms. FENG Wenli, and one is an executive Director, namely, Mr. TAN Wenhua.

董事委員會

審核委員會

本公司已遵照上市規則第3.21至3.23條及附錄十四的規定成立審核委員會，並以書面訂明其職權範圍。審核委員會的主要職責包括監督本集團的財務報告程序及內部監控程序、審閱本集團財務資料，以及考慮有關外聘核數師的事宜。審核委員會現時由三名獨立非執行董事組成，即王永權博士(主席)、符霜葉女士及馮文麗女士。

於二零一九年，審核委員會曾舉行2次會議，而個別董事出席有關會議的情況載列如下：

董事姓名	出席率/ 會議次數
獨立非執行董事	
王永權博士(主席)	2/2
符霜葉女士	2/2
張椿先生(自二零一九年六月十八日起退任)	1/1
馮文麗女士(自二零一九年六月十八日起委任)	1/1

審核委員會已審閱本集團截至二零一九年六月三十日止六個月之中期財務報告及截至二零一九年十二月三十一日止年度之年度綜合財務報表，包括本集團採納的會計準則及慣例，亦已與管理層商討核數、內部監控及財務申報事宜。審核委員會亦監控本公司根據上市規則要求執行守則之進程。

薪酬委員會

根據上市規則第3.25至3.27條及附錄十四的規定，本公司已根據董事於二零零八年二月二十七日通過的決議案成立薪酬委員會。薪酬委員會的主要職責包括就本公司董事及高級管理人員的薪酬結構以及就制訂該等薪酬政策設立正式及具透明度的程序，向董事會作出推薦意見。目前，薪酬委員會由四名成員組成，當中三名為獨立非執行董事，即符霜葉女士(主席)、王永權博士及馮文麗女士以及一名執行董事譚文華先生。



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Board Committees (continued)

Remuneration Committee (continued)

In 2019, the Remuneration Committee met once and the attendance of individual Directors at the meeting is set out below:

Name of Directors	Attendance/ Number of meetings
Independent non-executive Directors	
Ms. FU Shuangye (<i>Chairman</i>)	1/1
Dr. WONG Wing Kuen, Albert	1/1
Mr. ZHANG Chun (retired with effect from 18 June 2019)	1/1
Ms. FENG Wenli (appointed with effect from 18 June 2019)	0/0
Executive Director	
Mr. TAN Wenhua	1/1

The Remuneration Committee has made recommendations to the Board regarding the remuneration policy of the Company. In addition, it has also reviewed and approved management's remuneration proposal and directors' service contracts by reference to corporate goals and objectives resolved by the Board, and ensured that no Director or any of his/her associates is involved in deciding his/her own remuneration.

Nomination Committee

The Company established a Nomination Committee pursuant to a resolution of the Directors passed on 27 February 2008 pursuant to Appendix 14 to the Listing Rules. The primary duties of the Nomination Committee include making recommendations to the Board on the Company's policy and structure for recruiting Directors and senior management and on the establishment of formal and transparent procedures for nomination procedures and process and criteria adopted by the Nomination Committee to select and recommend candidates for directorship and senior management. Currently, the Nomination Committee consists of four members; three of whom are independent non-executive Directors, namely, Ms. FENG Wenli (*Chairman*), Dr. WONG Wing Kuen, Albert and Ms. FU Shuangye, and one is a non-executive Director, namely, Mr. HSU You Yuan.

In 2019, the Nomination Committee met once and the attendance of individual Directors at the meeting is set out below:

Name of Directors	Attendance
Independent non-executive Directors	
Mr. ZHANG Chun (retired with effect from 18 June 2019)	1/1
Ms. FENG Wenli (appointed with effect from 18 June 2019) (<i>Chairman</i>)	0/0
Dr. WONG Wing Kuen, Albert	1/1
Ms. FU Shuangye	1/1
Non-executive Director	
Mr. HSU You Yuan	1/1

董事委員會 (續)

薪酬委員會 (續)

於二零一九年，薪酬委員會曾舉行1次會議，而個別董事出席有關會議的情況載列如下：

董事姓名	出席率/ 會議次數
獨立非執行董事	
符霜葉女士 (<i>主席</i>)	1/1
王永權博士	1/1
張椿先生 (自二零一九年六月十八日起退任)	1/1
馮文麗女士 (自二零一九年六月十八日起委任)	0/0
執行董事	
譚文華先生	1/1

薪酬委員會已就本公司薪酬政策向董事會提供建議。此外，該委員會亦已參考董事會決定之公司目標及宗旨，檢討及批准管理層薪酬建議及董事服務合同，並確保概無董事或其任何聯繫人士參與決定其本身薪酬。

提名委員會

根據上市規則附錄十四的規定，本公司已根據董事於二零零八年二月二十七日通過的決議案成立提名委員會。提名委員會的主要職責包括就本公司董事及高級管理人員的聘用政策及架構以及就提名委員會就甄選推薦董事及高級管理人員候選人採納的提名程序及條件設立正式及具透明度的程序，向董事會作出推薦意見。現時，提名委員會由四名成員組成，當中三名為獨立非執行董事，即馮文麗女士 (*主席*)、王永權博士及符霜葉女士及一名非執行董事許祐淵先生。

於二零一九年，提名委員會曾舉行1次會議，而個別董事出席有關會議的情況載列如下：

董事姓名	出席率
獨立非執行董事	
張椿先生 (自二零一九年六月十八日起退任)	1/1
馮文麗女士 (自二零一九年六月十八日起委任) (<i>主席</i>)	0/0
王永權博士	1/1
符霜葉女士	1/1
非執行董事	
許祐淵先生	1/1



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Board Committees (continued)

Nomination Committee (continued)

The Nomination Committee has discussed matters relating to the appointment of senior management members during the year. The Nomination Committee also considered and resolved that all the existing Directors shall be recommended to be retained by the Company.

Board Diversity

The Board has a board diversity policy which is available on the Company's website. In order to achieve a diversity of perspectives among members of the Board, it is the policy of the Company to consider a number of factors when deciding on appointments to the Board and the continuation of those appointments. Such factors include gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge, length of service and the legitimate interests of the Company's principal shareholders. The Board considered the Company has achieved the objective of board diversity during the year.

Remuneration of Directors and Senior Management

Particulars of the Directors' remuneration for the year ended 31 December 2019 are set out in note 9 to the Financial Statements.

Pursuant to code provision B.1.5 of the CG Code, the remuneration of the members of the senior management (other than the Directors) whose particulars are contained in the section headed "Directors and Senior Management" in this annual report for the year ended 31 December 2019 by band is set out in note 10 to the Financial Statements.

NON-COMPETITION UNDERTAKING

During the year from 1 January 2019 to 31 December 2019, none of the Directors nor their respective associates (as defined in the Listing Rules) had any interest in a business that competed or might compete with the business of the Group.

Mr. TAN Wenhua has confirmed to the Company of his compliance with the non-competition undertakings provided to the Company under a non-competition undertaking dated 27 February 2008 ("Non-competition undertaking"). The independent non-executive Directors have reviewed the status of compliance and confirmed that all the undertakings under the Non-competition undertaking had been complied with and duly enforced from 1 January 2019 and up to 31 December 2019.

董事委員會(續)

提名委員會(續)

提名委員會年內已討論有關委任高級管理層成員的事宜。提名委員會亦已考慮及決議所有現任董事須由本公司推薦留任。

董事會成員多元化

董事會訂有董事會成員多元化政策，並已登載於本公司網站。為達致董事會成員範疇多元化，本公司奉行的政策是在決定委任及續聘董事會成員前，會考慮多項因素。該等因素包括性別、年齡、文化及教育背景、種族、專業經驗、技能、知識、服務任期以及本公司主要股東的合法權益。董事認為年內本公司已達到董事會成員多元化的目標。

董事和高級管理人員的薪酬

截至二零一九年十二月三十一日止年度之董事酬金詳情載於財務報表附註9。

根據企業管治守則的守則條文第B.1.5條，本年報「董事及高級管理人員」一節所包括的高級管理人員(董事除外)於二零一九年十二月三十一日止年度按組別的酬金詳情載於財務報表附註10。

不競爭承諾

於二零一九年一月一日至二零一九年十二月三十一日年內，概無董事及彼等各自的聯繫人(定義見上市規則)於與本集團業務競爭或可能與本集團業務競爭的業務中擁有任何權益。

譚文華先生已向本公司確認其遵守根據日期為二零零八年二月二十七日的非競爭承諾(「非競爭承諾」)向本公司提供的非競爭承諾。獨立非執行董事已審閱合規情況，並確認由二零一九年一月一日至二零一九年十二月三十一日已遵守及不時履行非競爭承諾項下的所有承諾。



Corporate Governance Report 企業管治報告

Financial Reporting and Internal Control

Financial Reporting

The Board, supported by the Chief Financial Officer and the Finance Department of the Company, is responsible for the preparation of the financial statements of the Company and the Group. In the preparation of financial statements, Hong Kong Financial Reporting Standards have been adopted and the appropriate accounting policies have been consistently used and applied. The Board aims to present a clear and balanced assessment of the Group's performance in the annual and interim reports to the shareholders, and make appropriate disclosure and announcements in a timely manner.

Auditors' Remuneration

The performance and remuneration of the external auditors of the Company, Ernst & Young, have been reviewed by the Audit Committee. For the year ended 31 December 2019, the fees paid and payable to Ernst & Young and other external auditors in respect of audit services amounted to approximately RMB3,070,000 (2018: RMB2,791,000). In addition, approximately RMB295,000 (2018: RMB272,000) was charged for other non-audit services.

Risk management and internal control

The Board is responsible for the risk management and the internal control of the Group and for reviewing its effectiveness. The Company conducted regular review to monitor the Company's internal management and operation during the year. Procedures have been designed to review the risk management functions and to ensure maintenance of proper accounting records for the provision of reliable financial information for internal use or for publication, ensure compliance of applicable laws, rules and regulations.

During the year, the Board supervised the management's design, implementation and monitoring of the risk management and internal control systems, and reviewed the adequacy and effectiveness of the risk management and internal control systems of the Group; such review covered all major control aspects of the Group, including financial, operational and compliance controls.

The Group's internal audit team plays an important role in monitoring the internal governance of the Company. The internal audit team mainly monitors and reviews the matters relating to the internal control and compliance of the Company, and provides regular risk-oriented internal audits for its subsidiaries. The internal audits cover sales, financial reporting and information security and so on. The internal audit team reports to the Board once a year. The review covered each of the twelve months of 2019.

財務報告及內部監控

財務報告

董事會在本公司首席財務官及財務部門的支援下，負責編製本公司及本集團的財務報表。本公司在編製財務報表時，已採納香港財務報告準則，並貫徹使用及應用適當的會計政策。董事會旨在於致股東年報及中期報告中，對本集團業績作出清晰平衡的評估，並適時作出適當的披露及公佈。

核數師酬金

本公司的外聘核數師安永會計師事務所（「安永」）之表現及酬金已由審核委員會審閱。截至二零一九年十二月三十一日止年度，就審核服務已付及應付安永及其他外聘核數師費用約人民幣3,070,000元（二零一八年：人民幣2,791,000元）。此外，約人民幣295,000元（二零一八年：人民幣272,000元）已計入其他非核數服務。

風險管理及內部監控

董事會負責本集團的風險管理及內部監控，並檢討監控的成效。本年度內，本公司對其內部管理及營運，進行定期檢討及監察。本公司已設計程序，審視風險管理職能及確保保存適當的會計記錄，以便提供可靠的財務資料，以供內部使用或刊印發行，亦確保符合相關法律、規則及規例。

年內，董事會監督管理層對風險管理及內部監控系統的設計、實施及監察，並已檢討本集團的風險管理及內部監控系統是否充足及有效，有關檢討涵蓋本集團所有重要的監控方面，包括財務監控、營運監控及合規監控。

本集團的內部審核團隊於監察本公司內部管治方面扮演著重要角色。內部審核團隊的主要職責是監督及檢討本公司的內部監控及合規相關事宜，並定期對本公司的附屬公司開展風險導向的內部審計。其內部審計範圍涵蓋銷售、財務匯報和信息安全等方面。內部審核團隊每年向董事會匯報一次，而審核涵蓋了二零一九年十二個月。



Corporate Governance Report

企業管治報告

Financial Reporting and Internal Control (continued)

Risk management and internal control (continued)

In order to fulfil their fiduciary duties and duties of skill, care and diligence, the Directors will constantly seek advice and assistance from the Company's internal legal team and if necessary, seek advice from external legal advisors in Hong Kong and the PRC. The Company also adopted internal control procedures relating to, among others, signing authority and procedures since February 2007. The Company has an Audit and Legal Department consisting 3 members with extensive experience in the legal field. The main duties of the Audit and Legal department include:

- providing legal advice on major business decisions
- reviewing and drafting legal documents
- handling legal disputes
- advising on legal issues related to daily operations
- conducting internal training for compliance matters

For the year ended 31 December 2019, the Board considered that the Group's risk management and internal control systems are adequate and effective and the Company has complied with the Corporate Governance Code.

Directors' responsibility on the financial statements

The Directors acknowledged their responsibility for preparing the financial statements for the year ended 31 December 2019, which were prepared in accordance with applicable accounting standards.

The reporting responsibility of the external auditor of the Company, Ernst & Young, on the consolidated financial statements of the Group are set out in the independent auditor's report on pages 70 to 77.

Going concern

Other than the events stated in note 2.1 to the Financial Statements on pages 92 to 94, there are no material uncertainties relating to events or conditions that cast significant doubt upon the Group's ability to continue as a going concern.

Investors Relations

The Company places strong emphasis on its communications with investors, and considers that maintaining on-going and open communications with investors can promote investors' understanding of and confidence in the Company. The Company disclosed all necessary information to the Shareholders in compliance with the Listing Rules and met with media, securities analysts, fund managers and investors on a regular basis to respond to their enquiries so as to provide them with a clearer picture of the Company's achievements in business management and other aspects.

財務報告及內部監控(續)

風險管理及內部監控(續)

為履行其誠信責任及應有技能、謹慎和勤勉行事的責任，董事將不斷向本公司內部法律團隊徵求意見及協助，倘若有需要，則向香港及中國的外聘法律顧問徵求意見。本公司亦自二零零七年二月起採納有關(其中包括)簽署授權及程序的內部監控程序。本公司設有審核及法律部門，由三名成員組成，彼等在法律領域具備豐富經驗。審核及法律部門的主要職務包括：

- 就重大業務決策提供法律意見
- 審閱及草擬法律文件
- 處理法律爭議
- 就與日常營運有關的法律問題提供意見
- 就合規事宜提供內部培訓

截至二零一九年十二月三十一日止年度，董事會認為本集團的風險管理及內部監控系統為適當及有效，且本公司已遵守企業管治守則。

董事對財務報表的責任

董事知悉，彼等須按照適用的會計準則，編製截至二零一九年十二月三十一日止年度的財務報表。

本公司外聘核數師安永會計師事務所對本集團綜合財務報表的報告責任，載於第70頁至第77頁的獨立核數師報告。

持續經營能力

除第92至94頁財務報表附註2.1載列之事項外，概無任何有關可對本集團持續經營能力構成重大疑慮的事件或情況的重大不明朗因素。

投資者關係

本公司十分重視與投資者之溝通，並認為與投資者維繫持續和開放之溝通可有助投資者了解本公司及加強其對本公司之信心。本公司遵照上市規則之規定向股東披露所有必需資料，並與傳媒、證券分析員、基金經理及投資者定期會面回答其查詢，藉以向彼等提供有關本公司於業務、管理及其他方面成就之更清晰資料。

Corporate Governance Report 企業管治報告

The general meeting of the Company is also an effective communication channel between the Board and Shareholders. The Company will meet with the Shareholders and respond to their enquiries in the general meetings. The executive Directors attended the annual general meeting of the Company held on 18 June 2019.

Shareholders' Rights

Convening an extraordinary general meeting of the Company ("EGM")

Pursuant to article 58 of the articles of association of the Company, Shareholders holding at the date of deposit of the requisition not less than one-tenth of the paid up capital of the Company carrying the right of voting at general meetings of the Company shall at all times have the right, by written requisition to the Board or the Company Secretary, to require an EGM to be called by the Board for the transaction of any business specified in such requisition; and such meeting shall be held within 2 months after the deposit of such requisition.

There are no provisions allowing Shareholders to move new resolutions at general meetings under the Cayman Islands Companies Law (2011 Revision) or the articles of association of the Company. Shareholders who wish to move a resolution may request the Company to convene a general meeting following the procedures set out in the preceding paragraph.

Enquiries from Shareholders

Shareholders may send written enquiries, either by post or by facsimile, together with his/her contact details, such as postal address, email or fax, addressing to the Board at the head office of the Company at the following address or facsimile number:

Solargiga Energy Holdings Limited
Room 1402, Harbour Centre
25 Harbour Road
Wanchai
Hong Kong
Attention to: Board of Directors/Company Secretary

Fax: 852 3416 2111

Changes to Constitutional Documents

During the year ended 31 December 2019, there was no significant change in the Company's constitutional documents, and these documents are published on the websites of the Company and the Stock Exchange.

本公司之股東大會亦為董事會與股東之間有效之溝通渠道。於股東大會上，本公司將與股東會面並回應其提出之查詢。執行董事曾出席二零一九年六月十八日舉行之股東週年大會。

股東權利

召開本公司股東特別大會（「股東特別大會」）

根據本公司組織章程細則第58條，任何於遞交請求日期持有不少於本公司實繳股本（附有於本公司股東大會表決權利）十分之一之股東，於任何時候有權透過董事會或公司秘書發出書面要求，要求董事會召開股東特別大會，以處理有關要求中訂明之任何事項；且該大會應於遞交該要求後兩個月內舉行。

於開曼群島公司法（二零一一年修訂版）或本公司組織章程細則中，概無條文容許股東於股東大會上動議新決議案。有意動議決議案的股東可依循上一段所述的程序要求本公司召開股東大會。

股東查詢

股東可將書面查詢（不論郵寄或傳真）連同其詳細聯絡資料（如郵寄地址、傳真或電郵）按以下地址或傳真號碼送交於本公司總辦事處之董事會：

陽光能源控股有限公司
香港
灣仔
港灣道25號
海港中心1402室
經辦人：董事會／公司秘書

傳真號碼：852 3416 2111

憲章文件變動

於截至二零一九年十二月三十一日止年度內，本公司之憲章文件並無任何變動。該等憲章文件刊載於本公司及聯交所網站。



DIRECTORS AND SENIOR MANAGEMENT PROFILE

董事和高級管理人員簡歷

Directors

Executive Directors

Mr. TAN Wenhua (譚文華), aged 63, an executive Director and the Chairman of the Board. He was one of the founders of the Jinzhou Plants in 2001. He was conferred various honours including the Model for the Labour of the Building Materials Systems of the Nation, the medal of "May 1st" Labour of Liaoning Province, the Builders Merit award of Liaoning Province, the Outstanding Entrepreneur of the Building Materials Industry of the Nation, the Venture Entrepreneur of the Liaoning Province and First Prize Entrepreneur of Jinzhou. Prior to the founding of Jinzhou Plants, he was the Chairman of 錦州新華石英玻璃(集團)有限責任公司 (Jinzhou Xinhua Quartz Glass (Group) Co., Ltd.) and the Director of 錦州一五五廠 (Jinzhou 155 Factory), a state-owned factory engaging in quartz crucibles manufacturing. He has been granted a special subsidy by the State Council in 2004 for his contribution in engineering technology. He is the father of Mr. Tan Xin, the executive Director of the Company and Chief Executive Officer of the Company.

Mr. TAN Xin (譚鑫), aged 36, is an executive Director and the Chief Executive Officer of the Company. He holds a bachelor's degree of Marketing from the Macau University of Science and Technology, and a master's degree of Business Administration from University of East Anglia, the U.K. Mr. Tan is also the representative at the 11th and 12th member congress of the National Association of Industry and Commerce (全國工商聯), Representative at the 17th National Congress of the Communist Youth League (共青團), Standing Committee Member of the 11th and 12th Liaoning Province Association of Industry and Commerce (遼寧省工商業聯合會), and the Vice President of the Liaoning General Chamber of Commerce (遼寧省總商會), Standing member of the 10th and 11th Liaoning Province Youth Federation (遼寧省青年聯合會常務委員會成員), Member of the 12th and Standing Member of the 13th Jinzhou Municipal Committee of the Chinese People's Political Consultative Conference (錦州市第十二屆政協委員, 第十三屆政協常務委員), and President of the Jinzhou Youth Chamber of Commerce. Mr. Tan was awarded the Liaoning "Excellent Entrepreneur" (優秀企業家), the 4th Constructors' Medal (第四屆建設者獎章), the "May 1st Labour Medal" (五一勞動獎章), the Jinzhou "Model Workers" (勞動模範), "Meritorious Entrepreneur" (功勳企業家), "Outstanding Private Entrepreneurs" (優秀民營企業家) and "Top 10 New Industrial Enterprises" (工業十大新銳企業家) and "Top Ten Young Entrepreneurs" (十佳青年企業家) and other honorary titles. Mr. TAN took up the position of Chief Executive Officer of the Group since October 2016. Before taking the role of the Chief Executive Officer, Mr. Tan also worked in other subsidiaries within the Group and accumulated plenty of experiences from his prior positions. He is the son of Mr. TAN Wenhua who is an executive Director and the Chairman of the Company.

董事

執行董事

譚文華先生，63歲，執行董事兼董事會主席。彼於二零零一年為錦州廠創辦人之一。彼曾獲全國建材系統勞動模範、遼寧省「五一」勞動獎章、遼寧省建設者獎章、全國建材行業優秀企業家、遼寧省創業企業家及錦州市一等功企業家等多項殊榮。創辦錦州廠前，彼出任錦州新華石英玻璃(集團)有限責任公司董事長及國有石英坩堝製造廠錦州一五五廠董事長。國務院於二零零四年就譚先生對工程技術作出的貢獻，授予其為可享受國務院特殊津貼的專家。彼為譚鑫先生(為本公司執行董事及首席執行官)的父親。

譚鑫先生，36歲，執行董事兼本公司首席執行官。彼持有澳門科技大學市場學學士學位，以及英國東英吉利亞大學(University of East Anglia)工商管理碩士學位。譚先生亦為全國工商聯第十一、十二次會員代表大會代表、共青團第十七次全國代表大會代表、遼寧省工商業聯合會第十一、十二屆常務委員、總商會副會長、遼寧省第十、十一屆青年聯合會常務委員、錦州市第十二屆政協委員、第十三屆政協常務委員、錦州市青年商會會長。譚先生曾榮獲遼寧省「優秀企業家」、第四屆建設者獎章、「五一勞動獎章」、錦州市「勞動模範」、「功勳企業家」、「優秀民營企業家」、「工業十大新銳企業家」和「十佳青年企業家」等榮譽稱號。譚先生於二零一六年十月開始出任本集團首席執行官，於出任首席執行官前，譚先生曾於本集團旗下其他附屬公司工作，於過往職位中積累豐富經驗。彼為本公司執行董事兼主席譚文華先生的兒子。



Directors and Senior Management Profile 董事和高級管理人員簡歷

Directors (continued)

Executive Directors (continued)

Mr. WANG Junze (王鈞澤), aged 48, is an executive Director and the Chief Financial Officer of the Company. He joined the Company on 1 January 2007 and was the Company's deputy general manager of China region, who was responsible for the accounting and finance matter of the Group. He obtained a Master of Business Administration from the State University of New Jersey (Rutgers). He is a certified public accountant in Maryland, the United States. Prior to joining the Group, he was a Special Assistant to President & Deputy Spokesman of The Office of General Manager of WWX, the Spokesman and Chief Financial Officer of Panram International Corp., a company listed on the Gre Tai Securities Market in Taiwan.

Non-executive Director

Mr. HSU You Yuan (許祐淵), aged 65, a non-executive Director of the Company. He joined the Group on 6 February 2007 and was appointed an executive Director on the same date. He graduated with a master degree in Business Administration from the Chinese Culture University in 1980. Prior to joining the Group, Mr. HSU was the Managing Director of Wafer Works Corp. ("WWX") from 1998 to 2003 and later became the Vice-Chairman of WWX in 2003. WWX is a manufacturer of silicon wafer for the semiconductor industry and is listed on the Gre Tai Securities Market in Taiwan in 2002. He was the managing director of Silicon Technology Investment (Cayman) Corp. and was appointed the Chief Executive Officer of Solar Technology Investment (Cayman) Corp., responsible for overseeing, amongst others, WWX's investment in the solar energy industry. In March 2006, he was appointed a director and he was subsequently appointed as the Chairman of the board of Jinzhou Youhua in September 2006. Mr. HSU's previous work credentials also include acting as Deputy General Manager of Mosel Vitelic Inc., a company listed on the Taiwan Stock Exchange and as a director and Executive Vice-President of Mosel Vitelic (Hong Kong) Limited, a subsidiary of Mosel Vitelic Inc. Mr. HSU had also made contributions to non-commercial sectors in the past. He served as a researcher, a deputy director, and the director of Business Department of the Executive Yuan Development Fund of Taiwan (Note: Executive Yuan Development Fund is now known as National Development Fund, Executive Yuan). He was also a lecturer of Statistics and Managerial Mathematics for the Business Administration department at the Chinese Culture University. Mr. HSU has been an independent non-executive director of China Shanshui Cement Group Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since September 2018.

董事(續)

執行董事(續)

王鈞澤先生，48歲，執行董事兼本公司首席財務官。彼於二零零七年一月一日加盟本公司，任職本公司中國區副總經理，負責本集團的會計及財務。彼獲新澤西州(Rutgers)州立大學頒授工商管理碩士學位。彼為美國馬里蘭州執業會計師。加盟本集團前，彼出任合晶科技總經理辦公室總裁特別助理兼副發言人以及台灣證券櫃檯買賣中心上市公司品安科技股份有限公司發言人兼首席財務官。

非執行董事

許祐淵先生，65歲，本公司非執行董事。彼於二零零七年二月六日加盟本集團並於同日獲委任為執行董事。彼於一九八零年畢業於中國文化大學，獲頒企業管理碩士學位。加盟本集團前，許先生自一九九八年至二零零三年出任合晶科技股份有限公司(「合晶科技」)董事總經理，其後於二零零三年間轉任合晶科技副董事長。合晶科技乃半導體硅片製造商，該公司於二零零二年在台灣證券櫃檯買賣中心上市。彼歷任Silicon Technology Investment (Cayman) Corp.董事總經理，並曾獲委任為Solar Technology Investment (Cayman) Corp.首席執行官，專責監督(其中包括)合晶科技於太陽能產業的投資。於二零零六年三月，彼獲委任為錦州佑華董事，並隨後於二零零六年九月獲委任為該公司董事會主席。許先生曾出任台灣證交所上市公司台灣茂矽電子股份有限公司副總經理及台灣茂矽電子股份有限公司附屬公司香港華智公司董事兼執行副總裁。許先生過往亦對非商業領域作出貢獻。彼曾先後出任台灣的行政院開發基金管理委員會業務組研究員、副組長及組長(註：行政院開發基金管理委員會現已改名為行政院國家發展基金管理會)。彼亦曾任中國文化大學企管系講師，講授統計學及管理數學。彼並自二零一八年零九月起為在香港聯交所主板上市的中国山水水泥集團有限公司獨立非執行董事。



Directors and Senior Management Profile

董事和高級管理人員簡歷

Directors (continued)

Independent Non-executive Directors

Dr. WONG Wing Kuen, Albert (王永權), aged 68, was appointed an independent non-executive Director on 12 January 2008. Dr. Wong is a fellow member of The Institute of Chartered Secretaries and Administrators, The Hong Kong Institute of Chartered Secretaries, The Taxation Institute of Hong Kong, Chartered Institute for Securities and Investments, UK, Association of International Accountants, Society of Registered Financial Planners, Hong Kong, The Institute of Certified Public Accountants in Ireland, UK, as well as a member of Hong Kong Securities Institute, The Chartered Institute of Arbitrators, Macau Society of Certified Practising Accountants and an associate member of The Chartered Institute of Bankers in Scotland, UK. Dr. WONG had been a director and Chief Executive Officer of Minghua Group International Holdings Limited, a listed public company in the United States, until 30 September 2004. Dr. WONG had also been an independent non-executive director of Rare Earths Global Limited, a company listed on the London Stock Exchange — AIM Market, since March 2012, and retired as an independent non-executive director on 2 May 2014 because of the cancellation of admission on AIM of the ordinary shares of Rare Earths Global Limited. According to the filings made available to public through the EDGAR database in U.S., for the quarterly period ended 30 September 2005, Minghua Group International Holdings Limited was “a small business issuer” and “a development stage company”. Dr. WONG was the Chief Consultant of KND & Co. CPA Limited. KND & Co. CPA Limited was deregistered on 31 December 2017.

Since 1 January 2018, Dr. WONG was appointed as the Principal Consultant of KND Associates CPA Limited. Dr. WONG has been an independent non-executive director of APAC Resources Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since July 2004; an independent non-executive director of China Merchants Land Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since June 2012; an independent non-executive director of China VAST Industrial Urban Development Company Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since August 2014; an independent non-executive director of China Wan Tong Yuan (Holdings) Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since September 2017; an independent non-executive director of Capital Finance Holdings Limited, a company listed on the GEM board of the Hong Kong Stock Exchange, since January 2018; an independent non-executive director of China Medical & HealthCare Group Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since December 2018; an independent non-executive director of China Medical & HealthCare Group Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since December 2018; and an independent non-executive director of Dexin China Holdings Company Limited, a company listed on the Main Board of the Hong Kong Stock Exchange, since February 2019.

董事(續)

獨立非執行董事

王永權博士，68歲，二零零八年一月十二日獲委任為獨立非執行董事。王博士為英國特許秘書及行政人員公會、香港特許秘書公會、香港稅務學會、英國特許證券及投資學會、英國國際會計師公會、香港註冊財務策劃師協會及英國愛爾蘭公認會計師公會資深會員以及香港證券專業學會、英國特許仲裁師學會、澳門會計師公會及英國蘇格蘭特許銀行家學會會員。王博士曾在美國一間上市公司明華集團國際有限公司出任董事兼首席執行官，直至二零零四年九月三十日止。王博士自二零一二年三月起亦曾擔任英國倫敦交易所AIM市場上市公司Rare Earths Global Limited的獨立非執行董事，並已於二零一四年五月二日辭任獨立非執行董事，原因是AIM已取消接納Rare Earths Global Limited的普通股。根據截至二零零五年九月三十日止季度期間通過EDGAR在美國向公眾人士發布的存檔資料，明華集團國際有限公司屬「小型企業發行商」及「處於發展階段的公司」。王博士原任職於冠達會計師事務所有限公司為首席顧問，冠達會計師事務所有限公司已於二零一七年十二月三十一日已申請取消登記。

王博士於二零一八年一月一日被委任為冠泓會計師行有限公司的首席顧問。王博士並自二零零四年七月起為在香港聯交所主板上市的亞太資源有限公司獨立非執行董事；於二零一二年六月為香港聯交所主板上市的招商局置地有限公司獨立非執行董事；於二零一四年八月為香港聯交所主板上市的中國宏泰產業市鎮發展有限公司之獨立非執行董事；於二零一七年九月為香港聯交所主板上市的中國萬桐園(控股)有限公司之獨立非執行董事；於二零一八年一月為香港聯交所創業板上市的首都金融控股有限公司之獨立非執行董事；於二零一八年十二月為香港聯交所主板上市的中國醫療網絡有限公司之獨立非執行董事；及於二零一九年二月為香港聯交所主板上市的德信中國控股有限公司之獨立非執行董事。

Directors and Senior Management Profile

董事和高級管理人員簡歷

Directors (continued)

Independent Non-executive Directors (continued)

Dr. WONG is an Independent Non-executive Director of the Company and has served on the Board for more than 10 years. As an Independent Non-executive Director with extensive experience and knowledge and in-depth understanding of the Company's operations and business, Dr. WONG has expressed objective views and given independent guidance to the Company over the past years. He continues to demonstrate a firm commitment to his role.

Pursuant to code provision A.5.5 of the Corporate Governance Code as set out in Appendix 14 of the Listing Rules, the Nomination Committee and the Board consider that Dr. WONG, being a Certified Public Accountant, is able to complement the professional background of the composition of the Board in terms of expertise in accounting and financial reporting. Notwithstanding Dr. WONG holds various company directorships in listed companies in Hong Kong, he devoted sufficient time in fulfilling his role in the Company. During the past year, he attended and actively participated in the discussions in all the Board meetings and committee meetings which he was eligible to attend.

The Nomination Committee and the Board consider that the long service of Dr. WONG would not affect his exercise of independent judgment and are satisfied that Dr. WONG has the required character, integrity and experience to continue fulfilling the role of an Independent Non-executive Director and consider Dr. WONG to be independent.

Ms. FU Shuangye (符霜葉), aged 51, was appointed an independent non-executive Director on 12 January 2008. Ms. FU graduated from Wuhan University with a bachelor degree in English Literature in 1990 and obtained her further legal studies certificate in the Law School of China Politics and Law University in 1997. She was qualified as a PRC lawyer in 1998. She was a partner of Zhong Lun W&D Law Firm in Beijing. Ms. FU is now the Managing Director Partner of Zhong Hao Attorneys-at-Law. She has extensive experience in the legal profession.

Ms. FU is an Independent Non-executive Director of the Company and has served on the Board for more than 10 years. As an Independent Non-executive Director with extensive experience and knowledge and in-depth understanding of the Company's operations and business, Ms. FU has expressed objective views and given independent guidance to the Company over the past years. She continues to demonstrate a firm commitment to her role.

Pursuant to code provision A.5.5 of the Corporate Governance Code as set out in Appendix 14 of the Listing Rules, the Nomination Committee and the Board consider that Ms. FU, being a practising solicitor, has extensive experience in legal profession. She is able to complement the professional background of the composition of the Board in terms of law and compliance.

The Nomination Committee and the Board consider that the long service of Ms. Fu would not affect her exercise of independent judgment and are satisfied that Ms. Fu has the required character, integrity and experience to continue fulfilling the role of an Independent Non-executive Director and consider Ms. Fu to be independent.

董事(續)

獨立非執行董事(續)

王博士擔任本公司獨立非執行董事超過十年。王博士經驗豐富、見識深廣，對本公司的業務營運瞭解透徹，過往一直以獨立非執行董事的身份向本公司表達客觀的見解及給予獨立的指導，對本身角色持續表現堅定的承擔。

根據上市規則附錄十四所載的企業管治守則第A.5.5條的守則條文，提名委員會及董事會認為，王博士作為註冊會計師，能補充董事會成員於會計及財務報告方面的專業背景。儘管王博士於香港多間上市公司擔任公司董事職務，彼仍有足夠時間履行其於本公司的職責。於過往年度，彼出席及積極參與其符合資格出席的全部董事會會議及委員會會議的討論。

提名委員會及董事會認為王博士的長期服務不會影響其作出獨立的判斷，並確信王博士具備繼續履行獨立非執行董事一職所需的品格、誠信及經驗，並相信王博士仍然屬獨立人士。

符霜葉女士，51歲，於二零零八年一月十二日獲委任為獨立非執行董事。符女士於一九九零年畢業於武漢大學，獲頒英國文學學士學位；於一九九七年獲頒中國政法大學法律系法律研究證書；及於一九九八年獲得中國律師資格。符女士曾任北京中倫文德律師事務所合夥人律師，目前出任北京市中灝律師事務所主任合夥人律師。彼於法律界有豐富經驗。

符女士擔任本公司獨立非執行董事超過十年。符女士經驗豐富、見識深廣，對本公司的業務營運了解透徹，過往一直以獨立非執行董事的身份向本公司表達客觀的見解及給予獨立的指導，對本身角色持續表現堅定的承擔。

根據上市規則附錄十四所載的企業管治守則第A.5.5條的守則條文，提名委員會及董事會認為，符女士作為執業律師，於法律專業方面擁有豐富經驗。彼能補充董事會成員於法律及合規方面的專業背景。

提名委員會及董事會認為符女士的長期服務不會影響其作出獨立的判斷，並確信符女士具備繼續履行獨立非執行董事一職所需的品格、誠信及經驗，並相信符女士仍然屬獨立人士。



Directors and Senior Management Profile

董事和高級管理人員簡歷

Directors (continued)

Independent Non-executive Directors (continued)

Mr. ZHANG Chun (張椿), aged 87, an independent non-executive Director, joined the Group on 12 January 2008. Mr. ZHANG graduated from Tianjin University in 1955 and conducted research on semiconductor silicon material in 北京有色金屬研究總院 (Beijing Non-Ferrous Metal Research Institution) in the same year. During 1965 to 1979, he was involved in the establishment of the semiconductor materials factory in Emei and the monocrystalline silicon factory in Luoyang and their production and technological management. During 1979 to 1998, he was the supervisor of a semi-conductor material research unit of Beijing Non-Ferrous Metal Research Institution, the supervisor of the 國家半導體材料工程研究中心 (State Semi-conductor Material Engineering Research Centre) and he also acted as the general manager of 金鑫半導體材料有限公司 (Jinxin Semi-conductor Material Company Limited). The (a) project on 3 to 4 inches monocrystalline silicon for the use in integrated circuit and (b) the research project on the manufacture of 125mm monocrystalline silicon wafer for the use in 2 to 3 μ m integrated circuit organized and led by Mr. ZHANG received 科學技術進步一等獎 (the Science and Technology Progress First Prize) by the China National Non-Ferrous Metals Industry Corp. Mr. ZHANG was granted a special subsidy of government from the State Council since 1992, was awarded the title of Supreme Model for the Labour of the Non-ferrous Metals Industry of the Nation in 1993 and was awarded as a 全國先進工作者 (National Pioneer) by the State Council in 1995.

Mr. ZHANG Chun, being in advanced age, did not offer himself for re-election at the AGM held on 18 June 2019 and will retire as an independent non-executive Director, a member of the audit committee and remuneration committee of the Board and chairman of the nomination committee of the Board with effect from the close of the AGM held on 18 June 2019. Mr. ZHANG confirmed that he has no disagreement with the Board of Directors and is not aware of any matters relating to his resignation that need to be brought to the attention of the shareholders.

董事 (續)

獨立非執行董事 (續)

張椿先生，87歲，獨立非執行董事，於二零零八年一月十二日加盟本集團。張先生於一九五五年於天津大學畢業，同年在北京有色金屬研究總院從事半導體硅材料的研究工作。一九六五年至一九七九年，彼在峨眉半導體材料廠和洛陽單晶硅廠參與建廠和生產及技術管理工作。一九七九年至一九九八年，彼任北京有色金屬研究總院半導體材料研究室主任、國家半導體材料工程研究中心主任及金鑫半導體材料有限公司總經理。張先生組織領導(a)3至4吋用於集成電路的單晶硅片項目和(b)製造用於2至3微米集成電路的125毫米單晶硅片的研究項目，兩者均獲中國有色金屬工業總公司科學技術進步一等獎。張先生於一九九二年起獲國務院頒授政府特殊津貼，一九九三年榮獲全國有色金屬工業特等勞動模範光榮稱號，一九九五年獲國務院頒發全國先進工作者稱號。

張椿先生因為年事已高，並沒有於二零一九年六月十八日的股東週年大會重選連任，由二零一九年六月十八日的股東周年大會結束起退任獨立非執行董事、董事會審核委員會及薪酬委員會委員及董事會提名委員會主席之職務。張椿先生先生確認其與董事會並無意見分歧，且不知悉任何與其辭職有關的事宜須提請股東注意。



Directors and Senior Management Profile

董事和高級管理人員簡歷

Directors (continued)

Independent Non-executive Directors (continued)

Ms. FENG Wenli (馮文麗), aged 63, graduated from Northeastern University in 1982 with a major in semiconductor materials. From the same year, she worked in 洛陽單晶硅廠工作 (Luoyang Monocrystalline Silicon Factory*). She was mainly engaged in semiconductor-grade monocrystalline silicon ingot-pulling technology and technical quality management. In 1990, she served as Chief Engineer of Luoyang Monocrystalline Silicon Factory. In 1993, she served as the Secretary of Party Committee of Luoyang Monocrystalline Silicon Factory and from 1995 onwards, she concurrently served as General Manager of Sino-US joint venture company 麥斯克電子材料有限公司 (MCL Electronic Materials Co., Ltd.*) and has received training on monocrystalline silicon ingot and wafer technologies and management training from MEMC of the United States. In October 2000, she worked as Deputy General Manager of 有研硅股國泰公司 (GRINM Silicon Guotai Co., Ltd.*) under 北京有色金屬研究總院 (Beijing General Research Institute For Nonferrous Metals*). She was responsible for the technical quality and production of heavily blended monocrystalline silicon ingots and wafers, and participated in the national science and technology research and development project work on 8-inch heavily arsenic blended monocrystalline silicon. She served as the Deputy General Manager of 上海申和熱磁電子材料公司 (Shanghai Shenhe Thermomagnetic Electronic Materials Co., Ltd.*) in March 2003, where she was responsible for monocrystalline ingot and wafer production. She has also received training on wafer production, technology and management from 日本東芝陶瓷公司 (Toshiba Ceramics Co., Ltd.*) of Japan. She was the General Manager of 內蒙古晟納吉光伏材料有限公司 (Inner Mongolia Minaji Photovoltaic Materials Co., Ltd.*) in 2006, where she was responsible for the production of solar monocrystalline silicon and the production of heavily blended monocrystalline silicon. She retired in 2016 and was appointed an Independent non-executive Director on 18 June 2019.

The Directors' interest or short positions in the shares or underlying shares in the Company within the meaning of Part XV of the Securities and Futures Ordinance ("SFO") are set out in the section headed "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" in this annual report. Each Director has been appointed for a term of three years. The Directors' emoluments, the basis of determining the same (including any bonus payments, whether fixed or discretionary in nature, irrespective of whether the Director has or does not have a service contract) and the Directors' fees are set out in note 9 to the Financial Statements and the section headed "Report of the Directors — Emolument Policy" of this annual report. Save as disclosed above, each Director confirmed that there are no other matters that need to be brought to the attention of the shareholders of the Company and there is no other information which is required to be disclosed pursuant to Rule 13.51(2) of the Listing Rules.

董事(續)

獨立非執行董事(續)

馮文麗女士(「馮女士」)，63歲。馮女士於一九八二年於東北大學半導體材料專業畢業，同年在洛陽單晶硅廠工作，主要從事半導體級單晶硅的拉晶技術和技術質量管理工作；一九九零年擔任洛陽單晶硅廠總工程師；一九九三年擔任洛陽單晶硅廠黨委書記；一九九五年兼任中美合資公司麥斯克電子材料有限公司總經理，並接受過美國MEMC公司的單晶硅和硅片技術和管理培訓。彼在二零零零年十月在北京有色金屬研究總院有研硅股國泰公司擔任副總經理，主管重摻單晶硅和硅片的技術質量、生產，參加了8英寸重摻單晶硅的國家科技研發項目工作。彼在二零零三年三月在上海申和熱磁電子材料公司擔任副總經理，主管單晶和硅片生產。並接受過日本東芝陶瓷公司的硅片生產和技術、管理的培訓。彼在二零零六年在內蒙古晟納吉光伏材料有限公司擔任總經理，主管太陽能單晶硅的生產和半導體重摻單晶的生產。彼在二零一六年退休，並於二零一九年六月十八日或委任為獨立非執行董事。

董事於本公司股份或相關股份中擁有根據證券及期貨條例(「證券及期貨條例」)第XV部所界定之權益或淡倉，載於本年報「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」一節。各董事之任期為期三年。董事薪酬、釐定薪酬之基準(包括無論屬固定或酌情且不論董事有否服務合約之任何花紅款項)以及董事袍金載於本年報財務報表附註9及本年報「董事會報告書—薪酬政策」一節。除上文披露者外，各董事確認，概無其他事宜須提呈本公司股東注意，亦無其他資料須根據上市規則第13.51(2)條予以披露。



Directors and Senior Management Profile

董事和高級管理人員簡歷

Senior Management

Mr. YUEN Kin Shan (袁建山), aged 38, is the Financial Controller, Company Secretary and Investor Relations Director of the Company. He holds a Bachelor of Commerce in Finance and Accounting from the University of New South Wales in Australia and a Master of Business Administration from The Hong Kong University of Science and Technology. He is also a member of the Hong Kong Institute of Certified Public Accountants and CPA Australia. He joined the Company in September 2014 and has over 10 years of experience in auditing, accounting, financial management and corporate finance.

Mr. LI Hongbang (李鴻邦), aged 47, the General Manager of Ingot Pulling and Wafer Slicing Business Department of the Group. He joined the Group in 2003. He graduated from Zhejiang University in 2010 with a bachelor's degree in marketing. From 2005, Mr. LI served as the office supervisor. Mr. LI was the head of Sales Department since 2007 and the supervisor of Shanghai Marketing Center and the head of Sales Department since 2009. Later, he became the director of Group Production Planning Department in 2013. He has served as the General Manager of Ingot Pulling Business Department since May 2014, and also served as the General Manager of Wafer Slicing Business Department since August 2015.

Mr. WANG Lixin (王立新), aged 52, the General Manager of Cell and Module Business Department of the Group. He graduated from the Party School of Liaoning Province in 2000. Prior to joining the Group, Mr. WANG was the Chief Engineer of Jinzhou Thermal Power Corporation (錦州熱電總公司) from April 1990 to May 2008. He joined the Group as the head of Cell Business Department and Equipment Department in 2008 and later became the plant head of Cell Business Department since 2012 and the general manager of Cell Business Department since 2014. He also served as the General Manager of Module Business Department since January 2018.

Mr. ZHANG Hai (張海), aged 37, the Vice General Manager and general manager of R&D quality assurance centre of the Group. He joined the Group in May 2009. He graduated from Northeastern University in 2006 with a bachelor's degree in information technology and business management and is an electrical engineer. In 2010, Mr. ZHANG was employed by Huachang Photovoltaic Technology Co., Ltd (華昌光伏科技有限公司) as the head of Quality Assurance Department. He served as the head of Group Quality Control Department in 2012 and the director of Group Quality Management Department in February 2014. In August 2014, he became the general manager of Module Business Department. Since January 2018, he served as the Vice General Manager and General Manager of R&D Quality Assurance Centre of the Group.

Ms. CHEN Linlin (陳琳琳), aged 42, is the General Manager of the Group's Service Assurance Center. She graduated from Dalian University of Technology in 2000 with a bachelor's degree in chemical engineering. She obtained a Master of Business Administration from Dalian University of Technology in 2006. She joined the Group in 2006 and has held various positions including project manager, project director, production planning director, planning director, and administrative director. Since February 2018, she serves as General Manager of the Group's Service Assurance Center.

高級管理人員

袁建山先生，38歲，為本公司財務總監、公司秘書及投資者關係總監。彼持有澳洲新南威爾斯大學頒授的商業學士學位(金融及會計)及香港科技大學頒授的工商管理碩士學位。彼亦為香港會計師公會及澳洲會計師公會會員。彼於二零一四年九月起加入本公司，具備逾十年審計、會計、財務管理及企業融資經驗。

李鴻邦先生，47歲，本集團拉晶及切片事業部總經理。彼於二零零三年加盟本集團。彼於二零一零年畢業於浙江大學，獲得市場營銷學士學位。李先生自二零零五年出任辦公室副主任。自二零零七年任銷售部長，自二零零九年任上海營銷中心主任兼銷售部部長，其後於二零一三年任集團生產計劃總監，自二零一四年五月任拉晶事業部總經理一職，並於二零一五年八月兼任切片事業部總經理。

王立新先生，52歲，本集團電池片及組件事業部總經理。彼於二零零零年畢業於遼寧省黨校。加盟本集團前，王先生自一九九零年四月至二零零八年五月出任錦州熱電總公司專責工程師。自二零零八年加盟本集團，任電池片事業部生產部部長兼設備部部長，其後於二零一二年任電池片事業部廠長，二零一四年起任電池片事業部總經理一職，並於二零一八年一月兼任組件事業部總經理。

張海先生，37歲，本集團副總經理兼研發品保中心總經理。彼於二零零九年五月加盟本集團。彼於二零零六年畢業於東北大學，獲得信息技術與商務管理學士學位，為電氣工程師。張先生二零一零年獲聘任為華昌光伏科技有限公司品保部部長，二零一二年任集團質檢部部長，二零一四年二月任集團質量管理部總監，二零一四年八月任組件事業部總經理一職，並於二零一八年一月任集團副總經理兼研發品保中心總經理。

陳琳琳女士，42歲，本集團服務保障中心總經理。彼於2000年，畢業於大連理工大學，獲得化學工程學士學位；於二零零六年獲得大連理工大學工商管理碩士學位。彼於二零零六年加盟本集團，歷任項目主管、項目總監、生產計劃總監、企劃總監、行政總監等職務，自二零一八年二月起，擔任集團服務保障中心總經理。



Directors and Senior Management Profile

董事和高級管理人員簡歷

Senior Management (continued)

Dr. LIU Aimin (劉愛民), aged 51, is a member of the Group's Corporate Strategy Committee. He joined the Group in 2017. He graduated from Lanzhou University in 1990 with a bachelor's degree in Physics and, in 1997, obtained a Ph.D. in Semiconductor Materials and Devices from the Institute of Semiconductors, Chinese Academy of Sciences. Thereafter, he studied abroad in Israel, Japan and New Zealand. After returning to China in 2002, Dr. Liu was appointed professor at the School of Physics of Dalian University of Technology and also the Director of its Solar Cell Research Centre. In 2014, co-operating with the Group's companies, they accomplished the "863" Black Silicon Solar Cell Technology Project ("863" 黑硅太陽電池技術計劃) (the "Project") under the National High-Tech Development Research Program (國家高技術發展研究計劃) of the Ministry of Science and Technology (科學技術部). The Project covers the research on improving solar cell efficiency through nano-structures and passivation of the surface of black silicon. Dr. Liu was the Chief Scientist of the Project. He is also a Review Expert for the National Science and Technology Progress Award.

Mr. LUO Qian (羅乾), aged 51, the General Manager of Solargiga Energy (Qinghai) Co., Ltd of the Group. He is a delegate of the 15th People's Congress and the 16th National People's Congress Standing Committee of Xining City. He joined the Group in 2010. He graduated from the Faculty of Chinese of Qinghai Normal University in 1992. From 1992 to 1997, he worked in the labour service company of Qinghai Provincial People's Political Consultative Conference (青海省政協機關勞動服務公司). He served as General Manager of Xining Zhanqing Electronics Co., Ltd. (西寧湛青電子有限公司) from 1997 to 2009. In 2009, Mr. Luo invested in Qinghai Chenguang New Energy Co., Ltd. (青海辰光新能源有限責任公司) ("Qinghai Chenguang"). In 2010, the Group acquired Qinghai Chenguang and changed the name to Solargiga Energy (Qinghai) Co., Ltd. He then was appointed by the board of directors of the Company as the General Manager of Solargiga Energy (Qinghai) Co., Ltd.

Mr. ZHANG Yubo (張昱博), aged 39, is the General Manager of Qujing Yangguang Energy Silicon Materials Co., Ltd. of the Group. He joined the Group in 2005. He graduated from Shenyang Ligong University in 2004 with a bachelor's degree in Metallic Materials. Mr. Zhang became the Group's Head of Technical Department in 2007 and then the Head of the Group's Yangguang manufacturing plants in Jinzhou in 2009. Later in 2014, he served as the Production Planning Director. Since 2017, he was appointed General Manager of Qujing Yangguang Energy Silicon Material Co., Ltd. (曲靖陽光能源硅材料有限公司).

Mr. SATO Masanobu (佐藤正延), aged 50, is the Quality Director of Solar Cell Business Department and Technology and Quality Director of Module Business Department of the Group. Prior to joining the Group, he worked in Sharp Corporation from 1988 and had worked in the semiconductor field for 18 years. After which, for 10 years from 2006, he served as the Quality Manager in the Department of Photovoltaic Systems in Sharp Corporation. Since 2016, he serves as the Quality Director of Cell Business Department and Technology and Quality Director of Module Business Department of the Group.

高級管理人員(續)

劉愛民博士，51歲，為本集團公司戰略資訊委員會成員，彼於二零一七年加盟本集團。彼於一九九零年畢業於蘭州大學，獲物理系學士學位，一九九七年畢業於中國科學院半導體研究所獲半導體材料與器件專業博士學位。其後在以色列、日本、新西蘭留學學習。二零零二年回國，劉博士任大連理工大學物理學院教授及大連理工大學太陽電池研究所所長。二零一四年與本集團公司共同完成了科學技術部國家高技術發展研究計劃「863」黑硅太陽電池技術計劃項目，為項目首席科學家。項目涵蓋通過表面黑硅納米結構和鈍化提高電池效率。彼亦為國家科技進步獎評審專家。

羅乾先生，51歲，本集團陽光能源(青海)有限公司總經理。彼為西寧市第十五屆人大代表及第十六屆人大常委，並於二零一零年加盟本集團。一九九二年畢業於青海師範大學中文系。一九九二至一九九七年就職於青海省政協機關勞動服務公司工作。一九九七至二零零九年就職於西寧湛青電子有限公司任總經理。二零零九年羅先生投資入股青海辰光新能源有限責任公司(「青海辰光」)，二零一零年本集團收購青海辰光控股並變更為陽光能源(青海)有限公司，彼被公司董事會聘任為陽光能源(青海)有限公司總經理。

張昱博先生，39歲，本集團曲靖陽光能源硅材料有限公司總經理。彼於二零零五年加盟本集團。彼於二零零四年畢業於瀋陽理工大學，獲得金屬材料學士學位。張先生於二零零七年出任集團技術部部長，於二零零九年任集團錦州陽光生產廠廠長，其後二零一四年轉任集團生產計劃總監，並於二零一七年出任曲靖陽光能源硅材料有限公司總經理。

佐藤正延先生，50歲，本集團電池業務部質量總監以及組件業務部技術及質量總監。加入本集團之前，自一九八八年彼於Sharp Corporation工作，並在半導體領域工作十八年。其後，自二零零六年起擔任Sharp Corporation質量經理，從事太陽能系統部門工作十年。自二零一六年起擔任本集團電池業務部質量總監以及組件業務部技術及質量總監。



REPORT OF THE DIRECTORS

董事會報告書

The Directors present the annual report together with the audited consolidated financial statements for the year ended 31 December 2019.

Principal Activities

The Company acts as an investment holding company of the Group. The principal activities of the Group are the trading of, manufacturing of and provision of processing services for polysilicon and monocrystalline silicon solar ingots/wafers, and the producing of and trading of photovoltaic cells and modules, the installation of photovoltaic systems and the operating of photovoltaic power plants. The analysis of the principal activities and geographical locations of the operations of the subsidiaries during the financial year are set out in note 1 to the consolidated financial statements. Further discussion and analysis of these activities, including a description of an indication of likely future development in the Group's business, can be found in the Management Discussion and Analysis set out on pages 10 to 31 of this annual report. This discussion forms part of this directors' report. The description of the Group's Environmental, Social and Governance aspects during the financial year can also be found in the Environmental, Social and Governance (the "ESG") Report set out on pages 63 to 69 of this annual report.

Compliance with relevant laws and regulations

As far as the directors are aware, the group has complied in material respects with the relevant laws and regulations that have a significant impact on the business and operation of the Group. During the year ended 31 December 2019, there was no material breach of or non-compliance with the applicable laws and regulations by the Group.

Major Customers and Suppliers

The Group's top five customers are mainly silicon solar wafer, cell or modules manufacturers or traders. In aggregate, the largest and five largest customers did not exceed 11% (2018: 16%) and 38% (2018: 52%) of the Group's total sales in 2019 respectively.

The Group currently procures raw materials from about 142 major suppliers (2018: 116). In aggregate, purchases from its largest and five largest suppliers did not exceed 13% (2018: 18%) and 39% (2018: 53%) of the Group's total purchases in 2019 respectively. Save for WWX, at no time during the year have the Directors, their close associates or any shareholder of the Company (which to the knowledge of the Directors owns more than 5% of the Company's share capital) had any interest in these major suppliers and/or customers.

董事提呈本年報連同截至二零一九年十二月三十一日止年度的經審核綜合財務報表。

主要業務

本公司為本集團投資控股公司。本集團主要業務為買賣及製造太陽能單晶硅棒／硅片，以及提供太陽能單晶硅棒／硅片的加工服務，並生產及買賣光伏電池及組件、安裝光伏系統以及經營光伏電站。本財政年度內附屬公司之主要業務及按地區分部劃分之業務分析載於財務報表附註1。有關該等活動的進一步討論及分析（包括本集團業務中可能進行的未來發展的跡象的描述）載於本年報第10至31頁管理層討論及分析。此討論構成本董事會報告書的一部分。而有關本財政年度內本集團於環境、社會及管治方面之描述，亦載於本年報第63至69頁環境、社會及管治報告。

遵守相關法律法規

據董事所知，本集團已在重大方面遵守了對本集團業務和運營有重大影響的相關法律法規。截至二零一九年十二月三十一日止年度，集團沒有發生重大違反適用法律法規的行為。

主要客戶及供應商

本集團五大客戶主要為太陽能硅片、電池或組件製造商或貿易商。最大及五大客戶於二零一九年的銷售總額分別不超過本集團銷售總額的11%（二零一八年：16%）及38%（二零一八年：52%）。

本集團現時從約142家（二零一八年：116家）主要供應商採購原材料。最大及五大供應商於二零一九年的採購總額分別不超過本集團採購總額的13%（二零一八年：18%）及39%（二零一八年：53%）。除合晶科技外，董事、彼等的緊密聯繫人士或就董事所知擁有本公司股本5%以上之任何本公司股東，概無於本年度內任何時間，在該等主要供應商及／或客戶中擁有任何權益。



Report of the Directors 董事會報告書

Financial Statements and Dividends

The profit of the Group for the year ended 31 December 2019 and the Group's financial position as at that date are set out in the financial statements on pages 78 to 204. The Directors do not recommend the payment of a final dividend for the years ended 31 December 2019 and 2018.

Transfer to Reserves

Loss attributable to shareholders of the Company for the year ended 31 December 2019 was RMB355,492,000 (2018: loss of RMB222,402,000) had been transferred to reserves. Other movements in reserves are set out in the consolidated statement of changes in equity on page 82.

As at 31 December 2019, distributable reserves of the Company amounted to approximately RMB1,136,994,000 (2018: RMB1,131,488,000).

Charitable Donations

Charitable donations made by the Group during the year amounted to RMB192,000 (2018: RMB659,000).

Bank Loans and Other Borrowings

Particulars of bank loans and other borrowings of the Group as at 31 December 2019 are set out in note 28 to the financial statements.

Property, Plant and Equipment

Details of acquisitions and other movements in property, plant and equipment are set out in note 14 to the financial statements.

Share Capital

Details of the movements in share capital of the Company during the year are set out in note 35 to the financial statements.

Five-year Financial Summary

A summary of the results and of the assets and liabilities of the Group for the last five financial years is set out on page 5 of the annual report.

財務報表及股息

本集團截至二零一九年十二月三十一日止年度的利潤，以及本集團於同日的財務狀況，載於第78至204頁的財務報表。董事不建議就截至二零一九年及二零一八年十二月三十一日止年度派付末期股息。

轉撥至儲備

截至二零一九年十二月三十一日止年度本公司股東應佔虧損為人民幣355,492,000元(二零一八年：虧損人民幣222,402,000元)已轉撥入儲備。儲備的其他變動載於第82頁綜合權益變動表內。

於二零一九年十二月三十一日，本公司可分派儲備約為人民幣1,136,994,000元(二零一八：人民幣1,131,488,000元)。

慈善捐款

本年度內本集團所作慈善捐款為人民幣192,000元(二零一八年：人民幣659,000元)。

銀行貸款及其他借貸

本集團於二零一九年十二月三十一日的銀行貸款及其他借貸詳情，載於財務報表附註28。

物業、廠房及設備

收購物業、廠房及設備以及其他變動的詳情，載於財務報表附註14。

股本

本年度內本公司股本變動的詳情，載於財務報表附註35。

五年財務摘要

本集團過去五個財政年度的業績以及資產與負債的概要，載於本年報第5頁。



Report of the Directors 董事會報告書

Directors

The Directors during the financial year and up to the date of this report were:

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. FU Shuangye

Mr. ZHANG Chun (retired with effect from 18 June 2019)

Ms. FENG Wenli (appointed with effect from 18 June 2019)

In accordance with the provisions of the Company's articles of association, Mr. TAN Xin, Mr. Wang Junze and Mr. HSU You Yuan will retire by rotation at the forthcoming annual general meeting. Mr. TAN Xin, Mr. Wang Junze and Mr. HSU You Yuan, being eligible, and will offer themselves for re-election at the annual general meeting.

Directors' Service Contracts

None of the Directors being proposed for re-election at the forthcoming annual general meeting has a service agreement with the Company which is not determinable by the Company within one year without payment of compensation, other than statutory compensation.

董事

本財政年度內及直至本報告日期止的在任董事為：

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

符霜葉女士

張椿先生(自二零一九年六月十八日起退任)

馮文麗女士(自二零一九年六月十八日起委任)

根據本公司組織章程細則的條文，譚鑫先生、王鈞澤先生及許祐淵先生將於應屆股東週年大會輪值退任。譚鑫先生、王鈞澤先生及許祐淵先生均合資格並將於股東週年大會重選連任。

董事服務合約

概無擬於應屆股東週年大會重選連任的董事與本公司訂立任何不可於一年內免付賠償(法定賠償除外)予以終止的服務協議。



Report of the Directors 董事會報告書

Related Party Transactions

During the year ended 31 December 2019, transactions with the following parties are considered to be related party transactions:

Name of party 各方名稱	Relationship 關係
Jinzhou Huarong Property Management Company Limited 錦州華榮物業管理有限公司	Controlled by Tan Wenhua, Chairman of the Company 受本公司主席譚文華控制
Jinzhou Youlin Semi-Conductor Material Co., Ltd. 錦州佑林半導體材料有限公司	Controlled by spouse of Tanxin, an executive director of the Company 受本公司執行董事譚鑫的配偶控制
Jiangsu Oriental Huida New Energy Technology Co., Ltd. ("Huida") 江蘇東方惠達新能源科技有限公司(「惠達」)	Associate of the Group 本集團的聯營公司
Jinzhou Huachang Photovoltaic Property Development Co., Ltd. 錦州華昌光伏房地產開發有限公司	Controlled by Tan Wenhua, Chairman of the Company 受本公司主席譚文華控制
Liaoning Little Giant Energy Technology Co., Ltd. 遼寧小巨人新能源科技有限公司	Associate of the Group 本集團的聯營公司

Details of the related party transactions are disclosed in note 40 to the financial statements.

關聯方交易

截至二零一九年十二月三十一日止年度，與下列人士的交易被視為關聯方交易：

有關關聯方交易的詳情於財務報表附註40披露。

Continuing Connected Transactions

The Company confirms that it has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules in respect of the Company's continuing connected transactions.

持續關連交易

本公司確認，其已根據上市規則第14A章就本公司持續關連交易遵守有關披露規定。

Connected Transaction

For the year ended 31 December 2019, the related party transactions disclosed in note 40 to the financial statements did not constitute connected transactions or continuing connected transactions under Chapter 14A of the Listing Rules.

關連交易

截至二零一九年十二月三十一日止年度，財務報表附註40所披露的關聯方交易並不構成上市規則第14A章項下的關連交易或持續關連交易的交易。

Share Option Scheme

The Company did not have a share option scheme as at 31 December 2019.

購股權計劃

於二零一九年十二月三十一日，本公司沒有購股權計劃。



Report of the Directors 董事會報告書

Purchase, Sale or Redemption of the Company's Listed Securities

There was no purchase, sale or redemption by the Company or any of its subsidiaries of the Company's listed securities during the year ended 31 December 2019.

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 31 December 2019, 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:

購買、出售或贖回本公司上市證券

於截至二零一九年十二月三十一日止年度，本公司或其任何附屬公司概無購買、出售或贖回本公司之上市證券。

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

於二零一九年十二月三十一日，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 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)	17.34%
	Interest of a controlled corporation (Note 2) 受控法團權益(附註2)	155,320,308 (L)	4.84%
Mr. WANG Junze 王鈞澤先生	Beneficial interest 實益權益	100,500 (L)	0.01%
Mr. HSU You Yuan 許祐淵先生	Beneficial interest 實益權益	15,591,016 (L)	0.49%

Notes:

- The letter "L" denotes the person's long position in such securities.
- As at 31 December 2019, 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。
- 於二零一九年十二月三十一日，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。



Report of the Directors 董事會報告書

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

As at 31 December 2019, so far as the Directors are aware, save as disclosed above, the following substantial shareholders (not being a Director or chief executive of the Company) 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 have otherwise notified to the Company:

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)	9.47%
Hiramatsu Hiroharu (Note 2) (附註2)	Interest of a controlled corporation 受控法團權益	304,261,692 (L)	9.47%

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 Hiramatsu Hiroharu as at the date of this report. By virtue of the SFO, Hiramatsu Hiroharu is deemed to be interested in the shares of the Company held by Hiramatsu International Corp.

主要股東於股份及相關股份中的權益及淡倉

截至二零一九年十二月三十一日，據董事所悉，除上文披露者外，以下主要股東（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)	9.47%
Hiramatsu Hiroharu (Note 2) (附註2)	Interest of a controlled corporation 受控法團權益	304,261,692 (L)	9.47%

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 Hiroharu全資擁有Hiramatsu International Corp.。根據證券及期貨條例，Hiramatsu Hiroharu被視為於Hiramatsu International Corp.持有的本公司股份中擁有權益。

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

As at 31 December 2019, so far as the Directors are aware, save as disclosed above, the other persons or corporations (not being a Director, chief executive or substantial shareholder of the Company) who have 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 have otherwise notified to the Company were as follows:

其他人士於股份及相關股份中的權益及淡倉

截至二零一九年十二月三十一日，據董事所悉，除上文披露者外，以下其他人士或法團（並非董事，本公司最高行政人員或主要股東）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：



Report of the Directors

董事會報告書

Other Persons' Interests and Short Positions' in Shares and Underlying Shares (continued)

其他人士於股份及相關股份中的權益及淡倉(續)

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 (%)
Wafer Works Investment Corp. ("WWIC")	Beneficial owner 實益擁有人	248,759,822 (L)	7.75%
Wafer Works Corp. ("WWX") (Note 2) 合晶科技股份有限公司(「合晶科技」)(附註2)	Interest of a controlled corporation 受控法團權益	248,759,822 (L)	7.75%

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, WWIC is wholly-owned by WWX as at the date of this report. By virtue of the SFO, WWX is deemed to be interested in the Shares held by WWIC.

Save as disclosed above, as at 31 December 2019, 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.

Directors' Interest in Potentially Competing Businesses

Mr. TAN Wenhua, being the executive Director, is interested in other related businesses, particulars of which are set out below:

Previously, Mr. Tan held approximately 40% interest in Jinzhou Changhua. On 13 June 2018, Mr. Tan disposed of all his shareholdings in Jinzhou Changhua to an independent third party. After the disposal, Mr. Tan does not hold any interest in Jinzhou Changhua. Jinzhou Changhua is engaged in the manufacturing of graphite and graphite related products. The business of Jinzhou Changhua does not compete with that of the Group. Jinzhou Changhua, as a company which manufactures graphite and graphite related products, is not a competitor of the Group because (a) the Group is not engaged in the manufacturing of graphite or any graphite related products; and (b) graphite is not a substitute for polysilicon in the manufacturing of solar products currently produced by the Group.

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，合晶科技全資擁有WWIC。根據證券及期貨條例，合晶科技被視為於WWIC持有的股份中擁有權益。

除上文所披露者外，截至二零一九年十二月三十一日，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須根據證券及期貨條例第XV部第2及3分部之條文披露的權益或淡倉。

董事於潛在競爭業務的權益

執行董事譚文華先生於其他相關業務擁有權益，其中詳情載列如下：

此前，譚先生於錦州昌華持有約40%的權益。於二零一八年六月十三日，譚先生將其於錦州昌華的全部股權出售予獨立第三方。出售後，譚先生並無持有錦州昌華的任何權益。錦州昌華從事製造石墨及石墨相關產品。錦州昌華的業務與本集團的業務並不存在任何競爭。作為一家製造石墨及石墨相關產品的公司，錦州昌華並非本集團的競爭對手，原因為(a)本集團並無從事石墨或任何石墨相關產品的製造業務；及(b)石墨不能替代多晶硅作為製造本集團目前生產的太陽能產品的原材料。



Report of the Directors 董事會報告書

Non-competition Undertaking

The Directors confirm that they have no interest in any business (apart from the Group's business) which competes or is likely to compete, either directly or indirectly, with the Group's business. The Directors have also signed a non-competition undertaking with the Company.

Disclosure on how the non-competition undertaking has been complied with and enforced would be consistent with the principles of making voluntary disclosures under the Listing Rules.

Pursuant to the Non-competition undertaking, Mr. TAN Wenhua shall continue to be bound by the terms of the non-competition undertaking in the event that he ceases to be a Director but remains a substantial shareholder of the Company.

The interested Director shall abstain from the meeting where there is actual or potential conflict in interest.

During the year ended 31 December 2019, the Company had not received any information in writing from Mr. TAN Wenhua in respect of any new business opportunity which competed or might compete with the existing and future business of the Group which were offered to or came to be the knowledge of the Mr. TAN Wenhua or their associates (other than any member of the Group), and the Company has received an annual written confirmation from Mr. TAN Wenhua in respect of him and his associates in compliance with the non competition undertaking. The independent non-executive Directors have also reviewed and were satisfied that Mr. TAN Wenhua had complied with the Non-competition undertaking.

Directors' Interests in Contracts

No transaction, arrangement or contract of significance to which the Company or any of its subsidiaries or fellow subsidiaries was a party, and in which a Director or an entity connected with a director is or had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year ended 31 December 2019.

Controlling Shareholders' Interests in Contracts

As at 31 December 2019, no contract of significance and no contract of significance for the provision of services had been entered into between the Company or any of its subsidiaries and the controlling shareholders of the Company or any of its subsidiaries.

不競爭承諾

董事確認，除本集團業務外，彼等概無於與本集團業務直接或間接存有競爭或極可能存有競爭的任何業務擁有權益。董事亦已與本公司訂立不競爭承諾。

本公司有關披露遵守及強制執行不競爭承諾情況的方式將與上市規則所載自願作出披露的原則相符。

根據不競爭承諾，倘若譚文華先生終止擔任董事職務但繼續為本公司主要股東，彼亦須受不競爭承諾的條款約束。

倘會議上討論的事宜與董事實際或可能存在利益衝突，該涉及利益董事須放棄出席有關會議。

截至二零一九年十二月三十一日止年度，本公司並無收到譚文華先生就任何與本集團現有及未來業務競爭或可能競爭的新業務機會的書面資料。是譚文華先生或其聯繫人（本集團任何成員除外）的知情，而本公司已收到譚文華先生就其及其聯繫人遵守非競爭承諾的年度書面確認。獨立非執行董事亦已審閱並信納譚文華先生已遵守不競爭承諾。

董事之合約權益

本公司或其任何附屬公司或同系附屬公司概無參與訂立任何於年終或年內任何時間仍然有效，且董事或董事與關連的實體於當中直接或間接擁有重大權益之重大交易、安排或合約。

控制股東在合同中的利益

於二零一九年十二月三十一日，本公司或其任何附屬子公司與本公司的控股股東或其任何附屬公司之間沒有訂立任何重要合同及提供服務的重要合同。



Report of the Directors 董事會報告書

Permitted Indemnity Provision

During the year ended 31 December 2019 and as at the date of this report, the Company has arranged for appropriate insurance cover for Director's and officers' liabilities in respect of legal actions against its Directors and senior management arising out of corporate activities.

Pursuant to the Company's Articles of Association, the Directors shall be indemnified and secured harmless out of the assets of the Company from and against all actions, costs, charges, losses, damages and expenses which they shall or may incur or sustain by reason of any act done, concurred in or omitted in or about the execution of their duty.

Emolument Policy

The emolument policy of the employees of the Group is set out by the Remuneration Committee on the basis of their merit, qualifications and competence.

The emoluments of the Directors are decided by the Remuneration Committee, having regard to the Company's operating results, individual performance and comparable market statistics.

Retirement Benefit Schemes

Particulars of the retirement benefit schemes of the Group are set out in note 34 to the consolidated financial statements.

Pre-emptive Rights

There are no provisions for pre-emptive rights under the Company's articles of association, or the law of Cayman Islands, being the jurisdiction in which the Company is incorporated under which would oblige the Company to offer new shares of the Company on a pro-rata basis to existing shareholders.

Model Code for Securities Transactions by Directors

The Company has adopted the Model Code as set out in Appendix 10 of the Listing Rules as the code of conduct regarding securities transactions by the Directors. Special enquiries have been made by the Company to confirm that all Directors have been complied with the Model Code for the year ended 31 December 2019.

Corporate Governance

Principal corporate governance practices adopted by the Company are set out in the corporate governance report on pages 32 to 43.

獲准許的彌償條文

於截至二零一九年十二月三十一日止年度及於本報告日期，本公司已就董事及高級管理人員因公司活動產生的法律訴訟安排適當的董事及高級人員責任保險。

根據本公司之組織章程細則，本公司董事可從本公司之資產獲得彌償，並確保該等董事就各自之職務執行其職責時免受因作出、發生之行為或遺漏作出行為而將或可能招致或蒙受之所有訴訟、費用、收費、損失、損害及開支而造成之損害。

薪酬政策

薪酬委員會按照僱員表現、資歷及能力，制定本集團僱員之薪酬政策。

薪酬委員會參照本公司的營運業績、董事個別表現及可比較市場統計數據，決定董事的薪酬。

退休福利計劃

本集團福利計劃詳情，載於財務報表附註34。

優先購股權

本公司之組織章程細則或開曼群島（即本公司註冊成立的司法權區）法例均無有關優先購股權之條文，規定本公司須按持股比例向現有股東提呈本公司新股。

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標準守則作為董事進行證券交易的操守守則。本公司作出特定查詢後確認，全體董事於截至二零一九年十二月三十一日止年度已遵守標準守則。

企業管治

本公司採納的主要企業管治常規，載於第32至43頁的企業管治報告。



Report of the Directors 董事會報告書

Audit Committee

The Company established an Audit Committee with written terms of references adopted in compliance with the Code set out in Appendix 14 of the Listing Rules. The members of the Audit Committee are the three independent non-executive Directors, and Dr. Wong Wing Kuen, Albert, an independent non-executive Director, is the Chairman of the Audit Committee.

The Audit Committee is to serve as a focal point for communication between other Directors, the external auditor and the internal auditor (where an internal audit function exists) of the Company as regards their duties relating to financial and other reporting, internal controls, external and internal audits and such other financial and accounting matters as the Board determines from time to time.

The Audit Committee is to assist the Board in providing an independent review of the effectiveness of the financial reporting process, internal control and risk management system of the Group, overseeing the audit process and performing other duties and responsibilities as may be assigned by the Board from time to time and the Company considers these systems effective and adequate. The audit committee has reviewed the Group's interim and annual consolidated financial statements for the year 2019, including the accounting principles and practices adopted by the Group.

Dividend Policy

In considering the payment of dividends, there shall be a balance between maintaining sufficient capital to grow the Group's business and rewarding the shareholders of the Company. The Board shall take into account the following factors, among other factors:

- (a) the Group's overall results of operation, financial position, liquidity position, capital requirements, cash flow and future prospects;
- (b) the amount of distributable reserves of the Company;
- (c) the expected capital requirements and future expansion plans of the Group;
- (d) the general business and regulatory conditions, the business cycle of the Group and other internal or external factors that may have an impact on the business or financial performance and position of the Group;
- (e) the statutory and regulatory restrictions;
- (f) the contractual restrictions on the payment of dividends by the Company to the Shareholders or by the subsidiaries of the Company to the Company;
- (g) the Shareholders' interests; and
- (h) other factors that the Board deems relevant.

審核委員會

本公司已成立審核委員會，並採納按照上市規則附錄十四所載守則制定的書面職權範圍。審核委員會成員由三名獨立非執行董事組成，而獨立非執行董事王永權博士為審核委員會主席。

審核委員會乃作為其他董事、本公司外聘核數師與內部核數師(倘存在內部審核職能)之間的溝通橋樑，關乎彼等職責中相關的財務及其他報告、內部監控、外部及內部審核以及董事會不時決定的其他財務及會計事宜。

審核委員會負責協助董事會獨立檢討本集團的財務報告過程、內部監控及風險管理制度的成效、監管審核過程及履行董事會不時指派的其他職責及責任及本公司認為這些制度為適當及有效。審核委員會已審閱本集團的二零一九年度中期及年度綜合財務報表，包括本集團採納的會計原則及常規。

股息政策

於考慮派付股息時，需要取得維持足夠資金以達致本集團業務增長與回饋本公司股東之間之平衡。董事會將計及(其中包括)以下因素：

- (a) 本集團之整體營運業績、財務狀況、流動資金情況、現金流量及未來前景；
- (b) 本公司可供分派儲備之金額；
- (c) 公司預期資本要求及未來擴展計劃；
- (d) 商業及規管環境、集團的商業週期和其他可能對集團業務或財務產生影響的內部或外部因素；
- (e) 法定和監管限制；
- (f) 公司向股東或公司附屬公司向公司支付股息的合約限制；
- (g) 股東利益；及
- (h) 董事會認為相關的其他因素。



Report of the Directors 董事會報告書

Sufficiency of Public Float

As at the date of this annual report, the Company has maintained the prescribed public float of not less than 25% of the issued share capital of the Company pursuant to the Listing Rules and as agreed with the Stock Exchange, based on the information that is publicly available to the Company and within the knowledge of the Directors.

Confirmation of Independence

The Company has received from each of the independent non-executive Directors an annual confirmation of independence pursuant to Rule 3.13 of the Listing Rules and considers all the independent Non-Executive Directors to be independent.

Auditors

Ernst & Young was appointed by the Directors to conduct audit on the financial statements of the Company for the year ended 31 December 2019. A resolution will be proposed at the forthcoming annual general meeting to reappoint Ernst & Young as the auditors of the Company.

By Order of the Board
TAN Wenhua
Chairman

Hong Kong, 31 March 2020

足夠公眾持股量

根據本公司透過公開途徑獲得的資料及據董事所知悉，於本年報日期，本公司一直維持上市規則所訂明並經與聯交所協定本公司已發行股本不少於25%的公眾持股量。

獨立身分的確認

本公司已接獲各獨立非執行董事根據上市規則第3.13條發出的年度獨立身分確認書，並認為全體獨立非執行董事均為獨立人士。

核數師

安永會計師事務所獲董事委任審核本公司截至二零一九年十二月三十一日止年度之財務報表。於應屆股東週年大會上將提呈一項決議案以續聘安永會計師事務所為本公司核數師。

承董事會命
主席
譚文華

香港，二零二零年三月三十一日



ABOUT ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

關於環境、社會及管治報告

This Environmental, Social and Governance (the “ESG”) Report published by the Group is in accordance with the Environmental, Social and Governance Reporting Guide issued by the Stock Exchange (the “ESG Reporting Guide”). This ESG report mainly covers the policies, initiatives and performance of the Group’s business for the year ended 31 December 2019. The Company confirms that it has complied with the “comply or explain” provisions set out in the ESG Reporting Guide for the year ended 31 December 2019.

Environmental

Aspect A1: Emissions

As for environmental protection, the Group continues to invest in energy-saving equipment and emphasize green production while constantly advancing its technology in energy saving, emissions reduction and clean production. The Group also controls stringently the emission of wastes. According to its waste management policy, wastes have to be minimized, reused and recycled before the last resort of disposal. The Group regularly keeps track of the latest national and regional environmental laws and regulations, complies with relevant laws and rules such as the Environmental Protection Law of the People’s Republic of China (中華人民共和國環境保護法), the Environmental Impact Assessment Law of the People’s Republic of China (中華人民共和國環境影響評價法) and the Law of the People’s Republic of China on Prevention and Control of Environmental Noise Pollution (中華人民共和國環境雜訊污染防治法), and takes various measures to achieve better performance in environmental protection amid daily office activities and specific business operations. During the year, the Group was not subject to any fines or related litigation in relation to environmental pollution.

Air pollutant emissions

Air emissions include NOx, Fluoride, and other pollutants regulated under national laws and regulations. Pollutants are primarily emitted from the raw material cleaning process. The fumes produced during the acid treatment of silicon feedstock by hydrofluoric acid and nitric acid are eventually treated and emitted through the acid mist towers.

Air pollutant emissions of the Group are detailed below:

Fluorochemicals 氟化物
Hydrogen fluoride 氟化氫
Hydrogen chloride 氯化氫
Chlorine gas 氯氣
Nitrogen oxides 氮氧化物

本報告為本集團根據聯交所頒佈之《環境、社會及管治報告指引》刊發的首份環境、社會及管治報告。本環境、社會及管治報告主要涵蓋本集團截至二零一九年十二月三十一日止年度的業務政策、措施及表現。本公司確認其於截至二零一九年十二月三十一日止年度已遵守《環境、社會及管治報告指引》中所列「不遵守就解釋」的條文。

環境

層面A1：排放物

環保方面，本集團繼續投資於節能設備，重視綠色生產，並不斷精進其於節能、減排和清潔生產方面的科技。本集團亦嚴格控制廢料排放，根據廢料管理政策，須先盡量減少、重用及循環再造廢料，最後才能進行必要的棄置。本集團定期留意最新的國家及地區環保法律法規，遵守《中華人民共和國環境保護法》、《中華人民共和國環境影響評價法》及《中華人民共和國環境雜訊污染防治法》等相關法律及規則，並採取多項措施，務求在日常辦公活動及具體業務中取得更佳的環保成效。年內，本集團並無就環境污染而面臨任何罰款或相關訴訟。

空氣污染物排放

廢氣排放包括氮氧化物、氟化物及其他受國家法律及法規規管的污染物。污染物主要從原料清洗工序排放，利用氫氟酸硝酸對硅料進行酸洗產生煙霧，最終經過酸霧塔處理排放。

本集團之空氣污染物排放如下：

	2019 二零一九	2018 二零一八
Fluorochemicals 氟化物	0.60 tonnes噸	1.39 tonnes噸
Hydrogen fluoride 氟化氫	0.03 tonnes噸	0.05 tonnes噸
Hydrogen chloride 氯化氫	0.13 tonnes噸	7.25 tonnes噸
Chlorine gas 氯氣	0.25 tonnes噸	7.25 tonnes噸
Nitrogen oxides 氮氧化物	0.63 tonnes噸	0.14 tonnes噸

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Greenhouse gas emissions

Greenhouse gas emissions reflect the impact of our businesses on climate change. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Our greenhouse gas emissions were mainly attributable to the indirect emissions from purchased electricity.

Indirect greenhouse gas emissions (scope 2):

carbon dioxide (CO₂) equivalent emissions

2018: Approximately 231,688 tonnes

2019: Approximately 303,290 tonnes

Note: An emission factor of 0.88 tonnes CO₂-e/MWh was used for calculating electricity consumption.

Hazardous wastes

The hazardous wastes generated by the Group mainly included:

Spent activated carbon felt cartridges 廢活性碳氈濾芯

Waste EVA/TPT edge strips 廢EVA/TPT邊條

Waste oil 廢油

Spent activated carbon felt cartridges are generated during the solar cell etching process and contain mainly activated carbon. Filtration through the activated carbon-based organic gas flaring towers gives rise to fluorochemical residues. Ethylene vinyl acetate ("EVA") is produced by our module assembly companies during the trimming of redundant edge strips in the process of module encapsulation. Tedlar polyester tedlar ("TPT"), a solar panel material, is also produced by our module assembly companies during the trimming of redundant edge strips in the course of module encapsulation, involving materials such as polyvinylidene fluoride and PMMA copolymers, polyethylene terephthalate and tetrafluoroethylene/vinyl ester copolymers.

Non-hazardous wastes

The non-hazardous wastes generated by the Group mainly included:

Xylene 二甲苯

Waste steel wire 廢鋼線

Packaging waste 廢包裝物

Plastic waste 塑料製品

Waste oil 廢油

溫室氣體排放

溫室氣體排放反映我們的業務對氣候變化的影響。溫室氣體包括二氧化碳、甲烷、氧化亞氮、氫氟碳化合物、全氟化碳及六氟化硫。我們的溫室氣體排放主要來自外購電力產生的間接排放。

間接溫室氣體排放(範圍2):

二氧化碳當量排放(CO₂)

二零一八: 約231,688噸

二零一九: 約303,290噸

註: 以排放係數每兆瓦時0.88噸二氧化碳當量用於計算的電力消耗。

有害廢棄物

本集團所產生的有害廢棄物主要包括:

	2019 二零一九	2018 二零一八
Spent activated carbon felt cartridges 廢活性碳氈濾芯	0.5 tonnes噸	0.12 tonnes噸
Waste EVA/TPT edge strips 廢EVA/TPT邊條	0.5 tonnes噸	6 tonnes噸
Waste oil 廢油	93.6 tonnes噸	—

廢活性碳氈濾芯為電池片刻蝕工序產生，其主要成分是活性炭，通過活性炭有機廢氣燃燒塔過濾後有氟化物的殘留。乙烯醋酸乙酯共聚物(「EVA」)為集團內組裝組件類公司產生，為組件封裝時多餘的邊條進行裁剪產生。太陽能電池背板(「TPT」)為集團內組裝組件類公司產生，為組件封裝時多餘的邊條進行裁剪產生，物質包括聚偏二氟乙烯、PMMA共聚物、聚對苯二甲酸乙二酯、四氟乙烯/乙烯基酯共聚物。

無害廢棄物

本集團所產生的無害廢棄物主要包括:

	2019 二零一九	2018 二零一八
Xylene 二甲苯	—	0.2 tonne噸
Waste steel wire 廢鋼線	12.2 tonnes噸	95.3 tonnes噸
Packaging waste 廢包裝物	169.3 tonnes噸	299 tonnes噸
Plastic waste 塑料製品	160.5 tonnes噸	173.1 tonnes噸
Waste oil 廢油	115.4 tonnes噸	64.5 tonnes噸

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Xylene is used in module experiments primarily for cleaning filters, upon which waste materials are left behind as residues. Waste steel wire is the major consumable used for cutting during the wafer slicing process, and the waste materials left behind are recovered by professional recycling companies. The Group's four major production operations all involve packaging equipment, raw materials, auxiliary raw materials and so forth, which produce paper, wood and plastic packaging waste, among others. Plastic waste is produced during plastic packaging in the production process. Waste oil is mainly a result of the replacement of air compressor lubricants, in particular during the ingot pulling process.

Prevention of emissions

We pursue to utilize energy efficiently and take this as the primary approach to reducing greenhouse gas emissions. In order to continuously improve energy performance and lower carbon footprint, we have implemented various energy-saving as well as emission and waste reduction measures such as the air compressor frequency conversion transformation and air compressor heat recovery projects. Frequency conversion transformation of air compressors can ensure not only the effective controls of frequency conversion in air compressors but also real-time monitoring of pressure conditions in production systems, therefore saving energy while coping with systems' energy demands. This can save us approximately RMB400,000 on electricity fee per year. Likewise, the air compressor heat recovery project can ensure effective recovery of heat energy and reduce energy use by recovering approximately 24,000 tonnes of hot water every year.

Reduction of hazardous wastes and non-hazardous wastes

The Group has specially set up the Environmental and Safety Department for monitoring and administering its various eco-friendly facilities to ensure compliance with national standards for pollutant and waste emissions. All wastes shall be minimized, reused and recycled before the last resort of disposal. As for the hazardous wastes generated during the production process, industry professionals are engaged to handle their recovery and transposition, whereas non-hazardous wastes are sold to external parties to minimise disposal volume.

二甲苯是組件環節內的實驗使用，主要是用來清洗濾鏡，廢棄物為清洗後產生的殘留。廢鋼線是切片工序使用進行切割的主要耗材，使用完為廢棄物後，由專業回收公司進行回收。集團內的四個主要生產環節都含有包裝設備、原料、輔料等材料，均會產生紙質、木質、膠質等廢包裝物。塑料製品為產生過程中產生的塑料類包裝造成。廢油主要是空壓機設備潤滑油更換而產生，主要是由於拉晶工序產生。

防止排放

我們追求高效利用能源作為減少溫室氣體排放的主要手段。為了不斷提高能源利用率和降低碳排放量，我們實施了多項節能及減少排放及廢棄物的措施，例如：空壓機變頻改造、空壓機熱回收項目等。空壓機變頻改造能有效地控制空壓機變頻，並檢測生產系統的實時壓力，以適應系統需求而節約能量，電費每年可節約人民幣400,000元。另外空壓機熱回收項目能有效回收熱能，減少能量的浪費，每年可回收約24,000噸熱能水。

減少有害廢棄物及無害廢棄物

本集團特別設立環境安全部對各項環保設施進行監督與管理，確保污染物及廢棄物達國家標準。所有資源採取盡量減少、重用及循環再造廢料，最後才能進行必要的棄置。對於生產程序上所產生的有害廢棄物，均與有專業公司進行回收轉移處理。而無害廢棄物則進行外售處理，盡量減低棄置量。



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Aspect A2: Use of Resources

The Group strictly executes the policies, regulations and standards on energy conservation provided by national, local and industrial authorities, such as the Law of the People's Republic of China on Energy Conservation (中華人民共和國節約能源法). In order to achieve better efficiency of resources, the Group emphasizes on saving energy, water, materials and land, comprehensive use of resources, and development of circular economy. The Group also facilitates its sustainable development with better management measures, an enhanced awareness of saving resources, and efficient and cyclic use of resources. It strictly manages its use of resources to ensure reasonable use of resources in the course of operation and avoid waste. Upon assessment by our Environmental and Safety Department, there is no significant impact brought by the Group's environmental and natural resource use. The Group is active in practicing the concept of green development and promoting the green development of the production chain.

Electricity

In 2019, electricity consumption of the Group totaled 344,648 MWh (2018: 263,282 MWh). Electricity consumption of our four major production operations is detailed below:

層面A2：資源使用

本集團嚴格執行國家、地方及行業機關規定的節能政策、法規及準則，例如《中華人民共和國節約能源法》。為達致更高的資源效益，本集團著眼於節約能源、用水、材料和土地、資源全面利用以及循環經濟發展。本集團亦通過改進管理措施、提高節約資源意識、資源的高效及循環利用，以促進其可持續發展。本集團嚴格管理資源運用，確保在營運過程中合理使用資源，避免產生廢料。經我們的環保及安全部門評估後，本集團的環境及天然資源運用並無重大影響。本集團積極落實綠色發展概念，推動生產鏈的綠色發展。

電力

本集團電力於二零一九年總消耗量為344,648兆瓦時(二零一八：263,282兆瓦時)。四個主要生產環節耗電量如下：

	2019 二零一九		2018 二零一八	
	Power consumption (MWh) 電能耗量 (兆瓦時)	Approximate average consumption (kWh/unit) 平均耗量約 (千瓦時/單位)	Power consumption (MWh) 電能耗量 (兆瓦時)	Approximate average consumption (kWh/unit) 平均耗量約 (千瓦時/單位)
Ingots 硅棒	249,191	25.58/kg公斤	181,082	26.26/kg公斤
Wafers 硅片	26,388	0.12/piece片	24,844	0.17/piece片
Solar cells 電池	18,302	94.0/kW千瓦	18,195	75.8/kW千瓦
Modules 組件	46,926	28.0/kW千瓦	38,159	27.5/kW千瓦



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Water

We are committed to using water in a responsible manner and have developed relevant strategies to reduce raw water consumption and meanwhile to review the relevant processes and perform regular monitoring. The Group's production plants use municipal water as their primary water source. The use of water is regulated in accordance with the prevailing energy management rules. Management of second-tier energy consumption is rationalized and measuring devices are installed to save water. The Group had no issue in sourcing water during the year. Concentrated water produced by ultrapure water equipment for production purpose is reused, with the annual reuse volume reaching 120,000 tonnes. Both ultrapure water production techniques and equipment are refined to increase pure water output and reduce consumption of raw water. During the year, the Group consumed a total of 1,774,814 tonnes (2018: 1,341,085 tonnes) of raw water. Water consumption density was 439.4 tonnes/MW (2018: 404.6 tonnes/MW).

Packing material

The main packaging material consumed by the Group is carton boxes. These are in line with main customers' standard packaging requirements. The total weight of carton boxes used in 2019 was approximately 3,108 tonnes (2018: approximately 4,036 tonnes). Packaging material consumption density is 0.75 tonnes/MW (2018: 1.46 tonnes/MW).

Aspect A3: The Environment and Natural Resources

There is no material impact to the environment and natural resources from our operation activities, yet to minimise the aforementioned impact on the environment from our business operations, the Group implements measures for environmental protection, including using energy-efficient equipment to achieve additional energy savings and reduce waste. To reduce energy use, circulating water instead of coal boiler is used to provide heating in winter seasons. Further, sewage treatment stations, acid mist treatment towers, purification towers and so on have been developed to achieve environmental sustainability. In future, we will continuously contribute to environmental protection and strive for a greener environment, in an effort to fulfill our duties as part of a sharing community.

Social

Aspect B1: Employment

Employees are the important value of our Group. In 2019, the Group has complied with all relevant labour laws and regulations in respective countries and regions. The Group offers competitive remuneration, promotional opportunities, compensation and benefit packages to attract and retain talents. Salaries are reviewed regularly in reference to performance appraisals and market trends.

水

我們致力於以負責任的方式用水，並已制定有關策略減少消耗原水量，同時檢討有關過程，定期監測。集團生產廠房水源主要使用市政自來水，對水的使用管理按照能源管理規定，完善次級用能管理，加裝計量儀表，節約用水。本集團於年內尋找適用水源時沒有出現任何問題。對於生產用超純水設備產生的濃水進行回用，年回用量120,000噸，改進超純水生產工藝及設備，提高純水產出，降低原水使用量。本集團於年內原水總使用量為1,774,814噸(二零一八：1,341,085噸)。耗水密度為439.4噸／兆瓦(二零一八：404.6噸／兆瓦)。

包裝物料

本集團之消耗的包裝物料主要為紙箱，符合主要客戶的標準包裝要求。二零一九年財政年度內消耗的紙箱，總重量約3,108噸(二零一八：約4,036噸)。使用的包裝物料密度為0.75噸／兆瓦(二零一八：1.46噸／兆瓦)。

層面A3：環境及天然資源

我們的營運活動不會對環境和自然資源造成重大影響，但為降低前述業務營運對環境造成的影響，本集團實行環保措施，包括使用高能源效益設備，進一步節電減廢。為節省能源使用，本集團於冬季期間並無使用燃煤鍋爐供暖，而使用循環水。另外，我們已發展污水處理站、酸霧處理塔和淨化塔等，以達致環境的可持續發展。我們日後將會繼續致力於環境保護，並努力建設更加綠色的環境，履行我們作為共同生活社區一分子的責任。

社會

層面B1：僱傭

僱員為本集團的重要價值所在。二零一九年，本集團已遵守有關國家及地區所有相關的勞動法律及法規。本集團提供具競爭力的薪酬、晉陞機會、薪金及福利方案，藉以吸引和挽留人才。我們定期參照績效評核和市場趨勢檢討薪金。



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All employments are based on personal capabilities and qualifications regardless of race, religion, sex, age, national origin, citizenship or any other grounds of discrimination. The Group strictly prohibits discrimination among the employees in all business operations and also provides equal opportunity to all employees. Stringent and cautious measures such as training have been implemented by our human resources department in order to prevent cases of discrimination.

Total number of employees by age group

As of 31 December 2019, the Group had a total of 4,036 (31 December 2018: 3,669) employees as categorized below:

		Under 25	26-35	36-45	46-55	56 or above
		25歲以下	26-35歲	36-45歲	46-55歲	56歲及以上
2019						
Number of employees	人數	509	1,576	1,340	547	64
2018						
Number of employees	人數	444	1,400	1,274	486	65

Aspect B2: Health and Safety

The Group has complied with all relevant laws and regulations in respective countries, especially those related to its production processes. A series of health and safety policies is in place to ensure the overall safety of our working environment. All employees strictly comply with all the health and safety codes and manuals of their production processes and departments. The Group also inspects its plants regularly to monitor and enhance the safety levels inside. During the year, the Group did not have any non-compliance with any laws and regulations in respect of employees' health and safety.

Aspect B3: Development and Training

Training and development always serve as the key factors for business success. The Group has provided various tailor-made training programs covering corporate culture, occupational safety, laws and regulations, professional skills and other aspects for employees from different departments to cope with their business needs. The training programs are evaluated regularly to review the effectiveness and compared to the business needs. The Group also updates its employees from time to time on the latest information of the industry and laws and regulations which is essential to the Group's operations and their job responsibilities.

所有僱員都是因應個人才能和資歷聘請，並不存在任何種族、宗教、性別、年齡、國籍、公民身份或任何其他形式的歧視。本集團嚴禁所有業務營運的僱員之間有任何歧視，全體僱員均享有平等的機會。我們的人力資源部分已實行嚴謹措施(例如培訓)，以免出現歧視。

按年齡組別劃分的僱員總數

於二零一九年十二月三十一日，本集團總員工人數為4,036人(二零一八年十二月三十一日：3,669人)，年齡組合如下：

層面B2：健康與安全

本集團已遵守有關國家所有相關的法律及法規，特別是在生產流程方面。本集團訂有一系列健康與安全政策，確保工作環境的整體安全。我們嚴格要求全體僱員遵守其生產流程及部門的所有健康與安全守則及手冊。集團亦會定期於廠房進行檢查，以監察及提升廠房內之安全水平。年內，本集團並無違反任何有關僱員健康與安全的法律及法規。

層面B3：發展及培訓

培訓及發展一直為業務成功的關鍵因素。本集團為不同部門僱員度身設計不同的培訓計劃，涵蓋企業文化、職業安全、法律法規、專業技能及其他方面，以應付其業務需要。我們定期評估培訓計劃的成效，並與業務需要互相對比。本集團亦不時向僱員提供對本集團營運及其職責至為重要的最新行業及法律法規信息。



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Aspect B4: Labour Standards

The Group has complied with all relevant local labour laws and regulations in respective countries. In PRC, the Group regularly keeps track of the latest laws and regulations such as the Labor Law of the People's Republic of China (中華人民共和國勞動法) and the Labor Contract Law of the People's Republic of China (中華人民共和國勞動合同法). The Group strictly prohibits the use of child or forced labour in its business operations.

Aspect B5: Supply Chain Management

The Group is committed to effectively managing its supply chain and providing customers with premium products and services, in an effort to meet and even exceed customers' expectations. When purchasing products and services, the Group complies with all applicable environmental laws, regulations and rules. Comprehensive assessment of suppliers is performed on an ad hoc basis to benchmark against customers' expectations of product quality. Most of the key suppliers maintain a close and long-term partnership with the Group. During the year, the Group maintained good and stable relationships with its suppliers.

Aspect B6: Product Responsibility

The quality of products is the important key to customers' loyalty. The Group performs high quality controls in every production operation. Procedures and policies are established to govern all sorts of claims and complaints. If the Group receives any claims or complaints regarding its products and services, it will conduct investigation in order to provide immediate and appropriate responses to customers. This strengthens product quality and consequently enables us to stay competitive in the market.

Aspect B7: Anti-Corruption

The Group is committed to achieving the highest possible standards of openness and integrity. Hence, it strictly implements various operating procedures and codes of conduct to regulate the work ethic of the Group's senior management and general staff. Employees are required to declare potential conflicts of interest. Further, a whistle-blowing policy is also in place to minimise the risk of fraudulent acts or criminal offences occurring in the workplace. During the year, the Group did not find any cases in breach of the relevant laws and regulations relating to corruption, bribery, extortion, fraud or money laundering.

Aspect B8: Community Investment

Over the years, the Group has focused on community activities and placed great emphasis on both physical and mental health of employees. The Group continuously organizes activities such as badminton, billiards, basketball and table tennis, to enrich employees' health and cultural life and building a good corporate culture.

層面B4：勞工準則

本集團已遵守有關國家所有相關的地方勞動法律及法規。在中國，本集團定期留意最新的法律法規信息，例如《中華人民共和國勞動法》及《中華人民共和國勞動合同法》。本集團嚴禁在業務營運中使用童工或強制勞工。

層面B5：供應鏈管理

本集團致力對供應鏈進行有效管理，為客戶提供優質產品及服務，力求滿足乃至超越客戶期望。並於採購產品及服務時，本集團會遵守適用的環境法例、法規及規定。站在客戶對產品質量要求的高度對供應商進行不定期的全面審核。大部分主要供應商均與本集團維持緊密的長期合作關係。年內，本集團與其供應商保持良好且穩定的關係。

層面B6：產品責任

產品質量是客戶忠誠度的關鍵所在。本集團對每一生產環節實行優質監控，並設有程序及政策規管各項申索和投訴。若本集團接獲任何有關產品及服務的申索或投訴，本集團將會進行調查，向客戶提供即時、適當的回應，此舉措可加強產品質量，從而保持我們在市場上的競爭力。

層面B7：反貪污

本集團致力達致最高的開放及誠信水平。因此，本集團嚴格執行各項作業程序及操守守則，以規範本集團高級管理層和一般員工的職業道德。僱員均須申報潛在的利益衝突。另亦設有告密政策，以盡量減少工作場所發生的詐騙行為或刑事罪行。在本報告年度，本集團並無發現任何違反與貪污、賄賂、勒索、欺詐或洗黑錢的相關法例及法規的違規案例。

層面B8：社區投資

本集團多年來一直專注於社區活動，重視僱員的身心健康。本集團持續舉辦羽毛球、撞球、籃球和乒乓球等活動，以豐富僱員的健康及文化生活，建構企業文化。



INDEPENDENT AUDITOR'S REPORT

獨立核數師報告



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To the shareholders of Solargiga Energy Holdings Limited
(Incorporated in the Cayman Islands with limited liability)

致陽光能源控股有限公司股東
(於開曼群島註冊成立之有限公司)

Opinion

We have audited the consolidated financial statements of Solargiga Energy Holdings Limited (the "Company") and its subsidiaries (the "Group") set out on pages 78 to 204, which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2019, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSA") issued by the HKICPA. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the HKICPA's *Code of Ethics for Professional Accountants* (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

意見

本核數師(以下簡稱「我們」)已審計列載於第78至204頁陽光能源控股有限公司(以下簡稱「貴公司」)及其附屬公司(「貴集團」)的綜合財務報表,此財務報表包括於二零一九年十二月三十一日的綜合財務狀況表,截至該日止年度的綜合損益表、綜合全面收入表、綜合權益變動表和綜合現金流量表以及綜合財務報表附註,包括主要會計政策概要。

我們認為,綜合財務報表已根據香港會計師公會(「香港會計師公會」)頒布的《香港財務報告準則》(「香港財務報告準則」)真實而公平地反映了貴集團於二零一九年十二月三十一日的綜合財務狀況及其截至該日止年度的綜合財務表現及綜合現金流量,並已遵照香港《公司條例》披露規定妥為擬備。

意見的基礎

我們已根據香港會計師公會頒布的《香港審計準則》(「香港審計準則」)進行審計。我們在該等準則下承擔的責任已在本報告「核數師就審計綜合財務報表承擔的責任」部分中作進一步闡述。根據香港會計師公會頒布的《專業會計師道德守則》(「守則」),我們獨立於貴集團,並已履行守則中的其他專業道德責任。我們相信,我們所獲得的審計憑證能充足及適當地為我們的意見提供基礎。

關鍵審計事項

關鍵審計事項是根據我們的專業判斷,認為對本期綜合財務報表的審計最為重要的事項。這些事項是在我們審計整體綜合財務報表及出具意見時進行處理的,我們不會對這些事項提供單獨的意見。就下列各事項而言,我們是在該背景下提供我們在審計中處理該事項的方式。



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Key audit matters (continued)

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matter

Impairment of prepayment to a supplier and provision for an onerous contract

A subsidiary of the Group entered into a long-term supply contract (the "Supply Contract") with one of its suppliers to purchase polysilicon material in 2011. On 27 April 2018, the supplier filed a complaint and a claim of a sum totalling approximately US\$391,000,000 against the subsidiary for alleged breach of the Supply Contract. The supplier has alleged that under the Supply Contract, the subsidiary shall need to pay a total of non-refundable advance payment of US\$34,500,000 and to purchase the quantities of polysilicon for the period from 2012 to 2020 with a total amount of US\$348,000,000.

The subsidiary has elected to suspend the procurement under the Supply Contract in June 2012. At that time, the remaining prepayment balance at the supplier was US\$11,500,000. By the end of 2014, as management considered the subsidiary would never resume its purchase under the Supply Contract and be unable to recover the remaining prepayment balance with the supplier, the Group recognised a full impairment loss for the aforementioned prepayment balance and an additional provision of US\$7,122,375 for its remaining payment obligation according to the Supply Contract in year of 2014. As at 31 December 2019, the Group remained the full impairment provision of US\$11,500,000 (equivalent to RMB80,266,000) for the prepayment and US\$7,122,375 (equivalent to RMB49,687,000) for the payment obligation.

關鍵審計事項(續)

我們已履行本報告「核數師就審計綜合財務報表承擔的責任」部分所述的責任，包括與該等事項有關的責任。因此，我們的審計包括執程序，以應對我們對綜合財務報表中的重大錯誤陳述風險的評估。我們的審計程序(包括為處理下列事項而採取的程序)結果，為我們對隨附綜合財務報表所發表的審計意見提供了基礎。

關鍵審計事項

預付予供應商的款項減值及有償合約撥備

本集團一間附屬公司與其供應商之一於二零一一年訂立長期供應合約(「供應合約」)。於二零一八年四月二十七日，該供應商因涉嫌違反供應合同而向該附屬公司提出訴訟並索賠總額約為391,000,000美元的款項。供應商聲稱根據供應合同，該附屬公司需要支付34,500,000美元的數量的多晶硅不可退還預付款，併購買二零一二年至二零二零年期間的總金額為348,000,000美元的多晶硅。

該附屬公司選擇在二零一二年六月中止根據供應合同進行的採購。於當時，供應商的預付款餘額為11,500,000美元。到二零一四年底，由於管理層認為該附屬公司將不會再根據供應合同恢復採購並且無法向供應商追回剩餘的預付款餘額，故本集團根據供應合同於二零一四年對上述預付款項餘額確認了全額減值損失，並為剩餘的付款責任額外計提了撥備7,122,375美元。於二零一九年十二月三十一日，本集團維持預付款項的全額減值撥備11,500,000美元(折合人民幣80,266,000元)及付款責任的全額減值撥備7,122,375美元(折合人民幣49,687,000元)。



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Key audit matters (continued)

Key audit matter

Impairment of prepayment to a supplier and provision for an onerous contract (continued)

The case is unsettled and currently in litigation. In early 2020, the subsidiary and the supplier, in principle, agreed to settle the matter through negotiation, the terms of which are confidential and yet to be finalised. Going forward, the subsidiary and the supplier will be engaged in the negotiation and drafting of the terms of a settlement agreement. The potential impact of the lawsuit and relevant provision balances were material to the consolidated financial statements and the recognition and measurement of the relevant provisions involved significant management judgements and estimates.

The accounting policies and disclosures of the impairment and provision are included in note 2.4 "Summary of significant accounting policies", note 3 "Significant accounting judgements and estimates", note 18 "Prepayments for raw materials" and note 32 "Provisions" to the consolidated financial statements.

How our audit addressed the key audit matter

We obtained and reviewed the relevant documents involved in management's analysis and judgement, including the Supply Contract and its amendments, the memorandum signed by the subsidiary and its supplier and the relevant files of the lawsuit. We also reviewed management's analysis on the cost of fulfilling the onerous contract, and communicated with the Company's lawyers regarding the progress of the lawsuit and related legal issues, and obtained written confirmation from them. Based on the documents reviewed, the analysis made on management's judgement, together with the confirmation from the lawyers, we assessed whether the relevant provisions are made appropriately and whether the matter is properly disclosed in the notes to the consolidated financial statements.

關鍵審計事項 (續)

關鍵審計事項

預付予供應商的款項減值及有償合約撥備 (續)

此案尚未解決，目前正在訴訟中。二零二零年初，該附屬公司和該供應商原則上同意通過談判解決此問題，談判的條款是保密的而尚未定案。今後，該附屬公司和該供應商將參與談判和起草和解協議的條款。該訴訟的潛在影響及對應減值撥備的餘額對於合併報表具有重大影響，確認和計量該減值撥備涉及到管理層的重大判斷和估計。

有關該減值與撥備的會計政策及披露載於綜合財務報表附註2.4主要會計政策概要、附註3重大會計估計及判斷、附註18原材料預付款項及附註32撥備。

我們的審計如何處理關鍵審計事項

我們已取得並審閱涉及管理層分析及判斷的相關文件，包括供應合約及其補充協議，以及附屬公司及其供應商所簽署的備忘錄。我們亦已審閱管理層就履行有償合約成本及向公司律師傳達訴訟及相關法律問題的進展情況，並取得書面確認。根據已審閱的資料、對管理層判斷所作出的分析以及向律師取得的確認，我們已就有關減值撥備是否適當及有關事宜是否於綜合財務報表附註中妥為披露作出評估。



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Key audit matters (continued)

Key audit matter

Impairment of property, plant and equipment

As at 31 December 2019, the Group had property, plant and equipment of RMB1,407,159,000, which accounted for a significant portion of the Group's assets. Certain subsidiaries of the Group suffered loss in year 2019 and there was an indication of impairment for property, plant and equipment of these subsidiaries due to the uncertainty in the future.

Management performed impairment test accordingly by comparing the net present value of the forecasted future cash flows with the carrying amounts of identified cash-generating units as at 31 December 2019, and recognised a net impairment of RMB15,167,000 during this year. Estimating the recoverable amount requires significant management judgements and estimates of future sales, gross margins, operating costs, terminal values, growth rates and the discount rates.

The accounting policies and disclosure of the provision are included in note 2.4 "Summary of significant accounting policies", note 3 "Significant accounting judgements and estimates" and note 14 "Property, plant and equipment" to the consolidated financial statements.

How our audit addressed the key audit matter

We evaluated management's assessment on the impairment indicators for property, plant and equipment and management's identification of cash-generating units.

We reviewed management's valuation model and assessed the key assumptions used, such as estimates of future sales, gross margins, operating costs, terminal values, growth rates and the discount rates by comparing them to the related subsidiaries' historical performance, financial budgets, and development plans, and the analysis on industry and market trend. We also involved our valuation specialists to assist us in assessing the valuation methodology and some key model parameters.

We also assessed the adequacy of the disclosures of property, plant and equipment in the consolidated financial statements.

關鍵審計事項(續)

關鍵審計事項

物業、廠房及設備減值

於二零一九年十二月三十一日，本集團的物業、廠房及設備為人民幣1,407,159,000元，佔本集團資產的重大部分。集團某些附屬公司於二零一九年錄得虧損及由於未來的不確定性，該些附屬公司的物業、廠房及設備呈現減值跡象。

因此，管理層通過比較預測現金流量的淨現值與已識別現金產生單位於二零一九年十二月三十一日的賬面值，進行了減值測試，並於年內確認淨減值人民幣15,167,000元。估計可收回金額時，管理層需要作出關鍵判斷，包括估計未來銷售額、毛利率、經營成本、終值、增長率及折現率。

有關該撥備的會計政策及披露載於綜合財務報表附註2.4主要會計政策概要、附註3重大會計估計及判斷及附註14物業、廠房及設備。

我們的審計如何處理關鍵審計事項

我們已就管理層對物業、廠房及設備減值跡象的評估及管理層對現金產生單位的識別作出評估。

我們已審閱管理層的估值模式，並通過對比過往表現、實體財務預算、行業與市場趨勢分析及實體發展計劃，評估所採用的關鍵假設，例如未來銷售額、毛利率、經營成本、終值、增長率及折現率。我們亦曾徵詢我們的估值專家，以協助我們評估估值方法和一些關鍵模型參數。

我們對固定資產是否在合併財務報表中充分披露進行了評估。



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Key audit matters (continued)

Key audit matter

Impairment of trade receivables and contract assets

The amount of trade receivables and contract assets accounted for a significant portion of the Group's assets. As at 31 December 2019, the book value and the impairment provision are RMB1,286,963,000 and RMB92,669,000 for trade receivables, and RMB362,000 and RMB49,000 for contract assets and impairment.

The Group applied the simplified approach to the provision and recorded lifetime expected losses for trade receivables and contract assets. The expected credit loss model is based on the Group's historical debtors' default rate and other specific factors, including classification of trade debtors, ageing of the ending balance, historical recovery, amount written off as uncollectible, and etc. At the same time, management also considers forward-looking information, including the anticipation of the customers' operation, the forecast of industry situation, overall economic conditions, and etc. Estimating the expected credit loss requires significant management judgements and estimates.

The accounting policies and disclosure of the provision are included in note 2.4 "Summary of significant accounting policies", note 3 "Significant accounting judgements and estimates", note 23 "Trade and bills receivable" and note 24 "Contract assets" to the consolidated financial statements.

How our audit addressed the key audit matter

We discussed with management on the estimation involved in determining the expected credit loss allowance regarding trade receivables and contract assets, and assessed management's processes and controls relating to the estimation of the expected credit loss allowance.

We assessed the appropriateness of simplified approach, tested the provision matrix prepared by management to calculate the expected credit loss, and checked the information included in the provision matrix which is based on the Group's historical observed default rates and other specific factors. We corroborated whether the ageing analysis for groupings of trade debtors which have similar patterns of credit loss, historical payment patterns and historical loss data are complete and accurate. We evaluated the appropriateness of the forward-looking information which the Group used to calibrate the matrix, such as the anticipation of the customers' operation, the forecast of industry situation, overall economic conditions, and etc.

We also assessed the adequacy of the disclosures of trade receivables and contract assets in the consolidated financial statements.

關鍵審計事項(續)

關鍵審計事項

應收貿易款項減值撥備

應收賬款及合約資產是集團資產的重要組成部分。截至二零一九年十二月三十一日，應收賬款賬面原值及減值準備金額為人民幣1,286,963,000元及人民幣92,669,000元，合約資產賬面原值及減值準備為人民幣362,000元及人民幣49,000元。

本集團採用簡易方法以剩餘週期預期損失對應收賬款和合約資產進行減值計量。預期信用損失模型以本集團歷史違約率以及其他具體因素為基礎，包括客戶類型、期末餘額的賬齡、歷史回款和核銷情況等。同時，管理層亦考慮前瞻性信息，包括對客戶的經營情況預期、市場環境的預測、及宏觀經濟情況等。對預期信用損失的估計需要管理層的重大判斷和估計。

應收賬款及合約資產減值相關的會計政策和披露參見合併財務報表附註2.4主要會計政策概要，附註3重大會計估計及判斷，附註23應收賬款及應收票據及附註24合約資產。

我們的審計如何處理關鍵審計事項

我們與管理層討論管理層計算應收賬款及合約資產預期信用損失撥備金額涉及的估計，評估該估計相關的管理層程序及內部控制。

我們評估了採用簡易方法的合理性並且測試了管理層用於計算預期信用損失採用的撥備矩陣，檢查了撥備矩陣中包含的基於集團歷史違約率及其他具體因素的信息。我們驗證了具有相同信用損失規律客戶的賬齡情況、客戶歷史回款週期及客戶歷史違約是否完整、準確。我們取得了佐證資料，評估管理層用於校準撥備矩陣的前瞻信息的合理性，如客戶的預期經營情況、行業前景、整體經濟環境等。

我們對應收賬款及合約資產是否在合併財務報表中充分披露進行了評估。



Independent Auditor's Report 獨立核數師報告

Other information included in the Annual Report

The directors of the Company are responsible for the other information. The other information comprises the information included in the Annual Report, other than the consolidated financial statements and our auditor's report thereon. The Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

When we read the Annual Report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the Group's Audit Committee.

Responsibilities of the directors for the consolidated financial statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors of the Company are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors of the Company either intend to liquidate the Group or to cease operations or have no realistic alternative but to do so.

The directors of the Company are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

年報所載的其他資訊

貴公司董事須對其他信息負責。其他信息包括年報內的信息，但不包括綜合財務報表及我們的核數師報告。我們預期於本核數師報告日期後取得年報。

我們對綜合財務報表的意見並不涵蓋其他信息，我們亦不對該等其他信息發表任何形式的鑒證結論。

結合我們對綜合財務報表的審計，我們的責任是在獲得以上指明的其他信息時閱讀有關信息，在此過程中，考慮其他信息是否與綜合財務報表或我們在審計過程中所了解的情況存在重大抵觸或者似乎存在重大錯誤陳述的情況。

當我們閱讀年報時，如果我們認為當中存在重大錯誤陳述，我們須向貴集團的審核委員會溝通有關事宜。

董事就綜合財務報表須承擔的責任

貴公司董事須負責根據香港會計師公會頒布的香港財務報告準則及香港《公司條例》的披露規定擬備真實而公平的綜合財務報表，並對其認為為使綜合財務報表的擬備不存在由於欺詐或錯誤而導致的重大錯誤陳述所需的內部控制負責。

在擬備綜合財務報表時，貴公司董事負責評估貴集團持續經營的能力，並在適用情況下披露與持續經營有關的事項，以及使用持續經營為會計基礎，除非 貴公司董事有意將貴集團清盤或停止經營，或別無其他實際的替代方案。

貴公司董事在審核委員會協助下，須負責監督貴集團的財務報告過程。



Independent Auditor's Report

獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Our report is made solely to you, as a body, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSA's will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSA's, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

核數師就審計綜合財務報表承擔的責任

我們的目標，是對綜合財務報表整體是否不存在由於欺詐或錯誤而導致的重大錯誤陳述取得合理保證，並出具包括我們意見的核數師報告。我們僅向閣下(作為整體)報告，除此之外本報告別無其他目的。我們不會就本報告的內容向任何其他人士負責或承擔任何責任。

合理保證是高水平的保證，但不能保證按照香港審計準則進行的審計，在某一重大錯誤陳述存在時總能發現。錯誤陳述可以由欺詐或錯誤引起，如果合理預期它們單獨或匯總起來可能影響綜合財務報表使用者依賴綜合財務報表所作出的經濟決定，則有關的錯誤陳述可被視作重大。

在根據香港審計準則進行審計的過程中，我們運用了專業判斷，保持了專業懷疑態度。我們亦：

- 識別和評估由於欺詐或錯誤而導致綜合財務報表存在重大錯誤陳述的風險，設計及執行審計程序以應對這些風險，以及獲取充足和適當的審計憑證，作為我們意見的基礎。由於欺詐可能涉及串謀、偽造、蓄意遺漏、虛假陳述，或凌駕於內部控制之上，因此未能發現因欺詐而導致的重大錯誤陳述的風險高於未能發現因錯誤而導致的重大錯誤陳述的風險。
- 了解與審計相關的內部控制，以設計適當的審計程序，但目的並非對貴集團內部控制的有效性發表意見。
- 評價所採用會計政策的恰當性及董事作出的會計估計和相關披露的合理性。
- 對董事採用持續經營會計基礎的恰當性作出結論。根據所獲取的審計憑證，確定是否存在與事項或情況有關的重大不確定性，從而可能導致對貴集團的持續經營能力產生重大疑慮。如果我們認為存在重大不確定性，則有必要在核數師報告中提請使用者注意綜合財務報表中的相關披露。假若有關的披露不足，則我們應當發表非無保留意見。我們的結論是基於核數師報告日止所取得的審計憑證。然而，未來事項或情況可能導致貴集團不能持續經營。



Independent Auditor's Report 獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Tong Ka Yan, Augustine.

Ernst & Young
Certified Public Accountants
Hong Kong
31 March 2020

核數師就審計綜合財務報表承擔的責任(續)

- 評價綜合財務報表的整體列報方式、結構和內容，包括披露，以及綜合財務報表是否公平反映相關交易和事項。
- 就貴集團內實體或業務活動的財務資訊獲取充足、適當的審計憑證，以便對綜合財務報表發表意見。我們負責貴集團審計的方向、監督及執行。我們為審計意見承擔全部責任。

除其他事項外，我們與審核委員會溝通了計劃的審計範圍、時間安排、重大審計發現等，包括我們在審計中識別出內部控制的任何重大缺陷。

我們還向審核委員會提交聲明，說明我們已符合有關獨立性的相關專業道德要求，並與他們溝通有可能合理地被認為會影響我們獨立性的所有關係和其他事項，以及在適用的情況下，相關的防範措施。

從與審核委員會溝通的事項中，我們確定哪些事項對本期綜合財務報表的審計最為重要，因而構成關鍵審計事項。我們在核數師報告中描述這些事項，除非法律法規不允許公開披露這些事項，或在極端罕見的情況下，如果合理預期在我們報告中溝通某事項造成的負面後果超過產生的公眾利益，我們決定不應在報告中溝通該事項。

出具本獨立核數師報告的審計項目合夥人是唐嘉欣。

安永會計師事務所
執業會計師
香港
二零二零年三月三十一日



CONSOLIDATED STATEMENT OF PROFIT OR LOSS

綜合損益表

For the year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

		Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Revenue	收益	5	4,425,552	4,022,452
Cost of sales	銷售成本		(4,084,184)	(3,624,902)
Gross profit	毛利		341,368	397,550
Other income and gains, net	其他收入及收益，淨額	6	15,970	53,752
Selling and distribution expenses	銷售及分銷開支		(84,583)	(77,447)
Administrative expenses	行政開支		(409,458)	(377,609)
Impairment losses on financial and contract assets, net	財務及合約資產減值，淨額	7	(5,262)	(44,497)
Impairment of property, plant and equipment	物業、廠房及設備減值	14	(15,167)	(47,020)
Impairment losses on prepayment	預付款項減值損失	7	(26,975)	—
Loss from operations	經營虧損		(184,107)	(95,271)
Share of losses of associates	應佔聯營公司虧損		(1,330)	(1,461)
Impairment of associate	聯營公司投資減值		(4,104)	—
Other investment loss	其他投資減值		(379)	—
Finance costs	融資成本	8	(123,130)	(136,012)
Loss before tax	除稅前虧損	7	(313,050)	(232,744)
Income tax (expense)/credit	所得稅(費用)/抵免	11	(41,308)	12,157
Loss for the year	年度虧損		(354,358)	(220,587)
Attributable to:	以下人士應佔：			
Equity holders of the Company	本公司權益持有人		(355,492)	(222,402)
Non-controlling interests	非控制性權益		1,134	1,815
Loss for the year	年度虧損		(354,358)	(220,587)
Basic and diluted loss per share attributable to ordinary equity holders of the Company (RMB cents)	本公司普通股權益持有人應佔每股基本及攤薄虧損(人民幣分)	13	(11.07)	(6.92)



CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

綜合全面收入表

For the year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Loss for the year	年度虧損	(354,358)	(220,587)
Other comprehensive loss for the year (after tax and reclassification adjustments):	年度其他全面虧損(經稅項及重新分類調整後):		
Items that may be reclassified subsequently to profit or loss:	可於期後被重新分類至損益的項目:		
- Currency translation differences	- 匯兌差額	(83)	(14,659)
Total comprehensive loss for the year, after tax	年度全面虧損總額(扣除稅項後)	(354,441)	(235,246)
Attributable to:	以下人士應佔:		
Equity holders of the Company	本公司權益持有人	(355,575)	(237,061)
Non-controlling interests	非控制性權益	1,134	1,815
Total comprehensive loss for the year	年度全面虧損總額	(354,441)	(235,246)



CONSOLIDATED STATEMENT OF FINANCIAL POSITION

綜合財務狀況表

At 31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi) (以人民幣列值)

		Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Non-current assets	非流動資產			
Property, plant and equipment	物業、廠房及設備	14	1,407,159	1,517,027
Prepayments for acquisitions of property, plant and equipment	購置物業、廠房及設備的預付款項		29,447	62,451
Right-of-use assets	使用權資產	17	151,136	—
Land lease prepayments	土地租賃預付款項	17	—	141,989
Prepayments for raw materials	原材料的預付款項	18	—	33,557
Investments in associates	於聯營公司的投資	19	157	5,591
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	20	1,800	2,430
Deferred tax assets	遞延稅項資產	21	16,573	48,009
Total non-current assets	非流動資產總額		1,606,272	1,811,054
Current assets	流動資產			
Inventories	存貨	22	394,110	347,368
Trade and bills receivables	應收貿易賬款及票據	23	1,274,604	1,483,723
Contract assets	合約資產	24	313	15,205
Prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產	25	350,476	240,935
Current tax recoverable	即期可收回稅項		3,360	2,695
Pledged deposits	已抵押存款	26	403,191	425,309
Cash and cash equivalents	現金及現金等價物	27	396,854	239,712
Total current assets	流動資產總額		2,822,908	2,754,947
Current liabilities	流動負債			
Interest-bearing borrowings	計息借貸	28	1,680,914	1,773,140
Trade and bills payables	應付貿易賬款及票據	29	1,502,624	1,441,065
Other payables and accruals	其他應付款項及應計開支	30	68,736	104,025
Contract liabilities	合約負債	31	265,979	64,466
Current tax payable	即期應付稅項		10,476	193
Provision for inventory purchase commitments	存貨購買承擔撥備	32	49,687	48,883
Current portion of lease payables	一年內到期的租賃負債	17	376	—
Total current liabilities	流動負債總額		3,578,792	3,431,772
Net current liabilities	流動負債淨額		(755,884)	(676,825)
Total assets less current liabilities	資產總值減流動負債		850,388	1,134,229



Consolidated Statement of Financial Position

綜合財務狀況表

At 31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi) (以人民幣列值)

		Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Non-current liabilities	非流動負債			
Interest-bearing borrowings	計息借貸	28	129,325	17,317
Deferred tax liabilities	遞延稅項負債	21	2,564	2,678
Deferred income	遞延收入	33	134,509	197,225
Lease liabilities	租賃負債	17	1,012	—
Other non-current liabilities	其他非流動負債	32	127,412	109,018
Total non-current liabilities	非流動負債總額		394,822	326,238
Net assets	資產淨值		455,566	807,991
Equity	權益			
Equity attributable to equity holders of the Company	本公司權益持有人應佔權益			
Share capital	股本	35	276,727	276,727
Reserves	儲備	36	156,967	438,999
Non-controlling interests	非控制性權益		433,694	715,726
			21,872	92,265
Total equity	權益總額		455,566	807,991



CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

綜合權益變動表

Year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

		Attributable to equity shareholders of the Company 本公司權益股東應佔權益							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
		股本	股份溢價	一般儲備金	資本儲備	匯兌儲備	其他儲備	累計虧損	總計	非控制性權益	權益總額
		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 2018	於二零一八年一月一日	276,727	1,731,645	218,564	42,768	(36,106)	(67,111)	(1,216,148)	950,339	85,090	1,035,429
(Loss)/profit for the year	年度(虧損)/利潤	—	—	—	—	—	—	(222,402)	(222,402)	1,815	(220,587)
Other comprehensive loss for the year:	年度其他全面虧損:										
Exchange differences related to foreign operations	有關外國業務的外匯差額	—	—	—	—	(14,659)	—	—	(14,659)	—	(14,659)
Total comprehensive (loss)/income for the year	年度全面(虧損)/收入總額	—	—	—	—	(14,659)	—	(222,402)	(237,061)	1,815	(235,246)
Capital contribution from non-controlling interests	非控制性權益出資	—	—	—	—	—	—	—	—	31,819	31,819
Acquisition of non-controlling interests	收購非控制性權益	—	—	—	—	—	2,448	—	2,448	(18,733)	(16,285)
Appropriation to reserves	分配至儲備	—	—	3,826	—	—	—	(3,826)	—	—	—
Dividends paid to non-controlling shareholders	向非控制性股東分配股利	—	—	—	—	—	—	—	—	(7,726)	(7,726)
As at 31 December 2018	於二零一八年十二月三十一日	276,727	1,731,645	222,390	42,768	(50,765)	(64,663)	(1,442,376)	715,726	92,265	807,991
As at 1 January 2019	於二零一九年一月一日	276,727	1,731,645	222,390	42,768	(50,765)	(64,663)	(1,442,376)	715,726	92,265	807,991
(Loss)/profit for the year	年度(虧損)/利潤	—	—	—	—	—	—	(355,492)	(355,492)	1,134	(354,358)
Other comprehensive (loss)/profit for the year:	年度其他全面(虧損)/利潤:										
Exchange differences related to foreign operations	有關外國業務的外匯差額	—	—	—	—	(83)	—	—	(83)	—	(83)
Total comprehensive (loss)/income for the year	年度全面(虧損)/收入總額	—	—	—	—	(83)	—	(355,492)	(355,575)	1,134	(354,441)
Capital contribution from non-controlling interests	非控制性權益出資	—	—	—	—	—	73,543	—	73,543	(71,527)	2,016
Appropriation to reserves	分配至儲備	—	—	5,977	—	—	—	(5,977)	—	—	—
As at 31 December 2019	於二零一九年十二月三十一日	276,727	1,731,645	228,367	42,768	(50,848)	8,880	(1,803,845)	433,694	21,872	455,566



CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

	Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Cash flows from operating activities	經營活動現金流量		
Loss before tax	除稅前虧損	(313,050)	(232,744)
Adjustments for:	調整：		
Depreciation and amortisation	折舊及攤銷	7(c) 239,046	233,670
Loss on disposal of property, plant and equipment	出售物業、廠房及設備的虧損	7(c) 128,879	2,774
Impairment loss on disposal of an associate	出售聯營公司的減值損失	6 4,104	—
Investment loss from disposal of equity investments designated at fair value through other comprehensive income	出售以公允價值計量且其變動計入其他綜合收益的權益投資的投資虧損	6 379	—
Share of losses of associates (Reversal of write-down)/write-down of inventories	應佔聯營公司虧損存貨(撇減撥回)/撇減	1,330	1,461
Impairment losses on trade receivables and contract assets	應收貿易賬款及合約資產減值損失的計提	22(b) (27,005)	27,621
Impairment of property, plant and equipment	物業、廠房及設備減值	5,262	44,497
Impairment losses of prepayment	預付款項減值損失	15,167	47,020
Finance costs	融資成本	26,975	—
Provision/(reversal) for warranties	保用撥備/(撥備回衝)	8 123,130	136,012
Interest income from bank deposits	自銀行存款的利息收入	32 18,394	(3,621)
Net foreign exchange loss	匯兌虧損淨額	6 (11,740)	(5,616)
		(9,412)	(784)
Changes in working capital:	營運資金變動：		
(Increase)/decrease in inventories	存貨(增加)/減少	(19,737)	28,542
Decrease in trade receivables, prepayments, other receivables and other assets	應收貿易賬款、預付款項、其他應收賬款及其他資產減少	183,083	211,390
Decrease/(increase) in contract assets	合約資產減少/(增加)	14,892	(15,205)
(Increase)/decrease in prepayments for raw materials	原材料的預付款項(增加)/減少	(114,601)	21,741
Increase in trade and other payables	應付貿易賬款及其他應付款項增加	208,133	385,937
(Decrease)/increase in deferred income	遞延收入(減少)/增加	(62,716)	33,953
Cash generated from operations	經營活動所得現金	410,513	916,648
The PRC income tax (paid)/credited	(支付)/抵免中國企業所得稅	(370)	4,831
Net cash generated from operating activities	經營活動所得現金淨額	410,143	921,479

Consolidated Statement of Cash Flows

綜合現金流量表

Year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

	Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Cash flows from investing activities	投資活動現金流量		
Payments for the purchase of property, plant and equipment	就購置物業、廠房及設備支付的款項	(204,105)	(351,264)
Purchase of a shareholding in an associate	購買一間聯營公司股權	—	(1,800)
Proceeds from disposal of property, plant and equipment	出售物業、廠房及設備所得款項	10,350	71,516
Purchase of equity investments designated at fair value through other comprehensive income	購買公允價值計量且其變動計入其他綜合收益的權益投資	(1,800)	—
Proceeds from disposal of equity investments designated at fair value through other comprehensive income	出售公允價值計量且其變動計入其他綜合收益的權益投資所得款項	2,051	—
Interest received	已收利息	11,740	5,616
Net cash used in investing activities	投資活動所用現金淨額	(181,764)	(275,932)
Cash flows from financing activities	融資活動現金流量		
Placement of pledged bank deposits	置存已抵押銀行存款	(1,000,371)	(740,124)
Release of pledged bank deposits	解除已抵押銀行存款	1,022,490	533,912
Proceeds from bank loans and other loans	銀行貸款及其他貸款所得款項	1,573,108	2,549,285
Repayment of bank loans and other loans	償還銀行貸款及其他貸款	(1,553,326)	(2,805,908)
Principal portion of lease payments/finance lease rental payments	租賃付款的本金部分／ 融資租賃租金付款	(1,021)	(9,840)
Acquisition of non-controlling interests	收購非控制性權益	—	(16,285)
Capital contribution from non-controlling interests	非控制性權益出資	1,601	31,819
Interest paid	已付利息	(123,130)	(136,012)
Dividends paid to non-controlling shareholders	已付非控制性股東分配股利	—	(7,726)
Net cash used in financing activities	融資活動所用現金淨額	(80,649)	(600,879)



Consolidated Statement of Cash Flows

綜合現金流量表

Year ended 31 December 2019 截至二零一九年十二月三十一日止年度
(Expressed in Renminbi) (以人民幣列值)

		Notes 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Net increase in cash and cash equivalents	現金及現金等價物增加淨額		147,730	44,668
Cash and cash equivalents at the beginning of the year	年初現金及現金等價物		239,712	191,185
Effect of foreign exchange rate changes, net	匯率變動的影響淨額		9,412	3,859
Cash and cash equivalents at the end of the year	年末現金及現金等價物	27	396,854	239,712
Analysis of balances of cash and cash equivalents	現金及現金等價物結餘分析			
Cash and bank balances	現金及銀行結餘	27	396,854	239,712



NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

財務報表附註

31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1. Corporate and group 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 year, the Group was mainly engaged in the following four main businesses:

- the manufacture of, trading of and provision of processing services for monocrystalline silicon solar ingots/wafers;
- the manufacture and trading of monocrystalline silicon solar cells;
- the manufacture and trading of photovoltaic modules; and
- the construction and operating of photovoltaic power plants.

Information about subsidiaries

Particulars of the Company's principal subsidiaries are as follows:

1. 公司及集團資料

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)為上下游垂直整合太陽能服務的領先供應商。年內，本集團主要從事以下四項主要業務：

- 太陽能單晶硅棒／硅片製造、買賣及提供太陽能單晶硅棒／硅片加工服務；
- 製造及買賣太陽能單晶硅電池；
- 製造及買賣光伏組件；及
- 興建及經營光伏電站。

有關附屬公司的資料

本公司主要附屬公司的詳情如下：

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定／註冊／ 實繳／已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的 實際權益 %	Held by the Company 由本公司 持有 %	Held by a subsidiary 由一間 附屬 公司持有 %		
Jinzhou Rixin Silicon Materials Co., Ltd. ("Rixin") 錦州日鑫硅材料有限公司 (「日鑫」)	The PRC 9 May 2007, Mainland China 中國 二零零七年 五月九日 中國大陸	Registered and paid-in capital of RMB190,000,000 註冊及實繳資本 人民幣190,000,000元	100	-	100	Manufacture and trading of monocrystalline ingots/ wafers 製造及買賣單晶硅棒／硅片	Limited liability company 有限責任公司
Jinzhou Yangguang Energy Co., Ltd. ("Yangguang") 錦州陽光能源有限公司 (「陽光」)	The PRC 15 December 2004, Mainland China 中國 二零零四年 十二月十五日 中國大陸	Registered and paid-in capital of RMB1,151,565,479 註冊及實繳資本 人民幣1,151,565,479元	100	-	100	Manufacture and trading of photovoltaic modules 製造及買賣光伏組件	Limited liability company 有限責任公司



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財務報表附註

31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1. Corporate and group information (continued)

Information about subsidiaries (continued)

1. 公司及集團資料(續)

有關附屬公司的資料(續)

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定/註冊/ 實繳/已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的 實際權益 %	Held by the Company 由本公司 持有 %	Held by a subsidiary 由一間 附屬 公司持有 %		
Jinzhou Youhua Silicon Materials Co., Ltd. ("Youhua Silicon") 錦州佑華硅材料 有限公司 (「佑華硅」)	The PRC 12 September 2008, Mainland China 中國 二零零八年 九月十二日 中國大陸	Registered and paid-in capital of RMB320,000,000 註冊及實繳資本 人民幣320,000,000元	100	-	100	Manufacturing and trading of monocrystalline ingots/ wafers 製造及買賣單晶硅棒/硅片	Limited liability company 有限責任公司
Shanghai Jingji Electronic Materials Co., Ltd. ("Jingji") 上海晶技電子材料 有限公司 (「晶技」)	The PRC 16 March 1998, Mainland China 中國 一九九八年 三月十六日 中國大陸	Registered and paid-in capital of US\$6,950,000 註冊及實繳資本 6,950,000美元	100	-	100	Manufacturing and trading of polysilicon and monocrystalline ingots/ wafers 製造及買賣多晶硅及 單晶硅棒/硅片	Limited liability company 有限責任公司
Solar Technology Investment (Cayman) Corp* ("STIC")	Cayman Islands 15 December 2006 開曼群島 二零零六年 十二月十五日	Authorised capital of HK\$400,000,000 of HK\$0.10 each and issued share capital of HK\$167,895,494 法定資本400,000,000港元， 每股面值0.10港元及 已發行股本167,895,494港元	100	100	-	Investment holding 投資控股	Limited liability company 有限責任公司
Wealthy Rise International Limited** 鉅升國際有限公司**	Hong Kong 21 June 2007 香港 二零零七年 六月二十一日	HK\$1 1港元	19	-	19	Trading of polysilicon and monocrystalline ingots/ wafers/photovoltaic modules 買賣多晶硅及單晶硅棒/ 硅片/光伏組件	Limited liability company 有限責任公司



Notes to Consolidated Financial Statements

財務報表附註

31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1. Corporate and group information (continued)

Information about subsidiaries (continued)

1. 公司及集團資料(續)

有關附屬公司的資料(續)

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定/註冊/ 實繳/已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的 實際權益 %	Held by the Company 由本公司 持有 %	Held by a subsidiary by a 由一間 附屬 公司持有 %		
Jinzhou Yangguang Jinmao Photovoltaic Technology Co., Ltd. ("Jinzhou Jinmao") 錦州陽光錦懋光伏科技 有限公司 (「錦州錦懋」)	The PRC 17 July 2009, Mainland China 中國 二零零九年七月十七日 中國大陸	Registered and paid-in capital of RMB140,000,000 註冊及實繳資本 人民幣140,000,000元	100	-	100	Manufacture and trading of monocrystalline wafers 製造及買賣單晶硅片	Limited liability company 有限責任公司
Solargiga Energy (Hong Kong) Company Limited 陽光能源(香港)有限公司	Hong Kong 13 June 2008 香港 二零零八年六月十三日	HK\$1 1港元	100	100	-	Trading of polysilicon and monocrystalline ingots/ wafers/photovoltaic modules 買賣硅棒/硅片/多晶硅及 單晶光伏組件	Limited liability company 有限責任公司
Silicon Solar Materials Company Limited* 太陽能硅材料有限公司*	Hong Kong 26 November 2008 香港 二零零八年 十一月二十六日	HK\$1 1港元	100	-	100	Investment holding 投資控股	Limited liability company 有限責任公司
Solargiga Energy (Qinghai) Co., Ltd. ("Qinghai") 陽光能源(青海)有限公司 (「青海」)	The PRC 31 December 2008, Mainland China 中國 二零零八年 十二月三十一日 中國大陸	Registered and paid-in capital of RMB90,000,000 註冊及實繳資本 人民幣90,000,000元	51	-	51	Manufacture and trading of monocrystalline ingots 製造及買賣單晶硅棒	Limited liability company 有限責任公司



Notes to Consolidated Financial Statements 財務報表附註

31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1. Corporate and group information (continued)

Information about subsidiaries (continued)

1. 公司及集團資料(續)

有關附屬公司的資料(續)

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定/註冊/ 實繳/已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的 實際權益 %	Held by the Company 由本公司 持有 %	Held by a subsidiary 由一間 附屬 公司持有 %		
Sino Light Investments Limited*	British Virgin Islands 2 December 2009 英屬處女群島 二零零九年十二月二日	Authorized capital of US\$500,000 of US\$0.001 each and issued share capital of US\$53,920 法定資本500,000美元， 每股面值0.001美元及 已發行股本53,920美元	100	100	-	Investment holding 投資控股	Limited liability company 有限責任公司
You Xin Investments Limited* 佑鑫投資有限公司*	Hong Kong 29 July 2009 香港 二零零九年 七月二十九日	HK\$100,000 100,000港元	100	-	100	Investment holding 投資控股	Limited liability company 有限責任公司
Jinzhou Huachang Photovoltaic Technology Company Limited 錦州華昌光伏科技 有限公司	The PRC 23 October 2006, Mainland China 中國 二零零六年 十月二十三日 中國大陸	Registered and paid-in capital of RMB130,000,000 註冊及實繳資本 人民幣130,000,000元	100	-	100	Manufacture and trading of solar cells 製造及買賣太陽能電池	Limited liability company 有限責任公司



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財務報表附註

31 December 2019 於二零一九年十二月三十一日
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1. Corporate and group information (continued)

Information about subsidiaries (continued)

1. 公司及集團資料(續)

有關附屬公司的資料(續)

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定/註冊/ 實繳/已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的 實際權益 %	Held by the Company 由本公司 持有 %	Held by a subsidiary by a subsidiary 由一間 附屬 公司持有 %		
Jinzhou Xinyanguang Photovoltaic Application Co., Ltd. ("Xinyanguang") 錦州新陽光光伏應用 有限公司(「新陽光」)	The PRC 24 September 2007, Mainland China 中國 二零零七年 九月二十四日 中國大陸	Registered and paid-in capital of RMB100,000,000 註冊及實繳資本 人民幣100,000,000元	100	-	100	Construction of photovoltaic power plant 建設光伏電站	Limited liability company 有限責任公司
Jinzhou Xinlin Solargiga Industrial and Trading Co., Ltd. ("Jinzhou Xinlin") 錦州鑫林陽光工貿有限 公司(「錦州鑫林」)	The PRC 26 June 2014, Mainland China 中國 二零一四年 六月二十六日 中國大陸	Registered and paid-in capital of RMB20,000,000 註冊及實繳資本 人民幣20,000,000元	100	-	100	Trading of solar cells and solar modules 買賣太陽能電池及太陽能組件	Limited liability company 有限責任公司
Jinzhou Jiuxin Solargiga Technology and Trading Co., Ltd. ("Jinzhou Jiuxin") 錦州玖鑫陽光科貿有限 公司(「錦州玖鑫」)	The PRC 26 June 2014, Mainland China 中國 二零一四年 六月二十六日 中國大陸	Registered and paid-in capital of RMB20,000,000 註冊及實繳資本 人民幣20,000,000元	100	-	100	Trading of solar cells and solar modules 買賣太陽能電池及太陽能組件	Limited liability company 有限責任公司
Jinzhou Yangguang Motech Renewable Energy Co., Ltd ("Motech") 錦州陽光茂迪新能源 有限公司(「茂迪」)	The PRC 26 October 2015, Mainland China 中國 二零一五年 十月二十六日 中國大陸	Registered and paid-in capital of RMB64,040,000 註冊及實繳資本 人民幣64,040,000元	100	-	100	Manufacture of monocrystalline ingots 製造單晶硅硅棒	Limited liability company 有限責任公司

Notes to Consolidated Financial Statements

財務報表附註

31 December 2019 於二零一九年十二月三十一日
(Expressed in Renminbi unless otherwise indicated) (除另有註明者外，以人民幣列值)

1. Corporate and group information (continued)

Information about subsidiaries (continued)

1. 公司及集團資料(續)

有關附屬公司的資料(續)

Name of company 公司名稱	Place and date of incorporation/ establishment and place of operation 註冊成立/ 成立地點及日期 及經營地點	Authorised/ registered/ paid-in/ issued capital 法定/註冊/ 實繳/已發行資本	Proportion of ownership interest 所有權權益比例			Principal activities 主要業務	Legal form 法定形式
			Group's effective interest 本集團的實際權益 %	Held by the Company 由本公司持有 %	Held by a subsidiary 由一間附屬公司持有 %		
Jinzhou Chuanghui New Energy Co. Ltd. ("Chuanghui") 錦州創惠新能源有限公司(「創惠」)	The PRC 17 December 2010, Mainland China 中國 二零一零年十二月十七日 中國大陸	Registered and paid-in capital of RMB200,000,000 註冊及實繳資本 人民幣200,000,000元	100	-	100	Manufacture of photovoltaic modules 製造光伏組件	Limited liability company 有限責任公司
Jinzhou Yiyang New Energy Co., Ltd. ("Jinzhou Yiyang") 錦州億陽新能源有限公司(「錦州億陽」)	The PRC 19 January 2017, Mainland China 中國 二零一七年一月十九日 中國大陸	Registered capital of RMB25,000,000 and paid-in capital of RMB5,730,000 註冊資本 人民幣25,000,000元及實繳資本 人民幣5,730,000元	100	-	100	Manufacture and trading of monocrystalline ingots/wafers 製造及買賣單晶硅棒/硅片	Limited liability company 有限責任公司
Qujing Yangguang Energy Silicon Materials Co., Ltd. ("Qujing Yangguang") 曲靖陽光能源硅材料有限公司(「曲靖陽光」)	The PRC 29 August 2017, Mainland China 中國 二零一七年八月二十九日 中國大陸	Registered capital of RMB73,500,000 and paid-in capital of RMB105,000,000 註冊資本 人民幣73,500,000元及實繳資本 人民幣105,000,000元	70	-	70	Manufacture and trading of monocrystalline ingots/wafers 製造及買賣單晶硅棒/硅片	Limited liability company 有限責任公司
Liaoning Zhongdianke Semiconductor Material Co., Ltd. ("Liaoning Semiconductor") 遼寧中電科半導體有限公司(「遼寧半導體」)	The PRC 26 September 2018, Mainland China 中國 二零一八年九月六日 中國大陸	Registered capital of RMB36,000,000 and paid-in capital of RMB2,710,000 註冊資本 人民幣36,000,000元及實繳資本 人民幣2,710,000元	55	-	55	Manufacture and trading of electronic semiconductor materials 製造及買賣電子半導體物料	Limited liability company 有限責任公司



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1. Corporate and group information (continued)

Information about subsidiaries (continued)

- * Apart from investment holding, the subsidiary did not have any operation during the year ended 31 December 2019.
- ** Wealthy Rise International Limited is a non-wholly-owned subsidiary and, accordingly, is accounted for as a subsidiary by virtue of the Company's control over it.

The above table lists the subsidiaries of the Company which, in the opinion of the directors, principally affected the results for the year or formed a substantial portion of the net assets of the Group. To give details of other subsidiaries would, in the opinion of the directors, result in particulars of excessive length.

2.1 Basis of preparation

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") (which include all Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards ("HKASs") and Interpretations) issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"), accounting principles generally accepted in Hong Kong and the disclosure requirements of the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention except for equity investment which have been measured at fair value. These financial statements are presented in Renminbi ("RMB") and all values are rounded to the nearest thousand except when otherwise indicated.

As at 31 December 2019, the Group's current liabilities exceeded its current assets by RMB755,884,000. The liquidity of the Group is primarily depending 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. 公司及集團資料(續)

有關附屬公司的資料(續)

- * 除投資控股外，於截至二零一九年十二月三十一日止年度，該附屬公司並無任何業務。
- ** 鉅升國際有限公司是一家非全資子公司，由於本公司對其擁有控制權，因此被列為子公司。

上表為據董事認為主要影響年內業績或構成本集團大部分淨資產的本公司附屬公司。董事認為，如要詳列其他附屬公司的資料，會導致篇幅過份冗長。

2.1 編製基準

該等財務報表乃根據香港會計師公會(「香港會計師公會」)頒佈之香港財務報告準則(「香港財務報告準則」，包括所有香港財務報告準則、香港會計準則(「香港會計準則」)及詮釋)、香港公認會計原則及香港公司條例披露要求予以編製。除以公允價值計量的股權投資外，彼等乃根據歷史成本慣例編製。該等財務報表以人民幣(「人民幣」)列賬，除另有指明外，所有數值已調整至最接近千份位。

於二零一九年十二月三十一日，本集團的流動負債超逾其流動資產人民幣755,884,000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。



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2.1 Basis of preparation (continued)

The Group has carried out a review of its cash flow forecast for the twelve months ending 31 December 2020. 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 31 December 2020. In preparing the cash flow forecast, management has considered historical cash requirements of the Group, as well as other key factors, including anticipated sales in the twelve months ending 31 December 2020 and unutilised banking facilities as at 31 December 2019 from the Group's major banks with an amount of RMB1,674,208,000 which will expire on 31 December 2020.

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 12 months from the reporting date. Accordingly, the financial statements have been prepared on a going concern basis.

Basis of consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries (collectively referred to as the "Group") for the year ended 31 December 2019. A subsidiary is an entity (including a structured entity), directly or indirectly, controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e., existing rights that give the Group the current ability to direct the relevant activities of the investee).

When the Company has, directly or indirectly, less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- (a) the contractual arrangement with the other vote holders of the investee;
- (b) rights arising from other contractual arrangements; and
- (c) the Group's voting rights and potential voting rights.

2.1 編製基準 (續)

本集團已對其截至二零二零年十二月三十一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二零二零年十二月三十一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，包括截至二零二零年十二月三十一日止十二個月的預計銷售、於二零一九年十二月三十一日從本集團主要銀行獲得的未動用銀行融資人民幣1,674,208,000元（將於二零二零年十二月三十一日期滿）。

基於上文因素，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，財務報表乃按持續經營基準編製。

綜合賬目之基準

綜合財務報表包括本公司及其附屬公司（統稱「本集團」）截至二零一九年十二月三十一日止年度之財務報表。附屬公司為本公司直接或間接控制的實體（包括結構性實體）。當本集團對參與投資對象業務的浮動回報承擔風險或享有權利以及能透過對投資對象的權力（如本集團獲賦予現有權力以主導投資對象相關活動的既存權利）影響該等回報時，即取得控制權。

倘本公司直接或間接擁有少於投資對象大多數投票或類似權利的權利，則本集團於評估其是否擁有對投資對象的權力時會考慮一切相關事實及情況，包括：

- (a) 與投資對象的其他投票權持有人的合約安排；
- (b) 其他合約安排所產生的權利；及
- (c) 本集團的投票權及潛在投票權。



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2.1 Basis of preparation (continued)

Basis of consolidation (continued)

The financial statements of the subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Profit or loss and each component of other comprehensive income are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described above. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises (i) the assets (including goodwill) and liabilities of the subsidiary; (ii) the carrying amount of any non-controlling interest; and (iii) the cumulative translation differences recorded in equity; and recognises (i) the fair value of the consideration received; (ii) the fair value of any investment retained; and (iii) any resulting surplus or deficit in profit or loss. The Group's share of components previously recognised in other comprehensive income is reclassified to profit or loss or retained profits, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

2.1 編製基準(續)

綜合賬目之基準(續)

附屬公司之財務報表使用與本公司一致之會計政策按同一報告期間編製。附屬公司之業績由本集團取得控制權當日起計入綜合賬目，並持續計入綜合賬目至該控制權終止當日為止。

損益及其他全面收入之各個組成部份歸屬於本集團母公司之擁有人及非控股權益，即使此舉會導致非控股權益有虧絀結餘。所有有關本集團各成員公司間之交易及集團內部公司間資產及負債、權益、收入、開支及現金流量會於綜合計算時全數抵銷。

倘事實及情況顯示下文附屬公司會計政策所述三項控制因素之一項或多項出現變化，本集團會重新評估其是否控制被投資方。並無失去控制權之附屬公司擁有權權益變動以權益交易入賬。

倘本集團失去附屬公司之控制權，則會終止確認(i)該附屬公司之資產(包括商譽)及負債；(ii)任何非控股權益之賬面值；及(iii)計入權益之累計匯兌差額；並確認(i)已收取代價之公平值；(ii)任何保留投資之公平值；及(iii)所產生並於損益確認之任何盈餘或虧絀。先前已於其他全面收入確認之本集團應佔組成部份乃重新分類至損益或保留利潤(如適用)，基準與本集團直接出售相關資產或負債所需使用之基準相同。



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2.2 Changes in accounting policies and disclosures

The Group has adopted the following new and revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 9
HKFRS 16
Amendments to HKAS 19
Amendments to HKAS 28
HK(IFRIC)-Int 23
Annual Improvements 2015–2017 Cycle

香港財務報告準則第9號修訂本
香港財務報告準則第16號
香港會計準則第19號修訂本
香港會計準則第28號修訂本
香港(國際財務報告詮釋委員會)— 詮釋第23號
二零一五年至二零一七年週期的年度改進

Except for the amendments to HKFRS 9, HKAS 19 and 28, and Annual Improvements to HKFRSs 2015–2017 Cycle, which are not relevant to the preparation of the Group's financial statements, the nature and the impact of the new and revised HKFRSs are described below:

a. HKFRS 16 Leases

HKFRS 16 replaces HKAS 17 Leases, HK(IFRIC)-Int 4 Determining whether an Arrangement contains a Lease, HK(SIC)-Int 15 Operating Leases — Incentives and HK(SIC)-Int 27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model to recognise and measure right-of-use assets and lease liabilities, except for certain recognition exemptions. Lessor accounting under HKFRS 16 is substantially unchanged from HKAS 17. Lessors continue to classify leases as either operating or finance leases using similar principles as in HKAS 17.

2.2 會計政策變動及披露

本集團已於本年度的財務報表內首次採用下列新訂及經修訂香港財務報告準則。

Prepayment Features with Negative Compensation Leases
Plan Amendment, Curtailment or Settlement
Long-term Interests in Associates and Joint Ventures
Uncertainty over Income Tax Treatments
Amendments to HKFRS 3, HKFRS 11, HKAS 12 and HKAS 23

提早還款特性及負補償租賃
計劃修正、縮減或清償
於聯營公司及合資公司的長期權益
所得稅處理的不確定性
香港財務報告準則第3號、香港財務報告準則第11號、
香港會計準則第12號及香港會計準則第23號修訂本

除與香港財務報告準則第9號、香港會計準則第19號和第28號的修訂以及香港財務報告準則2015–2017年週期的年度改進(與本集團財務報表的編製不相關)外，新的和經修訂的香港財務報告準則的性質和影響如下所述：

a. 香港財務報告準則第16號租賃

香港財務報告準則第16號取代香港會計準則第17號租賃、香港(國際財務報告詮釋委員會)— 詮釋第4號釐定安排是否包括租賃、香港(國際財務報告詮釋委員會)— 詮釋第15號經營租賃 — 優惠及香港(國際財務報告詮釋委員會)— 詮釋第27號評估涉及租賃法律形式交易之內容。該準則載列確認、計量、呈列及披露租賃之原則，並要求承租人在單一資產負債表內模型中考慮所有租賃。香港財務報告準則第16號下之出租人會計法與香港會計準則第17號下之會計處理相比並無重大變動。出租人將繼續利用香港會計準則第17號內之同一分類原則將所有租賃分類。出租人繼續使用與香港會計準則第17號類似的原則將租賃分類為經營租賃或融資租賃。

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2.2 Changes in accounting policies and disclosures (continued)

a. HKFRS 16 Leases (continued)

HKFRS 16 did not have any significant impact on leases where the Group is the lessor.

The Group has adopted HKFRS 16 using the modified retrospective method of adoption with the date of initial application of 1 January 2019. Under this method, the standard has been applied retrospectively with the cumulative effect of initial adoption as an adjustment to the opening balance of retained earnings at 1 January 2019, and the comparative information for 2018 was not restated and continues to be reported under HKAS 17.

New definition of a lease

Under HKFRS 16, a contract is, or contains a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. Control is conveyed where the customer has both the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset. The Group elected to use the transition practical expedient allowing the standard to be applied only to contracts that were previously identified as leases applying HKAS 17 and HK(IFRIC)-Int 4 at the date of initial application. Contracts that were not identified as leases under HKAS 17 and HK(IFRIC)-Int 4 were not reassessed. Therefore, the definition of a lease under HKFRS 16 has been applied only to contracts entered into or changed on or after 1 January 2019.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their stand-alone prices. A practical expedient is available to a lessee, which the Group has adopted, not to separate non-lease components and to account for the lease and the associated non-lease components (e.g., property management services for leases of properties) as a single lease component at the date of initial application.

2.2 會計政策變動及披露(續)

a. 香港財務報告準則第16號租賃(續)

香港財務報告準則第16號對本集團為出租人的租賃並無重大影響。

本集團採用經修訂的追溯採用法於二零一九年一月一日首次應用日期採納香港財務報告準則第16號。根據此方法，該準則追溯應用於首次採用的累積影響作為二零一九年一月一日未分配利潤期初餘額的調整，而二零一八年的資料並不會重述比較，並繼續根據香港會計準則第17號報告。

租賃的新定義

基於香港財務報告準則第16號，租賃為在一定期間內讓渡控制及使用一項資產的權利以獲取對價的合同或合同的一部分。控制權為客戶擁有獲取與使用該項資產相關的幾乎所有的經濟利益的權利以及使用該項已識別資產的權利。在首次採用日，本集團選擇採用過渡期的實務變通，新租賃準則僅適用於在香港會計準則第17號及香港(國際財務報告詮釋委員會)一 詮釋第4號下確定為租賃的合約。在香港會計準則第17號及香港(國際財務報告詮釋委員會)一 詮釋第4號下識別為不包含租賃的合約無須重新評估。因此，香港財務報告準則第16號的租賃定義僅適用於於二零一九年一月一日或之後簽訂或更改的合約。

在開始或重新評估包含租賃組成部分的合同時，在首次採用日，本集團以各租賃組成部分和非租賃組成部分的單獨價格為基礎將對價分攤至這些組成部分。本集團作為承租人採用了一項實務變通，選擇不拆分非租賃組成部分，而是將各租賃組成部分和與其相關的非租賃組成部分(比如，租賃資產的物業管理服務)作為同一租賃組成部分於首次應用日進行會計處理。



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2.2 Changes in accounting policies and disclosures (continued)

a. HKFRS 16 Leases (continued)

As a lessee — Leases previously classified as operating leases

Nature of the effect of adoption of HKFRS 16

The Group has lease contracts for various items of property. As a lessee, the Group previously classified leases as either finance leases or operating leases based on the assessment of whether the lease transferred substantially all the rewards and risks of ownership of assets to the Group. Under HKFRS 16, the Group applies a single approach to recognise and measure right-of-use assets and lease liabilities for all leases, except for two elective exemptions for leases of low value assets (elected on a lease by lease basis) and short-term leases (elected by class of underlying asset). Instead of recognising rental expenses under operating leases on a straight-line basis over the lease term commencing from 1 January 2019, the Group recognises depreciation (and impairment, if any) of the right-of-use assets and interest accrued on the outstanding lease liabilities (as finance costs).

Impacts on transition

Lease liabilities at 1 January 2019 were recognised based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at 1 January 2019 and included in interest-bearing bank and other borrowings. The right-of-use assets were measured at the amount of the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to the lease recognised in the statement of financial position immediately before 1 January 2019.

All these assets were assessed for any impairment based on HKAS 36 on that date. The Group elected to present the right-of-use assets separately in the statement of financial position. This includes the lease assets recognised previously under land leases prepayments of RMB141,989,000.

2.2 會計政策變動及披露 (續)

a. 香港財務報告準則第16號租賃(續)

作為承租人 — 之前劃分為經營租賃的租賃

採用香港財務報告準則第16號的影響

本集團擁有各類廠房、機器、車輛及其他設備的租賃合約。在新準則適用前，本集團作為承租人根據租賃是否將租賃資產所有權相關的幾乎所有風險與報酬轉移給本集團，將租賃分類為融資租賃和經營租賃。根據香港財務報告準則第16號，本集團對所有租賃採用單一方法確認和計量使用權資產與租賃負債，低價值資產租賃(基於每一項租賃)與短期租賃(基於每一類資產)除外。取代自二零一九年一月一日起在租賃期內未按直線法確認經營租賃的租金支出，本集團確認了使用權資產的折舊(和減值(如有))以及未償租賃的應計利息負債(作為融資成本)。

過渡期的影響

本集團根據相關租賃的剩餘租賃付款額按首次執採用日的增量借款利率折現的現值確認二零一九年一月一日的租賃負債，並計入計息銀行及其他貸款。使用權資產按照與租賃負債相等的金額來計量，並根據於二零一九年一月一日前計入財務報表的與該租賃相關的預付和預提租賃付款額進行調整。

本集團在首次採用日對全部使用權資產根據香港會計準則第36號「資產減值」進行減值測試。本集團選擇在資產負債表中單獨列示使用權資產。其中包括較早前於土地租賃預付款項下確認的租賃資產人民幣141,989,000元。



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2.2 Changes in accounting policies and disclosures (continued)

a. HKFRS 16 Leases (continued)

As a lessee — Leases previously classified as operating leases (continued)

Impacts on transition (continued)

The Group has used the following elective practical expedients when applying HKFRS 16 at 1 January 2019:

- Applying the short-term lease exemptions to leases with a lease term that ends within 12 months from the date of initial application;
- Using hindsight in determining the lease term where the contract contains options to extend/terminate the lease.

The impacts arising from the adoption of HKFRS 16 as at 1 January 2019 are as follows:

2.2 會計政策變動及披露(續)

a. 香港財務報告準則第16號租賃(續)

作為承租人 — 之前劃分為經營租賃的租賃(續)

過渡期的影響(續)

本集團於二零一九年一月一日採用香港財務報告準則第16號時，採用下述可選擇的實務變通：

- 對於租賃期將在首次採用日後12個月內結束的租賃採用短期租賃豁免；
- 對合同中含續租或終止租賃選擇權的租賃，採用後見之明確定租賃期。

於二零一九年一月一日採納香港財務報告準則第16號所產生的影響如下：

		Increase/ (decrease) 增加/(減少) RMB'000 人民幣千元
Assets	資產	
Increase in right-of-use assets	使用權資產之增加	144,399
Decrease in prepaid land lease payments	預付土地租賃款項之減少	(141,989)
Increase in total assets	總資產之增加	2,410
Liabilities	負債	
Increase in lease liabilities	租賃債務之增加	1,261
Increase in current portion of lease liabilities	一年內到期的租賃負債之增加	1,149
Increase in total liabilities	總負債之增加	2,410
Decrease in retained earnings	留存收益之減少	—



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2.2 Changes in accounting policies and disclosures (continued)

a. HKFRS 16 Leases (continued)

As a lessee — Leases previously classified as operating leases (continued)

Impacts on transition (continued)

The lease liabilities as at 1 January 2019 reconciled to the operating lease commitments as at 31 December 2018 are as follows:

		RMB'000 人民幣千元
Operating lease commitments as at 31 December 2018	於二零一八年十二月三十一日的經營租賃承擔	3,354
Less:	減：	
Commitments relating to short-term leases and those leases with a remaining lease term ended on or before 31 December 2019	與短期租約有關的承擔及於二零一九年十二月三十一日或之前結束的剩餘租期的租賃	(596)
		2,758
Weighted average incremental borrowing rate as at 1 January 2019	於二零一九年一月一日的加權平均增量借款利率	5.32%
Lease liabilities as at 1 January 2019	於二零一九年一月一日的租賃負債	2,410

b. Amendments to HKAS 28 clarify that the scope exclusion of HKFRS 9 only includes interests in an associate or joint venture to which the equity method is applied and does not include long-term interests that in substance form part of the net investment in the associate or joint venture, to which the equity method has not been applied. Therefore, an entity applies HKFRS 9, rather than HKAS 28, including the impairment requirements under HKFRS 9, in accounting for such long-term interests. HKAS 28 is then applied to the net investment, which includes the long-term interests, only in the context of recognising losses of an associate or joint venture and impairment of the net investment in the associate or joint venture. The Group assessed its business model for its long-term interests in associates and joint ventures upon adoption of the amendments on 1 January 2019 and concluded that the long-term interests in associates and joint ventures continued to be measured at amortised cost in accordance with HKFRS 9. Accordingly, the amendments did not have any impact on the financial position or performance of the Group.

2.2 會計政策變動及披露 (續)

a. 香港財務報告準則第16號租賃(續)

作為承租人 — 之前劃分為經營租賃的租賃(續)

過渡期的影響(續)

於二零一九年一月一日的租賃負債與截至二零一八年十二月三十一日的經營租賃承擔對賬如下：

		RMB'000 人民幣千元
Operating lease commitments as at 31 December 2018	於二零一八年十二月三十一日的經營租賃承擔	3,354
減：		
與短期租約有關的承擔及於二零一九年十二月三十一日或之前結束的剩餘租期的租賃		(596)
		2,758
於二零一九年一月一日的加權平均增量借款利率		5.32%
於二零一九年一月一日的租賃負債		2,410

b. 香港會計準則第28號修訂清楚列明，香港財務報告準則第9號的範圍除外，只包括適用該股份方法的聯營公司或合營企業的權益，而不包括實質上構成聯營公司或合營企業淨投資一部分的長期利益，其中的股權方法尚未適用。因此，一間企業在計算該等長遠利益時，採用香港財務報告準則第9號，而不是香港會計準則第28號，包括香港財務報告準則第9號項下的減值要求。然後，香港會計準則第28號只適用於合聯營公司或合營企業的虧損和聯營公司或合營企業淨投資的減值的情況下，包括長期利益在內的淨投資。本集團於二零一九年一月一日採納修訂後評估其於聯營公司的長期權益的業務模式，並得出結論認為，聯營公司的長期權益繼續按照香港財務報告準則第9號按攤銷成本計量。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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2.2 Changes in accounting policies and disclosures (continued)

- C. HK(IFRIC)-Int 23 addresses the accounting for income taxes (current and deferred) when tax treatments involve uncertainty that affects the application of HKAS 12 (often referred to as “uncertain tax positions”). The interpretation does not apply to taxes or levies outside the scope of HKAS 12, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The interpretation specifically addresses (i) whether an entity considers uncertain tax treatments separately; (ii) the assumptions an entity makes about the examination of tax treatments by taxation authorities; (iii) how an entity determines taxable profits or tax losses, tax bases, unused tax losses, unused tax credits and tax rates; and (iv) how an entity considers changes in facts and circumstances. Upon adoption of the interpretation, the Group considered whether it has any uncertain tax positions arising from the transfer pricing on its intergroup sales. Based on the Group’s tax compliance and transfer pricing study, the Group determined that it is probable that its transfer pricing policy will be accepted by the tax authorities. Accordingly, the interpretation did not have any impact on the financial position or performance of the Group.

2.3 Issued but not yet effective Hong Kong financial reporting standards

The Group has not applied the following new and revised HKFRSs, that have been issued but are not yet effective, in these financial statements.

Amendments to HKFRS 3
Amendments to HKFRS 9, HKAS 39 and HKFRS 7
Amendments to HKFRS 10 and HKAS 28 (2011)

HKFRS 17
Amendments to HKAS 1 and HKAS 8

香港財務報告準則第3號修訂本
香港財務報告準則第9號，香港會計準則第39號及
香港財務報告準則第7號修訂本
香港財務報告準則第10號及香港會計準則第28號
(修訂本)(2011年)
香港財務報告準則第17號
香港會計準則第1號及香港會計準則第8號修訂本

2.2 會計政策變動及披露(續)

- C. 香港國際財務報告詮釋委員會詮釋第23號處理於稅項處理方法涉及影響應用國香港會計準則第12號的不確定性(普遍稱為「不確定稅務狀況」)時，所得稅(即期及遞延)的入賬方法。該項詮釋不適用於香港會計準則第12號範圍外的稅項或徵稅，亦無具體包括與不確定稅項處理方法相關的權益及處罰的規定。該項詮釋具體處理(i)實體是否單獨考慮不確定稅項處理方法；(ii)實體對稅務機關審視稅項處理方法時作出的假設；(iii)實體如何釐定應課稅溢利或稅項虧損、稅基、未動用稅項虧損、未動用稅項抵免及稅率；及(iv)實體如何考慮事實及情況變動。詮釋採納後，本集團考慮其集團間銷售的轉讓定價是否存在任何不確定的稅務狀況。根據本集團的稅務合規及轉讓定價研究，本集團確定其轉讓定價政策很有可能會被稅務機關接納。因此，該詮釋對本集團的對本集團的財務狀況或表現並無任何重大影響。

2.3 已頒佈但尚未生效之香港財務報告準則

本集團並無於該等財務報表內應用下列已頒佈但尚未生效之新訂及經修訂香港財務報告準則。

*Definition of a Business*¹
*Interest Rate Benchmark Reform*¹
*Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*³
*Insurance Contracts*²
*Definition of Material*¹

業務的定義¹
利率基準改革¹
投資者與其聯營公司或合營企業之間的資產出售或注資³
保險合約²
重大的定義¹



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2.3 Issued but not yet effective Hong Kong financial reporting standards (continued)

- ¹ Effective for annual periods beginning on or after 1 January 2020
- ² Effective for annual periods beginning on or after 1 January 2021
- ³ No mandatory effective date yet determined but available for adoption

Further information about those HKFRSs that are expected to be applicable to the Group is described below.

Amendments to HKFRS 3 clarify and provide additional guidance on the definition of a business. The amendments clarify that for an integrated set of activities and assets to be considered a business, it must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output. A business can exist without including all of the inputs and processes needed to create outputs. The amendments remove the assessment of whether market participants are capable of acquiring the business and continue to produce outputs. Instead, the focus is on whether acquired inputs and acquired substantive processes together significantly contribute to the ability to create outputs. The amendments have also narrowed the definition of outputs to focus on goods or services provided to customers, investment income or other income from ordinary activities. Furthermore, the amendments provide guidance to assess whether an acquired process is substantive and introduce an optional fair value concentration test to permit a simplified assessment of whether an acquired set of activities and assets is not a business. The Group expects to adopt the amendments prospectively from 1 January 2020. Since the amendments apply prospectively to transactions or other events that occur on or after the date of first application, the Group will not be affected by these amendments on the date of transition.

Amendments to HKFRS 9, HKAS 39 and HKFRS 7 address the effects of interbank offered rate reform on financial reporting. The amendments provide temporary reliefs which enable hedge accounting to continue during the period of uncertainty before the replacement of an existing interest rate benchmark. In addition, the amendments require companies to provide additional information to investors about their hedging relationships which are directly affected by these uncertainties. The amendments are effective for annual periods beginning on or after 1 January 2020. Early application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

- ¹ 於二零二零年一月一日或之後開始的年度期間生效
- ² 於二零二一年一月一日或之後開始的年度期間生效
- ³ 尚未釐定強制生效日期惟可供採納

有關預期適用於本集團之該等香港財務報告準則之進一步資料如下。

香港財務報告準則第3號修訂澄清了業務的定義，並提供了額外的指導。該修訂澄清要將一套綜合活動和資產視為業務，至少必須包括投入和實質性進程，共同大大有助於創造產出的能力。業務可以存在，而不包括創建輸出所需的所有輸入和流程。該修訂取消了對市場參與者是否有能力收購業務並繼續產生產出的評估。相反，重點是獲得的投入和獲得的實質性進程是否大大有助於創造產出的能力。該修訂還縮小了產出的定義，將重點放在向客戶提供的商品或服務、投資收入或普通活動的其他收入上。此外，該修訂還提供了指導，以評估所獲得的程式是否具有實質性，並採用可選的公允價值集中測試，以便能夠簡化對購置的一套活動和資產是否不是業務的評估。本集團預計將從二零二零年一月一日起採納該修訂。由於該等修訂預期適用於首次應用日期或之後發生的交易或其他事件，因此本集團於過渡日期將不受這些修訂影響。

香港財務報告準則第9號、香港會計準則第39號及香港財務報告準則第7號(修訂本)旨在解決銀行同業拆息改革對財務申報之影響。該等修訂本提供可在替換現有利率基準前之不確定期限內繼續進行對沖會計處理之暫時性補救措施。此外，該等修訂本規定公司須向投資者提供有關直接受該等不確定因素影響之對沖關係之額外資料。該等修訂本於二零二零年一月一日或之後開始之年度期間生效，允許提前應用。該等修訂本預期不會對本集團的財務報表造成任何重大影響。



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2.3 Issued but not yet effective Hong Kong financial reporting standards (continued)

Amendments to HKFRS 10 and HKAS 28 (2011) address an inconsistency between the requirements in HKFRS 10 and in HKAS 28 (2011) in dealing with the sale or contribution of assets between an investor and its associate or joint venture. The amendments require a full recognition of a gain or loss when the sale or contribution of assets between an investor and its associate or joint venture constitutes a business. For a transaction involving assets that do not constitute a business, a gain or loss resulting from the transaction is recognised in the investor's profit or loss only to the extent of the unrelated investor's interest in that associate or joint venture. The amendments are to be applied prospectively. The previous mandatory effective date of amendments to HKFRS 10 and HKAS 28 (2011) was removed by the HKICPA in January 2016 and a new mandatory effective date will be determined after the completion of a broader review of accounting for associates and joint ventures. However, the amendments are available for adoption now.

Amendments to HKAS 1 and HKAS 8 provide a new definition of material. The new definition states that information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. The amendments clarify that materiality will depend on the nature or magnitude of information. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. The Group expects to adopt the amendments prospectively from 1 January 2020. The amendments are not expected to have any significant impact on the Group's financial statements.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

香港財務報告準則第10號及香港會計準則第28號(二零一一年)(修訂本)針對香港財務報告準則第10號及香港會計準則第28號(二零一一年)之間有關投資者與其聯營公司或合營企業之間資產出售或注資兩者規定之不一致情況。該等修訂本規定，當投資者與其聯營公司或合營企業之間的資產出售或注資構成一項業務時，須確認全數收益或虧損。當交易涉及及不構成一項業務之資產時，由該交易產生之收益或虧損於該投資者之損益內確認，惟僅以不相關投資者於該聯營公司或合營企業之權益為限。該等修訂本已前瞻應用。香港會計師公會已於二零一六年一月剔除香港財務報告準則第10號及香港會計準則第28號(二零一一年)(修訂本)的以往強制生效日期，而新的強制生效日期將於對聯營公司及合營企業的會計處理完成更廣泛的檢討後釐定。然而，該等修訂本現時可供採納。

香港會計準則第1號及香港會計準則第8號(修訂本)提供新的重要定義。新定義載明，如對資料的遺漏、失實陳述或模糊可合理預期會影響一般用途財務報表的主要用戶對基於該等財務報表作出的決定，則有關資料為重要資料。該等修訂本澄清重要性將取決於資料的性質或數量。如可合理預期資料的失實陳述會影響主要用戶作出的決定，則該資料的失實陳述屬重要。本集團預期自二零二零年一月一日起採納該等修訂本。該等修訂本預期不會對本集團的財務報表產生任何重大影響。



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2.4 Summary of significant accounting policies

Investments in associates and joint ventures

An associate is an entity in which the Group has a long term interest of generally not less than 20% of the equity voting rights and over which it is in a position to exercise significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The Group's investments in associates and joint ventures are stated in the consolidated statement of financial position at the Group's share of net assets under the equity method of accounting, less any impairment losses. Adjustments are made to bring into line any dissimilar accounting policies that may exist. The Group's share of the post-acquisition results and other comprehensive income of associates and joint ventures is included in the consolidated statement of profit or loss and consolidated other comprehensive income, respectively. In addition, when there has been a change recognised directly in the equity of the associate or joint ventures, the Group recognises its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and its associates or joint ventures are eliminated to the extent of the Group's investments in the associates or joint ventures, except where unrealised losses provide evidence of an impairment of the assets transferred. Goodwill arising from the acquisition of associates or joint ventures is included as part of the Group's investments in associates or joint ventures.

2.4 主要會計政策概要

於聯營公司及合營企業之投資

聯營公司是本集團擁有一般不少於20%股份投票權的長期權益，並可對其發揮重大影響力的實體。重大影響力指參與投資對象財務及營運決策之權力，但對政策並無控制權或共同控制權。

合營企業是一種共同安排，共同控制該安排的各方有權擁有合營企業的淨資產。共同控制是指按照合同約定分享對安排的控制權，只有在相關活動的決定需要共享控制權的各方的一致同意時才存在。

本集團於聯營公司及合營企業之投資乃根據權益會計法計算本集團所佔資產淨值減去任何減值虧損後在綜合財務狀況表上列賬。會計政策如有任何相異之處，會作出調整以使兩者一致。本集團所佔聯營公司及合營企業的收購後業績及其他全面收入，分別計入綜合損益及綜合其他全面收入表內。此外，倘聯營公司及合營企業權益項內直接確認一項變動，本集團於綜合權益變動表內確認任何有關變動的所佔部分(如適用)。本集團與聯營公司及合營企業進行交易所產生的未變現盈虧乃按其於本集團於聯營公司及合營企業投資之相關部份作抵消，惟未變現虧損證明已轉讓資產出現減值情況則除外。因收購聯營公司及合營企業產生之商譽計入本集團於聯營公司及合營企業之投資。



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2.4 Summary of significant accounting policies

Investments in associates and joint ventures (Continued)

If an investment in an associate becomes an investment in a joint venture or vice versa, the retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method. In all other cases, upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognises any retained investment at its fair value. Any difference between the carrying amount of the associate or joint ventures upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognised in profit or loss.

When an investment in an associate or a joint venture is classified as held for sale, it is accounted for in accordance with HKFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The consideration transferred is measured at the acquisition date fair value which is the sum of the acquisition date fair values of assets transferred by the Group, liabilities assumed by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree that are present ownership interests and entitle their holders to a proportionate share of net assets in the event of liquidation at fair value or at the proportionate share of the acquiree's identifiable net assets. All other components of non-controlling interests are measured at fair value. Acquisition-related costs are expensed as incurred.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts of the acquiree.

If the business combination is achieved in stages, the previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognised in profit or loss.

2.4 主要會計政策概要(續)

於聯營公司及合營企業之投資(續)

倘若於聯營公司之投資變成於合營公司之投資(反之亦然)，則保留權益不予以重新計量。相反，該投資繼續按權益法計算入賬。在其他所有情況下，於失去對聯營公司的重大影響力或對合營公司的共同控制的情況下，本集團按其公平值計量及確認其任何剩餘投資。聯營公司或合資企業喪失重大影響力或共同控制權的賬面值與剩餘投資及出售所得款項的公平值之間的任何差額乃於損益賬內確認。

倘於聯營公司及合營企業之投資分類為持有作銷售，則其根據香港財務報告準則第5號持作銷售之非流動資產及已終止經營業務入賬。

業務合併及商譽

業務合併乃採用收購法入賬。所轉讓代價乃按收購日期公平值計量，收購日期公平值為本集團所轉讓資產之收購日期公平值、本集團為被收購方前擁有人所承擔之負債及本集團於交換被收購方之控制權而發行之股本權益之總和。就各業務併購而言，本集團選擇是否以公平值或被收購方可識別資產淨值的應佔比例，計量於被收購方的非控股權益，即於被收購方中賦予持有人在清盤時按比例分佔資產淨值的現有所有權權益。非控股權益的所有其他組成部分乃按公平值計量。收購相關成本於產生時支銷。

本集團收購業務時根據按合同條款、收購日期的經濟狀況及相關條件所作適當分類及指定用途評估所接收財務資產及負債，其中包括分離被收購方主合約中的嵌入式衍生工具。

倘業務合併分階段進行，則先前所持股本權益按收購日期公平值重新計量，而就此所產生的任何收益或虧損於損益確認。



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2.4 Summary of significant accounting policies (continued)

Business combinations and goodwill (Continued)

Any contingent consideration to be transferred by the acquirer is recognised at fair value at the acquisition date. Contingent consideration classified as an asset or liability is measured at fair value with changes in fair value recognised in profit or loss. Contingent consideration that is classified as equity is not remeasured and subsequent settlement is accounted for within equity.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the amount recognised for non-controlling interests and any fair value of the Group's previously held equity interests in the acquiree over the identifiable net assets acquired and liabilities assumed. If the sum of this consideration and other items is lower than the fair value of the net assets acquired, the difference is, after reassessment, recognised in profit or loss as a gain on bargain purchase.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is tested for impairment annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired. The Group performs its annual impairment test of goodwill as at 31 December. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the Group are assigned to those units or groups of units.

Impairment is determined by assessing the recoverable amount of the cash-generating unit (group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash-generating unit (group of cash-generating units) is less than the carrying amount, an impairment loss is recognised. An impairment loss recognised for goodwill is not reversed in a subsequent period.

Where goodwill has been allocated to a cash-generating unit (or group of cash-generating units) and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on the disposal. Goodwill disposed of in these circumstances is measured based on the relative value of the operation disposed of and the portion of the cash-generating unit retained.

2.4 主要會計政策概要 (續)

業務合併及商譽(續)

收購方將轉讓的任何或然代價按收購日期之公平值確認。歸類為資產或負債的或然代價按公平值計量，公平值的變動於損益確認。歸類為權益之或然代價毋須重新計量，而後結算在權益中入賬。

商譽初始按成本計量，即所轉讓代價、已確認非控股權益數額以及本集團先前所持被收購方權益的任何公平值超出所收購可識別資產淨值及所承擔負債之差額。倘該代價及其他項目總和低於所收購資產淨值的公平值，則差額經重新評估後於損益確認為議價購買收益。

於初始確認後，商譽乃按成本減任何累計減值虧損計量。每年對商譽進行減值測試，倘出現任何事件或情況轉變而顯示賬面值可能減值，則會更頻繁地測試。本集團於每年十二月三十一日對商譽進行減值測試。就減值測試而言，業務合併所得的商譽自收購當日起分配至本集團的各個現金產生單位或各組現金產生單位(預期會產生合併協同效益)，而不論本集團其他資產或負債有否指定撥往該等單位或單位組別。

減值數額通過評估商譽所屬的現金產生單位(現金產生單位組別)的可收回金額而釐定。倘現金產生單位(現金產生單位組別)的可收回金額低於賬面值，則確認減值虧損。就商譽所確認的減值虧損不會於其後期間撥回。

倘商譽分配至現金產生單位(或現金產生單位組別)，且該單位內部分業務被出售，則於釐定出售的盈虧時，有關所出售業務的商譽計入業務的賬面值。在此情況下出售的商譽根據所出售業務的相關價值及所保留的現金產生單位部分而計算。



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2.4 Summary of significant accounting policies (continued)

Fair value measurement

The Group measures its equity investments at fair value at the end of each reporting period. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 – based on quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly
- Level 3 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

2.4 主要會計政策概要 (續)

公平值計量

本集團於各報告期間結算日按公平值計量其權益投資。公平值乃在市場參與者於計量日期進行之有序交易中出售資產所收取或轉移負債所支付之價格。公平值計量乃基於假設出售資產或轉移負債的交易於資產或負債的主要市場或於未有主要市場的情況下，則於資產或負債的最有利市場進行。主要或最有利市場須位於本集團能到達的地方。資產或負債的公平值乃基於市場參與者為資產或負債定價所用的假設計量(假設市場參與者依照彼等的最佳經濟利益行事)。

非財務資產的公平值計量考慮到市場參與者能否利用資產來產生最大的經濟利益及善用資產或能否將之出售予將利用資產來產生最大的經濟利益及善用資產的另一市場參與者的能力。

本集團使用適用於不同情況的估值方法，而其有足夠資料計量公平值，以盡量利用相關可觀察輸入數據及盡量減少使用不可觀察輸入數據。

公平值於財務報表計量或披露的所有資產及負債基於對公平值計量整體屬重要的最低輸入數據水平按如下所述在公平值層級中分類：

- 第一級 – 根據已識別資產或負債於活躍市場中所報未調整價格
- 第二級 – 根據對所記錄公平值計量有重大影響之最低輸入數據可直接或間接被觀察之估值方法
- 第三級 – 根據對不可觀察之公平值計量有重大影響之最低輸入數據之估值方法



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2.4 Summary of significant accounting policies (continued)

Fair value measurement (continued)

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

Impairment of non-financial assets

Where an indication of impairment exists, or when annual impairment testing for an asset is required (other than inventories, contract assets, deferred tax assets, financial assets, investment properties and non-current assets/a disposal group classified as held for sale), the asset's recoverable amount is estimated. An asset's recoverable amount is the higher of the asset's or cash-generating unit's value in use and its fair value less costs of disposal, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss is recognised only if the carrying amount of an asset exceeds its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. An impairment loss is charged to the statement of profit or loss in the period in which it arises in those expense categories consistent with the function of the impaired asset.

An assessment is made at the end of each reporting period as to whether there is an indication that previously recognised impairment losses may no longer exist or may have decreased. If such an indication exists, the recoverable amount is estimated. A previously recognised impairment loss of an asset other than goodwill is reversed only if there has been a change in the estimates used to determine the recoverable amount of that asset, but not to an amount higher than the carrying amount that would have been determined (net of any depreciation/amortisation) had no impairment loss been recognised for the asset in prior years. A reversal of such an impairment loss is credited to the statement of profit or loss in the period in which it arises.

2.4 主要會計政策概要 (續)

公平值計量(續)

對於在本財務報告以持續方式確認之資產及負債，本集團於各報告期間結算日根據對於公平值計量整體有重大影響之最低輸入數據通過重估分類以確定各層級之間是否出現轉移。

非財務資產減值

倘出現減值跡象，或需要對資產進行年度減值測試(存貨、合同資產、遞延所得稅資產、財務資產、投資性房地產及非流動資產／分類為持有待售的處置組除外)，則估計資產的可收回數額。資產之可收回數額乃資產或現金產生單位之使用價值與其公平值扣除銷售成本兩者中之較高者，並就個別資產釐定，除非該資產並無產生大致上獨立於其他資產或資產組別的現金流量，在此情況下，則就資產所屬之現金產生單位釐定可收回數額。

減值虧損僅於資產賬面值超過其可收回數額時確認。在評估使用價值時，估計日後現金流量乃按除稅前折現率計算其現值，該折現率反映目前市場對貨幣時間值之評估及該資產的特定風險。減值虧損乃在其產生期間自損益表中在與減值資產之功能一致的開支類別扣除。

於各報告期間結算日會評估有否任何跡象顯示資產出現任何減值，或有否跡象顯示過往確認之減值虧損已不再存在或有所減少。倘出現任何該等跡象，則會估計資產之可收回數額。當用以釐定資產可收回數額之估計有變時，方會撥回該資產先前確認之減值虧損(不包括商譽)，惟撥回之該等數額不可超過過往年度倘並無就該項資產確認減值虧損而應有之賬面值(扣除任何折舊／攤銷)。撥回之減值虧損乃於產生期間計入損益表。



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2.4 Summary of significant accounting policies

(continued)

Related parties

A party is considered to be related to the Group if:

- (a) the party is a person or a close member of that person's family and that person
 - (i) has control or joint control over the Group;
 - (ii) has significant influence over the Group; or
 - (iii) is a member of the key management personnel of the Group or of a parent of the Group; or
- (b) the party is an entity where any of the following conditions applies:
 - (i) the entity and the Group are members of the same group;
 - (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
 - (iii) the entity and the Group are joint ventures of the same third party;
 - (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
 - (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;
 - (vi) the entity is controlled or jointly controlled by a person identified in (a);
 - (vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and
 - (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group or to the parent of the Group.

2.4 主要會計政策概要 (續)

關聯方

任何人士倘符合以下情況即屬本集團之關聯方：

- (a) 有關人士為下述人士或身為下述人士之直系親屬：
 - (i) 對本集團擁有控制權或共同控制權；
 - (ii) 對本集團擁有重大影響力；或
 - (iii) 為本集團或本集團母公司的主要管理人員；或
- (b) 有關人士為適用下列任何條件之實體：
 - (i) 該實體與本集團為同一集團的成員公司；
 - (ii) 該實體為另一間實體(或另一間實體的母公司、附屬公司或同系附屬公司)的聯營公司或合營公司；
 - (iii) 該實體及本集團為同一第三方的合營公司；
 - (iv) 該實體為第三方的合營公司，而另一實體為該名第三方的聯營公司；
 - (v) 該實體為申報本集團或本集團關聯實體的員工福利之退休福利計劃中的一方；
 - (vi) 該實體受(a)段所述人士的控制或共同控制；
 - (vii) (a)(i)段所述之人士對該實體擁有重大影響力或為該實體(或該實體母公司)的主要管理人員；及
 - (viii) 該實體、或一間集團的任何成員公司(為集團之一部份)向本集團或本集團母公司提供主要管理人員服務。



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2.4 Summary of significant accounting policies (continued)

Property, plant and equipment and depreciation

Property, plant and equipment, other than construction in progress, are stated at cost less accumulated depreciation and any impairment losses. When an item of property, plant and equipment is classified as held for sale or when it is part of a disposal group classified as held for sale, it is not depreciated and is accounted for in accordance with HKFRS 5. The cost of an item of property, plant and equipment comprises its purchase price and any directly attributable costs of bringing the asset to its working condition and location for its intended use.

Expenditure incurred after items of property, plant and equipment have been put into operation, such as repairs and maintenance, is normally charged to the statement of profit or loss in the period in which it is incurred. In situations where the recognition criteria are satisfied, the expenditure for a major inspection is capitalised in the carrying amount of the asset as a replacement. Where significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognises such parts as individual assets with specific useful lives and depreciates them accordingly.

Depreciation is calculated to write off the cost of items of property, plant and equipment, less their estimated residual value, if any, using the straight-line method over their estimated useful lives as follows:

- Buildings situated on leasehold land are depreciated over the shorter of the unexpired term of lease and their estimated useful lives, being no more than 50 years after the date of completion.
- Plant and machinery 10 to 25 years
- Other fixed assets 3 to 5 years

2.4 主要會計政策概要 (續)

物業、廠房及設備及折舊

除在建工程外，物業、廠房及設備乃按成本值減累計折舊及任何減值虧損列賬。當一項物業、廠房及設備重新分類為持作出售或當其為組成分類為持作出售的處置組合的一部分時，其毋須折舊並根據香港財務報告準則第5號入賬。物業、廠房及設備項目成本值包括其購買價及將資產達至營運狀況及地點以作擬定用途之任何直接應佔成本。

物業、廠房及設備項目開始運作後產生之支出，如維修及保養費用等，一般於產生期間在損益表中扣除。倘符合確認標準，主要檢查之開支於資產賬面值中資本化為重置成本。倘物業、廠房及設備之重要部份須不時更換，則本集團將該等部份確認為具有特定使用年期及折舊之個別資產。

折舊是根據各項物業、廠房及設備項目的估計可使用年期，以直線法減去其估計剩餘價值(如有)計算，以撇銷其成本值，詳情如下：

- 位於租賃土地的樓宇是按租賃未屆滿年期及其估計可使用年期的較短期間折舊，即竣工日期起計不多於50年。
- 廠房及機器 10至25年
- 其他固定資產 3至5年



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2.4 Summary of significant accounting policies

(continued)

Property, plant and equipment and depreciation (continued)

Where parts of an item of property, plant and equipment have different useful lives, the cost of that item is allocated on a reasonable basis among the parts and each part is depreciated separately. Residual values, useful lives and the depreciation method are reviewed, and adjusted if appropriate, at least at each financial year end.

An item of property, plant and equipment including any significant part initially recognised is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss on disposal or retirement recognised in the statement of profit or loss in the year the asset is derecognised is the difference between the net sales proceeds and the carrying amount of the relevant asset.

Construction in progress

Construction in progress represents a building under construction, which is stated at cost less any impairment losses, and is not depreciated. Cost comprises the direct costs of construction and capitalised borrowing costs on related borrowed funds during the period of construction. Construction in progress is reclassified to the appropriate category of property, plant and equipment when completed and ready for use.

Intangible assets (other than goodwill)

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is the fair value at the date of acquisition. The useful lives of intangible assets are assessed to be either finite or indefinite. Intangible assets with finite lives are subsequently amortised over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at each financial year end.

2.4 主要會計政策概要 (續)

物業、廠房及設備及折舊 (續)

若物業、廠房及設備項目部分的可使用年期不同，該項目的成本或估值則按合理基準在多個部分之間分配，而各部分會個別計提折舊。資產的可使用年期、其剩餘價值及折舊方法均會每年審閱。

物業、廠房及設備項目(包括獲初步確認之任何重大部份)於出售時或當預期其使用或出售不再產生日後經濟利益時撤銷確認。於資產獲撤銷確認之年度在損益表中確認之出售或報廢之任何收益或虧損為出售所得款項淨額與有關資產賬面值間的差額。

在建工程

在建工程指在建樓宇，按成本減任何減值虧損列賬，並不計提折舊。成本包括建設期間的相關借入資金的建設直接成本和資本化借貸成本。在建工程在完工並可供使用時重新分類為適當類別的物業、廠房及設備。

無形資產(商譽除外)

單獨取得的無形資產於初始確認時按成本計量。通過業務合併取得的無形資產的成本為收購日期的公平值。無形資產的可使用年期分為有限期或無限期。有限期的無形資產隨後按可使用經濟年期攤銷，並於有跡象顯示無形資產可能出現減值時評估減值。有限可使用年期的無形資產的攤銷期及攤銷方法至少於每個財政年度末檢討一次。



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2.4 Summary of significant accounting policies (continued)

Intangible assets (other than goodwill) (continued)

Intangible assets with indefinite useful lives are tested for impairment annually either individually or at the cash-generating unit level. Such intangible assets are not amortised. The useful life of an intangible asset with an indefinite life is reviewed annually to determine whether the indefinite life assessment continues to be supportable. If not, the change in the useful life assessment from indefinite to finite is accounted for on a prospective basis.

Amortisation of intangible assets with finite useful lives is charged to profit or loss on a straight-line basis over the assets' estimated useful lives as follows:

- Patents	9 years
- Customer relationship	10 years
- Customer contracts	1 year

Leases (applicable from 1 January 2019)

The Group assesses at contract inception whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

At inception or on reassessment of a contract that contains a lease component and non-lease component, the Group adopts the practical expedient not to separate non-lease component and to account for the lease component and the associated non-lease component (e.g., property management services for leases of properties) as a single lease component.

2.4 主要會計政策概要 (續)

無形資產(商譽除外)(續)

無限可使用年期的無形資產每年按個別或現金產生單位水平進行減值測試。該等無形資產不予攤銷。無限期無形資產的可使用年期會每年檢討，以確定無限可使用年期評估是否仍可證實。如無法證實，由無限期改變為有限期的可使用年期評估則按預期基準入賬。

無形資產(具有有限可使用年期者)的攤銷按下列資產估計可使用年期以直線法計入損益：

- 專利	9年
- 客戶關係	10年
- 客戶合約	1年

租賃(從2019年1月1日起適用)

本集團在合約開始時評估合約是否是或包含租賃。倘合約通過轉讓在一段時間內控制已識別資產使用的權利以換取對價，該合約即為租賃或包含租賃。

集團作為承租人

本集團對所有租賃採用單一的確認和計量方法，短期租賃和低價值資產租賃除外。本集團確認支付租賃款項的租賃負債和代表標的資產使用權的使用權資產。

在包含租賃部分和非租賃部分的合同成立之初或重新評估時，本集團採用實際權宜之計，不將非租賃組成部分分開，而將租賃組成部分和相關的非租賃組成部分(例如：用於物業租賃的物業管理服務)作為單個租賃組成部分進行會計處理。



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2.4 Summary of significant accounting policies (continued)

Leases (applicable from 1 January 2019) (continued)

Group as a lessee (continued)

(a) Right-of-use assets

Right-of-use assets are recognised at the commencement date of the lease (that is the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and any impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease terms and the estimated useful lives of the assets as follows:

Leasehold lands	20 to 30 years
Office buildings	2 years

If ownership of the leased asset transfers to the Group by the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

2.4 主要會計政策概要 (續)

租賃(從2019年1月1日起適用)(續)

集團作為承租人(續)

(a) 使用權資產

本集團在租賃開始日(即標的資產可供使用之日)確認使用權資產。使用權資產按成本減去累計折舊和減值損失後的金額計量，並根據租賃負債的重新計量進行調整。使用權資產的成本包括確認的租賃負債金額、產生的初始直接成本、在開始日期或之前支付的租賃款減去收到的任何租賃激勵。使用權資產在租賃期和資產預計使用壽命較短的期間內按直線法計提折舊，具體如下：

租賃土地	20至30年
辦公大樓	2年

如果租賃資產的所有權在租賃期結束時轉移至本集團或成本反映行使了購買權利，則使用資產的估計使用壽命計算折舊。



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2.4 Summary of significant accounting policies (continued)

Leases (applicable from 1 January 2019) (continued)

(b) Lease liabilities

Lease liabilities are recognised at the commencement date of the lease at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for termination of a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as an expense in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in lease payments (e.g., a change to future lease payments resulting from a change in an index or rate) or a change in assessment of an option to purchase the underlying asset.

(c) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (that is those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the recognition exemption for leases of low-value assets to leases of office equipment and laptop computers that are considered to be of low value. Lease payments on short-term leases and leases of low-value assets are recognised as an expense on a straight-line basis over the lease term.

2.4 主要會計政策概要 (續)

租賃(從2019年1月1日起適用)(續)

(b) 租賃負債

在租賃開始日，本集團以租賃期內支付的租賃付款現值計量租賃負債。租賃付款包括固定付款(包括實質上的固定付款)減去任何應收租賃獎勵、取決於指數或利率的可變租賃付款以及預計在剩餘價值擔保下支付的金額。租賃付款還包括合理確定由本集團行使的購買期權的行權價格和終止租賃的罰款(如果租賃期限反映了本集團行使終止期權的情況)。不依賴指數或利率的可變租賃付款在觸發付款的事件或條件發生的期間確認為費用(除非它們是為生產存貨而發生)。

在計算租賃款項的現值時，由於租賃內含利率不易釐定，故此本集團使用租賃開始日期之增量借貸利率計算。於租賃開始日期後，租賃負債金額之增加反映利息之增長，其減少則關乎已作出之租賃付款。此外，如果發生修改、租賃期限的變更、租賃付款的變更(例如，由於用於確定此類租賃付款的指數或利率的變更而導致的未來付款的變更)或購買標的資產的選擇權的評估變更，則重新計量租賃負債的賬面價值。

(c) 短期租賃和低值資產租賃

本集團將短期租賃確認豁免適用於其機械及設備的短期租賃(即租賃期自生效日期起12個月或更短，且不包含購買選擇權的租賃)。它還將低價值資產確認豁免租賃適用於被視為低價值的辦公室設備租賃。短期租賃及低價值資產租賃之租賃款項按直線法於租期內確認為開支。



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2.4 Summary of significant accounting policies (continued)

Leases (applicable from 1 January 2019) (continued)

Group as a lessor

When the Group acts as a lessor, it classifies at lease inception (or when there is a lease modification) each of its leases as either an operating lease or a finance lease.

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. When a contract contains lease and non-lease components, the Group allocates the consideration in the contract to each component on a relative stand-alone selling price basis. Rental income is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

Leases that transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee are accounted for as finance leases.

Leases (applicable before 1 January 2019)

Leases that transfer substantially all the rewards and risks of ownership of assets to the Group, other than legal title, are accounted for as finance leases. At the inception of a finance lease, the cost of the leased asset is capitalised at the present value of the minimum lease payments and recorded together with the obligation, excluding the interest element, to reflect the purchase and financing. Assets held under capitalised finance leases, including prepaid land lease payments under finance leases, are included in property, plant and equipment, and depreciated over the shorter of the lease terms and the estimated useful lives of the assets. The finance costs of such leases are charged to the statement of profit or loss so as to provide a constant periodic rate of charge over the lease terms.

2.4 主要會計政策概要 (續)

租賃 (從2019年1月1日起適用) (續)

集團作為出租人

當本集團作為出租人時，在租賃開始時 (或發生租賃變更時) 將其每個租賃分類為經營租賃或融資租賃。

本集團實質上沒有轉移資產所有權附帶的所有風險和報酬的租賃被歸類為經營租賃。產生的租金收入在租賃期內按直線法核算，並因其經營性質計入損益表的收入。在談判和安排經營租賃時產生的初始直接費用，計入租賃資產的賬面價值，並在租賃期內按與租金收入相同的基礎確認。或有租金在其賺取期間確認為收入。

所有與基礎資產所有權有關的所有風險和報酬轉移給承租人的租賃，均列為融資租賃。

租賃 (2019年1月1日前適用)

凡資產擁有權 (法定業權除外) 的絕大部份回報及風險轉移至本集團的租約均以融資租賃入賬。於訂立融資租賃時，租賃資產的成本會按最低租金現值撥充資本，並連同有關承擔 (不包括利息部份) 列賬，以反映購買及融資情況。根據資本化融資租賃持有的資產 (包括融資租賃項下的預付土地租賃款項) 均列入物業、廠房及設備，按資產的租期與估計可使用年期兩者之較短者折舊。該等租約的融資費用自損益表扣除，以在租期內定期按一致比率扣除。



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2.4 Summary of significant accounting policies

(continued)

Leases (applicable before 1 January 2019) (continued)

Assets acquired through hire purchase contracts of a financing nature are accounted for as finance leases, but are depreciated over their estimated useful lives.

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Where the Group is the lessor, assets leased by the Group under operating leases are included in non-current assets, and rentals receivable under the operating leases are credited to the statement of profit or loss on the straight-line basis over the lease terms. Where the Group is the lessee, rentals payable under operating leases net of any incentives received from the lessor are charged to the statement of profit or loss on the straight-line basis over the lease terms.

Prepaid land lease payments under operating leases are initially stated at cost and subsequently recognised on the straight-line basis over the lease terms.

When the lease payments cannot be allocated reliably between the land and buildings elements, the entire lease payments are included in the cost of the land and buildings as a finance lease in property, plant and equipment.

Investments and other financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income, and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient of not adjusting the effect of a significant financing component, the Group initially measures at its fair value, plus in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under HKFRS 15 in accordance with the policies set out for "Revenue recognition" below.

2.4 主要會計政策概要 (續)

租賃(2019年1月1日前適用)(續)

透過具融資性質的租購合約收購的資產乃列作融資租賃，惟有關資產乃按估計可使用年期折舊。

凡資產所有權的絕大部分回報及風險仍歸出租人所有的租約，均當作經營租賃入賬。倘本集團為出租人，由本集團以經營租賃出租的資產乃計入非流動資產，而經營租賃的應收租金按租約年期以直線法計入損益表。倘本集團為承租人，則根據經營租賃應付的租金於扣除自出租人收取的任何優惠後，於租賃期內以直線法自損益表扣除。

經營租賃項下之預付土地租賃費初步乃按成本值列賬，其後則以直線法按租約年期攤銷。

倘租賃支出未能於土地及樓宇部分間可靠分配，全部租賃支出則於物業、廠房及設備內作為融資租賃悉數計入土地及樓宇成本。

投資及其他財務資產

初步確認及計量

財務資產於初步確認時分類為按攤銷成本，其他綜合收益的公允價值及損益的公允價值計量。

初始確認時的財務資產分類取決於財務資產的合約現金流量特徵以及本集團管理它們的業務模式。除貿易應收款項不包含重大融資成分或本集團已採用不調整重大融資成分影響的實際權宜之外，本集團初步以公允價值計量，加上財務資產不以公允價值計量且其變動計入損益的交易費用。不包含重大融資成分或本集團已採用實際權宜之計的貿易應收款項按香港財務報告準則第15號所確定的交易價格按照下文「收入確認」所載政策的計量。



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2.4 Summary of significant accounting policies (continued)

Investments and other financial assets (continued)

Initial recognition and measurement (continued)

In order for a financial asset to be classified and measured at amortised cost or fair value through other comprehensive income, it needs to give rise to cash flows that are solely payments of principal and interest ("SPPI") on the principal amount outstanding. Financial assets with cash flows that are not SPPI are classified and measured at fair value through profit or loss, irrespective of the business model.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Financial assets classified and measured at amortised cost are held within a business model with the objective to hold financial assets in order to collect contractual cash flows, while financial assets classified and measured at fair value through other comprehensive income are held within a business model with the objective of both holding to collect contractual cash flows and selling. Financial assets which are not held within the aforementioned business models are classified and measured at fair value through profit or loss.

All regular way purchases and sales of financial assets are recognised on the trade date, that is, the date that the Group commits to purchase or sell the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the marketplace.

Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows:

Financial assets at amortised cost (debt instruments)

Financial assets at amortised cost are subsequently measured using the effective interest method and are subject to impairment. Gains and losses are recognised in the statement of profit or loss when the asset is derecognised, modified or impaired.

2.4 主要會計政策概要 (續)

投資及其他財務資產 (續)

初步確認及計量 (續)

為了使財務資產按攤餘成本或公允價值通過其他綜合收益進行分類和計量，需要產生現金流量，這些現金流量僅為本金和利息（「SPPI」）的未償還本金。現金流量不是SPPI的金融資產被分類並以公允價值計量且其變動計入當期損益，而與業務模型無關。

本集團管理財務資產的業務模式是指其如何管理其財務資產以產生現金流量。業務模型確定現金流量是否來自收集合同現金流量，出售財務資產，或兩者兼而有之。商業模型中以攤銷成本分類和計量的金融資產，其目的是持有金融資產以收集合同現金流量，而商業模型中以既要收取合同現金流量又要出售目的的金融資產則分類為以公允價值計量且其變動計入其他綜合收益的金融資產。不屬於上述業務模式的金融資產，按照公允價值計量且其變動會計入當期損益。

所有一般買賣之財務資產概於交易日，即本集團承諾購買或出售該資產之日期，予以確認。一般買賣乃指按照一般市場規定或慣例在一定期間內交付資產之財務資產買賣。

後續計量

財務資產的後續計量根據其分類進行，該等財務資產分類如下：

按攤銷成本計算的財務資產 (債務工具)

按攤銷成本計算的財務資產其後採用實際利率法計量，並可能會出現減值。當資產終止確認，修改或減值時，損益在損益表中確認。



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2.4 Summary of significant accounting policies (continued)

Investments and other financial assets (continued)

Subsequent measurement (continued)

Financial assets at fair value through other comprehensive income (debt instruments)

For debt investments at fair value through other comprehensive income, interest income, foreign exchange revaluation and impairment losses or reversals are recognised in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in other comprehensive income. Upon derecognition, the cumulative fair value change recognised in other comprehensive income is recycled to the statement of profit or loss.

Financial assets designated at fair value through other comprehensive income (equity investments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity investments designated at fair value through other comprehensive income when they meet the definition of equity under HKAS 32 Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to the statement of profit or loss. Dividends are recognised as other income in the statement of profit or loss when the right of payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in other comprehensive income. Equity investments designated at fair value through other comprehensive income are not subject to impairment assessment.

2.4 主要會計政策概要 (續)

投資及其他財務資產(續)

後續計量(續)

通過其他綜合收益以公允價值計量的財務資產(債務工具)

就以公允價值計量且其他綜合收益的債務投資而言，利息收入，外匯重估及減值虧損或撥回於損益表確認，並按與按攤銷成本計量的財務資產相同的方式計算。其餘公平值變動於其他全面收益確認。終止確認後，其他綜合收益確認的累計公允價值變動將轉回損益表。

通過其他綜合收益以公允價值指定的財務資產(股權投資)

於初步確認時，本集團可選擇不可撤銷地將其股權投資分類為按公允價值通過其他綜合收益指定的股權投資，當符合香港會計準則第32號金融工具：列報中的權益定義且不進行交易時。分類是按個別工具基準確定的。

這些財務資產的收益和損失永遠不會回收到損益表。當股息支付權確立時，股息在損益表中確認為其他收入，與股息相關的經濟利益很可能流入本集團且股息金額能夠可靠地計量，除非當本集團從收益中獲益時，即收回部分財務資產成本，在此情況下，該等收益計入其他綜合收益。以公允價值計量且其他綜合收益的股權投資不受減值評估。



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2.4 Summary of significant accounting policies (continued)

Investments and other financial assets (continued)

Subsequent measurement (continued)

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognised in the statement of profit or loss.

This category includes derivative instruments and equity investments which the Group had not irrevocably elected to classify at fair value through other comprehensive income. Dividends on equity investments classified as financial assets at fair value profit or loss are also recognised as other income in the statement of profit or loss when the right of payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognised in the statement of profit or loss.

Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

2.4 主要會計政策概要 (續)

投資及其他財務資產 (續)

後續計量 (續)

以公允價值計量且其變動計入損益的財務資產

以公允價值計量且其變動計入當期損益的財務資產在財務狀況表中按公允價值列賬，公允價值變動淨額在損益表中確認。

此類別包括衍生工具及股本投資，本集團並無不可撤銷地選擇按公平值透過其他全面收益分類。分類為以公允價值損益計量的財務資產的股權投資股利也在確認支付權時在損益表中確認為其他收益，與股息相關的經濟利益很可能流入本集團及股息金額可以可靠地計量。

如果經濟特徵和風險與收購方沒有密切關係，則混合合同中包含財務負債或非金融主體的衍生工具與收購方獨立，並作為單獨衍生工具入賬；與嵌入衍生工具具有相同條款的單獨工具將符合衍生工具的定義；而混合合約並非按公平值計入損益。嵌入式衍生工具按公允價值計量，公允價值變動計入損益表。

只有在合同條款發生變化時才會重新評估，這些變更會顯著改變原本需要的現金流量或將財務資產重新分類為公允價值計入損益類別。

嵌入在包含財務資產主體的混合合同中的衍生工具不單獨計算。財務資產託管人與嵌入式衍生工具必須全部分類為以公允價值計量且其變動計入損益的財務資產。



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2.4 Summary of significant accounting policies (continued)

Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognised (i.e., removed from the Group's consolidated statement of financial position) when:

- the rights to receive cash flows from the asset have expired; or
- the Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership of the asset. When it has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the Group continues to recognise the transferred asset to the extent of the Group's continuing involvement. In that case, the Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred assets is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

2.4 主要會計政策概要 (續)

解除確認財務資產

財務資產(或(如適用)財務資產的一部分或同類財務資產組別的一部分)主要在以下情況會解除確認(即自本集團綜合財務狀況報表中移除):

- 自資產收取現金流量的權利已屆滿; 或
- 本集團已轉讓其自資產收取現金流量的權利, 或已承諾將根據「交付」安排在無重大延誤情況下向第三方全數悉償已收現金流量; 及(a)本集團將資產的絕大部分風險及回報轉讓; 或(b)本集團並無將資產的絕大部分風險或回報轉讓或保留, 惟已轉讓資產的控制權。

當本集團已轉讓其自資產收取現金流量的權利或已訂立交付安排時, 本集團評估其是否已保留該資產所有權的風險及回報以及相關程度。當其並無轉讓或保留該資產的絕大部份風險及回報, 亦無轉讓該資產的控制權時, 本集團繼續確認已轉讓資產, 惟以本集團持續參與為限。於該情況下, 本集團亦確認一項關聯負債。已轉讓資產及該關聯負債根據反映本集團已保留的權利及義務的基準計量。

以所轉讓資產作擔保的形式存在的持續參與按該資產的初始賬面值與本集團可能須償還的最高代價兩者間的較低者計量。



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2.4 Summary of significant accounting policies (continued)

Impairment of financial assets

The Group recognises an allowance for expected credit losses (“ECLs”) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

General approach

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12 months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and considers reasonable and supportable information that is available without undue cost or effort, including historical and forward-looking information.

For debt investments at fair value through other comprehensive income, the Group applies the low credit risk simplification. At each reporting date, the Group evaluates whether the debt investments are considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the external credit ratings of the debt investments. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

2.4 主要會計政策概要 (續)

財務資產減值

本集團確認對並非按公允值計入損益的所有債務工具預期信貸虧損的撥備。預期信貸虧損乃基於根據合約到期的合約現金流量與本集團預期收取的所有現金流量之間的差額而釐定，並以原實際利率的近似值貼現。預期現金流量將包括出售所持抵押的現金流量或組成合約條款的其他信貸提升措施。

一般方法

預期信貸虧損分兩個階段進行確認。就自初始確認起未有顯著增加的信貸風險而言，預期信貸虧損提供予由未來12個月內可能發生違約事件而導致的信貸虧損（12個月預期信貸虧損）。就自初始確認起經已顯著增加的信貸風險而言，不論何時發生違約，於餘下風險年期內的預期信貸虧損均須計提虧損撥備（全期預期信貸虧損）。

於各報告日期，本集團評估自初步確認後金融工具的信貸風險是否大幅增加。在進行評估時，本集團將截至報告日期金融工具發生違約的風險與初始確認日期金融工具發生違約的風險進行比較，並考慮可用的合理且可支持及沒有不必要的成本或努力的信息，包括歷史和前瞻性信息。

對於以公允價值計量且其他綜合收益的債務投資，本集團採用低信用風險簡化。於各報告日期，本集團會使用所有合理及可支持的資料評估債務投資是否被視為信貸風險較低，且無需過多的成本或努力。在進行評估時，本集團重新評估債務投資的外部信用評級。此外，本集團認為，合約付款超過30天後，信貸風險大幅增加。



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2.4 Summary of significant accounting policies (continued)

Impairment of financial assets (continued)

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Debt investments at fair value through other comprehensive income and financial assets at amortised cost are subject to impairment under the general approach and they are classified within the following stages for measurement of ECLs except for trade receivables and contract assets which apply the simplified approach as detailed below.

- Stage 1 – Financial instruments for which credit risk has not increased significantly since initial recognition and for which the loss allowance is measured at an amount equal to 12-month ECLs
- Stage 2 – Financial instruments for which credit risk has increased significantly since initial recognition but that are not credit-impaired financial assets and for which the loss allowance is measured at an amount equal to lifetime ECLs
- Stage 3 – Financial assets that are credit-impaired at the reporting date (but that are not purchased or originated credit-impaired) and for which the loss allowance is measured at an amount equal to lifetime ECLs

2.4 主要會計政策概要 (續)

財務資產減值(續)

合約付款逾期90天時，本集團認為財務資產違約。然而，在若干情況下，當內部或外部資料顯示本集團不可能在考慮本集團持有的任何信貸增強前不可能全數收取未償還合約金額時，本集團亦可能認為財務資產違約。當沒有合理預期收回合約現金流量時，財務資產會被撇銷。

以公允價值計量的其他綜合收益和財務資產按攤銷成本進行的債務投資在一般方法下可能會發生減值，並且除了貿易應收款項和採用簡化方法的合約資產(以下詳述)外，它們在以下階段分類用於計量預期信貸虧損。

- 階段一 – 自初始確認以來信用風險未顯著增加的金融工具，其損失準備的計算金額等於12個月的預期信貸虧損
- 階段二 – 自初始確認以來信用風險顯著增加但不是信用減值財務資產且其損失準備金等於全期預期信貸虧損的金融工具
- 階段三 – 報告日信貸減值的財務資產(但不是購買或原有的信用減值)，其損失準備金的金額等於全期預期信貸虧損



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2.4 Summary of significant accounting policies (continued)

Impairment of financial assets (continued)

Simplified approach

For trade receivables and contract assets that do not contain a significant financing component or when the Group applies the practical expedient of not adjusting the effect of a significant financing component, the Group applies the simplified approach in calculating ECLs. Under the simplified approach, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For trade receivables and contract assets that contain a significant financing component and lease receivables, the Group chooses as its accounting policy to adopt the simplified approach in calculating ECLs with policies as described above.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, an amount due to the ultimate holding company, derivative financial instruments and interest-bearing bank and other borrowings.

2.4 主要會計政策概要 (續)

財務資產減值(續)

簡化方法

對於不包含重大融資成分的貿易應收款項及合約資產，或本集團採用不調整重大融資成分影響的實際權宜之計，本集團採用簡化方法計算預期信貸虧損。根據簡化方法，本集團不會追蹤信用風險的變化，而是根據每個報告日的全期預期信貸虧損確認損失準備。本集團已根據其歷史信貸虧損經驗建立撥備矩陣，並根據債務人及經濟環境的前瞻性因素作出調整。

就貿易應收款項及包含重大融資成分及應收租賃款項的合約資產而言，本集團選擇採用上述簡化方法計算預期信貸虧損作為其會計政策。

財務負債

首次確認及計量

財務負債在初始確認時分類為以公允價值計量且其變動計入當期損益的財務負債，貸款和借款，應付款項，或作為有效對沖中指定為套期工具的衍生工具(如適用)。

所有財務負債首先按公平值確認及倘為貸款及借貸及應付款，則須扣除直接應佔交易成本。

本集團的財務負債包括貿易及其他應付款項，應付最終控股公司款項，衍生金融工具及計息銀行及其他借款。



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2.4 Summary of significant accounting policies (continued)

Financial liabilities (continued)

Subsequent measurement

The subsequent measurement of financial liabilities depends on their classification as follows:

Financial liabilities at amortised cost

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost, using the effective interest rate method unless the effect of discounting would be immaterial, in which case they are stated at cost. Gains and losses are recognised in the statement of profit or loss when the liabilities are derecognised as well as through the effective interest rate amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortisation is included in finance costs in the statement of profit or loss.

Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. A financial guarantee contract is recognised initially as a liability at its fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequent to initial recognition, the Group measures the financial guarantee contracts at the higher of: (i) the ECL allowance determined in accordance with the policy as set out in "Impairment of financial assets"; and (ii) the amount initially recognised less, when appropriate, the cumulative amount of income recognised.

2.4 主要會計政策概要 (續)

財務負債(續)

後續計量

財務負債的後續計量根據其分類進行，詳情如下：

以攤銷成本計量的財務負債

於首次確認後，計息貸款及借貸隨後以實際利率法以攤銷成本計量，除非貼現影響微不足道，在該情況下以按成本列賬。當負債終止確認及按實際利率進行攤銷程序時，其收益及虧損於損益表內確認。

攤銷成本於計算時已考慮收購事項任何折讓或溢價及屬實際利率不可或缺一部分的費用或成本後計算。實際利率攤銷計入損益表的融資成本內。

財務擔保合約

本集團發行的財務擔保合約是指由於指明債務人未能按照債務工具條款到期支付而需要付款以償還持有人所產生的損失的合約。財務擔保合約初步確認為其公允價值的負債，並根據發行擔保的直接交易成本進行調整。於初步確認後，本集團於以下較高者計量財務擔保合約：(i)根據「財務資產減值所載政策釐定的預期信貸虧損撥備」；及(ii)初步確認的金額(如適用)減去已確認的累計收入金額。



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2.4 Summary of significant accounting policies (continued)

Derecognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled, or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognised in the statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined on the weighted average basis and, in the case of work in progress and finished goods, comprises direct materials, direct labour and an appropriate proportion of overheads. Net realisable value is based on estimated selling prices less any estimated costs to be incurred to completion and disposal.

Provisions

A provision is recognised when a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation.

2.4 主要會計政策概要 (續)

撤銷確認財務負債

當負債的義務已被履行或取消或屆滿，本集團即撤銷確認財務負債。

倘同一貸款人以較重大不同條款之財務負債取代現有財務負債或現有負債條款經重大修訂，則有關轉換或修訂會被視為撤銷確認原有負債，並確認新負債，各賬面值之差額乃於損益表確認。

抵銷金融工具

如果當前有可抵扣已確認金額的法定權利，並且有意以淨額結算，或實現資產及同時解決債務，財務資產和財務負債會被抵銷而淨額在財務狀況表中報告。

存貨

存貨以成本及可變現淨值兩者中的較低者列賬。成本以加權平均成本法計算，就在製品及製成品而言，包括直接材料、直接勞工及適當比例的間接費用。可變現淨值按估計售價減任何估計完成及出售所需成本而計算。

撥備

倘若因過往事件導致現有債務(法定或推定)及日後可能需要有資源流出以償還債務，則確認撥備，但必須能可靠估計有關債務金額。



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2.4 Summary of significant accounting policies (continued)

Provisions (continued)

When the effect of discounting is material, the amount recognised for a provision is the present value at the end of the reporting period of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in finance costs in the statement of profit or loss.

The Group provides for warranties in relation to the sale of certain industrial products and the provision of construction services for general repairs of defects occurring during the warranty period. Provisions for these assurance-type warranties granted by the Group are recognised based on sales volume and past experience of the level of repairs and returns, discounted to their present values as appropriate.

Cash and cash equivalents

For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash on hand and demand deposits, and short term highly liquid investments that are readily convertible into known amounts of cash, are subject to an insignificant risk of changes in value, and have a short maturity of generally within three months when acquired, less bank overdrafts which are repayable on demand and form an integral part of the Group's cash management.

For the purpose of the consolidated statement of financial position, cash and cash equivalents comprise cash on hand and at banks, including term deposits, and assets similar in nature to cash, which are not restricted as to use.

Government grants

Government grants are recognised at their fair value where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. When the grant relates to an expense item, it is recognised as income on a systematic basis over the periods that the costs, which it is intended to compensate, are expensed.

Where the grant relates to an asset, the fair value is credited to a deferred income account and is released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual instalments or deducted from the carrying amount of the asset and released to the statement of profit or loss by way of a reduced depreciation charge.

2.4 主要會計政策概要 (續)

撥備(續)

倘若貼現的影響重大，則確認的撥備金額為預期需用作償還債務的未來支出於報告期間結算日的現值。隨時間過去而增加的貼現現值增加額計入損益表內「融資成本」。

本集團就保證期間發生的瑕疵的一般維修提供與某些工業產品銷售和提供建築服務有關的保證。本集團授予的這些保證類保證的條款乃根據銷售量及過往的維修及退貨水平經驗確認，並酌情貼現至其現值。

現金及現金等價物

就綜合現金流量表而言，現金及現金等價物乃指手頭現金及活期存款，以及於購入後一般三個月內到期、可隨時轉換為已知金額現金之短期變現能力高但價值變動風險不大之投資扣除須按要求償還之銀行透支，並為本集團現金管理之重要部份。

就綜合財務狀況表而言，現金及現金等價物乃指並無限制用途之手頭及銀行現金，包括定期存款以及性質與現金相似之資產。

政府補貼

政府補貼收入乃於合理確定有關補貼將獲收取，且所有附帶條件均獲符合時按公平值確認。如補貼涉及開支項目，則會於擬用作補償的成本支銷的期間有系統地確認為收入。

如補貼涉及一項資產，則公平值會計入遞延收入賬，並就有關資產之預期使用年期每年按等額轉撥至損益表，或從該資產之賬面值中扣減並透過扣減折舊開支轉撥至損益表。



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2.4 Summary of significant accounting policies (continued)

Employee benefits

(i) Short term employee benefits

Salaries, annual bonuses and staff welfare costs are accrued in the period in which the associated services are rendered by employees of the Group. Where payment or settlement is deferred and the effect would be material, these amounts are stated at their present values.

(ii) Contributions to defined contribution retirement plans

Contributions to local retirement schemes pursuant to the relevant labour rules and regulations in Mainland China, Taiwan and Hong Kong are recognised as an expense in profit or loss as incurred, except to the extent that they are included in the cost of inventories not yet recognised as an expense.

(iii) Termination benefits

Termination benefits are recognised at the earlier of when the Group can no longer withdraw the offer of those benefits and when it recognises restructuring costs involving the payment of termination benefits.

Income tax

Income tax comprises current and deferred tax. Income tax relating to items recognised outside profit or loss is recognised outside profit or loss, either in other comprehensive income or directly in equity.

Current tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period, taking into consideration interpretations and practices prevailing in the countries in which the Group operates.

Deferred tax is provided, using the liability method, on all temporary differences at the end of the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

2.4 主要會計政策概要 (續)

僱員福利

(i) 短期僱員福利

薪金、全年花紅及僱員福利成本於本集團僱員提供相關服務期間累計。倘遞延處理有關付款或結算造成重大影響，則該等款項將按現值列賬。

(ii) 定額供款退休計劃的供款

根據中國、台灣及香港相關勞工規則及規例，就當地退休計劃作出的供款，除非包括於尚未確認為開支的存貨成本，否則，供款於產生時於損益確認為開支。

(iii) 合約終止補償

合約終止補償在下列兩者孰早日確定：本集團不可再撤回提供此等福利時；及其確認涉及支付合約終止補償的重組成本時。

所得稅

所得稅包括當期及遞延稅項。與於損益外確認之項目有關之所得稅，於其他全面收入或直接於權益內確認。

當期稅項資產及負債根據於報告期間結算日前已頒佈或實質上已頒佈之稅率（及稅法），計及本集團營運所在國家之現行詮釋及慣例，預期將從稅局收回或將支付予稅局的金額計量。

在報告期間結算日資產及負債之稅基與其於財務報告之賬面值之間的所有暫時性差異，須按負債法計提遞延稅項撥備。



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2.4 Summary of significant accounting policies (continued)

Income tax (continued)

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries and associates, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carryforward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, the carryforward of unused tax credits and unused tax losses can be utilised, except:

- when the deferred tax asset relating to the deductible temporary differences arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries and associates, deferred tax assets are only recognised to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at the end of each reporting period and are recognised to the extent that it has become probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be recovered.

2.4 主要會計政策概要 (續)

所得稅(續)

所有應課稅暫時性差異均會確認為遞延稅項負債，惟應注意下列各點：

- 倘若遞延稅項負債之起因，是由於商譽，或在一宗非屬業務合併之交易中初步確認之資產或負債，且在交易時，對會計利潤或應課稅利潤或虧損均無影響，則屬例外；及
- 對於涉及附屬公司及聯營公司之投資之應課稅暫時性差異而言，倘若撥回暫時性差異之時間可以控制，以及暫時性差異不甚可能在可見將來撥回，則屬例外。

對於所有可扣減之暫時性差異、結轉未用稅項資產及未用稅項虧損，若日後有可能出現應課稅利潤，可用以抵扣該等可扣減暫時性差異、結轉未用稅項資產及未用稅項虧損，則遞延稅項資產一律確認入賬，惟應注意下列各點：

- 倘若有關可扣減暫時性差異之遞延稅項資產之起因，是由於在一宗非屬業務合併之交易中初步確認資產或負債，而且在交易時，對會計利潤或應課稅利潤或虧損均無影響，則屬例外；及
- 對於涉及附屬公司及聯營公司之投資的可扣減暫時性差異而言，只有在暫時性差異有可能在可見將來撥回，而且日後有可能出現應課稅利潤，可用以抵扣該等暫時性差異時，方會確認遞延稅項資產。

遞延稅項資產之賬面值，會在各報告期間結算日予以審閱。若不再可能有足夠應課稅利潤用以抵扣全部或部分相關遞延稅項資產，則扣減遞延稅項資產賬面值。未確認之遞延稅項資產乃於各報告期間結算日重新評估，並於可能獲得足夠應課稅利潤以收回全部或部份遞延稅項資產時予以確認。



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2.4 Summary of significant accounting policies (continued)

Income tax (continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and deferred tax liabilities are offset if and only if the Group has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Revenue recognition

Revenue from contracts with customers

Revenue from contracts with customers is recognised when control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

When the consideration in a contract includes a variable amount, the amount of consideration is estimated to which the Group will be entitled in exchange for transferring the goods or services to the customer. The variable consideration is estimated at contract inception and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognised will not occur when the associated uncertainty with the variable consideration is subsequently resolved.

2.4 主要會計政策概要 (續)

所得稅 (續)

變現資產或清償負債之期間預期適用之稅率，會用作衡量遞延稅項資產及負債，並以報告期間結算日前已經生效或大致上已經生效之稅率（及稅法）為基準。

只有當本集團有可依法強制執行權利將即期稅項資產與即期稅項負債抵銷，且遞延所得稅資產及負債與同一稅務機關就一個或不同應課稅實體徵收的所得稅有關，而有關實體有意按淨額基準結算結餘時，或預計於未來每個期間都有大量的遞延所得稅負債或資產清償或收回以致同時實現資產和清償負債，遞延所得稅資產和遞延所得稅負債互相抵銷。

收入確認

與客戶簽訂合同的收入

當客戶合約的控制權轉移至客戶的金額反映本集團預期就交換該等貨品或服務而有權獲得的代價時，確認與客戶的合約收入。

當合約中的代價包括可變金額時，估計代價金額將由本集團有權以換取將貨品或服務轉移至客戶。可變對價在合約開始時估計並受約束，直至很可能在隨後解決與可變對價的相關不確定性時，未確認累計收入金額的重大收入轉回。



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2.4 Summary of significant accounting policies (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

When the contract contains a financing component which provides the customer with a significant benefit of financing the transfer of goods or services to the customer for more than one year, revenue is measured at the present value of the amount receivable, discounted using the discount rate that would be reflected in a separate financing transaction between the Group and the customer at contract inception. When the contract contains a financing component which provides the Group a significant financial benefit for more than one year, revenue recognised under the contract includes the interest expense accreted on the contract liability under the effective interest method. For a contract where the period between the payment by the customer and the transfer of the promised goods or services is one year or less, the transaction price is not adjusted for the effects of a significant financing component, using the practical expedient in HKFRS 15.

(i) Sale of industrial products

Revenue from the sale of industrial products is recognised at the point in time when control of the asset is transferred to the customer, generally on acceptance of the industrial products by customers.

(ii) Processing services

Revenue from the processing services rendered is recognised over time, using an input method to measure progress towards complete satisfaction of the service, because the Group's performance does not create an asset with an alternative use and the Group has an enforceable right to payment for performance completed to date. The input method recognises revenue based on the proportion of the actual costs incurred relative to the estimated total costs for satisfaction of the processing services.

2.4 主要會計政策概要 (續)

收入確認(續)

與客戶簽訂合同的收入(續)

當合同中包含一個融資部分，為客戶提供為客戶轉移貨物或服務超過一年的巨大利益時，收入按應收金額的現值計量，並使用貼現率貼現並在合約開始時反映在本集團與客戶之間的獨立融資交易中。當合約包含為本集團提供超過一年的重大財務利益的融資部分時，根據合約確認的收入包括按實際利率法計算的合約負債所產生的利息開支。對於客戶付款與承諾商品或服務轉讓之間的期限為一年或一年以下的合同，交易價格不會根據香港財務報告準則第15號的實際權宜之計根據重大融資成分的影響進行調整。

(i) 銷售工業產品

銷售工業產品的收入在資產控制權轉移給客戶的時間點確認，通常是在客戶接受工業產品時。

(ii) 加工服務

所提供加工服務的收入會隨著時間的推移而確認，使用輸入法計量完全滿意服務的進度，因為本集團的表現並未創建具有替代用途的資產，且本集團擁有可執行的已完成績效至今的付款權利。輸入法根據實際發生的成本相對於滿足處理服務的估計總成本的比例確認收入。



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2.4 Summary of significant accounting policies (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

(iii) Construction services

Revenue from the construction services is recognised over time, using an input method to measure progress towards complete satisfaction of the service, because the Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced. The input method recognises revenue based on the proportion of the actual costs incurred relative to the estimated total costs for satisfaction of the construction services.

Revenue from other sources

Rental income is recognised on a time proportion basis over the lease terms. Variable lease payments that do not depend on an index or a rate are recognised as income in the accounting period in which they are incurred.

Other income

Interest income is recognised on an accrual basis using the effective interest method by applying the rate that exactly discounts the estimated future cash receipts over the expected life of the financial instrument or a shorter period, when appropriate, to the net carrying amount of the financial asset.

Dividend income is recognised when the shareholders' right to receive payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

Contract assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Group performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognised for the earned consideration that is conditional. Contract assets are subject to impairment assessment, details of which are included in the accounting policies for impairment of financial assets.

2.4 主要會計政策概要 (續)

收入確認(續)

與客戶簽訂合同的收入(續)

(iii) 興建服務

興建服務的收入隨著時間的推移而確認，使用輸入法計量完全滿足服務的進度，因為集團的業績創造或增強了客戶在資產創建或增強時控制的資產。輸入法根據實際發生的成本佔興建服務滿足估計總成本的比例確認收入。

來自其他來源的收入

租金收入按租賃期按時間比例確認。不按指數或利率的可變租賃付款在其產生的會計期間內確認為收入。

其他收入

利息收入採用實際利率法按權責發生製確認，採用準確折現預計未來現金收入超過金融工具預期年限的利率或適當時候較短期間的財務資產賬面淨值。

股息收入於股東收取付款的權利確認後確認，與股息相關的經濟利益很可能流入本集團且股息金額能夠可靠地計量。

合約資產

合約資產是交換轉移給客戶的商品或服務的權利。如果本集團通過在客戶支付對價之前或在付款到期之前將貨物或服務轉移給客戶來執行，則合約資產將被確認為有條件的獲得對價。合同資產需要進行減值評估，其詳細信息包含在財務資產減值的會計政策中。



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2.4 Summary of significant accounting policies (continued)

Contract liabilities

A contract liability is recognised when a payment is received or a payment is due (whichever is earlier) from a customer before the Group transfers the related goods or services. Contract liabilities are recognised as revenue when the Group performs under the contract (i.e., transfers control of the related goods or services to the customer).

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, i.e., assets that necessarily take a substantial period of time to get ready for their intended use or sale, are capitalised as part of the cost of those assets. The capitalisation of such borrowing costs ceases when the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs capitalised. All other borrowing costs are expensed in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Research and development expenses

Expenditure on research and development is charged to profit or loss as an expense when incurred.

Dividends

Final dividends are recognised as a liability when they are approved by the shareholders in a general meeting. Proposed final dividends are disclosed in the notes to the financial statements.

Interim dividends are simultaneously proposed and declared, because the Company's memorandum and articles of association grant the directors the authority to declare interim dividends. Consequently, interim dividends are recognised immediately as a liability when they are proposed and declared.

2.4 主要會計政策概要 (續)

合約負債

確認合同負債為當本集團轉移相關的商品或服務之前，收到客戶的款項或應付款(以較早者為準)之時。合約負債於本集團根據合約履行時確認為收入(即：將相關商品或服務的控制權轉讓給客戶)。

借貸成本

與收購、建造或生產合資格資產(即需要長時間才可投入擬定用途或銷售的資產)直接相關的借貸成本獲撥充資本作為該等資產的部分成本。在資產大致可投入擬定用途或銷售時，該等借貸成本便會停止資本化。特定借貸在撥作合資格資產的支出前用作短暫投資所賺取的投資收入，會從資本化借貸成本中扣除。所有其他借貸成本於產生期間列作開支。借貸成本包括利息以及實體在借取資金時產生的其他成本。

研發開支

研發開支於產生時計入損益作為開支。

股息

末期股息乃於股東於股東大會上批准時確認為一項負債。建議末期股息於財務報表附註披露。

由於本公司之組織章程大綱及細則授予董事會宣派中期股息之權力，故中期股息乃同時建議及宣派。因此，中期股息於建議及宣派時即時確認為一項負債。



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2.4 Summary of significant accounting policies (continued)

Foreign currencies

The Company's functional currency is Hong Kong dollars. However, the consolidated financial statements of the Group are presented in RMB, as the directors of the Company consider that the major subsidiaries of the Company are all presented in RMB and meanwhile this presentation is more useful for its current and potential investors. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. Foreign currency transactions recorded by the entities in the Group are initially recorded using their respective functional currency rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency rates of exchange ruling at the end of the reporting period. Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was measured. The gain or loss arising on translation of a non-monetary item measured at fair value is treated in line with the recognition of the gain or loss on change in fair value of the item (i.e., translation difference on the item whose fair value gain or loss is recognised in other comprehensive income or profit or loss is also recognised in other comprehensive income or profit or loss, respectively).

2.4 主要會計政策概要 (續)

外幣

本公司的功能貨幣為港元。然而，本集團綜合財務報表以人民幣呈報，乃由於本公司董事認為本公司主要附屬公司均以人民幣呈報，而同時此呈報對現時及潛在投資者更為有用。本集團內的實體各自決定其功能貨幣為何，各實體的財務報告項目均以所定功能貨幣計量。外幣交易初步按交易日的有關功能貨幣的匯率換算入賬。以外幣為計價單位的貨幣資產及負債，按有關功能貨幣於報告期間結算日的通行匯率再換算。貨幣項目結算或匯兌差額於損益表中確認。

按歷史成本列賬、以外幣計量的非貨幣項目，採用初步交易日期的匯率換算。按公平值列賬、以外幣計量的非貨幣項目，則採用釐定公平值日期的匯率換算。因換算以公平值計量的非貨幣項目而產生之損益，其處理方式與確認該項目公平值變動損益之方式一致（即公平值損益於其他全面收入內確認之項目之換算差額或損益亦分別於其他全面收入或損益內確認）。



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2.4 Summary of significant accounting policies (continued)

Foreign currencies (continued)

In determining the exchange rate on initial recognition of the related asset, expense or income on the derecognition of a non-monetary asset or non-monetary liability relating to an advance consideration, the date of initial transaction is the date on which the Group initially recognises the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of the advance consideration.

The functional currencies of certain overseas subsidiaries are currencies other than the RMB. As at the end of the reporting period, the assets and liabilities of these entities are translated into RMB at the exchange rates prevailing at the end of the reporting period and their statements of comprehensive income are translated into RMB at the weighted average exchange rates for the year. The resulting exchange differences are recognised in other comprehensive income and accumulated in the exchange reserve. On disposal of a foreign operation, the component of other comprehensive income relating to that particular foreign operation is recognised in the statement of profit or loss.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on acquisition are treated as assets and liabilities of the foreign operation and translated at the closing rate.

For the purpose of the consolidated statement of cash flows, the cash flows of overseas subsidiaries are translated into RMB at the exchange rates ruling at the dates of the cash flows. Frequently recurring cash flows of overseas subsidiaries which arise throughout the year are translated into RMB at the weighted average exchange rates for the year.

2.4 主要會計政策概要 (續)

外幣 (續)

於釐定與終止代價有關的非貨幣資產或非貨幣負債終止確認時相關資產，開支或收入的初步確認時的匯率，初始交易日期為本集團初步確認的日期預付代價產生的非貨幣性資產或非貨幣性負債。

若干海外附屬公司之功能貨幣為非人民幣貨幣。於報告期間結算日，該等實體的資產與負債，按報告期間結算日的通行匯率換算為人民幣，其全面收入表則按本年度的加權平均匯率換算為人民幣。因此而產生的匯兌差額乃計入其他全面收入表，並於外匯儲備中累計。出售海外業務時，與該項特定海外業務有關之其他全面收入成份會在損益表中確認。

因收購海外業務而產生之任何商譽及對因收購產生之資產及負債賬面值的任何公平值調整，均被列為海外機構的資產及負債，並以結算匯率換算。

就綜合現金流量表而言，海外附屬公司之現金流量按現金流量日期之匯率換算為人民幣。海外附屬公司於整個年度內經常產生之現金流量乃按本年度之加權平均匯率換算為人民幣。



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3. Significant accounting judgments and estimates

The preparation of the Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and their accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amounts of the assets or liabilities affected in the future.

Estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

(a) Useful lives of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over the estimated useful life of each asset, after taking into account the estimated residual value. Management reviews annually the useful life of an asset and its residual value, if any. Both the period and methods of depreciation are reviewed annually. The depreciation expenses for future periods are adjusted if there are significant changes from previous estimates.

(b) Impairment of non-financial assets

Management assesses whether there are any indicators of impairment for non-financial assets at the end of each reporting period. Other non-financial assets are tested for impairment when there are indicators that the carrying amounts may not be recoverable. An impairment exists when the carrying value of an asset or a cash-generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The calculation of the fair value less costs of disposal is based on observable market prices less incremental costs for disposing of the asset. When value in use calculations are undertaken, management must estimate the expected future cash flows from the asset or cash-generating unit and choose a suitable discount rate in order to calculate the present value of those cash flows. Further details are given in note 14 to the financial statements.

Goodwill is tested for impairment at least annually even if there is no indication of impairment.

3. 重大會計估計及判斷

編製本集團之財務報表要求管理層作出反映收入、費用、資產及負債之已報告數額及相關披露以及或然負債之披露之判斷、估計及假設。有關該等假設及估計之不明朗因素可能引致須於日後對受影響之資產或負債之賬面值作出重大調整。

不明朗因素估計

於報告期間結算日有重大可能使下個財政年度資產及負債賬面值須作重大調整而與未來有關的主要假設及不明朗因素估計的其他主要來源概述如下。

(a) 物業、廠房及設備的可使用年期

物業、廠房及設備在計及其估計剩餘價值後，以直線法按各資產的估計可使用年期計提折舊。管理層每年審閱資產的可使用年期及其剩餘價值(如有)，並每年審閱計提折舊的期間及方法。如果先前估計發生重大變動，則會對未來期間的折舊開支作出調整。

(b) 非財務資產減值

管理層評估各報告期末非財務資產是否存在減值跡象。當有跡象顯示賬面值可能無法收回時，其他非財務資產會進行減值測試。倘資產或現金產生單位的賬面值超過其可收回金額，即其公平值減出售成本及其使用價值的較高者，則存在減值。公允價值減去處置成本的計算基於可觀察的市場價格減去處置資產的增量成本。當計算使用價值時，管理層必須估計來自資產或現金產生單位的預期未來現金流量，並選擇合適的貼現率以計算這些現金流量的現值。進一步詳情載於財務報表附註14。

商譽即使沒有減值跡象，也至少每年進行減值測試。



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3. Significant accounting judgments and estimates (continued)

Estimation uncertainty (continued)

- (c) Provision for expected credit losses on trade receivables and contract assets

The Group uses a provision matrix to calculate ECLs for trade receivables and contract assets. The provision rates are based on ageing for groupings of various customer segments that have similar loss patterns (i.e., by geography, product type, customer type and rating, and coverage by letters of credit and other forms of credit insurance).

The provision matrix is initially based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., gross domestic products) are expected to deteriorate over the next year which can lead to an increased number of defaults in the manufacture sector, the historical default rates are adjusted. At each reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

The assessment of the correlation among historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions may also not be representative of customer's actual default in the future. The information about the ECLs on the Group's trade receivables and contract assets are disclosed in note 23 and note 24 to the financial statements, respectively.

3. 重大會計估計及判斷(續)

不明朗因素估計(續)

- (c) 貿易應收款項和合約資產的預期信用損失準備

本集團使用撥備矩陣計算貿易應收款項及合約資產的預期信用損失。撥備率基於具有類似損失模式的各個客戶群的分組的賬齡(即按地理位置，產品類型，客戶類型和評級，以及信用證和其他形式的信用保險的覆蓋範圍)。

撥備矩陣最初基於集團歷史觀察到的違約率。本集團將校準矩陣以使用前瞻性信息調整歷史信用損失經驗。例如，如果預計經濟狀況(即國內生產總值)預計在明年惡化，這可能導致製造業違約數量增加，則調整歷史違約率。於每個報告日期，更新歷史觀察到的違約率並分析前瞻性估計值的變化。

對歷史觀察到的違約率，預測經濟狀況和預期信用損失之間的相關性的評估是一個重要的估計。預期信用損失的金額對環境變化和預測經濟條件敏感。本集團的歷史信用損失經驗和經濟狀況預測也可能無法代表客戶未來的實際違約。有關本集團貿易應收款項及合約資產的預期信用損失的信息分別在財務報表附註23和附註24中披露。

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3. Significant accounting judgments and estimates (continued)

Estimation uncertainty (continued)

(d) Leases — Estimating the incremental borrowing rate

The Group cannot readily determine the interest rate implicit in a lease, and therefore, it uses an incremental borrowing rate (“IBR”) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Group “would have to pay”, which requires estimation when no observable rates are available (such as for subsidiaries that do not enter into financing transactions) or when it needs to be adjusted to reflect the terms and conditions of the lease (for example, when leases are not in the subsidiary’s functional currency). The Group estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates (such as the subsidiary’s stand-alone credit rating).

3. 重大會計估計及判斷(續)

不明朗因素估計(續)

(d) 租賃 — 估算增量借款利率

本集團無法輕易確定租賃內含的利率，因此，本集團使用增量借款利率（「增量借款利率」）來計量租賃負債。增量借款利率是指本集團在類似期限內以類似擔保，為獲得與類似經濟條件下的使用權資產具有相似價值的資產所必需的資金所必須支付的利率環境。因此，增量借款利率反映了本集團「將要支付的」而沒有可觀察的利率（例如，未進行融資交易的子公司）或需要進行調整以反映租賃金融工具的條款和條件時，需要進行估算（例如，當租賃不是子公司的功能貨幣時）。本集團使用可觀察的輸入數據（例如市場利率）（如可用）估算增量借款利率，並且需要進行某些特定於實體的估算（例如子公司的獨立信用評級）。



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3. Significant accounting judgments and estimates (continued)

Estimation uncertainty (continued)

- (e) Impairment of prepayments to suppliers and provision for onerous contract

The Group makes non-cancellable advance payments to raw material suppliers under purchase agreements which are to be offset against future purchases. In the event when the economic benefits expected to be received under these purchase agreements are less than the unavoidable costs of meeting the contractual obligations; or the financial conditions of suppliers deteriorate, management will consider whether such advance payments to suppliers are impaired and make necessary provision for the present obligations under the agreements. The Group does not require collateral or other security against its prepayments to suppliers. Management performs ongoing evaluations of impairment of prepayments to suppliers and provisions for commitments that may become onerous due to a change of market conditions and the financial conditions of its suppliers. The evaluations take into account the projected revenue, related expenses and other costs. When the prepayments are not likely to be settled as expected, the Group will make necessary provisions for the present obligations under the agreements. Meanwhile, provision for onerous contract will also be made when the unavoidable costs of meeting the obligations under the purchase agreements exceed the economic benefits expected to be received under it. An increase or decrease in the above provisions would affect the Group's profit or loss and net assets value. Further details of the provision for impairment of prepayments to suppliers and the provision for inventory purchase commitment are given in note 18 and note 32 to the financial statements, respectively.

3. 重大會計估計及判斷(續)

不明朗因素估計(續)

- (e) 預付予供應商的款項減值及有償合約撥備

本集團根據購買協議向原材料供應商作出不可撤銷預付款項，有關款項將於未來購貨時作出抵銷。倘根據該等購買協議預期可收取的經濟利益低於履行合約責任不可避免的成本，或該等供應商財務狀況轉壞，管理層將考慮預付予該等供應商的款項是否經已減值，並就該等協議項下的現有責任作出必要撥備。本集團並無就預付予供應商的款項要求抵押品或其他抵押。管理層持續評估預付予供應商的款項的減值，及就可能由於市況及供應商財務狀況變動而變為有償的承擔撥備。該評估需要考慮預計收益、有關開支及其他成本。若可能無法如期結算預付款項時，本集團將就該等協議項下的現有責任作出必要撥備。同時，當符合購買協議項下的責任的不可避免成本超出其項下預期所得的經濟裨益時，亦將計提有償合約撥備。上述撥備的增加或減少將影響本集團的損益及資產淨值。預付予供應商的款項減值撥備及存貨購買承擔撥備的進一步詳情分別載於財務報表附註18及附註32。



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3. Significant accounting judgments and estimates (continued)

Estimation uncertainty (continued)

(f) Write-down of inventories

Net realisable value of inventories is the estimated selling price in the ordinary course of business, less estimated costs to completion and selling expenses. These estimates are based on the current market condition and the historical experience of manufacture and selling products of similar nature. It could change significantly as a result of changes in technique and competitors' actions in response to adverse industry cycles. Management reassesses these estimates at the end of each reporting period. As at 31 December 2019, the Group provided for write-down of inventories amounting to RMB15,818,000 (2018: RMB42,823,000).

(g) Income taxes

The Group is subject to income taxes in various jurisdictions. Significant judgement is required in determining the provision for income taxes. There are transactions during the ordinary course of business, for which calculation of the ultimate tax determination is uncertain. Where the final tax outcome is different from the amounts that were initially recorded, such differences would affect profit or loss in future years.

Recognition of deferred tax assets, which is related to tax losses and deductible temporary differences, depends on management's expectation of future taxable profits that will be available against which the tax losses or the asset can be utilised. The outcome of their actual utilisation may be different.

The carrying value of deferred tax assets relating to recognised tax losses and deductible temporary differences at 31 December 2019 was RMB16,573,000 (2018: RMB48,009,000). Further details are disclosed in note 21 to the financial statements.

3. 重大會計估計及判斷(續)

不明朗因素估計(續)

(f) 存貨撇減

存貨的可變現淨值乃其於日常業務過程中的估計售價，扣除估計完成所需成本及銷售開支。該等估計乃基於目前市況以及製造及銷售同類產品的過往經驗，可能會因為技術改變及競爭對手為針對嚴峻行業週期而採取的行動而出現重大改變。管理層會於各報告期間結算日重新評估該等估計。於二零一九年十二月三十一日，本集團已就存貨撇減計提撥備人民幣15,818,000元(二零一八年：人民幣42,823,000元)。

(g) 所得稅

本集團須繳付多個司法權區的所得稅。釐定所得稅撥備需作出重大判斷。於日常業務過程中，有交易的最終稅項未能確定。倘最終稅項結果與初步記錄的金額不同，有關差額將影響未來年度的損益。

確認有關稅項虧損及可扣稅暫時差額的遞延稅項資產視乎管理層預期日後可能有應課稅利潤可動用稅項虧損或資產。其實際動用結果可能有所不同。

於二零一九年十二月三十一日有關已確認稅項虧損及可扣稅暫時差額的遞延稅項資產的賬面值為人民幣16,573,000元(二零一八年：人民幣48,009,000元)。進一步詳情於財務報表附註21披露。



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3. Significant accounting judgments and estimates (continued)

Estimation uncertainty (continued)

(h) Provision for warranties

The Group provides warranties for its photovoltaic modules for up to 25 years after sales have taken place. Due to limited warranty claims history, management estimates warranty based on the Group's historical cost data, industry data and an assessment of the history of warranty claims of the Group's competitors. The warranty obligation of the Group will be affected not only by the product failure rates, but also by costs incurred to repair or replace failed products. If the actual product failure rates and the costs of replacement or repairing of failed products differ from the estimates, the Group will need to prospectively revise the provision for warranties which would affect profit or loss in future years. Further details of the Group's provision for warranties are given in note 32 to the financial statements.

4. Operating segment information

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 resources allocation and performance assessment, the Group has identified four reportable segments: (i) the manufacture of, trading of, and provision of processing services for polysilicon and monocrystalline silicon solar ingots/wafers ("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"). No operating segments have been aggregated to form these reportable segments. Comparative figures have been provided on a basis consistent with the current year's segment analysis. Revenue, costs and expenses are allocated to those reportable segments with reference to sales generated by those segments and the costs and expenses incurred by those segments.

3. 重大會計估計及判斷(續)

不明朗因素估計(續)

(h) 保用撥備

本集團就其光伏組件提供長達25年的售後保用。由於過往甚少出現保用索償，因此管理層根據歷史成本數據、業內數據及對本集團競爭對手的過往保用索償評估估計保用成本。本集團的保用責任不但會受產品故障比率影響，同時會受維修或置換出現故障產品所涉成本影響。倘實際產品故障比率及置換或維修出現故障產品的成本與估計有差異，本集團將須按未來基準修訂將影響未來年度損益的保用撥備。本集團保用撥備的進一步詳情載於財務報表附註32。

4. 經營分部資料

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)多晶硅以及太陽能單晶硅棒／硅片的製造、買賣及提供多晶硅以及太陽能單晶硅棒／硅片加工服務(「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」)。並無合併經營分部以組成此等可報告分部。比較數字按與本年度分部分分析一致之基準提供。分配予該等可報告分部的收益、成本及開支乃參考該等分部產生的銷售及該等分部產生的成本及開支計算。



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4. Operating segment information (continued)

(b) Geographic information

Substantially all of the Group's property, plant and equipment, lease prepayments, goodwill, intangible assets and interests in associates are located or operated in the Mainland China. The following table sets out information about the Group's revenue from external customers and the Group's non-current prepayments by geographical location. The geographical location of a customer is based on the location to which the goods were delivered or the services were provided.

(i) Revenue from external customers

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Mainland China	中國大陸	3,273,758	2,963,496
Export sales	出口銷售		
– Japan	– 日本	783,353	662,962
– Taiwan	– 台灣	—	6,621
– Other Asian Regions	– 其他亞洲地區	349,266	377,267
– Europe	– 歐洲	17,060	12,106
– Mexico	– 墨西哥	2,115	—
Sub-total	小計	1,151,794	1,058,956
Total	總計	4,425,552	4,022,452

4. 經營分部資料(續)

(b) 地區資料

本集團物業、廠房及設備、租賃預付款項、商譽、無形資產及於聯營公司的權益位於中國或於中國經營。下表按所在地列出本集團來自外界客戶的收益及非流動預付款項的資料。客戶所在地以交付貨品或提供服務的地點為依據。

(i) 來自外界客戶的收益



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4. Operating segment information (continued)

(b) Geographic information (continued)

(ii) Non-current prepayments

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Mainland China	中國大陸	29,447	62,451
Overseas – Taiwan	海外 – 台灣	—	33,557
Sub-total	小計	—	33,557
Total	總計	29,447	96,008

(c) Information about major customers

For the year ended 31 December 2019, revenue from major customers, each of whom contributed 10% or more to the Group's total revenue, is set out below:

4. 經營分部資料(續)

(b) 地區資料(續)

(ii) 非流動預付款項

(c) 主要客戶的資料

截至二零一九年十二月三十一日止年度，來自主要客戶的收益，各佔本集團總收益10%或以上者載列如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Customer A	客戶A		
– From Segment A	– 來自分部A	—	12,428
– From Segment B	– 來自分部B	482,736	587,202
– From Segment C	– 來自分部C	—	6
Customer B	客戶B		
– From Segment A	– 來自分部A	9,276	109,262
– From Segment B	– 來自分部B	146,833	512,387
– From Segment C	– 來自分部C	—	11,993



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5. Revenue

5. 收益

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
<i>Revenue from contracts with customers</i>	與客戶簽訂合同的收入		
Sales of monocrystalline silicon solar ingots/ wafers	銷售太陽能單晶硅棒／硅片	1,106,209	703,802
Sales of monocrystalline and multicrystalline silicon solar cells	銷售太陽能單晶及多晶硅電池	45,173	83,004
Sales of photovoltaic modules	銷售光伏組件	2,898,479	2,489,290
Construction and operation of photovoltaic power plants	興建及經營光伏電站	26,441	58,182
Rendering of services	提供服務	349,250	688,174
		4,425,552	4,022,452



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5. Revenue (continued)

Revenue from contracts with customers

(i) Disaggregated revenue information

For the year ended 31 December 2019

5. 收益(續)

與客戶簽訂合同的收入

(i) 分類收入信息

截至二零一九年十二月三十一日止年度

		Silicon solar ingots/wafers 太陽能硅棒/ 硅片 RMB'000 人民幣千元	Photovoltaic modules 光伏組件 RMB'000 人民幣千元	Silicon solar cells 太陽能硅電池 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	Total 總計 RMB'000 人民幣千元
Types of goods and service	商品和服務的類型					
Sales of industrial products	銷售工業商品	1,106,209	2,898,479	45,173	—	4,049,861
Processing service	代工服務	39,338	300,623	9,289	—	349,250
Construction services	興建服務	—	—	—	26,441	26,441
Total	總計	1,145,547	3,199,102	54,462	26,441	4,425,552
Geographic market	地區性市場					
Mainland China	中國	1,145,038	2,079,587	22,692	26,441	3,273,758
Japan	日本	12	751,571	31,770	—	783,353
South Asia	南亞	—	349,266	—	—	349,266
Other Asian regions	其他亞洲地區	497	16,563	—	—	17,060
Others	其他	—	2,115	—	—	2,115
Total	總計	1,145,547	3,199,102	54,462	26,441	4,425,552
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	1,106,209	2,898,479	45,173	—	4,049,861
Service transferred over time	服務隨時間轉移	39,338	300,623	9,289	26,441	375,691
Total	總計	1,145,547	3,199,102	54,462	26,441	4,425,552



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5. Revenue (continued)

Revenue from contracts with customers (continued)

(i) Disaggregated revenue information (continued)

For the year ended 31 December 2018

Types of goods and service	商品和服務的類型	Silicon solar	Photovoltaic	Silicon solar cells	Construction and	Total
		ingots/wafers 太陽能 硅棒/硅片 RMB'000 人民幣千元	modules 光伏組件 RMB'000 人民幣千元		operation of photovoltaic power plants 興建及經營 光伏電站 RMB'000 人民幣千元	
Sales of industrial products	銷售工業產品	703,802	2,489,290	83,004	—	3,276,096
Processing service	代工服務	104,697	581,358	2,119	—	688,174
Construction services	興建服務	—	—	—	58,182	58,182
Total	總計	808,499	3,070,648	85,123	58,182	4,022,452
Geographic market	地區性市場					
Mainland China	中國	759,554	2,082,448	63,312	58,182	2,963,496
Japan	日本	12,708	628,443	21,811	—	662,962
Taiwan	台灣	6,621	—	—	—	6,621
Other Asian regions	其他亞洲地區	29,616	347,651	—	—	377,267
Others	其他	—	12,106	—	—	12,106
Total	總計	808,499	3,070,648	85,123	58,182	4,022,452
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	703,802	2,489,290	83,004	—	3,276,096
Service transferred over time	服務隨時間轉移	104,697	581,358	2,119	58,182	746,356
Total	總計	808,499	3,070,648	85,123	58,182	4,022,452

The following table shows the amounts of revenue recognised in the current reporting period that were included in the contract liabilities at the beginning of the reporting period and recognised from performance obligations satisfied in previous periods:

下表顯示本報告期內確認的收入金額，已包括在報告期初的合約負債中，並確認滿足以前期間的履約義務：



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5. Revenue (continued)

Revenue from contracts with customers (continued)

(i) Disaggregated revenue information (continued)

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Revenue recognised that was included in contract liabilities at the beginning of the reporting period:	確認已包括在報告期初的合約負債的收入：		
Sales of industrial products	銷售工業產品	64,466	43,850

(ii) Performance obligations

Information about the Group's performance obligations is summarised below:

Sale of industrial products

The performance obligation is satisfied upon the acceptance of industrial products by customers and payment is generally due within 30 to 90 days from delivery, except for new customers and small-sized customers, where payment in advance is normally required.

Processing service

The performance obligation is satisfied over time as services are rendered and payment is generally due within 30 to 90 days after customer acceptance.

Construction service

The performance obligation is satisfied over time as services are rendered and payment is generally due within 30 to 90 days from the date of billing.

The transaction prices allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December are as follows:

5. 收益(續)

與客戶簽訂合同的收入(續)

(i) 分類收入信息(續)

(ii) 履約責任

有關本集團履約責任的資料概述如下：

銷售工業產品

在客戶接受工業產品時為完成履約責任，除了通常需要提前付款的新客戶和小客戶，付款通常在交付後30至90天內到期。

代工服務

於一段時間內提供服務為完成履約責任，而通常在客戶接受後30至90天內到期。

興建服務

於一段時間內提供服務為完成履約責任，而通常在帳單日後30至90天內到期。

截至十二月三十一日，被分配剩餘的履約責任(未完成或已完成部分)買賣價格如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Within one year	一年內	265,979	64,466



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6. Other income and gains, net

6. 其他收入及收益，淨額

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Other income	其他收入		
Government grants (note 33)	政府補貼(附註33)	166,152	46,184
Interest income from bank deposits	銀行存款的利息收入	11,740	5,616
		177,892	51,800
Other gains/(losses), net	其他收益/(虧損)，淨額		
Net foreign exchange gain	外匯收益淨額	9,412	787
Net loss on disposal of property, plant and equipment	出售物業、廠房及設備的虧損淨額	(128,879)	(2,774)
Gain from sales of other materials	銷售其他材料收益	216	1,021
Others	其他	(42,671)	2,918
		(161,922)	1,952

7. Loss before tax

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

7. 除稅前虧損

本集團除稅前虧損已扣除：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
(a) Staff costs* (including directors' and chief executive's remuneration (note 9))	員工成本*(包括董事及主要行政人員薪酬(附註9))		
Salaries, wages and other benefits	薪金、工資及其他福利	256,061	201,374
Contributions to retirement schemes	退休計劃供款	27,663	20,273
		283,724	221,647

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7. Loss before tax (continued)

7. 除稅前虧損(續)

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
(b) Auditors' remuneration 核數師酬金			
Audit services	核數服務	3,070	2,791
Tax services	稅務服務	23	—
Other services	其他服務	272	272
		3,365	3,063
		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
(c) Other items 其他項目			
Depreciation of right-of-use assets (2018: amortization of land lease payments) (note 17)	使用權資產的折舊 (2018: 租賃預付款項攤銷) (附註17)	5,715	4,244
Depreciation of property, plant and equipment# (note 14)	物業、廠房及設備的折舊# (附註14)	233,331	229,426
Provision/(reversal) for warranties# (note 32)	保用成本撥備/(撥備回沖)# (附註32)	18,394	(3,621)
Operating lease charges — properties	經營租賃支出 — 物業	—	1,914
Research and development costs	研究及開發成本	230,289	210,252
Impairment losses on financial and contract assets, net (note 23 and 24)	金融及合約資產減值，淨額 (附註23及24)	5,262	44,497
Impairment of property, plant and equipment (note 14)	物業、廠房及設備減值 (附註14)	15,167	47,020
Impairment losses on prepayment	預付款項減值損失	26,975	—
Net loss on disposal of property, plant and equipment	出售物業、廠房及設備的虧損 淨額	128,879	2,774
Cost of inventories sold# (note 22(b))	已售存貨成本#(附註22(b))	3,747,724	2,953,556
Cost of services rendered#	已提供服務成本#	336,460	671,346

Cost of inventories sold and cost of services rendered include, in aggregate, RMB457,668,000 (2018: RMB364,086,000) for the year ended 31 December 2019, relating to staff costs, depreciation and provision for warranties which amounts are also included in the respective total amounts disclosed separately above.

截至二零一九年十二月三十一日止年度的已售存貨成本及已提供服務成本包括有關員工成本、折舊及保用撥備合共人民幣457,668,000元(二零一八年：人民幣364,086,000元)，該款項亦計入於上文分開披露的各個款項總額。



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8. Finance costs

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Interest on bank and other loans wholly repayable within five years	須於五年內全數償清的銀行及其他貸款利息	123,003	135,469
Interest on lease liabilities	租賃負債	127	—
Interest on finance leases	融資租賃利息	—	543
Total interest expenses on financial liabilities not at fair value through profit or loss	非按公平值於損益賬列賬財務負債的利息開支總額	123,130	136,012

8. 融資成本

9. Directors' and chief executive's remuneration

Directors' and chief executive's remuneration for the year, disclosed pursuant to the Listing Rules, section 383(1)(a), (b), (c) and (f) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of Information about Benefits of Directors) Regulation, is as follows:

9. 董事及最高行政人員酬金

根據上市規則及香港公司條例第383(1)(a)、(b)、(c)及(f)條以及公司(披露董事利益資料)規例第2部須予披露的年內董事及最高行政人員的酬金如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Fees	袍金	4,050	3,708
Other emoluments:	其他酬金：		
Salaries, allowances and benefits in kind	薪金、津貼及實物利益	257	253
Retirement scheme contributions	退休計劃供款	35	33
		292	286
		4,342	3,994

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9. Directors' and chief executive's remuneration (continued)

9. 董事及最高行政人員酬金 (續)

		2019 二零一九年			
		Fees	Salaries, allowances and benefits in kind 基本 薪金、津貼 及實物利益	Retirement scheme contributions 退休計劃供款	Total
		RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元
Executive directors	執行董事				
Tan Wenhua	譚文華	860	—	—	860
Tan Xin (chief executive)	譚鑫(行政總裁)	1,612	—	16	1,628
Wang Junze	王鈞澤	553	257	19	829
Non-executive director	非執行董事				
Hsu You Yuan	許祐淵	699	—	—	699
Independent non-executive directors	獨立非執行董事				
Wong Wing Kuen, Albert	王永權	107	—	—	107
Fu Shuangye	符霜葉	107	—	—	107
Zhang Chun	張椿	54	—	—	54
Feng Wenli	馮文麗	58	—	—	58
Total	總計	4,050	257	35	4,342



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9. Directors' and chief executive's remuneration (continued)

9. 董事及最高行政人員酬金(續)

		2018 二零一八年			
		Salaries, allowances and benefits	Retirement scheme contributions		Total
		Fees	in kind		
		袍金	基本 薪金、津貼 及實物利益	退休計劃供款	總計
		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
Executive directors	執行董事				
Tan Wenhua	譚文華	873	—	—	873
Tan Xin (chief executive)	譚鑫(行政總裁)	1,368	—	15	1,383
Wang Junze	王鈞澤	507	253	18	778
Non-executive director	非執行董事				
Hsu You Yuan	許祐淵	657	—	—	657
Independent non-executive directors	獨立非執行董事				
Wong Wing Kuen, Albert	王永權	101	—	—	101
Fu Shuangye	符霜葉	101	—	—	101
Zhang Chun	張椿	101	—	—	101
Total	總計	3,708	253	33	3,994

There was no arrangement under which a director or the chief executive waived any remuneration during the year.

於年內，並無董事或最高行政人員訂立任何安排放棄或同意放棄任何酬金。



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10. Five highest paid employees

The five highest paid employees during the year included four (2018: four) directors including the chief executive whose remuneration are disclosed in note 9. The aggregate of the remuneration in respect of the remaining one (2018: one) highest paid employee who is neither a director nor chief executive of the Company is as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Basic salaries, allowances and benefits in kind	基本薪金、津貼及實物利益	699	615
Retirement scheme contributions	退休計劃供款	—	15
		699	630

The remuneration of the remaining one (2018: one) highest paid employee is within the following band:

		2019 二零一九年 Number of individuals 人數	2018 二零一八年 Number of individuals 人數
Nil to HK\$1,000,000	零至1,000,000港元	1	1

10. 五名最高薪酬僱員

年內五名最高薪酬僱員包括四名(二零一八年：四名)董事(包括最高行政人員)，彼等的薪酬於附註9披露。餘下一名(二零一八年：一名)並非本公司董事或最高行政人員的最高薪酬僱員的薪酬總額如下：

餘下一名(二零一八年：一名)最高薪酬僱員的薪酬屬以下組別：



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11. Income tax

(a) Income tax in the consolidated statement of profit or loss represents:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Current tax – the PRC	即期稅項 – 中國		
Provision for the year	年度撥備	9,104	177
Under-provision in respect of prior years	過往年度撥備不足	882	1,015
		9,986	1,192
Deferred tax (note 21)	遞延稅項(附註21)	31,322	(13,349)
Income tax expense/(credit) for the year	年度所得稅費用/(抵免)	41,308	(12,157)

11. 所得稅

(a) 綜合損益表內所得稅代表：

(b) A reconciliation of the tax expense applicable to loss before tax at the statutory rates for the countries (or jurisdictions) in which the Company and the majority of its subsidiaries are domiciled to the tax expense at the effective tax rates, is as follows:

(b) 採用本公司與其大部分附屬公司註冊國家(或司法權區)法定稅率所計算的除稅前虧損的稅項開支，與根據實際稅率計算的稅項開支對賬如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Loss before taxation	除稅前虧損	(313,050)	(232,744)
Tax at the statutory tax rate	按法定稅率計算的稅項	(78,263)	(58,186)
Tax effect of non-deductible expenses	不可扣稅支出的稅務影響	2,563	1,373
Tax effect of non-taxable income	非應稅收入的稅務影響	(958)	—
Effect of differential tax rates (note (i))	不同稅率的影響(附註(i))	5,805	518
Effect of tax concessions obtained (note (ii))	所獲稅務優惠的影響(附註(ii))	(1,181)	(1,926)
Tax effect of unused tax losses and temporary differences not recognised	尚未確認的未動用稅項虧損及暫時差額的稅務影響	81,615	73,902
Utilisation of unused tax loss and temporary differences not recognised in previous years	動用過往年度尚未確認的未動用稅項虧損及暫時差額	(603)	(28,853)
Write-off of unrecoverable deferred tax assets previously recognised	撇銷先前確認的不可收回的遞延稅項資產	31,448	—
Under-provision in respect of prior years	過往年度撥備不足	882	1,015
Tax charge at the Group effective rate	按本集團實際稅率計算的稅項開支	41,308	(12,157)

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11. Income tax (continued)

(b) (continued)

Notes:

- (i) Hong Kong profits tax is calculated at 16.5% (2018: 16.5%) of the estimated assessable profits of the Company's subsidiaries incorporated in Hong Kong during the year. No provision for Hong Kong profits tax has been made as the subsidiaries incorporated in Hong Kong 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 assessable profits for the year.

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

The statutory tax rate applicable to the Company's subsidiary incorporated in Germany is 15% for the year ended 31 December 2019 (2018: 15%). No provision for the German income tax has been made as the subsidiary incorporated in Germany did not have any taxable profits for the year ended 31 December 2019 (2018: Nil).

The statutory tax rate applicable to the Company's subsidiary incorporated in Ghana was 35% for the year ended 31 December 2019 (2018: 35%). No provision for the Ghana income tax has been made as the subsidiary incorporated in Ghana did not have any taxable profits for the year ended 31 December 2019 (2018: Nil).

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

Jinzhou Yangguang Energy Co., Ltd. ("Yangguang") was accredited as "High and New Technology Enterprise" by the relevant government authority in 2012 for a term of three years, and has been registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Yangguang has renewed the "High and New Technology Enterprise" certificate in 2018 effective for the three years from 2018 to 2020. Accordingly, Yangguang was entitled to the 15% income tax rate for 2019 and 2018.

Jinzhou Huachang Photovoltaic Technology Ltd ("Jinzhou Huachang") was accredited as "High and New Technology Enterprise" by the relevant government authority in 2014 for a term of three years, and has been registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Jinzhou Huachang has renewed the "High and New Technology Enterprise" certificate in 2017 effective for the three years from 2017 to 2019. Accordingly, Jinzhou Huachang was entitled to the 15% income tax rate for 2019 and 2018.

11. 所得稅 (續)

(b) (續)

附註：

- (i) 年內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% (二零一八年：16.5%) 計算。由於香港註冊成立的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年內應課稅利潤，故並無作出香港利得稅撥備。

本公司及其於開曼群島及英屬處女群島註冊成立的附屬公司根據其各自註冊成立國家的當地規則及規例毋須繳納任何所得稅。

截至二零一九年十二月三十一日止年度，本公司於德國註冊成立的附屬公司適用的法定稅率為15% (二零一八年：15%)。由於該間在德國註冊成立的附屬公司於截至二零一九年十二月三十一日止年度並無任何應課稅利潤，故並無作出德國所得稅撥備 (二零一八年：無)。

截至二零一九年十二月三十一日止年度，本公司於加納註冊成立的附屬公司適用的法定稅率為35% (二零一八年：35%)。由於該間在加納註冊成立的附屬公司於截至二零一九年十二月三十一日止年度並無任何應課稅利潤，故並無作出加納所得稅撥備 (二零一八年：無)。

- (ii) 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：

錦州陽光能源有限公司 (「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，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。二零一八年，陽光更新「高新科技」證書，有效期為三年，自二零一八年起至二零二零年止。因此，錦州陽光於二零一九年及二零一八年可按15%所得稅率繳稅。

錦州華昌光伏科技有限公司 (「錦州華昌」) 於二零一四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。二零一七年，錦州華昌更新「高新科技」證書，有效期為三年，自二零一七年起至二零一九年止。因此，錦州華昌於二零一九年及二零一八年可按15%所得稅率繳稅。



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11. Income tax (continued)

- (b) (continued)
Notes: (continued)
(ii) (continued)

Solargiga Energy (Qinghai) Co., Ltd. (“Qinghai”) was accredited as “High and New Technology Enterprise” by the relevant government authority in 2016 for a term of three years, and has been registered with the local tax authority to be eligible for a reduced income tax rate of 15%. Qinghai renewed the “High and New Technology Enterprise” certificate in 2019 effective for the three years from 2019 to 2021. Accordingly, Qinghai was entitled to the 15% income tax rate for 2019 and 2018.

Jinzhou Yangguang Jinmao Photovoltaic Technology Co., Ltd. (錦州陽光錦懋光伏科技有限公司) (“Jinzhou Jinmao”), was accredited as “High and New Technology Enterprise” by the relevant government authority in 2016 for a term of three years, and has been registered with the local tax authority to be eligible to a reduced income tax rate of 15%. Jinmao renewed the “High and New Technology Enterprise” certificate in 2019 effective for the three years from 2019 to 2021. Accordingly, Jinzhou Jinmao was entitled to the 15% income tax rate for 2019 and 2018.

Jinzhou Yangguang Motech Renewable Energy Co., Ltd (“Jinzhou Motech”) was accredited as “High and New Technology Enterprise” by the relevant government authority in 2017 for a term of three years, and has been registered with the local tax authority to be eligible to a reduced income tax rate of 15%. Accordingly, Jinzhou Motech was entitled to the 15% income tax rate for 2019 and 2018.

12. Dividends

The board does not recommend to declare a final dividend for the year ended 31 December 2019 (2018: Nil).

13. Loss per share attributable to ordinary equity holders of the company

- (a) Basic loss per share

The calculation of basic loss per share is based on the loss attributable to the ordinary equity holders of the Company of RMB355,492,000 (2018: loss of RMB222,402,000) and the weighted average of 3,211,780,566 (2018: 3,211,780,566) ordinary shares of the Company in issue during the year.

- (b) Diluted loss per share

No adjustment has been made to the basic loss per share amounts presented for the years ended 31 December 2019 and 2018 in respect of a dilution as the Group had no dilutive potential ordinary shares in issue during the years ended 31 December 2019 and 2018.

11. 所得稅 (續)

- (b) (續)
附註：(續)
(ii) (續)

陽光能源(青海)有限公司(「陽光青海」)於二零一六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。二零一九年，陽光青海更新「高新科技」證書，有效期為三年，自二零一九年起至二零二一年止。因此，陽光青海於二零一九年及二零一八年可按15%所得稅率繳稅。

錦州陽光錦懋光伏科技有限公司(Jinzhou Yangguang Jinmao Photovoltaic Technology Co., Ltd.)(「錦州錦懋」)於二零一六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。二零一九年，錦州錦懋更新「高新科技」證書，有效期為三年，自二零一九年起至二零二一年止。因此，錦州錦懋於二零一九年及二零一八年可按15%所得稅率繳稅。

錦州陽光茂迪新能源有限公司(「錦州茂迪」)於二零一七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，錦州茂迪於二零一九年及二零一八年可按15%所得稅率繳稅。

12. 股息

董事會不建議就截至二零一九年十二月三十一日止年度宣派末期股息(二零一八年：無)。

13. 本公司普通股權益持有人應佔每股虧損

- (a) 每股基本虧損

每股基本虧損乃根據本公司普通股權益持有人應佔虧損人民幣355,492,000元(二零一八年：虧損人民幣222,402,000元)以及年內本公司已發行普通股加權平均股數3,211,780,566股(二零一八年：3,211,780,566股)計算。

- (b) 每股攤薄虧損

於截至二零一九年及二零一八年十二月三十一日止年度，本集團並無潛在攤薄的已發行普通股，因此並無對截至二零一九年及二零一八年十二月三十一日止年度呈列的每股基本虧損款額作出攤薄調整。



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14. Property, plant and equipment

14. 物業、廠房及設備

		Construction in progress	Buildings	Plant, machinery and equipment	Motor vehicles	Furniture and fittings	Total
		在建工程	樓宇	廠房、機器 及設備	汽車	家具及固定 裝置	總計
		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
Cost:	成本：						
At 1 January 2019	於二零一九年一月一日	253,354	635,784	1,969,122	28,552	14,683	2,901,495
Exchange adjustments	匯兌調整	—	—	—	—	48	48
Additions	添置	261,831	10,562	104,357	733	15,429	392,912
Disposals	出售	—	—	(401,982)	(763)	(1,584)	(404,329)
Transfer	轉撥	(429,874)	96,998	332,265	—	611	—
At 31 December 2019	於二零一九年 十二月三十一日	85,311	743,344	2,003,762	28,522	29,187	2,890,126
Accumulated depreciation and impairment losses:	累計折舊及減值虧損：						
At 1 January 2019	於二零一九年一月一日	(71,483)	(161,751)	(1,116,740)	(22,917)	(11,577)	(1,384,468)
Exchange adjustments	匯兌調整	—	—	—	—	(54)	(54)
Depreciation for the year	年度折舊	—	(20,009)	(198,283)	(1,533)	(13,506)	(233,331)
Written back on disposals	出售時撥回	—	—	148,044	697	1,312	150,053
Provision for impairment losses	減值準備	—	—	(15,167)	—	—	(15,167)
Transfer in/(out)	轉入/(轉出)	(739)	739	—	—	—	—
At 31 December 2019	於二零一九年 十二月三十一日	(72,222)	(181,021)	(1,182,146)	(23,753)	(23,825)	(1,482,967)
Net book value:	賬面淨值：						
At 31 December 2019	於二零一九年 十二月三十一日	13,089	562,323	821,616	4,769	5,362	1,407,159



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14. Property, plant and equipment (continued)

14. 物業、廠房及設備(續)

		Construction in progress	Buildings	Plant, machinery and equipment	Motor vehicles	Furniture and fittings	Total
		在建工程	樓宇	廠房、機器 及設備	汽車	家具及固定 裝置	總計
		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
Cost:	成本：						
At 1 January 2018	於二零一八年一月一日	117,916	629,162	1,959,349	26,342	19,568	2,752,337
Exchange adjustments	匯兌調整	—	—	—	—	33	33
Additions	添置	290,325	831	39,065	2,387	4,056	336,664
Disposals	出售	—	—	(178,388)	(177)	(8,974)	(187,539)
Transfer	轉撥	(154,887)	5,791	149,096	—	—	—
At 31 December 2018	於二零一八年 十二月三十一日	253,354	635,784	1,969,122	28,552	14,683	2,901,495
Accumulated depreciation and impairment losses:	累計折舊及減值虧損：						
At 1 January 2018	於二零一八年一月一日	(71,483)	(136,810)	(974,325)	(21,352)	(17,268)	(1,221,238)
Exchange adjustments	匯兌調整	—	—	—	—	(33)	(33)
Depreciation for the year	年度折舊	—	(24,941)	(200,023)	(1,733)	(2,729)	(229,426)
Written back on disposals	出售時撥回	—	—	104,628	168	8,453	113,249
Provision for impairment losses	減值準備	—	—	(47,020)	—	—	(47,020)
At 31 December 2018	於二零一八年 十二月三十一日	(71,483)	(161,751)	(1,116,740)	(22,917)	(11,577)	(1,384,468)
Net book value:	賬面淨值：						
At 31 December 2018	於二零一八年 十二月三十一日	181,871	474,033	852,382	5,635	3,106	1,517,027



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14. Property, plant and equipment (continued)

As at 31 December 2019, certain of the Group's interest-bearing bank borrowings were secured by certain of the Group's property, plant and equipment (note 28), which had an aggregate net book value of RMB749,463,000 (31 December 2018: RMB454,831,000).

Substantially all of the Group's property, plant and equipment are located in Mainland China.

The Group has yet to obtain property ownership certificates for certain buildings included in property, plant and equipment with an aggregate net book value of RMB256,842,000 as at 31 December 2019 (31 December 2018: RMB283,974,000). Notwithstanding this, the directors are of the opinion that the Group owned the beneficial title to these buildings as at 31 December 2019.

For the year ended 31 December 2019, the recoverable amount of property, plant and equipment of certain subsidiaries' of the Group in the silicon solar ingots/wafers segment was lower than the carrying amount according to the negative expectation for the photovoltaic industry. The Group assessed the recoverable amount and as a result, the carrying amount of the property, plant and equipment of these subsidiaries in the silicon solar ingots/wafers segment was written down to the recoverable amount. An impairment loss of RMB15,167,000 was recognised in "Impairment of property, plant and equipment". The estimates of recoverable amount of the silicon solar ingots/wafers segment were based on value in use. The after-tax discount rate is 14.50%. Management believes any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed their recoverable amount. The key assumptions used for the value in use calculations are the revenue and operating costs.

14. 物業、廠房及設備 (續)

於二零一九年十二月三十一日，本集團若干計息銀行借貸乃以本集團賬面淨值總額人民幣749,463,000元(二零一八年十二月三十一日：人民幣454,831,000元)的若干物業、廠房及設備作抵押(附註28)。

本集團絕大部分物業、廠房及設備均位於中國大陸。

本集團尚未獲得若干計入物業、廠房及設備的樓宇的房屋所有權證。於二零一九年十二月三十一日，該等樓宇的賬面淨值總額為人民幣256,842,000元(二零一八年十二月三十一日：人民幣283,974,000元)。然而，董事認為，本集團於二零一九年十二月三十一日擁有該等樓宇的實益業權。

截至二零一九年十二月三十一日止年度，根據光伏行業的負面預期，本集團太陽能硅棒／硅片分部的若干附屬公司物業、廠房及設備的可收回金額低於其賬面值。本集團評估可收回金額，亦因此，太陽能硅棒／硅片分部的若干附屬公司的物業、廠房及設備的賬面值已減記至其可收回金額。物業、廠房及設備減值確認減值虧損人民幣15,167,000元。太陽能硅棒／硅片分部的可收回金額的估計基於使用價值。稅後折現率為14.50%。管理層認為，可收回金額所依據的關鍵假設的任何合理可能變動均不會導致賬面金額超過其可收回金額。用於計算使用價值的關鍵假設是收入和運營成本。



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15. Intangible assets

15. 無形資產

		Customer relationships 客戶關係 RMB'000 人民幣千元	Customer contracts 客戶合約 RMB'000 人民幣千元	Patents 專利 RMB'000 人民幣千元	Total 總額 RMB'000 人民幣千元
Cost:	成本：				
At 1 January and 31 December 2019	於二零一九年一月一日 及十二月三十一日	185,230	2,411	67,228	254,869
Accumulated amortisation and impairment losses:	累計攤銷及減值虧損：				
At 1 January and 31 December 2019	於二零一九年一月一日 及十二月三十一日	(185,230)	(2,411)	(67,228)	(254,869)
Net book value:	賬面淨值：				
At 31 December 2019	於二零一九年 十二月三十一日	—	—	—	—



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15. Intangible assets (continued)

15. 無形資產 (續)

		Customer relationships 客戶關係 RMB'000 人民幣千元	Customer contracts 客戶合約 RMB'000 人民幣千元	Patents 專利 RMB'000 人民幣千元	Total 總額 RMB'000 人民幣千元
Cost:	成本：				
At 1 January and 31 December 2018	於二零一八年一月一日及十二月三十一日	185,230	2,411	67,228	254,869
Accumulated amortisation and impairment losses:	累計攤銷及減值虧損：				
At 1 January and 31 December 2018	於二零一八年一月一日及十二月三十一日	(185,230)	(2,411)	(67,228)	(254,869)
Net book value:	賬面淨值：				
At 31 December 2018	於二零一八年十二月三十一日	—	—	—	—

The intangible assets were fully impaired during the year ended 31 December 2012.

無形資產已於截至二零一二年十二月三十一日止年度悉數減值。

16. Goodwill

16. 商譽

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Cost:	成本：		
At 1 January and 31 December	於一月一日及十二月三十一日	208,237	208,237
Accumulated impairment losses:	累計減值虧損：		
At 1 January and 31 December	於一月一日及十二月三十一日	(208,237)	(208,237)
Carrying amount:	賬面值：		
At 31 December	於十二月三十一日	—	—

The goodwill was fully impaired during the year ended 31 December 2012.

商譽已於截至二零一二年十二月三十一日止年度悉數減值。



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17. Leases

The Group as a lessee

The Group has lease contracts for office rental. Lump sum payments were made upfront to acquire the leased land from the owners with lease periods of 20 to 30 years, and no ongoing payments will be made under the terms of these land leases. Generally, the Group is restricted from assigning and subleasing the leased assets outside the Group.

(a) Prepaid land lease payments (before 1 January 2019)

		RMB'000 人民幣千元
Carrying amount at 1 January 2018	二零一八年一月一日的賬面額	146,233
Recognised in profit or loss during the year	年內損益確認	(4,244)
Carrying amount at 31 December 2018	二零一八年十二月三十一日的賬面額	141,989

(b) Right-of-use assets

The carrying amounts of the Group's right-of-use assets and the movements during the year are as follows:

		Leasehold lands 租賃土地 RMB'000 人民幣千元	Office buildings 辦公大樓 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
As at 1 January 2019	於二零一九年一月一日	143,154	1,245	144,399
Additions	增加	12,452	—	12,452
Depreciation charge	折舊費用	(4,719)	(996)	(5,715)
As at 31 December 2019	於二零一九年十二月三十一日	150,887	249	151,136

17. 租賃

本集團作為承租人

本集團有辦公室租金租賃合同。一次性付清全部款項給業主從而獲得租賃期為20至30年的租賃土地。根據這些土地租賃的條款，將不會持續付款。一般而言，本集團不得在本集團以外轉讓及轉租租賃資產。

(a) 預付土地租賃款(二零一九年一月一日之前)

(b) 使用權資產

本集團的使用權資產的賬面金額和年度變動如下：

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17. Leases (continued)

The Group as a lessee (continued)

(c) Lease liabilities

The carrying amount of lease liabilities and the movements during the year are as follows:

		2019 二零一九年 Lease liabilities 租賃負債 RMB'000 人民幣千元	2018 二零一八年 Finance lease payables 融資租賃 應付款項 RMB'000 人民幣千元
Carrying amount at 1 January	於一月一日之賬面額	2,410	9,840
New leases	新租賃	—	—
Accretion of interest recognised during the year	年內確認之利息增加	127	543
Payments	付款	(1,149)	(10,383)
Carrying amount at 31 December	於十二月三十一日之賬面值	1,388	—
Analysed into:	分析如下:		
Current portion	即期部分	376	—
Non-current portion	非即期部分	1,012	—

(d) The amounts recognised in profit or loss in relation to leases are as follows:

17. 租賃(續)

本集團作為承租人(續)

(c) 租賃負債

年內租賃負債的賬面金額和變動如下：

(d) 在損益中確認與租賃有關的金額如下：

		2019 二零一九年 RMB'000 人民幣千元
Interest on lease liabilities	租賃負債利息	127
Depreciation charge of right-of-use assets lease liabilities (included in cost of sales)	使用權資產折舊費用 租賃負債(已包含在銷售成本中)	5,715
Total amount recognised in profit or loss	計入損益的總額	5,842



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18. Prepayments for raw materials

In order to secure a stable supply of polysilicon materials, the Group entered into short-term and long-term contracts with certain raw material suppliers and made advance payments to these suppliers which are to be offset against future purchases. Prepayments for raw materials where the Group expects to receive the raw materials more than twelve months after the end of the reporting period are classified as non-current assets and to receive within one year are classified as current assets. There was no prepayment for raw materials made to a related party as at 31 December 2019 (31 December 2018: Nil).

As at 31 December 2014, management reassessed the prepayments for potential impairment and identified one of the suppliers, from which the Group allegedly failed to purchase the quantities of polysilicon under the long-term supply contract, and therefore made a full impairment provision of US\$11,500,000. As at 31 December 2019, the amount of impairment provision remained the same which was equivalent to RMB80,266,000.

Based on the updated assessment by management for the year ended 31 December 2019, no further impairment or reversal of impairment was made during the year ended 31 December 2019. The movement in the impairment provision during the year merely represented exchange adjustments.

19. Investments in associates

18. 原材料預付款項

為確保有穩定多晶硅原材料供應，本集團與若干原材料供應商訂立短期及長期合約並向該等供應商支付預付款項，該等款項將於日後購買中抵銷。本集團預期於報告期間結算日後十二個月以上方取得原材料的原材料預付款項分類為非流動資產，並將一年內取得原材料的原材料預付款項分類為流動資產。於二零一九年十二月三十一日，概無支付予關聯方的原材料預付款項(二零一八年十二月三十一日：無)。

於二零一四年十二月三十一日，管理層已對預付款項的潛在減值重新作出評估，並已確認其中一名供應商，本集團據稱未有根據長期供應合約向其購買其數量的多晶硅，並因此全額計提了11,500,000美元的撥備。截至二零一九年十二月三十一日，撥備金額維持不變，折合人民幣80,266,000元。

根據管理層於截至二零一九年十二月三十一日止年度更新的評估，於截至二零一九年十二月三十一日止年度概無就減值進一步計提撥備或撥回減值。年內減值撥備變動僅為匯兌調整。

19. 於聯營公司的投資

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Share of net assets	應佔資產淨值	157	5,591



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19. Investments in associates (continued)

The following list contains the particular of the associates, which are unlisted corporate entities:

19. 於聯營公司的投資 (續)

下表載列聯營公司的詳情，其為非上市公司實體：

Name of associate	Form of business structure	Place of establishment and business	Registered and paid-in capital	Percentage of ownership interest attributable to the Group 本集團應佔擁有權百分比	Principal activities
聯營公司名稱	業務架構形式	註冊成立及業務地點	註冊及實繳資本		主要業務
Jinzhou Chengguang New Energy Technology Co., Ltd. ("Chengguang") 錦州城光新能源科技有限公司(「城光」)	Incorporated 註冊成立	The PRC/ Mainland China 中國／中國大陸	Registered capital of RMB10,000,000 and paid-in capital of RMB10,000,000 註冊資本人民幣10,000,000元及實繳資本人民幣10,000,000元	49	Construction of photovoltaic power plants 建造光伏電站
Jiangsu Oriental Huida New Energy Technology Co., Ltd. ("Huida") 江蘇東方惠達新能源科技有限公司(「惠達」)	Incorporated 註冊成立	The PRC/ Mainland China 中國／中國大陸	Registered capital of RMB20,000,000 and paid-in capital of RMB4,700,000 註冊資本人民幣20,000,000元及實繳資本人民幣4,700,000元	30	Construction of photovoltaic power plants 建造光伏電站
Liaoning Little Giant Energy Technology Co., Ltd. ("Little Giant") 遼寧小巨人新能源科技有限公司(「小巨人」)	Incorporated 註冊成立	The PRC/Mainland China 中國／中國大陸	Registered capital of RMB10,000,000 and paid-in capital of RMB2,000,000 註冊資本人民幣10,000,000元及實繳資本人民幣2,000,000元	30	Construction of photovoltaic power plants 建造光伏電站

All of the above associates are accounted for using the equity method in the consolidated financial statements.

上述全部聯營公司均使用權益法於綜合財務報表內入賬。



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19. Investments in associates (continued)

Summarised financial information of the material associates, adjusted for any differences in accounting policies, and reconciled to the carrying amounts in the consolidated financial statements, is disclosed below:

19. 於聯營公司的投資 (續)

主要聯營公司的財務資料概要經任何會計政策差異調整及與綜合財務報表內賬面值對賬後披露如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Share of the associates' loss for the year	本年度應佔聯營公司虧損的份額	1,330	1,461
Share of the associates' total comprehensive loss	應佔聯營公司全面虧損總額	1,330	1,461
Aggregate carrying amount of the Group's investments in the associates	本集團於聯營公司之投資賬面總額	157	5,591

In June 2019, the Group provided a full impairment for its investment in 49% equity interest of Jinzhou Chengguang New Energy Technology Co., Ltd. which was unable to commence production as expected and unable to generate expected returns to recover the carrying amount of the investment as at 30 June 2019. The impairment loss recognised was RMB4,104,000.

於二零一九年六月，本集團就其於錦州城光新能源科技有限公司49%股權的投資提供全額減值，該公司無法按預期投產，亦無法產生預期回報以收回其賬面值截至二零一九年六月三十日的投資額。已確認的減值損失為人民幣4,104,000元。



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20. Equity investments designated at fair value through other comprehensive income/available-for-sale investments

20. 以公允價值計量且其變動計入其他綜合收益的權益投資／可供出售投資

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
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		
Unlisted equity investments, at fair value	非上市權益投資，按公平值		
Jinzhou Xincheng Yangguang Power Plants Co., Ltd.	錦州信誠陽光電站有限公司	—	2,430
Jiangsu Yueyang Photovoltaic Technology Co., Ltd.	江蘇悅陽光伏科技有限公司	1,800	—

In February 2019, The Group withdraw its investment in 19% equity interest of Jinzhou Xincheng Yangguang Power Plants Co., Ltd. ("Xincheng Power Plant") as this investment no longer coincide with the Group's investment strategy. Xincheng Power Plant was deregistered with Jinzhou Municipal Administration of Industry and Commerce according to common decision of the Group and other shareholders of Xincheng Power Plant. The Group had proceeds of RMB2,051,000 in cash from this investment withdrawal.

二零一九年二月，本集團撤回了對錦州信誠陽光電站有限公司(以下簡稱「信誠電站」) 19%股權的投資，因為該投資不再符合本集團的投資策略。根據本集團及信誠電站其他股東的共同決定，信誠電站已向錦州市工商局註銷。本集團從該項退出投資中獲得現金收益為人民幣2,051,000元。

In July 2019, the Group invested RMB1,800,000 in cash for 15% equity interest of Jiangsu Yueyang Photovoltaic Technology Co., Ltd., a photovoltaic product manufacturer which commenced production in November of 2019.

於二零一九年七月，本集團以現金人民幣1,800,000元購買江蘇悅陽光伏科技有限公司15%的股權，江蘇悅陽光伏科技有限公司是一間光伏產品製造商並於二零一九年十一月投產。



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21. Deferred tax

The components of deferred tax assets/(liabilities) recognised in the consolidated statement of financial position and the movements during the year are as follows:

21. 遞延稅項

於綜合財務狀況表確認的遞延稅項資產／(負債)的項目及年內變動如下：

		Deferred income	Fair value adjustment on business combination	Provision for doubtful debt and inventories	Depreciation allowance in excess of related depreciation	Provision for warranties	Losses available for offsetting against future taxable profits	Others	Total
		遞延收入	業務合併的公平值	呆賬及存貨撥備	折舊撥備 超逾相關折舊	保用撥備	應納稅利潤 可供日後 抵銷的虧損	其他	總計
		RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元	RMB'000 人民幣千元
At 1 January 2018	於二零一八年一月一日	739	(2,710)	3,038	(71)	21,879	8,475	632	31,982
(Charged)/credited to profit or loss (note 11)	於損益(扣除)/計入(附註11)	(739)	72	2,031	31	(704)	13,290	(632)	13,349
At 31 December 2018	於二零一八年十二月三十一日	—	(2,638)	5,069	(40)	21,175	21,765	—	45,331
At 1 January 2019	於二零一九年一月一日	—	(2,638)	5,069	(40)	21,175	21,765	—	45,331
(Charged)/credited to profit or loss (note 11)	於損益(扣除)/計入(附註11)	—	74	(4,898)	40	(15,377)	(11,161)	—	(31,322)
At 31 December 2019	於二零一九年十二月三十一日	—	(2,564)	171	—	5,798	10,604	—	14,009

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21. Deferred tax (continued)

Deferred tax assets not recognised

At 31 December 2019, the Group has not recognised deferred tax assets in respect of unused tax losses of RMB1,189,560,000 (31 December 2018: RMB695,958,000) and RMB209,192,000 (31 December 2018: RMB158,443,000) attributable to its subsidiaries in Mainland China and Hong Kong, respectively, and certain deductible temporary differences of RMB190,748,000 (31 December 2018: RMB331,402,000), as it is not probable that future taxable profits against which the losses or deductible temporary differences can be utilised will be available in the relevant tax jurisdictions and entities.

Included in the unrecognised tax losses, RMB209,192,000 (31 December 2018: RMB158,443,000) may be carried forward indefinitely and the remaining balance will expire at various dates up to 2023.

Deferred tax liabilities not recognised

At 31 December 2019, taxable temporary differences relating to the undistributed profits of certain subsidiaries of the Group established in the PRC amounted to RMB9,962,000 (2018: RMB10,281,000). No deferred tax liabilities have been recognised in respect of the withholding tax that would be payable on distribution of these retained profits as the Company controls the dividend policy of these subsidiaries and it has been determined that it is probable that profits from these subsidiaries will not be distributed in the foreseeable future.

21. 遞延稅項 (續)

尚未確認遞延稅項資產

於二零一九年十二月三十一日，本集團並無就分別於中國大陸及香港的附屬公司人民幣1,189,560,000元(二零一八年十二月三十一日：人民幣695,958,000元)及人民幣209,192,000元(二零一八年十二月三十一日：人民幣158,443,000元)的應佔未動用稅項虧損及若干可扣減暫時差額人民幣190,748,000元(二零一八年十二月三十一日：人民幣331,402,000元)確認遞延稅項資產，原因為相關稅務司法權區及實體不大可能會有未來應課稅利潤以供動用虧損或可扣減暫時差額。

未確認稅項虧損中的人民幣209,192,000元(二零一八年十二月三十一日：人民幣158,443,000元)可無限期結轉，餘額將於截至二零二三年的不同日期屆滿。

尚未確認遞延稅項負債

於二零一九年十二月三十一日，與本集團於中國成立的若干附屬公司未分派利潤有關的應課稅暫時差額為人民幣9,962,000元(二零一八年：人民幣10,281,000元)。概無就分派該等保留利潤應付的預扣稅項確認任何遞延稅項負債，原因是本公司控制該等附屬公司的股息政策，而其已決定該等附屬公司於可見未來分派利潤的機會不大。



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22. Inventories

(a) Inventories in the consolidated statement of financial position comprise:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Materials and supplies	材料及供應品	248,263	133,977
Finished goods	製成品	161,665	256,214
Less: Write-down of inventories to net realisable value	減：存貨撇減至可變現淨值	(15,818)	(42,823)
		394,110	347,368

(b) The analysis of the amount of inventories sold is as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Carrying amount of inventories sold	已售存貨的賬面值	3,774,729	2,925,935
Write-down of inventories	存貨撇減	—	27,621
Reversal of write-down of inventories	存貨撇減回沖	(27,005)	—
		3,747,724	2,953,556

22. 存貨

(a) 綜合財務狀況表所載存貨包括：

(b) 已售的存貨金額分析如下：

23. Trade and bills receivables

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Trade receivables	應收貿易賬款	1,286,963	1,387,746
Bills receivable	應收票據	80,310	213,893
Less: Impairment	減：減值	(92,669)	(117,916)
		1,274,604	1,483,723

23. 應收貿易賬款及票據



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23. Trade and bills receivables (continued)

An ageing analysis of the trade and bills receivables as at the end of the reporting period, based on the invoice date and net of loss allowance, is as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Within 1 month	一個月內	410,124	546,396
1 to 3 months	一至三個月	109,485	349,844
4 to 6 months	四至六個月	73,823	164,867
7 to 12 months	七至十二個月	377,952	339,784
Over 1 year	超過一年	303,220	82,832
		1,274,604	1,483,723

The Group normally allows a credit period of 30-90 days to 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. In addition, 10% of the total amount of receivables are retained as deposits in some domestic contracts, and will generally be recovered in approximately one year. As a result, the trade receivables turnover days of module sales are generally longer.

The movements in the loss allowance for impairment of trade receivables are as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
At beginning of year	於年初	117,916	73,350
Exchange adjustments	匯兌調整	—	1,248
Impairment losses (note 7)	已確認減值損失(附註7)	5,213	44,211
Amount written off as uncollectible	撇銷為不可收回之款項	(30,460)	(893)
At end of year	於年末	92,669	117,916

23. 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：

本集團一般給予客戶30至90日的信貸期。但針對國內之組件銷售，部分應收帳款的回收需取決於電站建設的工程週期，賬款信貸期較長，達180天。此外，亦需留有應收帳款總額的10%作為一些國內合同之質保金，此質保金一般在約一年內收回。故此，組件銷售之應收貿易賬款週轉日一般較長。

貿易應收款項減值虧損撥備變動如下：



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23. Trade and bills receivables (continued)

Impairment under HKFRS 9 for the year ended 31 December 2018

The decrease (2018: increase) in the loss allowance was due to the significant decrease in the gross carrying amount of loss allowance of RMB30,460,000 (2018: RMB893,000) as a result of the write-off of trade receivables due from a customer.

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables are written off if the Group is satisfied that recovery of the amount is remote.

The Group sells its products to China's large-scale state-owned and multinational enterprises, which have been maintaining good credit ratings with high reputations all over the world. The Group traded with such enterprises and never had any receivables that could not be recovered. Therefore, the directors were of the opinion that no impairment allowance was necessary for China's large-scale state-owned enterprises and multinational enterprises.

The Group applies the simplified approach to the provision for expected credit losses prescribed by HKFRS 9, which permits the use of lifetime expected loss provision for all trade debtors. To measure the expected credit loss on trade debtors excluding receivables from China's large-scale State-owned and multinational enterprises, trade debtors have been grouped based on shared credit risk characteristics and the ageing.

23. 應收貿易賬款及票據 (續)

香港財務報告準則第9號下載至二零一八年十二月三十一日止年度的減值

虧損準備減少(二零一八年：增加)是由於本期沖銷了對客戶的應收貿易賬款，導致虧損準備的賬面總金額大幅減少了人民幣30,460,000元(2018年：人民幣893,000元)。

於各報告日期採用撥備矩陣進行減值分析，以計量預期信貸虧損。該計算反映概率加權結果、貨幣時值及於報告日期可得的有關過往事項、當前狀況及未來經濟條件預測的合理及可靠資料。一般而言，如本集團納該金額的回收率較低時，應收貿易款項則予以撇銷。

本集團向信貸評級良好並且在全球有良好聲譽的大型國有企業以及跨國公司銷售產品。本集團與該類企業的交易沒有出現過未能收回的呆壞賬。因此，管理層認為無需對大型國有企業和跨國公司的應收款項計提壞賬。

香港財務報告準則第9號準則允許對所有貿易債務方使用預計剩餘週期內計提壞賬損失的方法，因此本集團採用了簡化方法計提預期壞賬損失。為了衡量除大型國有企業和跨國公司以外的貿易債務方的預期壞賬損失，我們按照信貸風險特徵和賬齡對貿易債權人進行分類。



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23. Trade and bills receivables (continued)

Set out below is the information about the credit risk exposure on the Group's trade receivables using a provision matrix:

As at 31 December 2019

		Large-scale Chinese state- owned and multinational composite enterprises 大型中國國有和 跨國複合型企業	Within	Between	Between	Between	Over	Total
			1 year	1 and 2 years	2 and 3 years	3 and 4 years	4 years	
			一年內	一年至二年	二年至三年	三年至四年	超過四年	總計
Expected credit loss rates	預期信貸虧損率	—	13.98%	45.37%	61.43%	68.37%	100%	
Gross carrying amount (RMB'000)	賬面總值(人民幣千元)	1,029,665	154,455	24,918	6,634	49,313	21,978	1,286,963
Expected credit losses (RMB'000)	預期信貸虧損 (人民幣千元)	—	21,595	11,304	4,076	33,716	21,978	92,669

As at 31 December 2018

		Large-scale Chinese state- owned and multinational composite enterprises 大型中國國有和 跨國複合型企業	Within	Between	Between	Between	Over	Total
			1 year	1 and 2 years	2 and 3 years	3 and 4 years	4 years	
			一年內	一年至二年	二年至三年	三年至四年	超過四年	總計
Expected credit loss rates	預期信貸虧損率	—	13.46%	44.03%	64.12%	89.76%	100%	
Gross carrying amount (RMB'000)	賬面總值(人民幣千元)	1,122,979	152,140	5,663	24,567	30,410	51,987	1,387,746
Expected credit losses (RMB'000)	預期信貸虧損 (人民幣千元)	—	20,478	2,493	15,752	27,296	51,897	117,916

As at 31 December 2019, bills receivable amounting to RMB52,828,000 (31 December 2018: RMB141,283,000), together with pledged deposits amounting to RMB298,489,000 (31 December 2018: RMB196,300,000) had been pledged as security to banks for issuing bills payable to suppliers amounting to RMB377,194,000 (31 December 2018: RMB661,518,000).

23. 應收貿易賬款及票據(續)

下表載列本集團使用撥備矩陣計算的應收貿易款項的信貸風險資料：

於二零一九年十二月三十一日

於二零一八年十二月三十一日

於二零一九年十二月三十一日，應收票據人民幣52,828,000元(二零一八年十二月三十一日：人民幣141,283,000元)以及已抵押存款人民幣298,489,000元(二零一八年十二月三十一日：人民幣196,300,000元)作為銀行用以開具應付供應商的票據人民幣377,194,000元(二零一八年十二月三十一日：人民幣661,518,000元)應付票據。

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24. Contract assets

24. 合約資產

		31 December 2019 二零一九年 十二月三十一日 RMB'000 人民幣千元	31 December 2018 二零一八年 十二月三十一日 RMB'000 人民幣千元	1 January 2018 二零一八年 一月一日 RMB'000 人民幣千元
Contract assets arising from:	合同資產產生於：			
Processing services	加工服務	351	13,364	35,125
Construction services	建築服務	11	2,127	—
Impairment	減值	(49)	(286)	—
		313	15,205	35,125

The contract assets primarily relate to the Group's right to consideration for work completed and not billed because the rights are conditioned on the Group's future performance in satisfying the respective performance obligations at the reporting date on processing and construction contracts. Upon completion of service and acceptance by the customer, the amounts recognised as contract assets are reclassified to trade receivables. All above contract assets as at 31 December 2019 are expected to be recovered or settled within one year.

合約資產主要與本集團考慮已完成而未結算的工作有關，因為該等權利取決於本集團於報告日期在履行加工及建築合約時履行各自履約責任的未來表現。在客戶完成服務和接受後，確認為合約資產的金額將重新分類為貿易應收款項。截至二零一九年十二月三十一日的所有上述合約資產預計將在一年內收回或結算。



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24. Contract assets (continued)

The movements in the loss allowance for impairment of contract assets are as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
At beginning of year	於年初	286	—
Impairment losses, net (note 7)	減值損失，淨額(附註7)	49	286
Reversal of impairment	減值回沖	(286)	—
At end of year	於年末	49	286

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates for the measurement of the expected credit losses of the contract assets are based on those of the trade receivables as the contract assets and the trade receivables are from the same customer bases.

The Group provides processing services and construction services to China's large-scale state-owned enterprises, which have been maintaining good credit ratings with high reputations. Therefore, the directors were of the opinion that no impairment allowance was needed.

24. 合約資產(續)

合約資產減值虧損撥備的變動如下：

每個報告日期使用撥備矩陣進行減值分析，以計算預期信用損失。因為合約資產及貿易應收款項來自同一客戶基礎，計算合約資產的預期信用損失的撥備率乃根據貿易應收款項計提。

本集團為大型中國國有企業提供加工服務和興建服務，這些企業一直保持良好的信譽評級並享有很高的聲譽。因此，董事認為無需提供減值撥備。

		Large-scale state-owned enterprises 大型國有企業	Within 1 year 一年內	Total 總計
Expected credit loss rates	預期信用損失率	—	14%	
Gross carrying amount (RMB'000)	總賬面金額(人民幣千元)	—	351	351
Expected credit losses (RMB'000)	預期信用損失(人民幣千元)	—	49	49



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25. Prepayments, other receivables and other assets

25. 預付款項、按金及其他應收款項

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Prepayments for raw materials	原材料的預付款項	262,112	174,486
Deductible value-added tax	可扣減增值稅	61,198	53,146
Other receivables	其他應收款項	33,966	20,103
Impairment allowance	減值撥備	(6,800)	(6,800)
		350,476	240,935

The other receivables mainly represent deposits and staff advances, and an impairment analysis is performed at each reporting date by considering the probability of default. Except the separate item of prepayments already impaired, as the financial assets included in the above balances relate to receivables for which there was no recent history of default, no impairment was provided during the year.

其他應收款項主要為存款及員工墊款，並於各報告日期通過考慮違約概率進行減值分析。除已經減值的單項預付款項外，由於上述金額內有關應收款項的財務資產近期並無拖欠記錄，故並無於年內提供減值。

26. 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:

26. 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：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Pledged as security for bank loans	抵押作為銀行貸款的抵押品	63,426	182,025
Others	其他	339,765	243,284
		403,191	425,309

The effective annual interest rate for pledged deposits with banks was 1.22% for the year ended 31 December 2019 (2018: 1.2%).

截至二零一九年十二月三十一日止年度，已抵押予銀行的存款的實際年利率為1.22厘（二零一八年：1.2厘）。



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27. Cash and cash equivalents

27. 現金及現金等價物

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Cash and bank balances	現金及銀行結餘	396,854	239,712

Cash and bank balances totalling RMB146,637,000 (31 December 2018: RMB134,887,000) as at 31 December 2019 are denominated in RMB. The RMB is not freely convertible into other currencies, however, under Mainland China's Foreign Exchange Control Regulations and Administration of Settlement, Sale and Payment of Foreign Exchange Regulations, the Group is permitted to exchange RMB for other currencies through banks authorised to conduct foreign exchange business.

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short term time deposits are made for varying periods of between one day and three months depending on the immediate cash requirements of the Group, and earn interest at the respective short term time deposit rates. The bank balances and pledged deposits are deposited with creditworthy banks with no recent history of default.

於二零一九年十二月三十一日的現金及銀行結餘合共人民幣146,637,000元(二零一八年十二月三十一日：人民幣134,887,000元)以人民幣列值。人民幣不可自由兌換為其他貨幣。然而，根據中國外匯管制條例及結匯、售匯及付匯管理規定，本集團獲批准透過授權銀行將人民幣兌換作外幣以進行外匯業務。

銀行現金根據日常銀行存款利率按浮動利率賺取利息。短期定期存款期限為一天至三個月，視乎本集團的即時現金需求而定，並以相應的短期定期存款利率賺取利息。銀行結餘及已抵押存款已存入近期並無欠款記錄且信用良好的銀行。



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28. Interest-bearing borrowings and Other Borrowings

28. 計息借貸

		2019 二零一九年			2018 二零一八年		
		Effective interest rate (%)	Maturity	RMB'000	Effective interest rate (%)	Maturity	RMB'000
Notes 附註		實際利率 (%)	到期	人民幣千元	實際利率 (%)	到期	人民幣千元
Current:	流動：						
Bank loans — secured	銀行貸款 — 有抵押	(a) 5.655-9.000	2020	862,881	7.14-8.3075	2019	794,500
Bank loans — guaranteed	銀行貸款 — 已擔保	(b) 4.440-7.140	2020	799,615	5.02-8.3075	2019	851,630
Other loans — guaranteed	其他貸款 — 已擔保	5.475	2020	10,464	—	—	—
Current portion of long-term borrowings:	長期借貸的流動部分：						
Other loans — guaranteed	其他貸款 — 已擔保	(b) 1.6-7.5	2020	7,954	1.6-7.5	2019	127,010
Total	合計			1,680,914			1,773,140
Non-current:	非流動：						
Other loans — guaranteed	其他貸款 — 已擔保	(b) 1.6-7.5	2021-2023	129,325	1.6-7.5	2020-2023	17,317
Total	合計			129,325			17,317

(a) The bank borrowings are secured by:

- (i) The Group's property, plant and equipment with the net book value of RMB749,463,000 (2018: RMB454,831,000).
- (ii) The Group's leasehold lands amounting to RMB69,843,000 (2018: RMB51,809,000).
- (iii) The Group's deposits amounting to RMB63,426,000 (2018: RMB182,025,000).

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

(a) 銀行借貸以下列方式作抵押：

- (i) 集團的若干物業、廠房及設備，賬面淨值為人民幣749,463,000元(二零一八年：人民幣454,831,000元)。
- (ii) 集團的土地租賃預付款項為人民幣69,843,000元(二零一八年：人民幣51,809,000元)。
- (iii) 集團的存款為人民幣63,426,000元(二零一八年：人民幣182,025,000元)。

(b) 若干附屬公司的借款由本集團其他附屬公司擔保。

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28. Interest-bearing borrowings and Other Borrowings (continued)

28. 計息借貸 (續)

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Analysed into:	分析為：		
Bank loans repayable:	須予償還的銀行貸款：		
Within one year or on demand	一年內或按要求	1,662,496	1,646,130
Other borrowings repayable:	須予償還的其他借貸：		
Within one year	一年內	18,418	127,010
In the second year	第二年	126,689	4,700
In the third to fifth years, inclusive	第三至五年，包括 首尾兩年	2,636	12,617
		147,743	144,327
		1,810,239	1,790,457

29. Trade and bills payables

29. 應付貿易賬款及票據

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Trade payables	應付貿易賬款	694,660	546,547
Bills payable	應付票據	807,964	894,518
		1,502,624	1,441,065



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29. Trade and bills payables (continued)

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

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Within 1 month	一個月內	263,656	449,254
1 to 3 months	一至三個月	470,864	319,128
4 to 6 months	四至六個月	604,466	267,889
7 to 12 months	七至十二個月	137,950	365,662
Over 1 year	超過一年	25,688	39,132
		1,502,624	1,441,065

- (b) As at 31 December 2019, the Group's bills payable of RMB377,194,000 (31 December 2018: RMB661,518,000) were secured by Group's bills receivable of RMB52,828,000 (31 December 2018: RMB141,283,000) (note 23) and by Group's pledged deposits of RMB298,489,000 (31 December 2018: RMB196,300,000).

29. 應付貿易賬款及票據 (續)

- (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：

- (b) 於二零一九年十二月三十一日，本集團人民幣377,194,000元(二零一八年十二月三十一日：人民幣661,518,000元)的應付票據以本集團人民幣52,828,000元(二零一八年十二月三十一日：人民幣141,283,000元)(附註23)的應收票據以及人民幣298,489,000元(二零一八年十二月三十一日：人民幣196,300,000)的已抵押存款作抵押。



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30. Other payables and accruals

30. 其他應付款項及應計開支

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Other payables and accrued expenses	其他應付款項及應計開支	38,548	82,730
Other tax payables	其他應付稅項	30,036	21,147
Dividends payable	應付股息	152	148
		68,736	104,025

The above amounts are unsecured, interest-free and have no fixed terms of repayment.

上述金額為無抵押，免息且無固定還款期。

31. Contract liabilities

Details of contract liabilities are as follows:

31. 合約負債

合約負債詳情如下：

		31 December 2019 二零一九年 十二月三十一日 RMB'000 人民幣千元	31 December 2018 二零一八年 十二月三十一日 RMB'000 人民幣千元	1 January 2018 二零一八年 一月一日 RMB'000 人民幣千元
Sale of industrial products	銷售工業產品	265,979	64,466	43,850

Contract liabilities include short-term advances received to deliver industrial products. The increase in contract liabilities in 2019 was mainly due to the increase in short-term advances received from customers in relation to the sale of industrial products at the end of the year.

合約負債包括提供工業產品的短期預收款。二零一九年年內合約負債增加主要是由於年底為向客戶銷售工業產品所產生的短期預收款增加所致。



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32. Provisions

32. 撥備

		Provision for warranties	Provision for inventory purchase commitment	Total
		保用撥備 RMB'000 人民幣千元	存貨購買 承擔撥備 RMB'000 人民幣千元	總計 RMB'000 人民幣千元
At 1 January 2018	於二零一八年一月一日	112,639	46,539	159,178
Provisions made	所作撥備	(3,621)	—	(3,621)
Exchange adjustments	匯兌調整	—	2,344	2,344
At 31 December 2018	於二零一八年十二月三十一日	109,018	48,883	157,901
At 1 January 2019	於二零一九年一月一日	109,018	48,883	157,901
Provisions made	所作撥備	18,394	—	18,394
Exchange adjustments	匯兌調整	—	804	804
At 31 December 2019	於二零一九年十二月三十一日	127,412	49,687	177,099

The Group's photovoltaic modules were 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 delivery. 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.

本集團的光伏組件出售時一般附帶自交付日期起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。



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32. Provisions (continued)

The Group has adopted the estimation where the warranty obligation is the equivalent of 1% of photovoltaic modules' revenues, which is consistent with the practice of the solar industry. In light of the historical sharp decline and anticipated long-term decreasing trend of module prices, the Group reassessed and updated the estimation of future warranty costs with effect from 1 January 2019. The accrual basis still stays at 1% as prior assumptions, and based on the historical experience and best estimation, the Group believes that the average selling price of solar modules over the past two years would reflect the estimated warranty cost liability more precisely, as opposed to the current and past spot prices.

A subsidiary of the Group entered into a long-term supply contract (the "Supply Contract") with one of its suppliers in 2011, and made a non-refundable prepayment of US\$11,500,000 in 2012. As at 31 December 2014, the subsidiary recognised an impairment of US\$11,500,000 (equivalent to RMB70,369,000 on 31 December 2014) for the non-refundable prepayment and recognised a provision of US\$7,122,375 (equivalent to RMB43,582,000 on 31 December 2014) for the onerous contract. The balance of provision for impairment of the non-refundable prepayment as of 2019 was RMB80,266,000 (31 December 2018: RMB78,927,000) and the provision for the onerous contract as of 2019 was RMB49,687,000 (31 December 2018: RMB48,883,000).

On 27 April 2018, the supplier filed a complaint and a claim of a sum totalling approximately US\$391,000,000 against the subsidiary for the above alleged breach of the Supply Contract. The case is unsettled and currently in litigation. In early 2020, the subsidiary and the supplier, in principle, agreed to settle the matter through negotiation, the terms of which are confidential and yet to be finalised. Going forward, the subsidiary and the supplier will be engaged in the negotiation and drafting of the terms of a settlement agreement. Based on information currently available to the Group, the directors determined that it was not necessary to make any further provision for the contingent losses from the Supply Contract for the year ended 31 December 2019.

32. 撥備 (續)

本集團已採用相當於1%的光伏組件的收益用於估算保用義務，其符合太陽能行業的做法。鑑於組件價格歷史上的急劇下降和預期長期下降的趨勢，本集團於二零一九年一月一日起重新評估和更新了對未來保用成本的估算，其應計基礎仍如先前的假設保持於1%，並根據歷史經驗和最佳估算，本集團認為，相較以現在和過去的現貨價格為基準，以過去兩年太陽能組件的平均銷售價格為基準，能更準確反映估算保用成本責任。

本集團一間附屬公司與其供應商之一於二零一一年訂立長期供應合約（「供應合約」）並且在二零一二年支付了不可退還的預付款11,500,000美元。於二零一四年十二月三十一日，該附屬公司確認不可退還預付款項減值11,500,000美元（相當於二零一四年十二月三十一日人民幣70,369,000元）並就有償合約確認撥備7,122,375美元（相當於二零一四年十二月三十一日人民幣43,582,000元）。於二零一九年，不可退還的預付款項減值準備餘額為人民幣80,266,000元（二零一八年十二月三十一日：人民幣78,927,000元）及並就有償合約確認撥備為人民幣49,687,000元（二零一八年十二月三十一日：人民幣48,883,000元）。

於二零一八年四月二十七日，供應商就上述涉嫌違反供應合約的附屬公司提出了申訴和總額約為391,000,000美元的索賠。案件尚未解決，目前正在訴訟之中。二零二零年初，該附屬公司和該供應商原則上同意通過談判解決此問題，談判的條款是保密的而尚未定案。今後，該附屬公司和該供應商將參與談判和起草和解協議的條款。根據本集團目前可獲得的信息，本公司董事確定截至二零一九年十二月三十一日止年度毋需就供應合約的或然虧損計提任何其他撥備。



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33. Deferred income

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

Those government grants related to assets are recognised in the consolidated 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.

34. Retirement benefit schemes

Employees of the Group's PRC subsidiaries are required to participate in a defined contribution retirement benefit scheme administered and operated by the local municipal government. The Group's PRC subsidiaries were required to make contributions to the scheme at 20% of the employees' salaries per annum to fund the retirement benefits of the employees.

The Group is required to participate in defined contribution retirement schemes administered and operated by Bureau of Labour Insurance of Taiwan for employees employed in Taiwan. Under the schemes, the employer is required to make contributions to the schemes at 6% of the employees' relevant income. Contributions to the schemes vest immediately.

The Group also operates a Mandatory Provident Fund Scheme (the "MPF scheme") under the Hong Kong Mandatory Provident Fund Schemes Ordinance for employees employed under the jurisdiction of the Hong Kong Employment Ordinance. The MPF scheme is a defined contribution retirement plan administered by independent trustees. Under the MPF scheme, the employer and its employees are each required to make contributions to the plan at 5% of the employees' relevant income, subject to a cap of monthly relevant income of HK\$30,000. Contributions to the MPF scheme vest immediately.

The Group has no other material obligation for the payment of retirement benefits associated with the schemes beyond the contributions described above.

33. 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錦州、青海省西寧和雲南省曲靖興建多個製造廠房及光伏電站而獲得不同的政府補貼。

該等與資產有關的政府補貼最初於綜合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。

34. 退休福利計劃

本集團中國附屬公司僱員須參與由地方市政府管理及營辦的定額供款退休福利計劃。本集團中國附屬公司須按僱員年薪的20%向計劃作出供款，為僱員退休福利提供資金。

本集團須為受聘於台灣的僱員參加由台灣勞工保險局管理及營辦的定額供款退休計劃。根據該等計劃，僱主須按僱員相關收入的6%向計劃作出供款。向計劃作出的供款即時歸屬。

本集團亦已根據香港強制性公積金計劃條例，為其受香港僱傭條例所管轄的僱員設立強制性公積金計劃（「強積金計劃」）。強積金計劃為定額供款退休計劃，由獨立受託人管理。強積金計劃規定僱主及其僱員各自按僱員相關收入的5%向計劃作出供款，以每月相關收入30,000港元為上限。向強積金計劃作出的供款即時歸屬。

除上述供款外，本集團毋須就支付該等計劃有關的退休福利承擔其他重大責任。



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35. Share capital

Authorised and issued share capital

35. 股本

法定及已發行股本

		2019 二零一九年		2018 二零一八年	
		No. of shares 股份數目	'000 千元	No. of shares 股份數目	'000 千元
Authorised:	法定：				
Ordinary shares of HK\$0.1 each	每股面值0.1港元的 普通股	5,000,000,000	HK\$500,000	5,000,000,000	HK\$500,000
Equivalent to	相當於		RMB450,000		RMB450,000
Ordinary shares, issued and fully paid:	已發行及繳足普通股：				
At 1 January and 31 December	於一月一日及 十二月三十一日	3,211,780,566	RMB276,727	3,211,780,566	RMB276,727



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36. Reserves

(1) Share premium

The application of the share premium account is governed by the Companies Law of the Cayman Islands. The share premium is distributable.

(2) General reserve fund

Pursuant to the relevant PRC laws and the articles of association of the Company's subsidiaries established in the PRC, these PRC subsidiaries are required to transfer a minimum of 10% of their distributable profits after taxation based on their PRC statutory financial statements to the general reserve fund until the balance of the fund is at least half of the paid-in capital of the relevant subsidiaries. The amounts allocated to this reserve are determined by the respective boards of directors with reference to the minimum requirement.

For the entities concerned, the general reserve fund can be converted into capital in proportion to the equity holders' existing equity holdings, provided that the balance after such conversion is not less than 25% of the registered capital.

(3) Capital reserve

The capital reserve comprises the fair value of shares allotted and issued over the subscription costs and share options granted to employees of the Group.

(4) Exchange reserve

The exchange reserve comprises all exchange differences arising from the translation of the financial statements of Group companies into the presentation currency. The reserve is dealt with in accordance with the accounting policy set out in note 2.4.

(5) Other reserve

Other reserve mainly represents the differences between considerations of acquisitions of equity interests from non-controlling equity owners and the carrying amount of the proportionate net assets.

36. 儲備

(1) 股份溢價

股份溢價賬的應用受開曼群島公司法規管。股份溢價可予分派。

(2) 一般儲備金

根據有關中國法律及本公司於中國註冊成立的附屬公司的組織章程細則，此等中國附屬公司須將其中國法定財務報表所示的除稅後可分派利潤最少10%轉撥至一般儲備金，直至該儲備金結餘至少達相關附屬公司實繳股本一半為止。各自董事會經參照最低要求後，釐定分配至該儲備的金額。

就有關實體而言，一般儲備金可按權益持有人現時的持股比例兌換為資本，惟兌換後結餘不得少於註冊資本的25%。

(3) 資本儲備

資本儲備為配發及發行予本集團僱員的股份超逾認購成本的部分以及授予彼等的購股權的公平值。

(4) 匯兌儲備

匯兌儲備包括所有因換算本集團財務報表至呈列貨幣而產生的匯兌差額。本儲備按附註2.4所載會計政策處理。

(5) 其他儲備

其他儲備主要指向非控制性權益擁有人收購股權的代價與按比例所佔資產淨值的賬面值之間的差額。



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37. Notes to the consolidated statement of cash flows

(a) Major non-cash transactions

During the year, the Group had non-cash additions to right-of-use assets and lease liabilities of RMB2,410,000 and RMB2,410,000, respectively, in respect of lease arrangements for plant and equipment and land (2018: Nil).

(b) Changes in liabilities arising from financing activities

37. 綜合現金流量表附註

(a) 重大非現金交易

年內，本集團就廠房、設備及土地的租賃安排分別有非現金增加使用權資產及租賃負債人民幣2,410,000元及人民幣2,410,000元(二零一八年：無)。

(b) 融資活動產生的負債變化

		Interest-bearing borrowings	Financial lease payables/Lease liabilities
		計息借款 RMB'000 人民幣千元	融資租賃應付款項／租賃負債 RMB'000 人民幣千元
At 31 December 2018	於二零一八年十二月三十一日	1,790,457	—
Effect of adoption of HKFRS 16	採納香港財務報告準則第16號的影響	—	2,410
At 1 January 2019 (restated)	於二零一九年一月一日(重列)	1,790,457	2,410
Changes from financing cash flows	融資現金流量的變化	21,171	(1,149)
Interest expense	利息費用	—	127
At 31 December 2019	於二零一九年十二月三十一日	1,811,628	1,388
		Interest-bearing Borrowings	Financial lease payables
		計息借款 RMB'000 人民幣千元	租賃負債 RMB'000 人民幣千元
At 1 January 2018	於二零一八年一月一日	2,047,080	9,840
Changes from financing cash flows	融資現金流量的變化	(256,623)	(9,840)
At 31 December 2018	二零一八年十二月三十一日	1,790,457	—



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37. Notes to the consolidated statement of cash flows (continued)

(c) Total cash outflow for leases

The total cash outflow for leases included in the statement of cash flows is as follows:

		2019 二零一九年 RMB'000 人民幣千元
Within financing activities	於融資活動中	1,149

38. Capital commitments

Capital commitments that relate to the purchase of property, plant and equipment outstanding at 31 December 2019 and 2018 not provided for in the financial statements are as follows:

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Contracted but not provided for	已訂約但未計提撥備	9,907	91,341

39. Operating lease commitments

At 31 December 2018, the total future minimum lease payables under non-cancellable operating leases are payable as follows:

		2018 二零一八年 RMB'000 人民幣千元
Within 1 year	一年內	1,745
After 1 year but within 5 years	一年後但五年內	745
After 5 years	五年後	864
		3,354

37. 綜合現金流量表附註(續)

(c) 租賃現金流出總額

現金流量表中包括的租賃現金流出總額如下：

38. 資本承擔

有關購置物業、廠房及設備於二零一九年及二零一八年十二月三十一日尚未償還且並未
在財務報表內撥備的資本承擔如下：

39. 經營租賃承擔

於二零一八年十二月三十一日，根據不可撤銷經營租賃，日後本集團應付的最低租賃付款總額如下：



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40. Related party transactions

In addition to the transactions and balances disclosed elsewhere in the financial statements, the Group had the following material related party transactions:

(a) Key management personnel remuneration

Key management personnel receive compensation in the form of salaries, housing and other allowances, benefits in kind, discretionary bonuses and retirement scheme contributions. Details of key management personnel remuneration are disclosed in note 9. Total remuneration is included in "staff costs" as disclosed in note 7(a).

(b) Transactions with associates and entities controlled by directors of the Company

40. 關聯方交易

除財務報表其他部分所披露的交易及結餘外，本集團有如下重大關聯方交易：

(a) 主要管理人員薪酬

主要管理人員以薪金、住房及其他津貼、實物利益、酌情花紅及退休計劃供款的方式收取酬金。主要管理人員薪酬詳情於附註9披露。薪酬總額撥入「員工成本」，詳情於附註7(a)披露。

(b) 與聯營公司及本公司董事所控制的實體之間的交易

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Sales of goods to: the associates of the Group the entities controlled by the directors of the Company or close family members of the directors	銷售貨品予： 本集團聯營公司 本公司董事或董事的近親所控制的實體	—	213
		77	—
		77	213
Purchases of goods and services 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及服務： 本公司董事或董事的近親所控制的實體	3,925	487

Note:

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 based on the prevailing market prices.

附註：

董事認為，本集團與關聯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。



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40. Related party transactions (continued)

(c) Outstanding balances with related parties

40. 關聯方交易 (續)

(c) 與關聯方之間的尚未償還結餘

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Trade and bills receivables: the associates of the Group the entities controlled by the directors of the Company or close family members of the directors	應收貿易賬款及票據： 本集團聯營公司	103	109
	本公司董事或董事的近親所 控制的實體	17	—
		120	109
Prepayment and other receivables: the entities controlled by the directors of the Company or close family members of the directors	預付款項及其他應收款項： 本公司董事或董事的近親所 控制的實體	3,000	4,207
Trade payables: the 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	340	32
	Receipt in advance: the entities controlled by the directors of the Company or close family members of the directors	預收款項： 本公司董事或董事的近親 所控制的實體	—

Note:

The above 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.

附註：

上述結餘為無抵押、免息及須按要求償還。應收及應付關聯方的貿易賬款均按各自的信貸條款償還或清償。



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41. Financial instruments by category

The carrying amounts of each of the categories of financial instruments as at the end of the reporting period are as follows:

2019

Financial assets

		Financial assets fair value through other comprehensive income 公允價值通過 其他綜合收益 的財務資產 RMB'000 人民幣千元	Financial assets at amortised cost 以攤消 成本列帳的 財務資產 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
Equity investments designated at fair value through other comprehensive income	通過其他綜合收益以公允價值指定的股權投資	1,800	—	1,800
Trade and bills receivables	應收貿易賬款及票據	80,310	1,194,294	1,274,604
Financial assets included in prepayments, other receivables and other assets	計入預付款項、其他應收款項及其他資產的財務資產	—	33,966	33,966
Pledged deposits	已抵押存款	—	403,191	403,191
Cash and cash equivalents	現金及現金等價物	—	396,854	396,854
		82,110	2,028,305	2,110,415

Financial liabilities

41. 按類型劃分的財務工具

於報告期間結算日，各類財務工具的賬面值如下：

二零一九年

財務資產

財務負債

		Financial liabilities at amortised cost 以攤消成本列帳 的財務負債 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
Trade and bills payables	應付貿易賬款及票據	1,502,624	1,502,624
Financial liabilities included in other payables and accruals (note 30)	計入其他應付款項及應計開支的財務負債(附註30)	21,787	21,787
Interest-bearing borrowings	計息銀行及其他借貸	1,810,239	1,810,239
		3,334,650	3,334,650



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41. Financial instruments by category (continued)

2018

Financial assets

		Financial assets fair value through other comprehensive income 公允價值通過 其他綜合收益 的財務資產 RMB'000 人民幣千元	Financial assets at amortised cost 以攤消 成本列帳的 財務資產 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
Equity investments designated at fair value through other comprehensive income	通過其他綜合收益以公允價值指定的股權投資	2,430	—	2,430
Trade and bills receivables	應收貿易賬款及票據	213,893	1,269,830	1,483,723
Financial assets included in prepayments, other receivables and other assets	計入預付款項、其他應收款項及其他資產的財務資產	—	20,103	20,103
Pledged deposits	已抵押存款	—	425,309	425,309
Cash and cash equivalents	現金及現金等價物	—	239,712	239,712
		216,323	1,954,954	2,171,277

Financial liabilities

		Financial liabilities at amortised cost 以攤消成本列帳 的財務負債 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
Trade and bills payables	應付貿易賬款及票據	1,441,065	1,441,065
Financial liabilities included in other payables and accruals (note 30)	計入其他應付款項及應計開支的財務負債(附註30)	68,685	68,685
Interest-bearing borrowings	計息銀行及其他借貸	1,790,457	1,790,457
		3,300,207	3,300,207

41. 按類型劃分的財務工具(續)

二零一八年

財務資產

Financial assets fair value through other comprehensive income 公允價值通過 其他綜合收益 的財務資產 RMB'000 人民幣千元	Financial assets at amortised cost 以攤消 成本列帳的 財務資產 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
2,430	—	2,430
213,893	1,269,830	1,483,723
—	20,103	20,103
—	425,309	425,309
—	239,712	239,712
216,323	1,954,954	2,171,277

財務負債

Financial liabilities at amortised cost 以攤消成本列帳 的財務負債 RMB'000 人民幣千元	Total 總計 RMB'000 人民幣千元
1,441,065	1,441,065
68,685	68,685
1,790,457	1,790,457
3,300,207	3,300,207



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42. Fair value and fair value hierarchy of financial instruments

(a) Financial assets and liabilities measured at fair value

Fair value hierarchy

The following table presents the fair value of financial instruments measured at the end of the reporting period on a recurring basis, categorised into the three-level fair value hierarchy as defined in HKFRS 13 “Fair Value Measurement”. The level into which a fair value measurement is classified is determined with reference to the observability and significance of the inputs used in the valuation technique as follows:

- Level 1 valuations: Fair value measured using only Level 1 inputs, i.e., unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date.
- Level 2 valuations: Fair value measured using Level 2 inputs, i.e., observable inputs which fail to meet Level 1, and not using significant unobservable inputs. Unobservable inputs are inputs for which market data are not available.
- Level 3 valuations: Fair value measured using significant unobservable inputs.

At 31 December 2019, the financial instruments of the Group carried at fair value were equity investments designated at fair value through other comprehensive income and bills receivable.

The following tables illustrate the fair value measurement hierarchy of the Group’s financial instruments:

42. 公平值及公平值層級

(a) 公允價值計量的財務資產及負債 公平值層級

下表列出了在報告期末或在經常性的基礎上，根據香港財務報告準則第13號「公允價值計量」所界定的分為三級的公平值層級的金融工具的公允價值。公允價值計量的級別的分類是參考估值技術中所使用的輸入值的可觀察性和重要性，如下：

- 第一層級估值：公允價值的計量僅使用第一層級輸入值，即於計日期活躍市場中相同資產或負債的未調整的報價。
- 第二層級估值：公允價值的計量使用第二層級輸入值，即無法滿足第一層級的可觀察輸入值，並且不使用重大不可觀察的輸入值。不可觀察的輸入值為沒有市場數據的輸入值。
- 第三層級估值：公允價值的計量僅使用重大不可觀察的輸入值。

截至二零一九年十二月三十一日，本集團以公允價值計量的金融工具是股權投資，並被界定為以公允價值計量且其變動計入其他綜合收益的金融工具。該等金融工具屬於上描公允價值層級中的第三層級。

下表詮釋了集團金融工具的公允價值計量層級：

Fair value measurements as at 31 December 2019 categorised into 於二零一九年十二月三十一日的公允價值計量分類為

		Quoted prices in active markets for identical assets (Level 1) 相同資產的 活躍市場報價 (第一層級) RMB'000 人民幣千元	Significant other observable inputs (Level 2) 重要的 其他可觀察輸入 (第二層級) RMB'000 人民幣千元	Significant unobservable inputs (Level 3) 重大 不可觀察輸入 (第三層級) RMB'000 人民幣千元
Financial assets	財務資產			
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 收益的股權投資	1,800	—	1,800
Bills receivable	應收票據	80,310	80,310	—
		82,110	80,310	1,800



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42. Fair value and fair value hierarchy of financial instruments (continued)

- (b) Fair values of financial assets and liabilities carried at other than fair value

The carrying amounts of the Group's financial instruments carried at cost or amortised cost were not materially different from their fair values as at 31 December 2019 and 31 December 2018.

43. Financial risk management objectives and policies

The Group's primary objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders, by pricing products and services commensurately with the level of risk and by securing access to finance at a reasonable cost.

Exposure to credit, liquidity, interest rate and currency risks arises in the normal course of the Group's businesses. The Group's exposure to these risks and the financial risk management policies and practices used by the Group to manage these risks are described below.

- (a) Credit risk

The Group trades only with recognised and creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis and the Group's exposure to bad debts is not significant. For transactions that are not denominated in the functional currency of the relevant operating unit, the Group does not offer credit terms without the specific approval of the Head of Credit Control.

Maximum exposure and year-end staging

The tables below show the credit quality and the maximum exposure to credit risk based on the Group's credit policy, which is mainly based on past due information unless other information is available without undue cost or effort, and year-end staging classification as at 31 December.

42. 公平值及公平值層級 (續)

- (b) 以公允價值以外列賬的財務資產和負債的公允價值

截至二零一九年十二月三十一日及二零一八年十二月三十一日，本集團以成本或攤銷成本列賬的財務工具的賬面金額跟其公允價值並沒有重大差異。

43. 財務風險管理目的及政策

本集團管理資金的首要目的為根據風險水平釐定產品及服務價格以及按合理成本取得融資，藉此保障本集團能持續營運，繼續為股東提供回報與為其他權益持有人帶來利益。

本集團所承擔的信貸、流動資金、利率及外匯風險來自本集團的日常業務。本集團承擔的有關風險以及本集團就管理該等風險所採用的財務風險管理政策及慣例載列如下。

- (a) 信貸風險

本集團僅與享譽盛名兼信譽可靠的第三方進行交易。按照本集團的政策，所有擬按信貸條款進行交易的客戶必須通過信貸核實程序後，方可作實。此外，本集團會持續監察應收結餘的情況，而本集團之壞賬風險並不重大。對於未使用相關經營單位功能貨幣計價的交易，未經信貸控制負責人的特別批准，本集團不會提供信貸條款。

最高風險及年末階段

下表顯示根據本集團信貸政策之信貸質素及信貸風險之最大風險(其主要根據過往逾期資料(除非毋耗費過度成本或努力而可取得其他資料)釐定)及於十二月三十一日之年末階段分類。



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43. Financial risk management objectives and policies (continued) 43. 財務風險管理目的及政策 (續)

(a) Credit risk (continued)

Maximum exposure and year-end staging (continued)

As at 31 December 2019

(a) 信貸風險 (續)

最高風險及年末階段 (續)

於二零一九年十二月三十一日

		12-month ECLs 12個月 預期信貸 虧損	Lifetime ECLs 全期預期信貸虧損			
		Stage 1 第1階段 RMB'000 人民幣千元	Stage 2 第2階段 RMB'000 人民幣千元	Stage 3 第3階段 RMB'000 人民幣千元	Simplified approach 簡化方法 RMB'000 人民幣千元	RMB'000 人民幣千元
Trade receivables*	應收貿易賬款*	—	—	—	1,286,963	1,286,963
Bills receivable	應收票據					
— Not yet past due	— 並未逾期	80,310	—	—	—	80,310
Financial assets included in prepayments and other current assets	財務資產已包括預付 款項、及其他流動 資產					
— Normal**	— 正常**	350,476	—	—	—	350,476
— Doubtful**	— 呆賬**	6,800	—	—	—	6,800
Restricted deposits	限制存款					
— Not yet past due	— 並未逾期	403,191	—	—	—	403,191
Cash and cash equivalents	現金及現金等值項目					
— Not yet past due	— 並未逾期	396,854	—	—	—	396,854
		1,237,631	—	—	1,286,963	2,524,594

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43. Financial risk management objectives and policies (continued)

(a) Credit risk (continued)

Maximum exposure and year-end staging (continued)

As at 31 December 2018

		12-month ECLs 12個月 預期信貸 虧損	Lifetime ECLs			
			Stage 1 第1階段 RMB'000 人民幣千元	Stage 2 第2階段 RMB'000 人民幣千元	Stage 3 第3階段 RMB'000 人民幣千元	Simplified approach 簡化方法 RMB'000 人民幣千元
Trade receivables*	應收貿易賬款*	—	—	—	1,387,746	1,387,746
Bills receivable	應收票據					
— Not yet past due	— 並未逾期	213,893	—	—	—	213,893
Financial assets included in prepayments and other current assets	財務資產已包括預付款項、及其他流動資產					
— Normal**	— 正常**	240,935	—	—	—	240,935
— Doubtful**	— 呆賬**	6,800	—	—	—	6,800
Restricted deposits	限制存款					
— Not yet past due	— 並未逾期	425,309	—	—	—	425,309
Cash and cash equivalents	現金及現金等值項目					
— Not yet past due	— 並未逾期	239,712	—	—	—	239,712
		1,126,649	—	—	1,387,746	2,514,395

* For trade receivables included in trade and bills receivable, to which the Group applies the simplified impairment, information based on the provision matrix is disclosed in note 23 to the financial statements.

** The credit quality of the financial assets included in prepayments and other current assets and financial assets included in other non-current assets is considered to be "normal" when they are not past due and there is no information indicating that the financial assets had a significant increase in credit risk since initial recognition. Otherwise, the credit quality of the financial assets is considered to be "doubtful".

Further quantitative disclosures in respect of the Group's exposure to credit risk arising from trade and bills receivable, and prepayments and other current assets are set out in notes 23 and 25.

43. 財務風險管理目的及政策 (續)

(a) 信貸風險 (續)

最高風險及年末階段 (續)

於二零一八年十二月三十一日

* 就本集團應用減值簡化方法之應收貿易賬款 (包括應收貿易賬款及票據) 而言，根據撥備矩陣之資料於財務報告附註23內披露。

** 當計入預付款項、其他流動資產及財務資產之財務資產並無逾期且並無資料顯示財務資產自初步確認以來之信貸風險已大幅上升時，其信貸質素被視為「正常」。否則，財務資產之信貸質素被視為「呆賬」。

本集團面臨對應收貿易賬款及票據、預付款項及其他流動資產所產生之信貸風險有關之進一步定量數據分別於財務報告附註23及25披露。

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43. Financial risk management objectives and policies (continued)

(b) Liquidity risk

As detailed in note 2.1, the Group's current liabilities exceeded its current assets by RMB755,884,000 as at 31 December 2019. The liquidity of the Group is primarily depending 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. Management is taking certain actions to address these conditions in accordance with the Group's policy of regularly monitoring its current and expected liquidity requirements to ensure that it maintains sufficient reserves of cash and adequate committed lines of funding from major financial institutions to meet its liquidity requirements in the short and longer term. These actions include negotiating with banks to renew the short term loans and to explore the availability of alternative sources of financing. Further details of these actions and bank loans concerned are set out in note 2.1.

The following tables show the remaining contractual maturities at the end of the reporting period of the Group's financial liabilities, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on rates current at the end of the reporting period) and the earliest date the Group can be required to pay.

43. 財務風險管理目的及政策 (續)

(b) 流動資金風險

據附註2.1所詳述，本集團於二零一九年十二月三十一日的流動負債超逾其流動資產人民幣755,884,000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。根據本集團定期監察其當期和預期流動資金的需求的政策，管理層已就該等情況採取若干行動，以確保其維持充裕現金儲備及向各大金融機構取得充足承諾信貸額度，以應付長短期的流動資金需求。該等行動包括與銀行進行磋商以更新短期貸款及開拓其他融資渠道。該等行動及銀行貸款的進一步詳情載於附註2.1。

下表載列本集團財務負債於報告期間結算日的餘下合約年限，有關財務負債乃以未折現合約現金流量(包括根據合約利率或(如為浮息)根據報告期間結算日當前利率計算的利息付款)以及本集團須還款的最早日期作為基礎。



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43. Financial risk management objectives and policies (continued)

(b) Liquidity risk (continued)

		2019 二零一九 Contractual undiscounted cash outflow 未折現合約現金流出					
		Carrying amount at 31 December 於十二月三十一日的賬面值 RMB'000 人民幣千元	Total 總額 RMB'000 人民幣千元	Within 1 year or on demand 一年內或接獲通知時 RMB'000 人民幣千元	More than 1 year but less than 2 years 超過一年但少於兩年 RMB'000 人民幣千元	More than 2 years but less than 5 years 超過兩年但少於五年 RMB'000 人民幣千元	More than 5 years 超過五年 RMB'000 人民幣千元
Short-term bank loans	短期銀行貸款	1,680,914	1,723,827	1,723,827	—	—	—
Long-term bank and other loans	長期銀行及其他貸款	129,325	151,205	8,317	140,127	2,761	—
Trade and other payables	應付貿易賬款及其他應付款項	1,524,562	1,524,562	1,524,562	—	—	—
		3,334,801	3,399,594	3,256,706	140,127	2,761	—

		2018 二零一八 Contractual undiscounted cash outflow 未折現合約現金流出					
		Carrying amount at 31 December 於十二月三十一日的賬面值 RMB'000 人民幣千元	Total 總額 RMB'000 人民幣千元	Within 1 year or on demand 一年內或接獲通知時 RMB'000 人民幣千元	More than 1 year but less than 2 years 超過一年但少於兩年 RMB'000 人民幣千元	More than 2 years but less than 5 years 超過兩年但少於五年 RMB'000 人民幣千元	More than 5 years 超過五年 RMB'000 人民幣千元
Short-term bank loans	短期銀行貸款	1,773,140	1,835,383	1,835,383	—	—	—
Long-term bank and other loans	長期銀行及其他貸款	17,317	18,385	—	7,434	10,951	—
Trade and other payables	應付貿易賬款及其他應付款項	1,509,750	1,509,750	1,509,750	—	—	—
		3,300,207	3,363,518	3,345,133	7,434	10,951	—



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43. Financial risk management objectives and policies (continued)

(c) Interest rate risk

Except for bank deposits and RMB wealth management products with stable interest rates, the Group has no other significant interest-bearing assets. Accordingly, the Group's income and operating cash flows are substantially independent of changes in market interest rates. Details of the effective interest rates for bank deposits are disclosed in notes 26. The Group's interest rate risk arises mainly from borrowings. Borrowings obtained at variable rates and at fixed rates expose the Group to cash flow interest rate risk and fair value interest rate risk, respectively. The Group does not use derivative financial instruments to hedge its interest rate risk.

(i) Interest rate profile

The following table details the interest rate profile of the Group's net borrowings at the end of the reporting period.

		2019 二零一九年		2018 二零一八年	
		Effective interest rate 實際利率 %	RMB'000 人民幣千元	Effective interest rate 實際利率 %	RMB'000 人民幣千元
Variable rate borrowings	浮息借貸				
Short-term bank and other loans	短期及其他銀行貸款	5.06	110,332	3.64	166,631
Fixed rate borrowings	定息借貸				
Short-term bank and other loans	短期及其他銀行貸款	6.96	1,570,582	6.75	1,606,509
Long-term bank and other loans	長期銀行及其他貸款	2.26	129,325	3.86	17,317
			1,699,907		1,623,826
Total borrowings	借貸總額		1,810,239		1,790,457
Fixed rate borrowings as a percentage of total borrowings	定息借貸佔借貸總額的百分比		93.9%		90.7%

43. 財務風險管理目的及政策 (續)

(c) 利率風險

除穩定利率的銀行存款及人民幣理財產品外，本集團並無其他重大計息資產。因此，本集團的收入及經營現金流量大致上不受市場利率變動影響。有關銀行存款實際利率的詳情於附註26中披露。本集團的利率風險主要來自借貸。浮息及定息借貸使本集團分別承擔現金流利率風險及公平值利率風險。本集團並無使用衍生財務工具對沖其利率風險。

(i) 利率概況

下表詳列本集團於報告期間結算日借貸淨額的利率概況。



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43. Financial risk management objectives and policies (continued) 43. 財務風險管理目的及政策 (續)

(c) Interest rate risk (continued)

(ii) Sensitivity analysis

(c) 利率風險 (續)

(ii) 敏感度分析

			The Group 本集團		
			2019 二零一九年		
Increase/ (decrease) in interest rate 利率上升/ (下跌) %	Increase/ (decrease) in profit 對年度(虧損)/ 利潤的影響 RMB'000 人民幣千元	Increase/ (decrease) in equity 對權益 的影響 RMB'000 人民幣千元			
			2018 二零一八年		
Increase/ (decrease) in interest rate 利率上升/ (下跌) %	Increase/ (decrease) in profit 對年度(虧損)/ 利潤的影響 RMB'000 人民幣千元	Increase/ (decrease) in equity 對權益 的影響 RMB'000 人民幣千元	Increase/ (decrease) in interest rate 利率上升/ (下跌) %	Increase/ (decrease) in profit 對年度(虧損)/ 利潤的影響 RMB'000 人民幣千元	Increase/ (decrease) in equity 對權益 的影響 RMB'000 人民幣千元
1	(1,103)	(1,103)	1	(1,666)	(1,666)
(1)	1,103	1,103	(1)	1,666	1,666

The sensitivity analysis above indicates the corresponding effects for the year and equity that would have arisen assuming that the change in interest rates had occurred at the end of the reporting period and had been applied to the exposure to interest rate risk for the financial instruments in existence at that date. The analysis has been performed on the same basis as 2018.

以上敏感度分析顯示，假設利率變動於報告期間結算日發生，並將利率變動應用於當天存在的財務工具所承擔的利率風險時，本集團所受影響及權益的即時變動。二零一八年的分析是以相同的基準進行。

(d) Currency risk

The Group is exposed to currency risk primarily through sales and purchases, bank loans and cash and bank deposits that are denominated in a foreign currency, i.e. a currency other than the functional currency of the operations to which the transactions relate. The currencies giving rise to this risk are primarily the United States Dollar, Euros, the Hong Kong Dollar, the Japanese Yen and the Chinese Yuan. Management does not expect any significant impact from movements in exchange rates since the Group uses the foreign currencies collected from customers to settle the amounts due to suppliers.

(d) 外匯風險

本集團承受的外匯風險，主要來自以外幣（即與交易相關的業務功能貨幣以外的貨幣）計值的銷售及採購、銀行貸款以及現金及銀行存款。產生該風險的貨幣主要為美元、歐元、港元、日圓及中國元。管理層並不預期匯率變動會造成任何重大影響，原因為本集團使用自客戶收取的外幣清償應付供應商款項。

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43. Financial risk management objectives and policies (continued)

(d) Currency risk (continued)

(i) Exposure to currency risk

The following table details the Group's exposure at the end of the reporting period to currency risk arising from recognised assets or liabilities in the consolidated statement of financial position (after elimination of intercompany receivables and payables) denominated in a currency other than the functional currency of the entity to which they relate.

43. 財務風險管理目的及政策 (續)

(d) 外匯風險 (續)

(i) 外匯風險

下表詳列本集團於報告期間結算日承擔的外匯風險，外匯風險因以相關實體功能貨幣以外貨幣計值的已於綜合財務狀況表(抵銷公司間應收款項及應付款項後)確認的資產或負債而產生。

Exposure to foreign currencies (expressed in Renminbi)
外匯風險(以人民幣列值)

	2019 二零一九年					2018 二零一八年				
	United States Dollars 美元 RMB'000 人民幣千元	Euros 歐元 RMB'000 人民幣千元	Hong Kong Dollars 港幣 RMB'000 人民幣千元	Japanese Yens 日圓 RMB'000 人民幣千元	Chinese Yuan 人民幣元 RMB'000 人民幣千元	United States Dollars 美元 RMB'000 人民幣千元	Euros 歐元 RMB'000 人民幣千元	Hong Kong Dollars 港幣 RMB'000 人民幣千元	Japanese Yens 日圓 RMB'000 人民幣千元	Chinese Yuan 人民幣元 RMB'000 人民幣千元
Trade and other receivables 應收貿易賬款及其他應收賬款	—	80,399	29	—	—	4,143	6,953	—	—	—
Cash at banks and on hand 銀行及手頭現金	1,147	16,966	1,001	643	34,985	19,192	1,834	1,309	6	479
Bank and other loans 銀行及其他貸款	(179,292)	(13,939)	—	—	(120,000)	(195,999)	(10,124)	—	—	(120,000)
Trade and other payables 應付貿易賬款及其他應付款項	(212)	(1,324)	—	—	—	(207)	(459)	—	(749)	—
	(178,357)	82,102	1,030	643	(85,015)	(172,871)	(1,796)	1,309	(743)	(119,521)



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43. Financial risk management objectives and policies (continued)

(d) Currency risk (continued)

(ii) Sensitivity analysis

The following table indicates the instantaneous change in the Group's profit/(loss) for the year and accumulated losses in equity in response to reasonably possible changes in the foreign exchange rates to which the Group has significant exposure at the end of the reporting period.

		2019 二零一九年			2018 二零一八年		
		Increase/ (decrease) in foreign exchange rates 匯率上升 (下跌) / %	Increase/ (decrease) in profit 對年度利潤/ (虧損)的影響 RMB'000 人民幣千元	Increase/ (decrease) in equity 對權益 的影響 RMB'000 人民幣千元	Increase/ (decrease) in foreign exchange rates 匯率上升 (下跌) / %	Increase/ (decrease) in profit 對年度利潤/ (虧損)的影響 RMB'000 人民幣千元	Increase/ (decrease) in equity 對權益 的影響 RMB'000 人民幣千元
United States Dollars	美元	10 (10)	(17,898) 17,844	(17,898) 17,844	10 (10)	(17,287) 17,287	(17,287) 17,287
Euros	歐元	10 (10)	8,343 (8,343)	8,343 (8,343)	10 (10)	(35) 35	(35) 35
Hong Kong Dollars	港幣	10 (10)	66 (66)	66 (66)	10 (10)	131 (131)	131 (131)
Japanese Yens	日圓	10 (10)	(68) 68	(68) 68	10 (10)	(74) 74	(74) 74
Chinese Yuans	人民幣元	10 (10)	(8,502) 8,502	(8,502) 8,502	10 (10)	(11,952) 11,952	(11,952) 11,952

The sensitivity analysis assumes that the change in foreign exchange rates had been applied to re-measure those financial instruments (excluding intercompany receivables and payables which are eliminated in the consolidated financial statements) held by the Group which expose the Group to foreign currency risk at the end of the reporting period. The analysis excludes differences that would result from the translation of the financial statements of Group companies into the presentation currency. The analysis has been performed on the same basis as 2018.

43. 財務風險管理目的及政策 (續)

(d) 外匯風險 (續)

(ii) 敏感度分析

下表顯示本集團因於報告期間結算日承擔重大風險的匯率可能出現合理變動，而致本集團年度利潤/(虧損)及權益累積虧損出現的即時變動。

敏感度分析乃假設已採用有關匯率變動重新計量本集團所持有令其於報告期間結算日承擔外匯風險的該等財務工具(不包括綜合財務報表中抵銷的公司間應收款項及應付款項)。分析不包括將本集團財務報表換算為呈報貨幣所產生的差額。二零一八年的分析是以相同的基準進行。



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43. Financial risk management objectives and policies (continued)

(e) Capital management

The Group actively and regularly reviews and manages its capital structure to maintain a balance between the higher shareholder returns that might be possible with higher levels of borrowings and the advantages and security afforded by a sound capital position, and makes adjustments to the capital structure in light of changes in economic conditions.

The Group monitors its capital structure on the basis of a gearing ratio. For this purpose, the Group defines gearing ratio as total borrowings to the total of share capital and reserves.

The gearing ratios at 31 December 2019 and 2018 were as follows:

		Note 附註	2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Current liabilities:	流動負債：			
Bank and other loans	銀行及其他貸款	28	1,680,914	1,773,140
			1,680,914	1,773,140
Non-current liabilities:	非流動負債：			
Bank and other loans	銀行及其他貸款	28	129,325	17,317
			129,325	17,317
Total borrowings	借貸總額		1,810,239	1,790,457
Share capital	股本		276,727	276,727
Reserves	儲備		156,967	438,999
			433,694	715,726
Gearing ratio	資產負債比率		417.4%	250.2%

Neither the Company nor any of its subsidiaries are subject to externally imposed capital requirements.

43. 財務風險管理目的及政策 (續)

(e) 資金管理

本集團積極定期檢討和管理其資本結構，在高借貸水平所可能帶來更高股東回報，以及穩健資本狀況所提供的優勢和保障兩者中間取得平衡，並因應經濟情況轉變而調整資本結構。

本集團以資產負債比率監察其資本結構。就此而言，本集團將資產負債比率定義為借貸總額相對總股本及儲備的比率。

於二零一九年及二零一八年十二月三十一日的資產負債比率如下：

本公司及其任何附屬公司均毋須遵守外界施加的資本規定。



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44. Events after the reporting period

Given the dynamic circumstances and uncertainties across the global markets to be recovered from the outbreak of the coronavirus disease 2019 ("COVID-19"), as of the reporting date, there was no material adverse effect on the financial statement as a result of the outbreak. However, the Group will continue to closely monitor the development of the situation and accordingly evaluate the impact on the financial position and performance, which will be reflected in the Group's 2020 interim and annual financial statements.

45. Statement of financial position of the Company

Information about the statement of financial position of the Company at the end of the reporting period is as follows:

44. 報告期後事項

鑒於新型冠狀病毒(「COVID-19」)爆發中可恢復的全球市場的動態情況及不確定性，截至報告日並未對本集團產生顯著重大不利影響，惟本集團將繼續密切關注其發展並評估其對財務狀況及表現的影響，以反映於本集團後續二零二零年的中期及年度財務報表中。

45. 本公司財務狀況表

於報告期間結算日本公司財務狀況表的資料如下：

		2019 二零一九年 RMB'000 人民幣千元	2018 二零一八年 RMB'000 人民幣千元
Non-current assets	非流動資產		
Investments in subsidiaries	於附屬公司的投資	1,479,472	1,437,513
		1,479,472	1,437,513
Current assets	流動資產		
Cash at banks and on hand	銀行及手頭現金	1,631	872
		1,631	872
Current liabilities	流動負債		
Other payables	其他應付款項	16,820	9,894
		16,820	9,894
Net current liabilities	流動負債淨額	(15,189)	(9,022)
Total assets less current liabilities	資產總值減流動負債	1,464,283	1,428,491
Net assets	資產淨值	1,464,283	1,428,491
Capital and reserves	資本及儲備		
Share capital	股本	276,727	276,727
Reserves (note)	儲備(附註)	1,187,556	1,151,764
Total equity	權益總額	1,464,283	1,428,491

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45. Statement of financial position of the Company (continued)

Note:

45. 本公司財務狀況表 (續)

附註：

		Share premium 股份溢價 RMB'000 人民幣千元	Exchange reserve 匯兌儲備 RMB'000 人民幣千元	Accumulated losses 累計虧損 RMB'000 人民幣千元	Total equity 權益總額 RMB'000 人民幣千元
Balance at 1 January 2018	於二零一八年一月一日的結餘	1,731,645	(64,978)	(594,666)	1,072,001
Changes in equity for 2018:	二零一八年的權益變動：				
Loss for the year	年度虧損	—	—	(5,491)	(5,491)
Other comprehensive income	其他全面收入	—	85,254	—	85,254
Total comprehensive income	全面收入總額	—	85,254	(5,491)	79,763
Balance at 31 December 2018	於二零一八年十二月三十一日的結餘	1,731,645	20,276	(600,157)	1,151,764
Balance at 1 January 2019	於二零一九年一月一日的結餘	1,731,645	20,276	(600,157)	1,151,764
Changes in equity for 2019:	二零一九年的權益變動：				
Loss for the year	年度虧損	—	—	(5,506)	(5,506)
Other comprehensive income	其他全面收入	—	41,298	—	41,298
Total comprehensive income	全面收入總額	—	41,298	(5,506)	35,792
Balance at 31 December 2019	於二零一九年十二月三十一日的結餘	1,731,645	61,574	(605,663)	1,187,556

46. Approval of the financial statements

The financial statements were approved and authorised for issue by the board of directors on 31 March 2020.

46. 批准財務報表

董事會已於二零二零年三月三十一日核准並許可發出財務報表。





Solargiga Energy



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