GCL

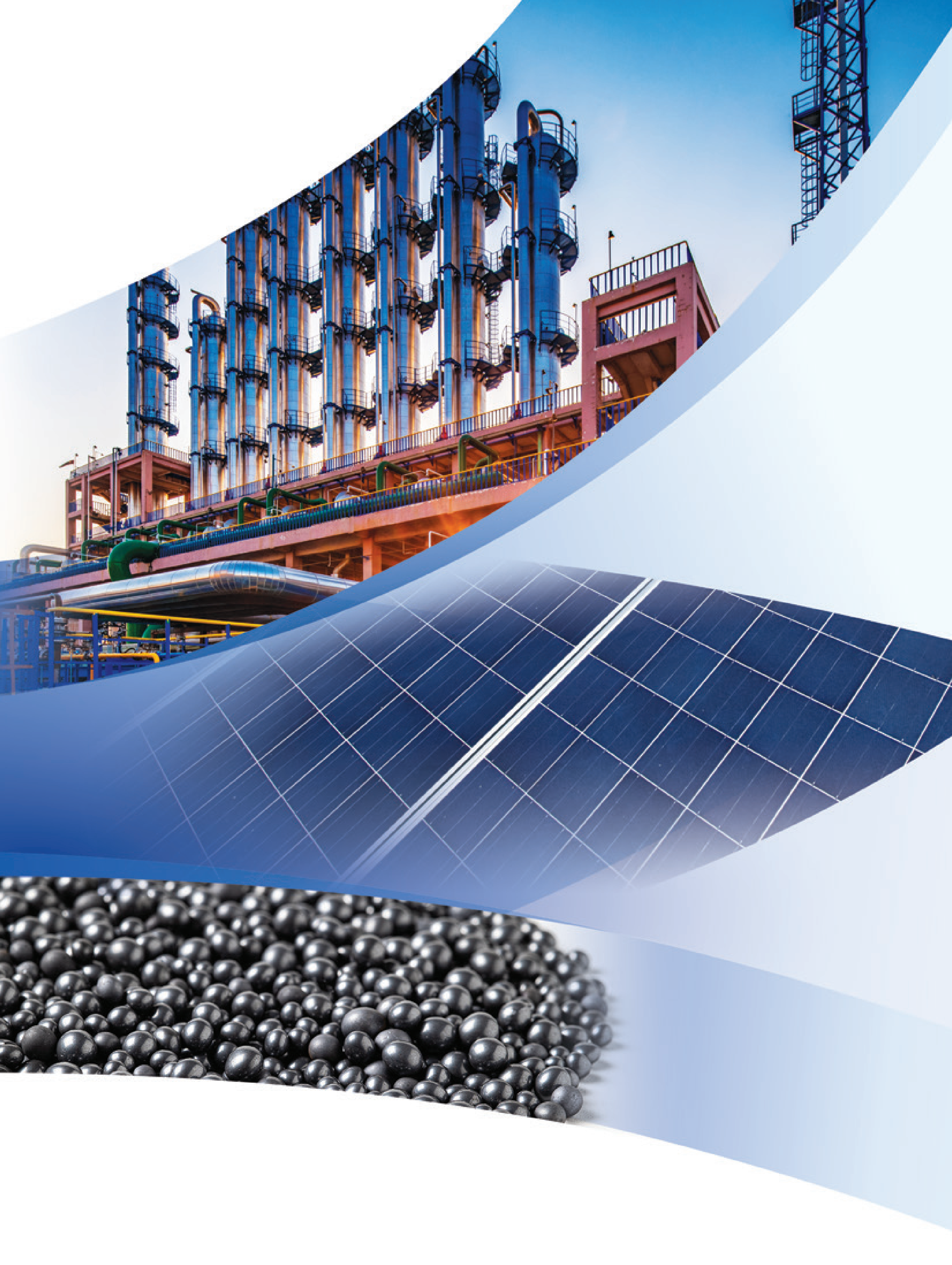
GCL Technology Holdings Limited
協鑫科技控股有限公司

(Formerly known as "GCL-Poly Energy Holdings Limited")
(Incorporated in the Cayman Islands with limited liability)
(Stock Code: 3800)

Technology | Digital | Green

Bringing Green Power to Life

2021
ANNUAL REPORT



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FIVE-YEAR FINANCIAL SUMMARY

	For the year ended 31 December				
	2017	2018	2019	2020	**2021**
	RMB'000	RMB'000	RMB'000	RMB'000	**RMB'000**
Continuing operations					
Revenue	23,794,455	20,565,435	19,249,621	14,671,267	**19,697,978**
Profit (loss) before taxation	2,912,002	(510,795)	317,683	(6,160,755)	**5,292,043**
Income tax (expense) credit	(637,880)	52,361	(206,848)	(110,496)	**(591,036)**
Profit (loss) for the year from continuing operations	2,274,122	(458,434)	110,835	(6,271,251)	**4,701,007**
Discontinued operations					
Profit for the year from discontinued operations	77,112	—	—	—	**—**
Profit (loss) for the year	2,351,234	(458,434)	110,835	(6,271,251)	**4,701,007**
Profit (loss) for the year attributable to:					
Owners of the Company	1,974,398	(693,399)	(197,207)	(5,667,864)	**5,083,952**
Non-controlling interests	376,836	234,965	308,042	(603,387)	**(382,945)**
	2,351,234	(458,434)	110,835	(6,271,251)	**4,701,007**

	At 31 December				
	2017	2018	2019	2020	**2021**
	RMB'000	RMB'000	RMB'000	RMB'000	**RMB'000**
Total assets	107,279,898	112,493,764	100,436,959	80,502,897	**64,097,914**
Total liabilities	79,972,319	85,661,257	73,715,551	60,111,692	**31,796,309**
	27,307,579	26,832,507	26,721,408	20,391,205	**32,301,605**
Equity attributable to owners of the Company	22,775,217	21,865,556	22,250,159	16,589,119	**29,026,013**
Non-controlling interests	4,532,362	4,966,951	4,471,249	3,802,086	**3,275,592**
	27,307,579	26,832,507	26,721,408	20,391,205	**32,301,605**

PERFORMANCE HIGHLIGHTS

	For the year ended 31 December			
	2021 RMB'000	2020 RMB'000	Change RMB'000	% of change
Revenue				
Sales of wafer	**8,456,880**	5,692,391	2,764,489	48.6%
Sales of electricity	**2,909,926**	5,395,710	(2,485,784)	(46.1%)
Sales of polysilicon	**5,964,921**	2,205,836	3,759,085	170.4%
Processing fees	**1,665,103**	830,495	834,608	100.5%
Others*	**701,148**	546,835	154,313	28.2%
	19,697,978	14,671,267	5,026,711	34.3%
Profit (loss) for the year attributable to owners of the Company	**5,083,952**	(5,667,864)	10,751,816	N/A

	RMB Cents	RMB Cents	Change RMB Cents	% of change
Earnings (Loss) per share				
— Basic	**20.68**	(28.06)	48.74	N/A
— Diluted	**20.65**	(28.06)	48.71	N/A

	RMB million	RMB million	Change RMB million	% of change
Adjusted EBITDA**	**9,832**	5,715	4,117	72.0%

* Amount includes the sales of ingots, operation and management services income and solar related supporting services income.

** Definition of adjusted EBITDA is disclosed in the "Management Discussion and Analysis" Section.

	As at 31 December			
	2021 RMB'000	2020 RMB'000	Change RMB'000	% of change
Extracts of consolidated statement of financial position				
Equity attributable to owners of the Company	**29,026,013**	16,589,119	12,436,894	75.0%
Total assets	**64,097,914**	80,502,897	(16,404,983)	(20.4%)
Bank balances and cash, pledged and restricted bank and other deposits#	**9,955,429**	6,348,161	3,607,268	56.8%
Indebtedness##	**12,979,980**	44,115,994	(31,136,004)	(70.6%)
Key financial ratios				
Current ratio	**1.23**	0.62	0.61	98.4%
Quick ratio	**1.19**	0.60	0.59	95.1%
Net debt to equity attributable to owners of the Company	**10.4%**	227.7%	(2.2)	(95.4%)

Amount includes bank balances and cash, pledged bank deposits classified as assets held for sale of RMB23,000,000 (2020: RMB92,000,000).

Indebtedness includes loans from related companies, bank and other borrowings, lease liabilities/obligations under finance leases, notes and bonds payables.

OTHER FINANCIAL ANALYSIS

Profit or Loss Analysis (De-consolidation of GNE Group)

For illustrative purpose, if deconsolidating GCL New Energy Holdings Limited ("GNE") and its subsidiaries ("GNE Group"), the financial results of the Group, GNE Group and the Group (De-consolidated GNE Group) would be as follows:

	The Group A RMB million	GNE Group B RMB million	Deconsolidation adjustments C RMB million	Notes	The Group (De-consolidated GNE Group) D=A-B-C RMB million
Non-current Assets					
Property, Plant and equipment	18,293	5,520	—		12,773
Right-of-use assets	2,299	317			1,982
Interest in associate/Joint venture	10,299	1,354	—		8,945
Investment in perpetual notes of GNE Group	—	—	(1,800)	1	1,800
Investment in subsidiaries	—	—	(2,066)	2	2,066
Pledged and restricted bank deposits and other deposits	465	181	—		284
Deposits, prepayments and other non-current assets and contract assets	2,221	246	—		1,975
Other non-current assets	706	97	—		609
Total Non-current Assets	**34,283**	**7,715**	**(3,866)**		**30,434**
Current Assets					
Inventories	951	—	—		951
Trade and other receivables	17,527	6,320	—		11,207
Pledged and restricted bank deposits	2,765	248	—		2,517
Bank balances and cash	6,702	586	—		6,116
Other current assets	1,870	1,048	(875)	3	1,697
Total Current Assets	29,815	8,202	(875)		22,488
Total Assets	64,098	15,917	(4,741)		52,922
Current liabilities					
Trade and other payables	13,853	1,327	—		12,526
Loans from a related company	32	32	—		
Bank and other borrowings — due within one year	5,023	1,084	—		3,939
Lease liabilities — due within one year	317	38	—		279
Notes payable — due within one year	467	467	—		—
Other current liabilities	4,525	696	(135)	3	3,964
Total Current Liabilities	24,217	3,644	(135)		20,708
Non-current Liabilities					
Bank and other borrowings — due after one year	3,560	2,009	—		1,551
Lease liabilities — due after one year	468	333	—		135
Notes payable — due after one year	2,648	2,648	—		—
Other non-current liabilities	903	329	—		574
Total Non-current Liabilities	7,579	5,319	—		2,260
Total liabilities	31,796	8,963	(135)		22,968
Net current assets	5,598	4,558	(740)		1,780
Net assets	32,302	6,954	(4,606)		29,954

Notes:

1. Amounts represent the GNE's Group perpetual notes of RMB1,800,000,000 subscribed by the subsidiaries of the Group.
2. Amounts represent adjustment for investment costs in GNE Group.
3. Amounts represent the eliminations of intercompany balances.

	The Group	**GNE Group**	**Deconsolidation adjustments**	**The Group (De-consolidated GNE Group)**
	A	**B**	**C**	**D=A-B-C**
	RMB million	RMB million	RMB million	RMB million
Revenue	19,698	2,845	(15)	16,868
Cost of sales	(12,350)	(1,066)	10	(11,294)
Gross profit	7,348	1,779	(5)	5,574
Other income	767	96	(229)	900
Distribution and selling expenses	(98)	—	—	(98)
Administrative expenses	(2,035)	(697)	26	(1,364)
Finance costs	(1,903)	(1,578)	—	(325)
Impairment losses under expected credit loss model, net of reversal	(339)	(61)	—	(278)
Other expenses, gains and losses, net	(1,022)	(153)	24	(893)
Share of profits of associates	2,652	99	—	2,553
Share of losses of joint ventures	(78)	—	—	(78)
Profit (loss) before tax	5,292	(515)	(184)	5,991
Income tax expense	(591)	(47)	—	(544)
Profit (loss) for the year	4,701	(562)	(184)	5,447

COMPANY PROFILE

GCL Technology Holdings Limited is a leading silicon-based material supplier globally. At the end of 2021, the annual production capacity of rod polysilicon of the Group's Xuzhou base reached 45,000 MT, and the annual production capacity of FBR-based granular silicon was 30,000 MT. Production capacity is continuously increasing. The FBR-based granular silicon projects of Leshan and Baotou bases are under construction. The Group's annual wafer production capacity increased from 40 GW to 50 GW through technical transformation. Regarding the Group's new energy business, which is mainly operated through the subsidiary GCL New Energy, has a total installed capacity of approximately 1 GW at the end of 2021.


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MAJOR EVENTS 2021

Jan

On 6 January, GCL Technology won "The Best Enterprise of the Hong Kong Stock Connect (最佳港股通公司)" award at the "Fifth Golden Hong Kong Stocks Annual Awards Ceremony (第五屆金港股年度頒獎盛典)" held in Shenzhen.

On 21 January, GCL Technology announced that the placing of 3,900 million shares of the Company was completed and the net proceeds amounted to approximately HK$4,148 million.

Feb

In the evening of 2 February, GCL Technology and its strategic partners, LONGi Green Energy and Zhonghuan Semiconductor Co., Ltd. issued an announcement respectively regarding a purchase agreement involving over 441,400 tons of polysilicon products.

On February 3, GCL Technology officially announced through online live broadcast that its subsidiary, Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd., an entity responsible for R&D and manufacturing of Fluidized Bed Reactor (FBR)-based granular Silicon, had an annual production capacity increased from the previous 6,000 tons to 10,000 tons, officially entering the 10,000-ton capacity scale and adding another technological innovation matrix to the field of photovoltaic raw materials in China.

On the evening of 28 February, GCL Technology issued two announcements on the production expansion of granular silicon projects, marking the Company's focus on the FBR-based main business of granular silicon and the maturity and reproducibility of FBR-based granular silicon technology, as well as the three-way development pattern covering the Eastern, Western and Northern regions.

Mar

On 3 March, the 2020 "PV Energy Cup" New Year Sharing Conference and Award Ceremony was successfully co-hosted by SOLARBE and SOLARBE Consulting. More than 300 photovoltaic companies participated in the election of the "PV Energy Cup" this year. With strong innovation, excellent quality and service, and outstanding brand influence, GCL Technology won the "Most Influential Raw Materials Enterprise" award in 2020.

On 3 March, the 2020 "PV Energy Cup" New Year Sharing Conference and Award Ceremony was successfully co-hosted by SOLARBE and SOLARBE Consulting. Capitalizing on the major technological breakthrough in the production process of FBR-based granular silicon and the significant contribution to the industry in terms of cost reduction, GCL Black Technology — FBR-based Granular Silicon won the award of "Photovoltaic Product of the Year".

On 9 March, GCL Technology announced that various standards of FBR-based granular silicon of the Company have made breakthrough upon the commencement of production of 10,000 metric tonnes FBR-based granular silicon, which was proven by production operation and the application by downstream users.

On 24 March, Suzhou GCL Photovoltaic Technologies Co., Ltd. (蘇州協鑫光伏科技有限公司) won the honorary title of "Jiangsu Industrial Internet Development Model Enterprise (Benchmark Factory)" with the silicon wafer intelligent manufacturing, management and control industrial internet platform project at the Yangtze River Delta Digital Transformation Conference and Annual Conference of Enterprise Informatization Association of Jiangsu (長三角數字轉型大會暨江蘇省企業信息化協會年度大會), marking an excellent start for the quarter.

Apr

On April 2, Inner Mongolia Xinyuan Silicon Material Technology Co., Ltd. (內蒙古鑫元硅材料科技有限公司) was incorporated in Baotou Metal Deep Processing Park, marking the official entry of GNE into the "City of Steel in Gobi".

In the morning of 9 April, the piling ceremony of FBR-based granular silicon project of Leshan GCL was held at Wutong Bridge of Leshan, Sichuan and the project commenced construction officially.

MAJOR EVENTS 2021 (CONTINUED)

May

On 12 May, the monocrystalline workshop of Jiangsu GCL Silicon Material Technology Development Co., Ltd. (江蘇協鑫硅材料科技發展有限公司) won the award of "Workers' Vanguard" from Xuzhou City Federation of Trade Union.

Jun

On the World Environment Day on 5 June, Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd. (江蘇中能硅業科技發展有限公司) obtained the first carbon footprint certificate for FBR-based granular silicon in China. The carbon footprint value per kilogram of FBR-based granular silicon produced by it is 20.74 kilograms of carbon dioxide equivalent.

On 16 June, after receiving the notice from the State Intellectual Property Office, Jurong GCL Photovoltaic Technology Co., Ltd. (句容協鑫光伏科技有限公司) obtained the patent certificates for two proprietary utility model patents, an automatic control device for slurry tank overflow level (一種漿液缸溢流液位自動控制裝置) and a HENNECKE4 sorting machine TFC module for preventing data loss".

On 28 June, the commencement ceremony of pile construction of FBR-based granular silicon project of Inner Mongolia Xinyuan (內蒙古鑫元) with an annual production capacity of 300,000 tonnes was successfully completed in Baotou marking the official launch of the project.

Jul

On 26 July, Henan GCL Photo voltaic Technology Co., Ltd. (河南協鑫光伏科技有限公司) received a special award of RMB500,000 for its intelligent workshops from the Finance Bureau of Luohe Economic and Technological Development Zone in Henan Province, representing the recognition of its intelligent production capacity as well as the support to its continuous investment in intelligence and enhancement of comprehensive strengths by governments at all levels.

Aug

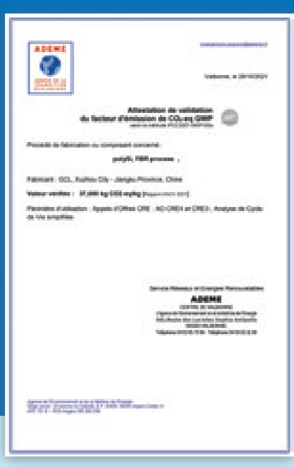
From 23 to 29 August, the 2021 national energy-saving week themed "energy saving, carbon reduction and green development (節能降碳，綠色發展)" was held. Commissioned by the Environment Resources Division of the National Development and Reform Commission, the National Energy Conservation Center organized an activity to invite key industrial enterprises making commitment to energy saving and carbon reduction. Zhongneng Polysilicon was invited as one of the key industrial enterprises to sign the Energy Saving and Carbon Reduction Commitment (節能降碳承諾書).

Sep

On 1 September, Ningxia GCL Monocrystalline Silicon Technology Development Co., Ltd. (寧夏協鑫晶體科技發展有限公司) was recognized as a "specialized and new" model enterprise and received a subsidy of RMB300,000 from the Industry and Information Technology Department of Ningxia Hui Autonomous Region. The recognition as a "specialized and new" model enterprise is of great significance for Ningxia Monocrystalline to achieve high-quality development. It also shows that the development of Ningxia Monocrystalline is highly recognized and supported by the autonomous region government.

On 2 September, Ningxia GCL Monocrystalline Silicon Technology Development Co., Ltd. (寧夏協鑫晶體科技發展有限公司) received a subsidy for "green factory" in an amount of RMB1.87 million from the Industry and Information Technology Department of Ningxia Hui Autonomous Region.

Oct



On 25 October, GCL Technology officially released its 2020 annual report and 2021 interim report. The results of the Company in the first half of 2021 was remarkable, and net profit attributable to the parent company was approximately RMB2.407 billion.

On 27 October, Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.* (江蘇中能硅業科技發展有限公司), a subsidiary of GCL Technology, received the "GCL FBR-based Granular Silicon Product Carbon Footprint Certificate" issued by the French Environment and Energy Control Agency, proving its carbon footprint value per kilogram of granular silicon is 37.000 kilograms carbon dioxide equivalent. This is the first "carbon footprint certificate" issued by a foreign authoritative organization in respect of FBR-based granular silicon in China so far.

Nov

On 10 November, the new 20,000-tonne modular project of fluidized bed reactor (FBR)-based granular silicon production of Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd. (江蘇中能硅業科技發展有限公司), a subsidiary of GCL Technology, was officially put into operation.

On 18 November, Shangji Automation and GCL Technology entered into a silicon materials procurement agreement, pursuant to which Shangji Automation and its subsidiary, Hongyuan New Materials (Baotou) Co. Ltd.* (弘元新材料（包頭）有限公司), shall procure 97,500 metric tonnes of rod silicons and FBR-based granular silicon from Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd. (江蘇中能硅業科技發展有限公司), a subsidiary of GCL Technology, during the period from January 2022 to December 2026.

On 23 and 24 November, more than 80 representatives from securities firms, funds and banks including Greenwoods Asset Management, Fullgoal Fund and Perseverance Asset Management were invited to the FBR-based granular silicon R&D and production base in Xuzhou and conducted onsite inspection for the FBR-based granular silicon production and application project.

Dec

On 2 December, the first batch of approximately 50 monosilicon boilers operated under the 5GW FBR-based granular silicon application demonstration project of Jiangsu GCL Silicon Material Technology Development Co., Ltd. (江蘇協鑫硅材料有限公司) achieved a utilization rate of 100% in the production of in the production of FBR-based granular silicon czochralski and stable mass production.

On 10 December, pursuant to the Notice of the General Office of the Ministry of Industry and Information Technology on Carrying out the Recommendation Work for the 2021 Green Manufacturing List (Department of Industry and Information Technology Section Letter [2021] No.130) (《工業和信息化部辦公廳關於開展2021年度綠色製造名單推薦工作的通知》(工信廳節函〔2021〕130號)), the shortlisted candidates for the 2021 list of green manufacturing were announced on the official website of the Ministry of Industry and Information Technology. Suzhou GCL Photovoltaic Technology Co., Ltd. (蘇州協鑫光伏科技有限公司) was on the list, and the two large-size mono wafer products of 182mm and 210mm produced by the company were selected as “National Green Products”.

On 22 December, pursuant to Notice on Publicizing the List of the Second Batch of High-tech Enterprises Recognized and Filed in Jiangsu Province in 2021 (《關於公示江蘇省2021年第二批認定報備高新技術企業名單的通知》), Suzhou GCL Photovoltaic Technology Co., Ltd. (蘇州協鑫光伏科技有限公司) passed the selection and was recognized as a “national high-tech enterprise” for the fourth time since it was first identified as a high-tech enterprise in 2012. The certification is valid for three years.

In the evening of 22 December, GCL Technology announced that the placing of 2,037 million shares of the Company was completed and the net proceeds amounted to approximately HK$4,994 million.

CHAIRMAN'S STATEMENT AND CEO'S REVIEW OF OPERATIONS AND OUTLOOK

Zhu Gongshan
Chairman

Dear Shareholders,

In 2021, the global economy continued to recover amid the spread of the pandemic. Coupled with more extreme weather conditions as compared with 2020, the global energy and power consumption rebounded rapidly. According to the statistics from International Energy Agency (IEA), the global power demand increased by more than 6% in 2021, marking the highest increase since the recovery from the financial crisis in 2010. The surging power demand has outstripped supply, which led to a sharp rise in power prices in many regions across the world. Shortages of natural gas and coal have been the key drivers of rising power prices. According to a report issued by IEA, despite continuous growth in renewable power installations, the global coal-fired power generation recorded a year-on-year increase of 9% in 2021. As a result, annual carbon dioxide emission from power sector reached the highest level in history. In addition, the escalation of the geopolitical conflict between Russia and Ukraine in early 2022 brought strong impact on the global traditional energy market. The price of commodities, particularly crude oil and natural gas, have further risen. Bottleneck in traditional energy supply, further energy shortages and excessive inflation spread around the world rapidly. The United Kingdom, the European Union (the "EU") and the United States have banned or reduced the import of oil, natural gas and coal from Russia. Against this backdrop, the geopolitical tensions will accelerate the restructuring and transformation of global energy supply as various countries have sought ways to improve energy efficiency, reduce dependence upon fossil energy and achieve energy independence. In particular, promoting installed capacity of new energy such as photovoltaics and wind power has become a worldwide consensus.

According to the latest energy strategy of the European Commission, the EU has implemented policies for supporting the development of renewable energy so as to reduce the external energy dependence of European countries. The EU has also proposed a 45% renewable energy target by 2030. According to this latest proposal, SolarPowerEurope confidently expects that the EU will achieve a total of 1,000GW accumulated installed capacity target, far exceeding the planned total installed capacity of 565GW set in the previous year. Recently, the German parliament passed a resolution to expedite the original goal of achieving 100% renewable energy power supply by 2045 to 2035, reflecting that the annual average new installed capacity will exceed 10GW in Germany, doubling that of 2021. In addition, the French government has also announced an energy independence plan and formulated an energy system mainly based on renewable energy, stating that the installed capacity of photovoltaic power generation is required to increase tenfold to hit 100GW target by 2050. In China, the implementation of new energy power generation installed capacity projects is a key task in the "14th Five-Year Plan" and the "15th Five-Year Plan". Leveraging the huge reserves of domestic new energy power generation projects and capitalizing fully on the carbon neutral policies, systems and technological cost reduction, the PV industry in China has continued to rank first in the global market in terms of business scale and manufacturing. The work report for 2022 of Premier Li Keqiang emphasized, for the first time, the construction of large-scale wind and photovoltaic power generation bases, and proposed the improvement in the capacity of power grids for renewable energy power generation with an aim to boost the long-term development of new energy. Driven by both policy and economic factors, including the launch of new energy projects in the entire county, the guaranteed grid connection of wind and photovoltaic power and the introduction of tools for carbon emission reduction, China will have new installed capacity of 75GW to 90GW in 2022, according to the estimation of China Photovoltaic Industry Association (CPIA), far exceeding the estimation of 60GW to 75GW made at the end of the previous year. According to the CPIA, the annual newly installed capacity will reach 90GW to 108GW. As such, the demand of photovoltaic power will show a steady and continuous growth and China will enter the era of photovoltaic development.

According to the European Consortium of Innovative Universities (ECIU), 143 major countries and economies around the world have participated in the promotion of the "carbon neutrality", of which 13 countries and economies, including the EU, Japan and the United Kingdom, have enacted legislations on the "carbon neutrality". The extensive launch of the new "carbon neutrality" policy in the world will usher in the "thirty years of golden development" of the PV industry. "Carbon neutrality" initiatives have been launched in various countries, accelerating the reform of energy system. As greater efforts have been made to develop new energy projects, which consist mostly of photovoltaic power generation, in order to alleviate the shortage of energy supply, photovoltaic installations have become increasingly popular around the world. According to the latest statistics from Bloomberg New Energy (BNEF), in 2021, the global new installed capacity of photovoltaic power generation was approximately 184GW, representing a year-on-year increase of approximately 41%. The new installed capacity is expected to range from 220GW to 268GW in 2022, marking a historic high.

"Carbon neutrality" facilitates a clean-alternative revolution, in which "carbon-based energy" is replaced by "silicon-based energy". This is the essential decarbonization path in the course of energy consumption where human production and daily activities shift from high to low carbon emission. Photovoltaic power is a major form of silicon-based energy. According to the research and estimation of the Chinese Academy of Sciences, silicon-based component products have accounted for 97.5% of the photovoltaic installation market. Therefore, silicon-based materials are essential to the development prospects of the PV industry. As a global leading supplier focusing on silicon-based materials, GCL Technology has strategically focused on the low-carbon and low-consumption FBR-based granular silicon technology by leveraging on technological innovation. GCL Technology is committed to promote the carbon reduction in the PV industry with technological innovation and strives to achieve the goal of negative carbon emissions.

Business Review for 2021

During 2021, GCL Technology produced a total of 47,610 MT of polysilicon (Xinjiang GCL was no longer consolidated in reporting since 2019, so its 2021 polysilicon production of 56,896 MT is not included). GCL Technology produced a total of 38,118 MW wafers. As at 31 December 2021, GCL Technology recorded revenue of RMB19,698 million, representing an increase of 34.3% as compared with the corresponding period in 2020; gross profit was approximately RMB7,348 million, representing an increase of 95.8% as compared with the corresponding period in 2020. Profit attributable to shareholders of the Company amounted to approximately RMB5,084 million and basic earnings per share was approximately RMB20.68 cents. As at 31 December 2021, the total liabilities of GCL Technology (including GNE, a holding subsidiary of GCL Technology) amounted to RMB31,796 million and the debt ratio decreased to 49.6%, representing a decrease by 25.1 percentage points as compared with the corresponding period in 2020.

As at 31 December 2021, the total PV installed capacity of GNE, a subsidiary of GCL Technology, was approximately 1,051MW, representing a decrease of 78.8% as compared with the corresponding period in 2020. Total revenue from PV power generation business amounted to approximately RMB2,695 million, representing a decrease of 45.4% as compared with the corresponding period in 2020. Loss attributable to shareholders of GNE Group amounted to approximately RMB790 million and basic loss per share was approximately RMB3.81 cents. During the year, the liabilities of GNE decreased by approximately RMB11.2 billion. It is expected that the debt will be further reduced by approximately RMB6 billion in 2022 as the proceeds from the sale of assets are received and used to repay debts. As at 31 December 2021, the debt ratio of GNE dropped to 56%, representing a decrease by 25 percentage points as compared with the same period of 2020.

Technological GCL: Leading the era of reform in PV materials driven by FBR-based granular silicon technology

Until today, the development of PV industry experienced many rounds of transformation. Each PV market transformation was accompanied by a revolutionary technological reform. As a leader in the domestic polysilicon industry, GCL Technology launched the first large-scale Siemens process refrigeration and hydrogenation technology transformation project in China in 2009, which led to the technological reform in the upstream materials of the prevailing PV industry. The Company had subsequently focused on the development of fluidized bed reactor (FBR) technology for over a decade and achieved a breakthrough in 2019 and commenced the commercialization and mass-production of FBR-based granular silicon, a new silicon-based material. At present, the comprehensive electricity consumption of FBR-based granular silicon in Xuzhou base has been stably controlled at 14.8kWh/kg, and the comprehensive steam consumption is 15.3kg/kg. This improvement has brought significant advantages in cost and carbon emission reduction. FBR-based Granular silicon represents the most advanced technological product of the existing silicon materials. It also exemplifies the "GCL Technology" and will become an important technological transition process for PV materials.

In order to maintain the growth of GCL Technology with the support of science and technology and continue to achieve success in scientific researches, the Company puts great efforts to ensure scientific researches are carried out smoothly. In respect of investments in scientific and technological R&D, GCL Technology has been continuously and steadily increasing its investments in the three aspects, namely capital, talent and governance system. The Company has been increasing its financial support for scientific research projects year by year. R&D expenses of the Company increased to RMB1.041 billion in 2021 and expected to account for 5% of the operating income for the year in 2022. In respect of talents, GCL Technology cooperates with domestic and overseas leading chemical and polymer materials research institutes and universities to jointly cultivate high-caliber technical personnel. In addition to the existing R&D personnel, the Company has further retained talented scientists and technicians. The Company is achieving its goal of retaining high-caliber scientists and technicians through introducing experts, internal cultivation and open recruitment. It is expected that the number of technical and managerial employees with doctoral and master's degree will account for more than 70% of the total number of employees. In addition to expanding its human resources, the Company has retained scientific research personnel by sharing the achievement of R&D and highly aligned the interests of the Company with scientific research personnel. Under its incentive scheme, the Board resolved to grant a total of 214 million Award Shares to 152 qualified key R&D and production personnel of polysilicon and FBR-based granular silicon technology at a grant price of HK$0.86 per Award Share in early 2022. Moreover, the Company attaches great importance to the independence and diverse direction of scientific and technological R&D. Central Research Institute of GCL Group is endowed with a high level of independence in R&D and has a well-developed and sound independent management system. The institute consists of five modules, including (silicon industry) R&D center, design center, US R&D center, technology management and intellectual property management, which can maximize the independence and confidentiality of R&D and allow the great diversity of scientific and technological R&D. The institute currently focuses on two major aspects, including R&D in FBR-based granular silicon and FBR-based granular silicon-based technology and silicon-based materials, which is a part of strategic plan of the Group, covering important areas such as improvement in FBR-based granular silicon product quality and process, optimization of equipment and upgrade of key materials. The Company is further seeking to expand its business to the upstream and downstream industrial chain and reaching a leading position in the exploration and research of silica, silicon carbide, silicon nitride, cathode and anode materials, perovskite and other products.

In order to effectively improve customers' experience and loyalty, the Company comprehensively communicates and cooperates with its customers. In respect of technical cooperation, the Company conducts on-site tests of FBR-based granular silicon products to promote further development and improvement in crystal pulling process. In respect to open technology, the Company has fully opened the 5GW Czochralski monosilicon demonstration project, which is supported by CCZ technology R&D, to its customers, so as to cultivate upstream and downstream ecosystems of the industrial chain and promote technological optimization and innovation to a certain extent. In the future, with the combination of resource investments, external joint cultivation and customer cooperation, GCL Technology will continue to be the driving force for technological innovation for the PV industry.

Digital GCL: Efficient operation of "Three Models and One Digital System" to facilitate digital and intelligent manufacturing

Based on its development strategies, actual conditions and IT development, GCL Technology adhered to the goal of digital and intelligent manufacturing during the production and optimization stage of the black technology FBR-based granular silicon project. Through closely cooperating with domestic leading digital technology companies in monitoring equipment, intelligent inspection and other projects and learning advanced concepts of domestic networks and technology manufacturing companies, the Company set up "manufacturing data center" and "operation data center", and applied "rules for forecast and analysis" and "digital risk control". Through the four initiatives of "database consolidation, data integration, enhanced business application and efficient decision-making", it has achieved effective bottom-up data integration and created a digital twin system, which can be replicated under its multi-base and segmented management.

Digital factories not only create value for enterprises in a fast and effective manner, but also assist enterprises in opening up an information platform and integrating information, thereby laying a solid foundation for intelligent transition of enterprises. At the production base in Xuzhou, an automatic, intelligent and intensive centralized control system has been established for the production of FBR-based granular silicon. Through intelligent analysis and application of cloud big data platform and massive data of the whole chain, operators will be able to fully comprehend the operating situation of FBR-based granular silicon production and R&D bases in Xuzhou, Leshan and Baotou. With the support of a series of remote digital intelligent control technologies, such as robot inspection, early warning system, eagle-eye recognition and remote scheduling, which were jointly developed with various domestic technological leading enterprises, the production process in FBR-based granular silicon production base has been designed through an accurate and intelligent digital cloud. The production efficiency has been improved and the production safety risks have been mitigated.

In 2021, the Company accelerated its digital transformation. Based on the reform of "Three Models and One Digital System", the Company modernized its strategic objectives, business values, processes and systems and digitized its operations under an efficient and intelligent operating system to support its outstanding performance. "Three Models and One Digital System" strategy is an important management tool of "Digital GCL" and a management concept that can perfectly coordinate the modern and technological digital factory operation system in the era of digital economy. A comprehensive production and operation data system, an effective digital management and control system and advanced modern management concepts complement each other. Under GCL Technology's digital initiatives on production process, in the first quarter of 2022, the production capacity of polysilicon per employee and the profit per employee increased significantly.

Green GCL: Double certification of carbon footprint at home and abroad, and supporting the low-carbon transformation of the energy structure with FBR-based granular silicon

Under the trend of "carbon neutrality", the right to carbon emission represents the right to development. The basis for valuing carbon is determined by development capacity. In May 2021, Jiangsu Zhongneng, a wholly-owned subsidiary of GCL Technology, obtained the "Product Carbon Footprint Certificate" issued by the China Quality Certification Center for its FBR-based granular silicon products. At the end of October 2021, Jiangsu Zhongneng received the "GCL FBR-based Granular Silicon Product Carbon Footprint Certificate" issued by the French Environment and Energy Control Agency, proving that its carbon footprint value of every kilogram of FBR-based granular silicon produced is only 37 kilograms of CO2 equivalent. This breaks the world's previous lowest record of 57.56 kilograms of CO2 equivalent per functional unit, and is also the first "carbon footprint certificate" of domestic FBR-based granular silicon products issued by a foreign authority. This recognition has shown that the excellent performance of domestic FBR-based granular silicon carbon emission has an absolute advantage in the global solar energy industry, paving the way for GCL Technology to realize the goal of "peak emission and carbon neutrality" and the achievements in green energy development.

As global green trade has become a long-term trend, low-carbon footprint certification is deemed the "golden key" for global trade. The EU Environment Commission plans to vote on the Carbon Border Adjustment Mechanism (CBAM) legislative report in May 2022. Once the report is approved, the free quota of carbon emissions in certain regions will be gradually cancelled. In addition, importers are required to verify and pay for any carbon emissions generated during the production of their goods, and the rate will be gradually increased. The PRC government is establishing and improving comprehensive mechanisms for its carbon market and carbon pricing. With the steady increase in the market penetration of FBR-based granular silicon, GCL Technology's carbon footprint will extend to the downstream wafers and components manufacturers. Under the global trend of carbon reduction, low carbon development is becoming the main strategies to increase overseas market shares for downstream wafers and components manufacturers. The improvement of the carbon market shows that the carbon footprint advantage of products in the whole industry will be transformed into a carbon cost advantage in the near future, and the penetration cost and production cost of goods will be included in the form of carbon tariffs and carbon prices.

The production capacity of FBR-based granular silicon has been supported by the infrastructure of GCL Technology and the supply margin has been secured with upstream extension

With a decade of commitment and upon the commissioning of additional production capacity of 20,000 tonnes of FBR-based granular silicon at the end of 2021. GCL Technology has officially featured the mass production capacity for FBR-based granular silicon under a replicable production and commercialized mass production model in 2022. The total planned capacity of FBR-based granular silicon in three bases in Xuzhou, Leshan, and Baotou was 500,000 tonnes, of which the planned capacity of FBR-based granular silicon in Xuzhou and Leshan was 100,000 tonnes, respectively. In Baotou, Inner Mongolia, the Company entered into equity cooperation with downstream first-tier manufacturers to enhance strategic mutual cooperation and has planned a total production capacity of 300,000 tonnes of FBR-based granular silicon, including the first phase of production capacity of 100,000 tonnes. Moreover, as a part of its development strategy of focusing on the development of polysilicon, the Company has extended its upstream supply chain to upstream manufacturers, so as to ensure the supply of high-purity nano-silicon powder, one of the raw materials for manufacturing FBR-based granular silicon. As the government has strictly controlled energy consumption and intensity, the planning of high-purity nano-silicon powder production capacity will effectively improve the safety margin of silicon material production of the Company, ensure the stability of the supply chain, and increase the income of the industrial chain.

The perseverance and efforts of employees on the production and construction front line are essential to the above huge expansion of production capacity. As the first large-scale FBR-based granular silicon production project in China and even in the world, the production base in Xuzhou with an additional production capacity of 20,000 tonnes of FBR-based granular silicon independently and prudently developed by the Company has become a model for subsequent projects with its excellent performance in terms of on-site safety, quality and production speed management. For production bases in Leshan and Baotou, the construction team of GCL Technology overcame unfavorable weather and construction conditions and completed the construction of high-quality infrastructure. Attaching great importance to "safety", "standards", "culture" and "benchmark" during the construction, these projects have become the leading and exemplary green projects in the industry.

Having been recognized by downstream customers for its cost reduction potential, FBR-based granular silicon has ushered in the N-type era

In 2021, leveraging its black technology of FBR-based granular silicon, GCL Technology maintained its leading position in the market. Its carbon-footprint has been endorsed by authoritative organizations and its potential for cost reduction and efficiency enhancement has been widely recognized by downstream customers, who have placed long-term production orders totaling no less than 700,000 tonnes. Major downstream manufacturers across the world have already started using FBR-based granular silicon commercially. The commercial use of FBR-based granular silicon has passed empirical data test. The Company continued to put great efforts in R&D of continuous Czochralski monosilicon technology (CCZ) and achieved a breakthrough. The 5GW Czochralski monosilicon demonstration project in Xuzhou has been regarded as the "experiment field" for the adaptive application of FBR-based granular silicon and CCZ. The successful experience of 5GW demonstration project will be fully opened to the market and promote the wide application of CCZ technique in pulling process during the technique transition from P-type to N-type in the PV industry, thereby increasing the market penetration of FBR-based granular silicon products, which perfectly match with the pulling process. FBR-based granular silicon and CCZ will help the PV industry usher in the N-type ear of high efficiency and low cost.

Raising funds and optimizing shareholding structure through placing new shares

The progress and market development prospect of FBR-based granular silicon project of the Company have been supported and recognized by the capital market and financial institutions. In 2021, GCL Technology and GNE successfully raised over HK$10 billion through three tranches of placement. The placements enabled the Group to further optimize its financial structure, expand its production scale and talent teams and reinforce its technical advantages. The placements also built a "capital pool" for the healthy expansion and development of FBR-based granular silicon project. In addition to expanding its shareholder base, the Company has also greatly improved the concentration and stability of its shareholder structure by introducing high-quality and long-term value-oriented shareholders, laying a solid foundation for the long-term robust development of its business operation and capital market performance.

GNE: Successfully achieving asset-light transformation and grasping opportunities brought by the trend of zero-carbon when developing hydrogen energy

In 2021, GNE, a subsidiary of the Company, continued to pursue its goal of reducing debt and securing cash flow and put great efforts in achieving asset-light transformation. As at 31 December 2021, GNE announced that the total installed capacity of solar plants disposed exceeded 2.9GW, which contributed more than RMB9.3 billion of cash flow. The cash flow has been sufficient to repay debts of all domestic and overseas holding platform companies under the GNE and guaranteed the repayment of debts due in the next 12 months repayable by the solar plants of GNE. "Asset-light approach" has laid a solid foundation for the development of new business of GNE.

Despite the fact that the asset-light operation model has reduced the scale of solar plants of GNE, the agency operation and maintenance business of GNE sustained rapid growth by capitalizing on its extensive solar plant operation and maintenance experience and massive data. Through providing value-added services such as equipment pre-testing, equipment performance testing, secondary system maintenance, external line maintenance, power market transactions, asset evaluation, wind-solar hydrogen storage integrated energy services, GNE has created value for its customers of agency operation and maintenance business based on cooperation and mutual benefits, thereby fostering collaborative development.

Moreover, unlike conventional practice, GNE has endeavored to seek a unique development path with its excellent market insight into the future needs. Capitalizing on its cutting-edge technologies and extensive experience, GNE has proactively expanded its business into hydrogen energy and related business. GNE will adopt a diversified development strategy with blue hydrogen and green hydrogen based on the main application and market prospects of hydrogen energy. Focusing on the development of blue hydrogen and its by-products and green power hydrogen production, GNE aims to gain a unique competitive edge in the sustainable development of its hydrogen energy business.

Outlook

As a manufacturer of silicon materials and driven by technological innovation, GCL Technology has committed itself to energy technology innovation and energy conservation and emission reduction. Positioning itself as a global leading silicon materials supplier and a pioneer in the industry, GCL Technology focuses on the research and development and manufacturing of PV materials. In 2021, nine companies under GCL Technology, including Jiangsu Zhongneng, GCL Silicon Material, Ningxia GCL, Suzhou GCL and Henan GCL, were recognized as the National High-Tech Enterprises. With over ten-year efforts in research and development of FBR-based granular silicon technology, the Company achieved a breakthrough in this technology and completed its capacity expansion of 10,000 tonnes in February 2021. The production capacity of standard modules increased by 20,000 tonnes within nine months, indicating that a modular mass production has been realized. Three FBR-based granular silicon production bases located in Jiangsu, Sichuan and Inner Mongolia strictly follow the new direction and policies of the Company, i.e. the "technological development of GCL, digital initiatives of GCL and green initiatives of GCL", in respect of project planning and construction, intelligent operation and digital control. As such, it laid a solid foundation for the Company to achieve its strategic goal of becoming a silicon materials supplier with the most advanced technology, the largest production capacity, the lowest carbon emission and the best customer experience in the industry at the lowest cost.

At the ninth meeting of the CPC Central Financial and Economic Affairs Commission held in March 2021, photovoltaics was officially defined as the main energy source in the future, reflecting a historic leap of the PV industry. During the National People's Congress and the Chinese People's Political Consultative Conference, the Chinese government promulgated policies to promote the construction of PV projects with an aim to lead the industry transition from old energy sources to new energy sources in an orderly manner. As the economic and social system has undergone a major transformation with a focus on carbon reduction, decarbonization, and zero carbon, the development of photovoltaics will achieve a historic breakthrough with unprecedented innovation in new technologies, new models, and new application.

The marketization and the introduction of global carbon neutrality policies offer a long-term promising prospect for the PV industry. In order to grasp these historic opportunities, GCL Technology will strictly follow the strategies of the government to establish a zero-carbon ecological alliance through market-oriented means and the integration of production, education, research and application in order to overcome the difficulties in developing key generic technology. The Company strives to foster the innovation and development with green energy technology. With the support of technology and digitalization and focusing on green development, the Company aims to achieve a high-quality green development with advanced technology and digital empowerment. The blueprint of "technological GCL, digital GCL and green GCL" has been formulated and GCL Technology is determined to realize its goal of making everything impossible possible by overcoming any difficulties it may face.

Finally, we would like to express our sincere gratitude to the Board of Directors, management team and all staff members of the Company for their hard work and dedication during 2021. We also are deeply grateful to our shareholders and business partners for their strong support.

MANAGEMENT DISCUSSION AND ANALYSIS

Overview

The Group went through the downturn in previous years and demonstrated its ability to overcome challenges. In 2021, the Group achieved a remarkable financial performance as a result our solar material business seized on the rebound of the solar industry in China and recorded impressive growth of revenue.

Results of the Group

For the year ended 31 December 2021, the revenue and gross profit of the Group were approximately RMB19,698 million and RMB7,348 million, respectively, representing an increase of 34.3% and 95.8% respectively as compared with approximately RMB14,671 million and RMB3,753 million in the corresponding period in 2020.

The Group recorded a profit for the year and a profit attributable to the owners of the Company of approximately RMB4,701 million and RMB5,084 million in 2021 respectively, as compared to the loss for the year and the loss attributable to owners of the Company of approximately RMB6,271 million and RMB5,668 million in 2020 respectively.

Fund raising activities

In January 2021, a placement of 3.9 billion new shares of the Company at a price of HK$1.08 per share with net proceeds of approximately HK$4.148 billion (equivalent to approximately RMB3.491 billion) was completed. Most of the net proceeds have been used for repayment of borrowings and development of the Company's FBR based granular silicon production business and production capacity.

In February 2021, the GNE Group completed a top-up placing and subscriptions of 2 billion shares at HK$0.455 per share, raising a net proceeds of approximately HK$895 million (equivalent to RMB747 million) after deducting placing commission and related expenses. The net proceeds have been used for repayment of borrowings.

In December 2021, a placement of 2.0 billion new shares of the Company at a price of HK$2.49 per share with net proceeds of approximately HK$4.9 billion (equivalent to approximately RMB4.08 billion) was completed. Part of the net proceeds have been used for development of the Company's FBR based granular silicon production business and production capacity and general working capital purpose.

Segment Information

The Group are reported on the three operating segments as follows:

Solar material business	—	mainly manufactures and sales of polysilicon and wafer to companies operating in the solar industry.
Solar farm business	—	manages and operates solar farms located in the USA and the PRC. These solar farms were constructed or acquired by the Group prior to obtaining a controlling stake in GNE.
New energy business	—	represents the business operations of GNE, which is principally engaged in the development, construction, operation and management of solar farms.

The following table sets forth the Group's operating results from operations by business segments:

	2021		2020	
	Revenue RMB million	**Segment profit (loss) RMB million**	Revenue RMB million	Segment (loss) profit RMB million
Solar material business	**16,653**	**5,534**	9,225	(4,867)
Solar farm business	**215**	**46**	460	64
Sub-total	**16,868**	**5,580**	9,685	(4,803)
New energy business[1]	**2,830**	**(581)**	4,986	(1,262)
Total	**19,698**	**4,999**	14,671	(6,065)

1. The segment profit of the new energy business includes reported net loss of the GNE Group of approximately RMB562 million (2020: Loss of RMB1,218 million) and allocated corporate expenses of approximately RMB19 million (2020: RMB44 million).

Business Structure

The Group is principally engaged in: (i) manufacturing and the sales of polysilicon and wafers for solar industry and (ii) the development, construction, operation and management of solar farms.

GNE is a listed company in HK (Stock code: 0451). Except for solar farm that were constructed or acquired by the Group prior to obtaining a controlling stake in GNE, the Group primarily develops, constructs, operates and manages downstream solar farms through the platform of GNE.

For illustrative purpose, if excluding the GNE Group and recognising the costs of investment in GNE and the perpetual notes receivable from GNE as non-current assets, the effect of de-consolidated the GNE Group as at 31 December 2021 would be as follows:

	The Group RMB million	The GNE Group RMB million	Deconsolidation adjustment (note) RMB million	The effect of de-consolidated the GNE Group RMB million
Total assets	64,098	15,917	(4,741)	52,922
Total liabilities	31,796	8,963	(135)	22,968
Bank balances and cash, pledged and restricted bank and other deposits	9,932	1,016	—	8,916
Bank balance and cash, pledged bank deposits classified as held for sale	23	23	—	—
Subtotal	9,955	1,039	—	8,916
Indebtedness				
Bank and other borrowings	8,583	3,093	—	5,490
Lease liabilities	785	371	—	414
Notes payables	3,115	3,115	—	—
Loans from related parties	32	32	—	—
Indebtedness for solar farm projects classified as held for sale	465	465	—	—
Subtotal	12,980	7,076	—	5,904

Note:

Deconsolidation adjustments mainly included:

— The Group's cost of investment in GNE amounted to RMB2,065,898,000.

— The GNE's perpetual notes of RMB1,800,000,000 subscribed by the subsidiaries of the Group and its relevant interest accrual.

— The transaction balances with the GNE Group and other eliminations.

Business Review

Solar material business

Production

The Group's solar material business belongs to the upstream of the solar supply chain, which supplies polysilicon and wafer to companies operating in the solar industry. Polysilicon is the primary raw material used in the solar wafer production. In the solar industry supply chain, wafers are further processed by downstream manufacturers to produce solar cells and modules.

Polysilicon

As at 31 December 2021, annual production capacity of rod silicon and granular silicon of the Group was 45,000 MT and 30,000 MT respectively. During the year ended 31 December 2021, the Group produced approximately 47,610 MT of polysilicon, representing an increase of 12.8% as compared to 42,189 MT for the corresponding year in 2020.

Wafer

As at 31 December 2021, the Group's annual wafer production capacity increased from 40 GW to 50 GW through technical transformation. During the year ended 31 December 2021, the Group produced 38,118 MW of wafers in aggregate (including 24,056 MW of OEM wafers), representing an increase of approximately 21.2% from 31,449 MW of wafers in aggregate (including 16,588 MW of OEM wafers) for the corresponding year in 2020, while the production volume of wafers (excluding OEM wafer) recorded a slight decrease of 5.4%, from 14,861 MW in corresponding year in 2020 to 14,062 MW for the year ended 31 December 2021.

Sales Volume and Revenue

During the year ended 31 December 2021, the Group sold 40,342 MT of polysilicon and 38,049 MW of wafers (including OEM wafer of 23,965 MW), representing an increase of 9.7% and an increase of 17.3%, respectively, as compared with 36,764 MT of polysilicon and 32,431 MW of wafers (including OEM wafer of 16,867 MW) for the corresponding year in 2020, while sales volume of wafers (excluding OEM wafer) recorded a decrease of 9.5%.

The average selling prices (excluding tax) of rod silicon and wafer were approximately RMB147.3 (equivalent to US$22.90) per kilogram and RMB0.600 (equivalent to US$0.093) per W respectively for the year ended 31 December 2021. The corresponding average selling prices of rod silicon and wafer for the year ended 31 December 2020 were approximately RMB60.7 (equivalent to US$8.82) per kilogram and RMB0.366 (equivalent to US$0.053) per W respectively.

Revenue from external customers of the solar materials business amounted to approximately RMB16,653 million for the year ended 31 December 2021, representing an increase of 80.5% from RMB9,225 million in 2020. It was mainly attributable to an increase in sales price of polysilicon and wafers (excluding OEM wafer).

Cost and Segment Gross Profit

The Group's polysilicon and wafer production costs mainly depend on its ability to control raw material costs, lower energy consumption, achieve economies of scale in its operations and streamline production processes. Benefited from the application of new technologies, the decrease in raw and auxiliary material costs and technological advancements, the overall manufacturing cost decreased. The Group will continue to push forward cost reduction and control measures.

Due to the rebound of price of solar products, gross profit margin for the solar material business increased from 3.3% to 32.9% due to the sharp increase in selling prices of photovoltaic products during the year. As the impacts of the global pandemic gradually subside, prices along the full industry chain surged, as demonstrated by the rebound in selling prices of photovoltaic products in 2021, while production in the industry has recovered to pre-pandemic levels.

Solar farm business

Overseas Solar Farms

As at 31 December 2021, the solar farm business includes 18 MW of solar farms in the USA. Besides, there were 150 MW solar farms in South Africa, which was partnered with CAD Fund and with the total effective ownership of 9.7% owned by the Group.

PRC Solar Farms

As at 31 December 2021, the Solar Farm business also includes 5 solar farms in the PRC, with both installed capacity and attributable installed capacity at 133.0 MW.

Sales Volume and Revenue

For the year ended 31 December 2021, the electricity sales volume of the solar farm business overseas and in the PRC were 26,371 MWh and 191,209 MWh respectively (2020: 27,425 MWh and 464,578 MWh, respectively).

For the year ended 31 December 2021, revenue for the solar farm business was approximately RMB215 million (2020: RMB461 million).

New energy business

On 5 January 2021, a sale of 638,298,000 GNE shares was completed as disclosed in the joint announcement of the Company and GNE dated 29 December 2020.

In February 2021, the placement of 2,000,000,000 shares of GNE was completed as disclosed in the joint announcement of the Company and GNE dated 10 February 2021.

As a result of the completion of the above, approximately 49.24% of the total issued share capital of GNE, comprising 10,376,602,000 shares in GNE were held by the Group.

The Company is of the view that it continues to control the operations of GNE. The GNE will continue to be accounted for and consolidated in the consolidated financial statements of the Company as a subsidiary.

As at 31 December 2021, the aggregated installed capacity of grid-connected solar farms of the GNE Group, including subsidiaries, joint ventures and associates decreased by 84.2% to 1,051 MW (31 December 2020: 6,636 MW). Details of capacity, electricity sales volume and revenue for the year ended 31 December 2021 are set out below.

Subsidiaries by provinces	Tariff Zones	Number of solar power plant	Aggregate Installed Capacity(1) (MW)	Grid-connected Capacity(1) (MW)	Electricity Sales Volume (million kWh)	Average Tariff (Net of Tax) (RMB/kWh)	Revenue (RMB million)
Inner Mongolia	1	4	189	189	365	0.73	267
Ningxia	1	2	60	60	92	0.64	59
		6	249	249	457	0.71	326
Qinghai	2	4	98	98	167	0.62	103
Jilin	2	4	51	51	75	0.75	57
Liaoning	2	3	60	60	67	0.64	43
Gansu	2	1	20	20	36	0.74	26
Sichuan	2	—	—	—	50	0.98	49
Shaanxi	2	—	—	—	990	0.77	767
Xinjiang	2	—	—	—	14	0.93	13
Yunan	2	—	—	—	204	0.72	146
		12	229	229	1,603	0.75	1,204
Jiangsu	3	9	114	108	404	0.84	340
Hebei	3	1	30	21	26	0.37	10
Zhejiang	3	1	23	21	33	0.97	32
Shandong	3	5	161	149	188	0.81	152
Henan	3	3	9	9	303	0.73	221
Guangdong	3	4	39	13	106	0.71	76
Fujian	3	3	56	56	61	0.81	50
Shanghai	3	1	7	7	7	0.97	7
Jiangxi	3	—	—	—	43	0.96	41
Hubei	3	—	—	—	29	0.79	23
Hainan	3	—	—	—	28	0.93	26
Anhui	3	—	—	—	21	0.95	20
Guizhou	3	—	—	—	77	0.90	69
Hunan	3	—	—	—	55	0.93	51
		27	439	384	1,381	0.81	1,118
Subtotal		45	917	862	3,441	0.77	2,648
US		2	134	134	203	0.38	78
Total of Subsidiaries		47	1,051	996	3,644	0.75	2,726

	Revenue (RMB million)
Electricity sales	1,135
Tariff adjustment — government subsidies received and receivables	1,591
Total revenue of subsidiaries for electricity sales	2,726
Less: effect of discounting tariff adjustment to present value	(31)
Total revenue of solar power plants, after discounting	2,695
Solar power plants operation and management service income	80
EPC consultancy and Technical service income	70
Total revenue of the GNE Group	**2,845**

(1) Aggregate installed capacity represents the maximum capacity that were approved by the local government authorities while grid-connected capacity represents that the actual capacity connected to the State Grid.

(2) Certain portion of the tariff adjustment (government subsidies) is discounted.

Most of the solar farms of the GNE Group are located in China and almost all of the revenue is contributed by the subsidiaries of State Grid. The State Grid is a State-owned enterprise in China, which possesses low default risk. Therefore, the directors of the GNE Group considered that the credit risk of trade receivables was minimal.

Revenue and Gross Profit of the GNE Group

During the year ended 31 December 2021, the Group's revenue was mainly derived from (i) solar power electricity generation; (ii) service fee income from the provision of the solar power plants operation and management services; and (iii) income from provision of engineering, procurement and construction consultancy and technical service. The table below sets forth an analysis of the Group's revenue:

	For the year ended 31 December	
	2021	2020
	RMB'000	RMB'000
Revenue		
— Sales of electricity and tariff adjustments	**2,694,979**	4,935,189
— Solar power plants operation and management service income	**79,637**	64,849
— Engineering, procurement and construction ("**EPC**") and technical service income	**70,283**	23,716
	2,844,899	5,023,754

The decrease in revenue was mainly attributable to the disposal of solar power plants during 2021. The grid connected capacity decreased from 4.8GW as at 31 December 2020 to 1.0GW as at 31 December 2021. The average tariff (net of tax) for the PRC was approximately RMB0.77/kWh (2020: RMB0.74/kWh).

During the year ended 31 December 2021, the Group provided operation and maintenance services for some of the disposed solar power plant projects and generate management service income. As at 31 December 2021, the Group had entered into contract to provide operation and maintenance services for solar power plants with total installed capacity of approximately 2,963 MW.

The gross profit margin was 62.5% for the year ended 31 December 2021, as compared to 64.1% for the year ended 31 December 2020. The cost of sales mainly consisted of depreciation, which accounted for 78.5% (2020: 78.7%) of the cost of sales, with the remaining costs being operation and maintenance costs of solar power plants.

Group's Outlook

The Group's outlook and likely future developments of the Group's business, is set out in the "Chairman's Statement and CEO's Review of Operations and Outlook" section of this announcement.

Financial Review

Revenue

Revenue for the year ended 31 December 2021 amounted to approximately RMB19,698 million, representing an increase of 34.3% as compared with approximately RMB14,671 million for the corresponding period in 2020. The increase was mainly due to the increase in revenue in solar material business as a result of the increase in selling prices of solar products and partially offset by decrease in sales of the GNE Group due to disposal of solar power plants during 2020 and 2021.

Gross Profit Margin

The Group's overall gross profit margin for the year ended 31 December 2021 was 37.3%, as compared with 25.6% for the corresponding period in 2020.

Gross profit margin for the solar material business increased significantly from 3.3% for the year ended 31 December 2020 to 32.9% for the year ended 31 December 2021.

The gross profit margin for the solar farm business decreased from 51.1% for the year ended 31 December 2020 to 43.7% for the year ended 31 December 2021.

The gross profit margin for the new energy business was 62.5% for the year ended 31 December 2021 and 64.1% for the corresponding period in 2020.

Distribution and Selling Expenses

Distribution and selling expenses increased from approximately RMB94 million for the year ended 31 December 2020 to approximately RMB98 million for the year ended 31 December 2021.

Administrative Expenses

Administrative expenses amounted to approximately RMB2,034 million for the year ended 31 December 2021, representing an increase of 12.1% from approximately RMB1,814 million for the corresponding period in 2020. The increase was mainly due to the increase of professional fee of solar material business and GNE Group.

Finance Costs

Finance costs for the year ended 31 December 2021 were approximately RMB1,903 million, which decreased by 39.7% as compared to approximately RMB3,155 million for the corresponding period in 2020. The decrease was mainly related to the decrease of average bank and other borrowings balances from the Group and the GNE Group during the year.

Impairment losses under expected credit loss model, net of reversal

The Group recognised approximately RMB339 million impairment losses under expected credit loss model, net of reversal, for the year ended 31 December 2021. (2020: impairment losses of RMB649 million).

The impairment losses under expected credit loss model, net of reversal for the year ended 31 December 2021 comprised of impairment losses of trade related receivables of approximately RMB4 million (2020: impairment losses of approximately RMB47 million) and non-trade related receivables of approximately RMB335 million (2020: impairment losses of approximately RMB602 million).

Other Expenses, Gains and Losses, Net

For the year ended 31 December 2021, net losses of approximately RMB1,022 million in other expenses, gains and losses were recorded as compared to net losses of approximately RMB5,011 million for the year ended 31 December 2020. The decrease of net losses was mainly due to decrease of impairment loss on property, plant and equipment. The net losses mainly comprises of:

(i) research and development costs of approximately RMB1,041 million (2020: RMB529 million)

(ii) impairment loss on property, plant and equipment approximately RMB331 million (2020: RMB4,248 million)

(iii) net profit on disposal of subsidiaries and solar power plant projects of approximately RMB101 million (2020: net loss of RMB299 million)

(iv) gain on disposal of an associate of approximately RMB141 million (2020: loss on disposal and deemed disposal of associates of RMB117 million)

(v) gain on disposal and deemed disposal of joint ventures approximately RMB257 million (2020: nil)

(vi) loss on fair value change of derivative financial instruments and convertible bonds to a non-controlling shareholder of a subsidiary approximately RMB56 million (2020: gain on fair value change of approximately RMB111 million)

(vii) loss on fair value change of other financial assets at FVTPL approximately RMB52 million (2020: gain on fair value change of approximately RMB40 million)

(viii) loss on measurement of assets classified as held for sale to fair value less cost to sell of nil (2020: RMB208 million)

Share of Profits of Associates

The Group's share of profits of associates for the year ended 31 December 2021 was approximately RMB2,652 million, mainly contributed by following associates:

- Share of profit of approximately RMB1.7 billion from Xinjiang GCL New Energy Materials Technology Co., Ltd.* ("**Xinjiang GCL**") (新疆協鑫新能源材料科技有限公司);
- Share of profit of approximately RMB618 million from Xuzhou Zhongping GCL Industrial Upgrading Equity Investment Fund LLP* ("**Zhongping GCL**") 徐州中平協鑫產業升級股權投資基金(有限合夥);
- Share of profit of approximately RMB210 million from Inner Mongolia Zhonghuan — GCL Solar Material Co., Ltd.* ("**Mongolia Zhonghuan GCL**") (內蒙古中環協鑫光伏材料有限公司), and;
- share of profits of approximately RMB99 million from associates of GNE Group as a result of the disposal of majority of equity interests in several partly-held solar power plants in 2020 and 2021.

Share of Losses of Joint Ventures

The Group's share of losses of joint ventures for the year ended 31 December 2021 was approximately RMB78 million, mainly due to the share of loss from Jiangsu Xinhua Semiconductor Material Technology Co., Ltd.* ("**Jiangsu Xinhua**") (江蘇鑫華半導體材料科技有限公司).

Income Tax Expense

Income tax expense for the year ended 31 December 2021 was approximately RMB591 million as compared with approximately RMB110 million of income tax expense for the corresponding period in 2020. There is an increase in income tax expenses mainly because of the income tax expenses from Solar Material Business recorded during the year, partially offset by decrease in income tax expenses due to disposal of solar power plants during 2021 of GNE Group.

Profit attributable to Owners of the Company

As a result of the above factors, profit attributable to owners of the Company amounted to approximately RMB5,084 million for the year ended 31 December 2021 as compared with a loss of approximately RMB5,668 million for the corresponding period in 2020.

* *English name for identification only*

Adjusted EBITDA

	2021 RMB'million	2020 RMB'million
For the year ended 31 December:		
Profit (loss) for the year	**4,701**	(6,271)
Adjust: non-operating or non-recurring items:		
— Impairment loss of property, plant and equipment and right-of-use assets	**331**	4,332
— Loss (gain) on fair value change of derivative financial instruments, held for trading investments and convertible bonds receivable, net	**22**	(110)
— (Gain) loss on disposal of subsidiaries, net	**(16)**	81
— (Gain) loss on disposal of solar power plant projects, net	**(85)**	218
— Change in fair value of convertible bonds to a non-controlling shareholder of a subsidiary	**35**	—
— (Gain) loss on disposal and deemed disposal of associates	**(141)**	117
— Gain on disposal and deemed disposal of a joint venture	**(257)**	—
— Loss (gain) on fair value change of other financial assets at FVTPL	**52**	(40)
— Exchange losses (gains), net	**6**	(373)
— Loss on measurement of assets classified as held for sale to fair value less cost to sell	**—**	208
— Impairment losses under expected credit loss model, net of reversal (non-trade related)	**335**	602
— Written off of deposits for acquisition of property, plant and equipment	**—**	15
— Gain on early termination of lease	**(2)**	(24)
	4,981	(1,245)
Add:		
Finance costs	**1,903**	3,155
Income tax expense	**591**	110
Depreciation and amortisation	**2,357**	3,695
Adjusted EBITDA	**9,832**	5,715

Property, Plant and Equipment

Property, plant and equipment decreased from approximately RMB36,706 million as at 31 December 2020 to approximately RMB18,293 million as at 31 December 2021. The decrease in property, plant and equipment was mainly due to the disposal of solar power plants in GNE Group, depreciation and impairment made during the year partially offset by increase in expansion production capacity of FBR-based granular silicon.

Contract Assets

Contract assets primarily relate to the portion of tariff adjustments for the electricity sold to the local state grid companies in the PRC in which the relevant on-grid solar power plants are still pending for registration to the Subsidy Catalogue. Any amount previously recognized as contract assets is reclassified to trade receivables at the point at which it is registered in the Subsidy Catalogue.

Contract assets decreased from approximately RMB1,228 million as at 31 December 2020 to approximately RMB41 million as at 31 December 2021, because some solar power plants entered into the project list of subsidy for renewable energy power plants in 2021 and transferred to trade receivables.

Interests in Associates

Interests in associates increased from RMB7.0 billion as at 31 December 2020 to RMB9.6 billion as at 31 December 2021. The increase was mainly due to share of profits of associates during the year.

Interests in associates as at 31 December 2021 mainly consists of below:

- The Group 38.5% equity interest in Xinjiang GCL of approximately of RMB4.8 billion;
- The Group 40.27% equity interest in Zhongping GCL of approximately of RMB2.0 billion, Zhongping GCL directly holds 34.5% equity interest in Xinjiang GCL;
- The Group 12.19% equity interest in Mongolia Zhonghuan GCL, which its carrying amount was approximately of RMB1.3 billion;
- The GNE Group equity interest in interests in associates approximately of RMB1.4 billion.

* *English name for identification only*

Trade and Other Receivables

Trade and other receivables increased from approximately RMB16,488 million as at 31 December 2020 to approximately RMB17,527 million as at 31 December 2021. The increase was mainly due to transfer from Contract Assets as a result of decrease in unbilled trade receivables of GNE Group and increase of bill receivables balances of Solar Material Business.

Trade and Other Payables

Trade and other payables increased from approximately RMB12,531 million as at 31 December 2020 to approximately RMB13,866 million as at 31 December 2021. The increase was mainly due to an increase in trade and construction payables during the year.

Balances with related companies

The related companies included associates, joint ventures and shareholder of non-controlling interest of the Group and companies controlled by Mr. Zhu Gongshan and his family members which hold in aggregate approximately 23.51% (2020: 30.13%) of the Company's share capital as at 31 December 2021 and exercise significant influence over the Company.

Amounts due from related companies decreased from approximately RMB1,338 million as at 31 December 2020 to approximately RMB600 million as at 31 December 2021. The decrease was mainly due to repayment from those related companies during the year.

Amounts due to related companies increased from approximately RMB2,088 million as at 31 December 2020 to approximately RMB2,744 million as at 31 December 2021. The increase was mainly due to advances of balances from those related companies during the year.

Loans from related companies

Loan from related companies decreased from approximately RMB909 million as at 31 December 2020 to approximately RMB32 million as at 31 December 2021. The decrease was mainly due to repayment of loans during the year.

Liquidity and Financial Resources

As at 31 December 2021, the total assets of the Group were about RMB64.1 billion, of which the aggregate restricted and unrestricted cash and bank balances and other deposits amounted to approximately RMB9.9 billion.

For the year ended 31 December 2021, the Group's main source of funding was cash generated from operating and financing activities.

In order to improve liquidity, the Group continues to pay close attention in managing the Group's cash position and conducts on-going negotiations with banks to ensure that the existing facilities will be successfully renewed and additional banking facilities are obtained when necessary. The Directors are of the opinion that, taking into account undrawn banking, renewal of existing banking facilities, the Group's cash flow projection for the coming year. The Group will have sufficient working capital to meet its cash flow requirements in the next twelve months. The Directors are satisfied that it is appropriate to prepare these consolidated financial statements on a going concern basis.

Indebtedness

Details of the Group's indebtedness are as follows:

	As at 31 December 2021 RMB Million	As at 31 December 2020 RMB Million
Current liabilities		
Bank and other borrowings — due within one year	**5,023**	22,885
Lease liabilities — due within one year	**317**	531
Notes payables — due within one year	**467**	3,313
Loans from related parties — due within one year	**32**	789
	5,839	27,518
Non-current liabilities		
Bank and other borrowings — due after one year	**3,560**	13,352
Lease liabilities — due after one year	**468**	1,359
Notes payables — due after one year	**2,648**	—
Loans from related parties — due after one year	**—**	120
	6,676	14,831
Indebtedness for solar power plants projects classified as held for sale		
Loan from a related company — due within one year	**—**	3
Bank and other borrowings — due within one year	**128**	330
Bank and other borrowings — due after one year	**327**	1,383
Lease liabilities	**10**	52
	465	1,768
Total indebtedness	**12,980**	44,117
Less: Bank balances and cash and pledged and restricted bank and other deposits	**(9,932)**	(6,256)
Bank balances and cash and pledged bank deposits and other deposits classified as assets held for sale	**(23)**	(92)
Net debt	**3,025**	37,769

Below is a table showing the bank and other borrowings structure and maturity profile of the Group.

	2021 **RMB million**	2020 RMB million
Secured	**7,828**	33,356
Unsecured	**755**	2,881
	8,583	36,237
Maturity profile of bank and other borrowings		
On demand or within one year	**5,023**	22,885
After one year but within two years	**1,496**	2,909
After two years but within five years	**1,345**	6,544
After five years	**719**	3,899
Group's total bank and other borrowings	**8,583**	36,237

As at 31 December 2021, RMB bank and other borrowings carried floating interest rates with reference to the Benchmark Borrowing Rate of The People's Bank of China and the LPR (Loan Prime Rate). USD bank and other borrowings carried interest rates with reference to the London Interbank Offer Rate.

Key Financial Ratios of the Group

	As at **31 December** **2021**	As at 31 December 2020
Current ratio	**1.23**	0.62
Quick ratio	**1.19**	0.61
Net debt to equity attributable to owners of the Company	**10.4%**	227.7%

Current ratio	=	Balance of current assets at the end of the year/balance of current liabilities at the end of the year
Quick ratio	=	(Balance of current assets at the end of the year — balance of inventories at the end of the year)/balance of current liabilities at the end of the year
Net debt to total equity attributable to owners of the Company	=	(Balance of total indebtedness at the end of the year — balance of bank balances and cash and pledged and restricted bank and other deposits at the end of the year)/balance of equity attributable to owners of the Company at the end of the year

Policy risk

Policies made by the Government have a pivotal role in the solar power industry. Any alternation in the preferential tax policies, on-grid tariff subsidies, generation dispatch priority, incentives, upcoming issuance of green certificates, laws and regulations would cause substantial impact on the solar power industry. Although the Chinese Government has been supportive in aiding the growth of the renewable industry by carrying out a series of favorable measures, it is possible that these measures will be modified abruptly. In order to minimize risks, the Group will follow rules set out by the government strictly, and will pay close attention to policy makers in order to foresee any disadvantageous movements.

Credit Risk

Each major operating business of the Group has a policy of credit control in place under which credit evaluations of customers are performed on all customers requiring credit.

In order to minimize the credit risk on sales of polysilicon and wafer products, the Group reviews the recoverable amount of each individual trade receivables periodically to ensure that adequate expected credit losses are made. Credit risk of sales of electricity is not significant as most of the revenue is recognised from the subsidiaries of State Grid Corporation of China (the "**State Grid**"). The State Grid is a state-owned enterprise in China, which possesses low default risk.

Risk associated with tariff

Power tariff is one of the key earning drivers for GNE. Any adjustment in tariff might have an impact on the profitability of new solar power projects. Given China's National Development and Reform Commission (NDRC) targets to accelerate the technology development for solar power industry in order to bring down development costs, solar power tariff may be lowered to the level of coal-fired power by near future, the government subsidy for solar power industry will finally be faded out. To minimize this risk, GNE will continue to increase the pace of technology development and implement cost control measures in order to lower development cost for new projects.

Risk related to interest rate

Interest risk may result from fluctuations in bank loan rates. Given the Group highly relies on external financing in order to obtain investment capital for new solar power project development and plants and equipment, any interest rate changes will have impact on the capital expenditure and finance costs of the Group, which in turn affect our operating results.

Foreign currency risk

Most of the Group's businesses are located in the PRC and the presentation currency of the consolidated financial statements of the Company is RMB. Substantially all of the Group's revenue, cost of sales and operating expenses are denominated in RMB, and the majority of the Group's assets and liabilities are denominated in RMB, while the rest are mainly denominated in US dollar and Hong Kong dollar. Any depreciation/appreciation of RMB against US dollar or any other foreign currencies may result in a change in value of the monetary assets and liabilities that are denominated in foreign currencies and affect the earnings and value of the net assets of the Group.

The Group continues to adopt a conservative approach on foreign exchange exposure management and ensure that its exposure to fluctuations in foreign exchange rates is minimised. The majority of the Group's borrowings are denominated in RMB. Foreign currency forward contracts will be utilised when it is considered as appropriate to hedge against foreign currency risk exposure.

Risk related to disputes with joint venture partners

Our joint venture partners may involve risks associated with the possibility that our joint venture partners may have financial difficulties or have disputes with us as to the scope of their responsibilities and obligations. We may encounter problems with respect to our joint venture partners which may have an adverse effect on our business operations, profitability and prospects.

Risk related to supplier concentration

Our wafer business are exposed to concentration risk of reliance on our major suppliers for the supply of the semi solar products, and any shortage of, or delay in, the supply may significantly impact our business and results of operation.

However, the largest supplier was associate of the Group, the Group was able to exercise significant influence on the operation of the associate, this enable the Group to monitor the above risks continually.

Pledge of or restrictions on assets

As at 31 December 2021, the following assets were pledged for certain bank and other borrowings, lease liabilities, or restrictions on assets, issuance of bills, short-term letters of credit for trade and other payables granted to the Group and bank and other borrowings of a joint venture of the Group:

— Property, plant and equipment of RMB7.7 billion (31 December 2020: RMB21.9 billion)

— Right-of-use assets of approximately RMB0.7 billion (31 December 2020: RMB0.8 billion)

— Investment properties of approximately RMB0.06 billion (31 December 2020: RMB0.06 billion)

— Trade receivables and contract assets of approximately RMB3.2 billion (31 December 2020: RMB10.6 billion)

— Pledged and restricted bank and other deposits of approximately RMB3.2 billion (31 December 2020: RMB4.6 billion)

In addition, lease liabilities of approximately RMB0.8 billion are recognised with related right-of-use assets of approximately RMB1.4 billion as at 31 December 2021 (31 December 2020: lease liabilities of approximately RMB1.9 billion are recognised with related right-of-use assets of approximately RMB2.4 billion).

Capital and other Commitments

As at 31 December 2021, the Group's capital commitments in respect of purchase of property, plant and equipment contracted for but not provided amounted to approximately RMB8,847 million respectively (2020: RMB501 million) and other commitments to contribute share capital to investments of approximately RMB960 million (2020: RMB1,689 million).

Contingencies

Financial guarantees contracts

As at 31 December 2021 and 2020, the Company and certain of its subsidiaries guaranteed bank and other borrowings of GNE and certain of its subsidiaries which amounted to approximately RMB996 million and approximately RMB1,820 million, respectively.

As at 31 December 2021, the Group provided a total guarantee with maximum amount of approximately RMB3,319 million and RMB900 million (31 December 2020: RMB4,064 million and RMB900 million) to several banks and financial institutions in respect of banking and other facilities of Xinjiang GCL, an associate of the Group and Jiangsu Xinhua, a joint venture of the Group respectively.

As at 31 December 2021, the GNE Group provided guarantee to its associates for certain of their bank and other borrowings with maximum amount of RMB1,541 million (31 December 2020: RMB3,050 million).

In addition to those financial guarantees provided to related parties as above, the GNE Group also provided financial guarantees to certain third parties, former wholly-owned subsidiaries, for certain of their bank and other borrowings amounting to approximately RMB477 million (2020: The Group and GNE Group provided RMB2,005 million financial guarantees to certain third parties) as at 31 December 2021.

Contingent liability

As at 31 December 2021 and 31 December 2020, the Group and the Company did not have any significant contingent liabilities.

Material Disposals

GCL-Poly Group

On 5 January 2021, a sale of 638,298,000 GNE shares at price of HK$0.235 per share with net proceeds of approximately HK$145 million (equivalent to approximately RMB122 million) was completed.

GNE Group

During the year ended 31 December 2021, the GNE Group has entered into various share transfer agreements with different third parties to dispose of equity interests in companies which hold various solar power plants. Material disposals are summarised as below:

Agreements signed in 2021	Name of buyers	Percentage of disposed equity interest	Capacity of solar power plants	Consideration
			(MW)	(RMB million)
March–April	Three Gorges Asset Management Co., Ltd* (三峽資產管理有限公司)	50%–100%	832	1,687
April	State Power Investment Corporation Guizhou Jinyuan Weining Energy Co., Ltd.* (國家電投集團貴州金元威寧能源股份有限公司) and Guangdong Jinyuan New Energy Co., Ltd.* (廣東金元新能源有限公司)	88%–100%	310	457
May	State Power Investment Corporation Chongqing Electric Power Co., Ltd.* (國家電投集團重慶電力有限公司)	100%	86	193
June	Chongqing Lvxin Energy Development Co., Ltd.* (重慶綠欣能源發展有限公司)	51%–100%	149	275
May–July	Guizhou West Power Construction Co., Ltd.* (貴州西能電力建設有限公司)	80%–100%	392	344
July	Yixing Hechuang New Energy Co., Ltd.* (宜興和創新能源有限公司)	100%	301	481
August	Ningxia Hanguang New Energy Co., Ltd.* (寧夏含光新能源有限公司)	100%	271	301
	Others		520	471
Total			2,861	4,209

Note: For details, please refer to the respective announcements published by the GNE Group.

Save as disclosed above, there were no other significant investments during the year ended 31 December 2021, or plans for material investments as at the date of this report, nor were there other material acquisitions and disposals of subsidiaries during the year ended 31 December 2021.

Events after Reporting Period

Details of the events after the Reporting Period are setting out in note 51 to the consolidated financial statements.

Employees

We consider our employees to be our most important resource. As at 31 December 2021, the Group had approximately 8,863 employees (31 December 2020: 7,657 employees), excluding the employee of the GNE Group, in the PRC and overseas. As at 31 December 2021, the GNE Group had approximately 896 employees (31 December 2020: 1,122 employees) in the PRC and overseas. Employees are remunerated with reference to individual performance, working experience, qualification and the prevailing industry practice. Apart from basic remuneration and the statutory retirement benefit scheme, employee benefits include but are not limited to discretionary bonuses, with share options granted to eligible employee.

MAJOR INVESTOR RELATIONS ACTIVITIES

The Board and management of the Company believe that effective investor relations is instrumental in enhancing investors' understanding to the Company, improving the quality of corporate governance and creating shareholders' value. Last year, we, together with various investor relations intermediaries and securities brokers, organized a series of investor relations activities to promote the Company in the capital market.

In 2021, we maintained close communication with the capital market through online and offline means amid the prolonged impact of COVID-19. In February, we organized an online live streaming for the commissioning ceremony of the 10,000-tonne FBR-based granular silicon production base in Xuzhou. In November, we organized two reverse roadshows at the FBR-based granular silicon production base in Xuzhou, and approximately 80 institution including Greenwoods Asset Management, Invesco Great Wall, HFT Investment Management, CITIC Securities, China Merchants Fund, GF Funds, Credit Suisse Securities, UBS Securities, East Money and TF Securities visited the FBR-based granular silicon production base, the control center and the demonstration of 5GW crystal pulling on site. Such activity was the largest and most professional onsite inspection for FBR-based granular silicon organized by the Company with the highest standards and covering the widest range. A Q&A session for the management was arranged after the onsite inspection in order to further elaborate the advantages of FBR-based granular silicon technology to the investors.

Throughout last year, we participated in over 400 investor relations activities including online non-deal and deal roadshows, investor seminars and one-on-one meetings, and maintained frequent communication with more than 5,000 investors/institutions including Perseverance Asset Management, Invesco Great Wall, BofA Securities, Morgan Stanley, Western Securities, Shenwan Hongyuan securities, ICBC International, Everbright Securities, First Shanghai Group, Minsheng Securities, Cathay Fortune Corp., Credit Suisse Securities, UBS Securities, HSBC, CICC and China International Fund Management, so that the capital market could keep abreast of the overall environment of solar industry and various active measures of the Company taken to respond to market changes, seize industry market opportunities, and actively develop various business operations.

Furthermore, we maintain smooth communication channels with individual investors and actively participate in interactions among social networking platforms, and through various new methods, we communicate responsively with a number of investors on the latest business developments of the Company.

CORPORATE ENVIRONMENTAL POLICIES AND PERFORMANCE

The Company actively promotes the balance of corporate economic growth, environmental protection and social contribution and sustainable development by adhering to the philosophy of "Bringing Green Power to Life" with its mission to provide effective clean energy and continuously improve our living environment. By continuous reinforcing the environmental protection concept, improving its production efficiency and implementing energy saving and carbon reduction initiates, the Company is committed to become a silicon-based material supplier with the lowest carbon emission, lowest cost, largest production capacity and best customer experience.

The Company believes that, a transparent, bilateral and timely communication is conducive to maintaining harmonious relationship among parties, enhancing mutual trust and respect and laying a solid foundation for the Company's sustainable development. Therefore, the Company has committed to communicating with stakeholders in multi channels and attaching great importance to their views. Regular and ad-hoc communications with various stakeholders, including government authorities/regulatory bodies, shareholders/investors, customers, the staff, partners, community personnel/non-governmental organization and media etc., were also held in an active manner to understand their concerns and regularly reviews the effectiveness of such efforts, so as to optimize the ways of communication and give a comprehensive reflection of the opinions from stakeholders.

The Company has always been in stringent compliance with national and local laws and regulations, including but not limited to the company laws, labor laws, occupation disease prevention laws, environmental protection laws and pollution prevention laws, etc. The Company always improves its level and performance in corporate governance, employee development and environmental management according to industry trends, stakeholders' expectations and its own operations. The Company has internal departments in place and formulates related policies, procedures and goals to improve its management capabilities, optimize manufacturing processes, enhance the efficiency of utilization of its resources, and promote emission and carbon reduction.

The Company firmly believes that green and low-carbon technological innovation has positive significance for realizing the sustainable development of the Company and the industry. It has persisted on innovation and introduced an innovative FBR-based granular silicon product in the market. Its characteristics of low energy consumption and low carbon emission not only solve the energy consumption pain point of the materials of the PV industry chain, but also reduce the production cost of the industry chain. In addition, with its excellent carbon footprint performance, the Company will continue to achieve its goal of carbon neutrality.

The Company has also devoted considerable resources into the upgrading and reforming of environmental protection, environment surveillance and management so as to enhance its environmental performance, including constantly improving the environmental management systems, formulating and updating the environmental policies, actively integrating the environmental objectives into life cycle and every parts of the production and operation of products, taking advantage of the technology to recover the emission and by-products generated during production in an effective manner, and encouraging our staff to take joint action. In addition, the Company had strengthened its supply chain management, and conducted environmental and social risks assessment on suppliers, with the aim of promoting the improvement on the level of environmental management of the industrial chain as a whole.

CORPORATE ENVIRONMENTAL POLICIES AND PERFORMANCE (CONTINUED)

By adhering to the principle of people-oriented management, the Company strives to continuously enhance staff's satisfaction with the Company and their happiness through practical rights protection, a diverse and equal working atmosphere, a scientific training system, a healthy and safe working environment, considerate humanistic care and sharing its development results with its employees.

The Company adheres to the operation concepts of equality, integrity, sharing and mutual benefits, and actively takes participation in various charity events. In 2021, while implementing the Company's internal epidemic prevention work and effectively ensuring the health and safety of employees, the Company actively responded to the needs of epidemic prevention and control.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Please refer to the "Environmental, Social and Governance Report" for more details, which will be published soon.

BIOGRAPHICAL DETAILS OF DIRECTORS AND SENIOR MANAGEMENT

Executive Directors

ZHU Gongshan (Chairman), aged 64, is the founder of the Company. He has been an Executive Director and the Chairman of the Company since July 2006. Mr. Zhu is also a member of the Strategy and Investment Committee of the Company. Mr. Zhu and his family (including his son, Mr. Zhu Yufeng, who is also a Director of the Company) are the beneficiaries of a discretionary trust which was interested in about 23.51% issued share capital of the Company as at the date of this Report. Mr. Zhu was a member of the 12th National Committee of the Chinese People's Political Consultative Conference (the "CPPCC") and is currently a member of the 12th Jiangsu Province Committee of the CPPCC, the chairman of Global Green Energy Industry Council, the vice chairman of Global Innovation Centre, the chairman of Asian Photovoltaic Industry Association, the deputy director of the Green and Low Carbon Development Promotion Committee of China Enterprise Confederation, the executive vice president of the Energy Storage and Electric Vehicle Branch of China Electricity Council. He concurrently serves as the executive chairman of ICC China Environment and Energy Committee, the vice chairman of China Overseas Chinese Entrepreneurs Association, the vice chairman of China Fortune Foundation Limited, the vice chairman of China Industrial Overseas Development & Planning Association, the vice president of Jiangsu Federation of Industry and Commerce, the honorary chairman of Jiangsu Residents Association in Hong Kong, an executive vice chairman of the Federation of HK Jiangsu Community Organisations, the honorary chairman of Suzhou Federation of Industry and Commerce and the chairman of SNEC Hydrogen Energy Industry Alliance Council. Mr. Zhu has been given the "New China 70th New Energy Industry 10 Outstanding Contributors" award and the medals of "Chinese Enterprise Reform, Figure of Energy Revolution and Leading Energy Entrepreneur of 40 Years Reform and Opening". Mr. Zhu graduated from Nanjing Electric Power College* (南京電力專科學校) in July 1981 and obtained a diploma in electrical automation. He is also the chairman of GCL System Integration Technology Co., Ltd., a company with its shares listed on the Shenzhen Stock Exchange (Stock Code: 002506) and a director of GCL Energy Technology Co. Ltd., a company with its shares listed on the Shenzhen Stock Exchange (Stock Code: 002015).

ZHU Zhanjun (Vice Chairman and Joint CEO), aged 52, has been an Executive Director and Executive President of the Company since January 2015. He has been appointed as the Chief Executive Officer ("CEO") of the Company since April 2016 and has been appointed as the Vice Chairman and re-designated as a Joint CEO of the Company since February 2022. Mr. Zhu is a member of the Strategy and Investment Committee of the Company and also a director of several subsidiaries of the Company. Mr. Zhu has vast experience in the polysilicon and wafer business. He joined the Company in 2004 as a plant manager of one power plants of the Company and was promoted as a general manager in 2006. He was transferred to Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.* (江蘇中能硅業發展有限公司) ("Jiangsu Zhongneng"), a subsidiary of the Company which manufactures polysilicon, as Deputy Director- Infrastructure in 2008. Mr. Zhu was promoted as the General Manager of Jiangsu GCL Silicon Material Technology Development Co., Ltd.* (江蘇協鑫硅材料科技發展有限公司) ("Jiangsu GCL"), a subsidiary of the Company in 2009 and was appointed as a vice president of the Company in 2013, overseeing the Company's ingot business and Jiangsu GCL's wafer business. Mr. Zhu is an engineer and obtained a Master's degree in Business Administration from China Europe International Business School* (中歐國際工商學院) in 2013.

Mr. Lan Tianshi (Joint CEO), aged 41, has been appointed as an executive Director and a joint CEO since February 2022. He joined the Group in July 2007 and served as a professional technician, deputy factory manager, factory manager, assistant deputy general manager, deputy general manager and executive deputy general manager of Jiangsu Zhongneng, a wholly-owned subsidiary of the Company. Mr. Lan currently holds various positions in the subsidiaries of the Company, including the chairman and general manager of Jiangsu Zhongneng, a director of Leshan GCL New Energy Technology Co., Ltd.* (樂山協鑫新能源科技有限公司), an executive director and general manager of Chengdu GCL Southwest Technology Development Co., Ltd.* (成都協鑫西南科技發展有限公司), and an executive director of GCL Industrial Design Research (Xuzhou) Co., Ltd.* (協鑫工業設計研究(徐州)有限公司). Mr. Lan holds a bachelor's degree in chemical engineering and technology from Harbin Engineering University, a master's degree from Sichuan University and a petrochemical engineering senior engineer certificate issued by the Jiangsu Petrochemical Engineering Advanced Professional Technical Qualification Evaluation Committee. Mr. Lan has nearly fifteen years of experience in chemical manufacturing and management.

ZHU Yufeng, aged 40, has been an Executive Director of the Company since September 2009 and is a member of the Remuneration Committee of the Company. Mr. Zhu is also a director of several subsidiaries of the Company. He graduated from George Brown College (Business Administration Faculty) in 2005. Mr. Zhu and his family (including his father, Mr. Zhu Gongshan, who is also a Director of the Company) are the beneficiaries of a discretionary trust which owns about 23.51% issued share capital of the Company as at the date of this Report. Mr. Zhu joined a subsidiary of the Company in 2006. He is responsible for human resources, administration and project tender of the Company. Mr. Zhu is also the chairman and an executive director of GCL New Energy Holdings Limited ("GNE"), a subsidiary of the Company with its shares listed on the Hong Kong Stock Exchange Main Board (Stock Code: 451). Mr. Zhu is also the director of GCL Energy Technology Co. Ltd., a company with its shares listed on the Shenzhen Stock Exchange (Stock Code: 002015).

SUN Wei, aged 50, has been an Executive Director of the Company since September 2016. Prior to the appointment, Ms. Sun was an Executive Director of the Company for the periods from November 2006 to July 2007 and from October 2007 until January 2015, she has also served the Company as the Honorary Chairman of Finance and Strategy Function. She is also a director of several subsidiaries of the Company. Ms. Sun currently is responsible for the corporate finance, financial strategy and management of the Group. Ms. Sun is the non-executive director of GNE and the vice chairman of Golden Concord Holdings Limited, a company controlled by Mr. Zhu Gongshan. Ms. Sun has over 25 years' experience in corporate finance, financial strategy and management experience. Ms. Sun was awarded a Doctorate degree in Business Administration in 2005. Ms. Sun is also a director of GCL Energy Technology Co. Ltd., a company with its shares listed on the Shenzhen Stock Exchange (Stock Code: 002015) and a director of GCL System Integration Technology Co., Ltd.*, a company with its shares listed on the Shenzhen Stock Exchange (Stock Code: 002506).

YEUNG Man Chung, Charles (CFO and Company Secretary), aged 54, has been an Executive Director of the Company since September 2014. He is also a member of the Nomination Committee, Corporate Governance Committee and Strategy and Investment Committee of the Company. Mr. Yeung was appointed as the Chief Financial Officer ("CFO") of the Company on 30 April 2014 and Company Secretary of the Company on 20 March 2017. He is also a director of several subsidiaries of the Company. Prior to joining the Company in April 2014, he served as a partner of Deloitte Touche Tohmatsu and was a part-time member of the Central Policy Unit of the Government of Hong Kong Special Administrative Region. When he left Deloitte Touche Tohmatsu in March 2014, he was the Head of Corporate Finance Advisory Services, Southern China. Mr. Yeung has a Bachelor of Business degree with a major in accounting and he is also a member of The Hong Kong Institute of Certified Public Accountants and The Australian Society of Certified Practising Accountants. Mr. Yeung has over 30 years of experience in accounting, auditing and financial management. Mr. Yeung is responsible for the financial control and reporting, corporate finance, tax and risk management of the Company and its subsidiaries. Mr. Yeung is also a non-executive director of GNE and the vice president of Golden Concord Group Limited. Mr. Yeung is an independent non- executive director of Tree Holdings Limited, a company with its shares listed on the Hong Kong Stock Exchange GEM Board (Stock code: 8395).

ZHENG Xiongjiu, aged 53, has been an Executive Director of the Company since April 2016. He was the general manager of the Company's two wafer plants in 2010. Since 2013, Mr. Zheng has managed the wafer business of five wafer plants including the two original wafer plants. In 2015, Mr. Zheng was promoted as senior vice president (solar business) of the Company. Mr. Zheng graduated from Xian Jiaotong University in 1991, major in mechanical engineering and obtained a Master's degree in Business Administration from China Europe International Business School* (中歐國際工商學院) in 2016.

Independent Non-Executive Directors

HO Chung Tai, Raymond *SBS, MBE, S.B.St.J., JP*, aged 83, has been an Independent Non-Executive Director of the Company since September 2007. He is the chairman of the Remuneration Committee, the Strategy and Investment Committee and the Corporate Governance Committee of the Company, and also a member of the Audit Committee and the Nomination Committee of the Company. Dr. Ho has 59 years of experience in the fields of civil, structural, environmental and geotechnical engineering and direct project management of mega-size engineering projects including 49 years in Hong Kong and 10 years in the United Kingdom. As Project Director, he had direct management responsibility for the HK$3.0 billion (cost at the time) project of Electrification and Modernisation of Kowloon-Canton Railway (East Rail line) from the mid-70's till early 80's; and also as Project Director for all the government-funded infrastructure works for Shatin New Town and Tseung Kwan O New Town from early 1982 till the end of 1993, as well as professionally responsible experience in the construction of tunnels, bridges, flyovers, roads, dockyards, wharves, jetties, hospitals, hotels, incinerators, high-rise commercial/ residential buildings, slopes, reclamation, environmental studies and environmental protection projects. Dr. Ho is currently the Honourary Chairman and past Chairman of Guangdong Daya Bay Nuclear Power Station and Ling Ao Nuclear Power Station Nuclear Safety Consultative Committee and former professional advisor to The Ombudsman of Hong Kong (Architecture, Engineering and Surveying). He also participates in the promotion of innovation and technology such as Graphene. Dr. Ho also is currently an independent non-executive director of the following listed companies in Hong Kong, namely, Deson Development International Holdings Limited, Chinlink International Holdings Limited, AP Rentals Holdings Limited and Superland Group Holdings Limited.

YIP Tai Him, aged 51, has been an Independent Non-Executive Director of the Company since March 2009. He is the chairman of the Audit Committee and the Nomination Committee and is also a member of the Remuneration Committee, the Strategy and Investment Committee and the Corporate Governance Committee of the Company. Mr. Yip is a practising accountant in Hong Kong. He is also a member of the Institute of Chartered Accountants in England and Wales and the Association of Chartered Certified Accountants in the United Kingdom. He has over 25 years of experience in accounting, auditing and financial management. Mr. Yip is currently an independent non-executive director of the following listed companies in Hong Kong, namely, Shentong Robot Education Group Company Limited, Redco Properties Group Limited, Zhongchang International Holdings Group Limited and Dongguan Rural Commercial Bank Co., Ltd.

SHEN Wenzhong, aged 53, has been an Independent Non-Executive Director of the Company since July 2015. He is a member of the Audit Committee and the Strategy and Investment Committee of the Company. Dr. Shen has been a Professor and PhD Supervisor in the School of Physics and Astronomy, Shanghai Jiao Tong University since 1999 as well as a Changjiang Chair Professor of Shanghai Jiao Tong University since 2000. He became the Director of the Solar Power Research Institute of Shanghai Jiao Tong University since 2007. Dr. Shen has participated in various science and technology research programmes in the PRC, published scientific papers in international journals and books on photovoltaic subjects. He graduated from the Shanghai Institute of Technical Physics, Chinese Academy of Sciences with a doctorate degree in 1995. During the period from 1996-1999, he joined Georgia State University in the U.S. as a postdoctoral fellow. Dr. Shen is currently an executive council member of China Renewable Energy Society, the honorable chairman of the Committee of Shanghai Solar Energy Society. He is an independent non-executive director of Jolywood (Suzhou) Sunwatt Co., Ltd.* (蘇州中來光伏新材股份有限公司), a company with its shares listed on The Shenzhen Stock Exchange and Jiangsu Arctech Solar Holding Co., Ltd.* (江蘇中信博新能源科技股份有限公司), a company with its shares listed on the Shanghai Stock Exchange.

WONG Man Chung, Francis, aged 57, has been an Independent Non-Executive Director of the Company since April 2016. He is a member of the Audit Committee and the Strategy and Investment Committee of the Company. Mr. Wong is a Certified Public Accountant (Practising), a fellow member of The Chartered Association of Certified Accountants, The Institute of Chartered Accountants in England and Wales, The Society of Chinese Accountants & Auditors and The Hong Kong Institute of Certified Public Accountants and a certified tax adviser of the Taxation Institute of Hong Kong. Previously, Mr. Wong has worked for KPMG, an international accounting firm for 6 years and the Compliance Department of Hong Kong Securities Clearing Company Limited for about 2 years. He has over 30 years of experience in auditing, taxation, corporate internal control & governance, acquisition & financial advisory, corporate restructuring & liquidation, family trust & wealth management. Mr. Wong is currently an independent non-executive director of China Oriental Group Company Limited, Digital China Holdings Limited, Wai Kee Holdings Limited, Integrated Waste Solutions Group Holdings Limited, Greenheart Group Limited, Hilong Holding Limited, Qeeka Home (Cayman) Inc., Shanghai Dongzheng Automotive Finance Co., Ltd. and IntelliCentrics Global Holdings Ltd., the shares of all these companies are listed on the Main Board of the Stock Exchange of Hong Kong Limited. Mr. Wong holds a master's degree in management from Jinan University, Guangzhou.

* English name for identification only.

Senior Management

At the date of this report, the senior management of the Group comprises the above executive Directors, namely, Mr. Zhu Gongshan, Mr. Zhu Zhanjun, Mr. Lan Tianshi, Mr. Zhu Yufeng, Ms. Sun Wei, Mr. Yeung Man Chung, Charles and Mr. Zheng Xiongjiu.

CORPORATE GOVERNANCE REPORT

The Company is dedicated to achieve and maintain a high standard of corporate governance to maximize the Company's and the stakeholders' value, with continuous review and evaluation of the various systems and procedures are carried out to ensure their effectiveness. During 2021, the Company had organised an in-house Directors' training in corporate governance for the Directors and senior management of the Company. The Strategy and Investment Committee has reviewed and assessed its responsibility to cover evaluation of significant investment and disposal proposals. Other work done in relation to corporate governance during 2021 is delineated in this report.

The Company has complied with all the code provisions as stipulated in the Corporate Governance Code (the "Code") under Appendix 14 in the Listing Rules throughout the year ended 31 December 2021 save for the deviation from the following code provisions of the Code:

Pursuant to Rules 13.49(1), 13.46(1), 13.49(6) and 13.48(1) of the Listing Rules, the Company was required to:

(a) Publish the annual results of the Group for the financial year ended 31 December 2020 (the "2020 Annual Results") on or before 31 March 2021, and to despatch the annual report for the financial year ended 31 December 2020 (the "2020 Annual Report") to the Shareholders on or before 30 April 2021; and

(b) Publish the interim results of the Group for the six months ended 30 June 2021 (the "2021 Interim Results") on or before 31 August 2021, and to despatch the interim report for the six months ended 30 June 2021 on or before 30 September 2021.

As disclosed in the Company's announcements dated 31 March 2021, 6 April 2021, 11 April 2021, 19 April 2021, 28 April 2021, 4 May 2021, 7 May 2021, 17 May 2021, 29 June 2021, 30 June 2021, 14 July 2021, 29 July 2021, 31 August 2021, 30 September 2021, 3 October 2021, 25 October 2021 and 29 October 2021, amongst others, the Company required additional time to address issues raised by the Company's former auditor, Deloitte Touche Tohmatsu, in its auditor letter dated 9 April 2021 (the "Audit Issues"), including but not limited to the engagement of an independent forensic accountant to conduct an forensic investigation on the Audit Issues, in order to complete the audit for the Company's consolidated financial statements for the year ended 31 December 2020 and to finalise the 2020 Annual Results and the 2020 Annual Report. The 2020 Annual Results and the 2021 Interim Results were published on 25 October 2021 and the 2020 Annual Report and 2021 Interim Report were despatched to the Shareholders on 3 November 2021.

The Board acknowledges that the delay in publication of the 2020 Annual Results and the 2021 Interim Results and despatch of the 2020 Annual Report and the 2021 Interim Report constituted non-compliance of Rules 13.49(1), Rule 13.49(6), Rule 13.46(1) and Rule 13.48(1) of the Listing Rule, respectively.

Further, the Company has failed to convene an annual general meeting ("AGM") and lay the 2020 Annual Results before the Shareholders at the AGM within the period of 6 months after the financial year ended on 31 December 2020 in accordance with the requirement under Rule 13.46(2)(b) of the Listing Rules.

As disclosed in the Internal Controls Review Announcement, the Internal Controls Consultant is satisfied that the Company (a) has addressed its recommendations in respect of all the key internal controls deficiencies identified in the Internal Controls Review; and (b) currently has sufficient and reliable corporate governance, internal controls and financial reporting systems to fulfil its obligations under the Listing Rules.

The Board

Board Composition

As at the date of this report, there are eleven Board members comprising, seven Executive Directors and four INEDs, with professional background and/or extensive expertise and experience in the Group's business related industries.

Biographical details of the Directors are set out under the section headed "Biographical details of Directors and Senior Management" of this annual report on pages 49 to 51.

Mr. Zhu Gongshan and Mr. Zhu Yufeng are members of the Zhu Family Trust which is a controlling shareholder of the Company. Mr. Zhu Yufeng is the son of Mr. Zhu Gongshan. Ms. Sun Wei is a vice chairman of Golden Concord Holdings Limited, a company controlled by Mr. Zhu Gongshan. Mr. Yeung Man Chung, Charles is the vice president of Golden Concord Group Limited, a company controlled by the Zhu Family Trust.

Save for the above and to the best knowledge of the Company, there is no financial, business, family or other material or relevant relationships among members of the Board and the substantial shareholders of the Company.

Each of the four INEDs has made a written confirmation to the Company of his independence with reference to the criteria and guidelines as set out in Rule 3.13 of the Listing Rules. Each Director has declared to the Company of his/her interests in any material contracts or other interest in the business of the Group or in any competing business with the Group. During the year ended 31 December 2021, the Company complied with Rules 3.10(1), 3.10(2) and 3.10A of the Listing Rules which require the minimum number of INEDs and at least one of the INEDs has appropriate professional qualifications or accounting or related financial management expertise.

Appropriate insurance to cover against liability of the Directors and officers of the Company has been arranged and renewed annually.

Board Process and Effectiveness

The Board is responsible for leading the Group's activities by determining strategic directions and business plan, exercising a number of reserved powers to oversee the operations and monitor the financial performance of the Group by determination of the annual budget, approving significant capital investment, ensuring the integrity of the Group's accounting and financial reporting system and to oversee management in the design, implementation and monitoring of the risk management and internal control systems of the Group.

The management is responsible to implement the Board's decision within the delegated authority, to make investment proposal, report their performance regularly to the Board and ensure by continuous monitoring that the Group's risk management and internal control systems are effective. Key features of Board process:

- at least four regular Board meetings will be held each year, with additional meetings to be held as and when required. All Directors will be informed of the tentative dates of the regular board meetings to be held at the beginning of each year. In 2021, there were four regular meetings and 36 non-regular meetings held by the Board;
- in respect of regular meetings, at least 14 days' notice is given to all Directors to give them an opportunity to attend. For all other meetings, reasonable notice is given;
- proposed agenda will be given to all Directors at least 14 days prior to the regular meetings to give them an opportunity to include matters in the agenda and the board papers were sent to all Directors at least 3 days before the meetings;
- all Directors are able to access to the advice and services of the Company Secretary, management and external professionals with a view to ensuring that board procedures, all applicable rules and regulations, are followed;
- minutes of all board meetings and committee meetings have been sent to all Directors for their comments and records respectively, within a reasonable time after the meetings are held; and
- a procedure has been adopted by the Company to enable the Directors, upon reasonable request, to seek independent professional advice in appropriate circumstances, at the Company's expense.

Appointment and Re-election of Directors

The INEDs are appointed for a specific term of office for three years. All Directors, including the INEDs, are subject to retirement by rotation and eligible for re-election at annual general meetings in accordance with the Company's Articles of Association, provided that every Director shall be retired at least once every three years. At the annual general meeting held on 2 December 2021. Mr. Zhu Gongshan, Mr. Zhu Yufeng, Ir. Dr. Ho Chung Tai, Raymond and Mr. Wong Man Chung, Francis, had been retired and re-elected as Directors at such meeting.

Nomination of Director

Where vacancies arise at the Board or whenever any qualified professionals or individuals with relevant expertise and experience is likely to be invited to join the Board, the qualifications, experience and awards (if any) of the proposed candidate(s) will be put forward to the Nomination Committee for its consideration and decision whether to make recommendation to the Board. A nomination policy has been adopted by the Company.

Responsibilities of Directors

During the year, the Directors had performed their responsibilities by attending and participating in various committees meetings, board meetings and general meetings. In order to encourage the Director's active participation in the meetings, meeting materials will be and had been dispatched to the Directors in advance of the meetings (for all regular meetings, at least three days in advance) to allow them to have the chance to read and understand the issues to be discussed at the meetings. The Company will also circulate a monthly report to the Directors to keep them up-to-date of the status and position of the Group.

At the beginning of each year, the Directors are provided with the tentative schedule of regular meetings so that they can mark their calendar as early as possible to avoid conflict of meetings. There were 40 Board meetings held during the year, including 1 annual general meeting and 3 extraordinary general meetings. The attendance of such meetings is shown in the table below:

Members of the Board	**Number of Board meetings attended/held**	**Number of general meetings attended/held**
Executive Directors		
Zhu Gongshan *(Chairman)*	24/40	1/4
Zhu Zhanjun *(Vice Chairman and Joint CEO)*	40/40	4/4
Zhu Yufeng	26/40	4/4
Sun Wei	38/40	4/4
Yeung Man Chung, Charles	40/40	4/4
Jiang Wenwu (resigned on 18 June 2021)	13/14	2/2
Zheng Xiongjiu	24/40	4/4
Independent Non-executive Directors		
Ho Chung Tai, Raymond	37/40	4/4
Yip Tai Him	34/40	4/4
Shen Wenzhong	40/40	4/4
Wong Man Chung, Francis	36/40	4/4

Directors' Induction and Continuous Professional Development

Upon the appointment of new Directors, a comprehensive directors' handbook, which sets out the Company's business and a summary of the applicable laws, rules and regulations and key governance issues, will be and had been provided to each newly appointed Directors. A training regarding the rules and regulations applicable to directors of listed companies to observe during their services on Board will also be provided to each of the newly appointed Directors. During the year, the Company had organised an in-house Directors' training for the Directors and the senior management of the Company to attend.

Ongoing updating the Directors and senior management of the Company on further developments and requirements of any applicable rules, regulations and laws or refreshing their knowledge and skills by providing briefings or arrangement of seminars had been adopted by the Company during the year. In addition, understanding the business and operations of the Group is also important for the Directors to discharge their responsibilities.

The Directors acknowledged the importance of updating their professional development and refreshing their knowledge and skills. The Company encouraged the Directors to participate in any seminar or forum organised by professional bodies, independent auditors, solicitors, chambers and business organisations as well as reading relevant articles. Below is a table in accordance with the records maintained by the Company indicating the Directors had received the following training in compliance with code provision A.6.5 of the Code during the year:

	Corporate Governance/ Updates on Laws, Rules & Regulations/ Accounting/Financial/Management or Other Professional Skills	
Directors	**Read Materials**	**Attend Seminars/ Briefings**
Executive Directors	√	√
Zhu Gongshan *(Chairman)*	√	√
Zhu Zhanjun *(Vice Chairman and Joint CEO)*	√	√
Zhu Yufeng	√	√
Sun Wei	√	√
Yeung Man Chung, Charles	√	√
Zheng Xiongjiu	√	√
Independent Non-executive Directors		
Ho Chung Tai, Raymond	√	√
Yip Tai Him	√	√
Shen Wenzhong	√	√
Wong Man Chung, Francis	√	√

Chairman and Joint Chief Executive Officer

Mr. Zhu Gongshan had been the Chairman of the Board since September 2009, and since 1 April 2016, Mr. Zhu Zhanjun was appointed as CEO of the Company. Mr. Zhu Zhanjun has been appointed as the Vice Chairman and re-designated as a Joint Chief Executive Officer; and Mr. Lan Tianshi has been appointed as an executive Director and a Joint CEO since February 2022. The primary responsibilities of the Chairman are to provide leadership to the Board in setting corporate goals of the Company, overseeing the performance and effectiveness of the Board, ensuring the compliance of rules and regulations and taking a lead to ensure that the Board acts in the best interest of the Company and shareholders as a whole. In particular, the Chairman should ensure that Board meetings are effectively conducted, including all Directors to receive timely, adequate, accurate, complete and reliable information. The Chairman also takes the primary responsibility for ensuring that good corporate governance practices and procedures are established. The Vice Chairman is responsible for assisting the Chairman in daily management of the Board.

The Joint CEO is responsible for strategic planning and management of the Company's daily operation, including financial management, technology and brand development.

The Chairman will meet with the non-executive Directors to discuss with them of any issues concerning the Company, without the presence of the executive Directors. During the year, a meeting had been held among the Chairman and the INEDs.

Delegation by the Board

The Board delegates certain responsibilities to various committees which are discussed below. Each of these committees has its respective terms of reference, all of them are posted on the Stock Exchange's and the Company's websites.

Accountability and Audit

The Directors acknowledge their responsibility for preparing the financial statements for each financial year, which give a true and fair view of the state of affairs of the Group and of the profits and cash flows of the Group in accordance with International Financial Reporting Standards, disclosure requirements of the Hong Kong Companies Ordinance and the Listing Rules. In preparing the financial statements for the year ended 31 December 2021, the Directors have selected suitable accounting policies and applied them consistently; made judgements and estimates which are reasonable and have prepared the financial statements on a going concern basis. The Directors are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position, results of operations, cash flows and changes in equity of the Group. The Independent Auditor's Report relating to their reporting responsibilities on the financial statements of the Company is set out from pages 94 to 96 of this annual report.

Audit Committee

The Audit Committee comprises four INEDs, namely Mr. Yip Tai Him, Ir. Dr. Ho Chung Tai, Raymond, Dr. Shen Wenzhong and Mr. Wong Man Chung, Francis. Mr. Yip Tai Him, who is a practicing accountant in Hong Kong and a member of the Institute of Chartered Accountants in England and Wales and the Association of Chartered Certified Accountants in the United Kingdom, possesses extensive accounting experience and serves as the chairman of the committee.

The terms of reference of the Audit Committee, which has been updated on 4 January 2016, setting out the operation, authorities and responsibilities of the committee is available on the websites of the Company and the Stock Exchange. The major responsibilities of the Audit Committee includes:

- monitoring integrity of the financial statements, annual report and interim report;
- monitoring and assessing the risk management and internal control systems (including the adequacy of resources, qualifications and experience of accounting and financial reporting staff);
- discussing the risk management and internal control systems with management to ensure that management has performed its duty to have effective systems;
- considering any major investigation findings on risk management and internal control matters as delegated by the Board or on its own initiative and management's response to these findings;
- monitoring the independence of an external auditor;

- monitoring and assessing the performance of the external auditor, proposing to the Board the appointment or removal of the external auditor, and facilitating the communication between external auditor and internal audit function;
- reviewing any material queries raised by the external auditor to management about accounting records, financial accounts or systems of control, management's response and the Board's timely response; and
- acting as key representative body for overseeing the Company's relations with the external auditor.

15 Audit Committee meetings were held in 2021 and the attendance is set out in the following table:

Members of Audit Committee	**Number of meetings attended/eligible to attend**
Yip Tai Him *(Chairman)*	15/15
Ho Chung Tai, Raymond	15/15
Shen Wenzhong	14/15
Wong Man Chung, Francis	15/15

The following work was performed by the Audit Committee during the year ended 31 December 2021 and up to the date of this report:

i. reviewed and approved the audit fees;
ii. assessed the independence of the external auditors;
iii. approved the scope of audit for the year ended 31 December 2021;
iv. reviewed the reports from the Auditor for the interim and year end;
v. reviewed the 2021 audited financial statements and the results announcement;
vi. reviewed the report on the continuing connected transactions for the financial year ended 31 December 2021 and six months ended 30 June 2021;
vii. reviewed the interim and year end internal audit reports and concluded that the Group has effective risk management and internal control systems and the qualifications and experience of the Company's accounting staff and resources for financial reporting function are adequate;
viii. reviewed the corporate governance review report (including the compliance status of provisions in relation to risk management and internal audit under Appendix 14 of the Listing Rules) prepared by Internal Controls Consultant and reported to the Board of its conclusion and recommendation;
ix. recommended the election of the proposed external auditors at the forthcoming annual general meeting; and
x. reviewed and approved certain non-audit services provided by the auditor.

The Audit Committee monitors the audit and non-audit services rendered to the Group by its external auditors and ensures that their engagement in other non-audit services will not impair their audit independence.

For the year ended 31 December 2021, the total remuneration paid to the Crowe (HK) CPA Limited is analysed as follows:

Nature of Service	**Fees** (RMB'000)
Audit services	
— 2021 Annual audit	11,800
Non-audit services	
— 2021 Interim review	2,984
— Others	2,510

Risk Management and Internal Control

Assisted by the Corporate Governance Committee and the Audit Committee, the Board is responsible for monitoring and reviewing the effectiveness of the risk management and internal control systems of the Company and its subsidiaries on an ongoing basis. The risk management and internal control systems (the "Systems") implemented by the Board, management and relevant parties aims to manage rather than eliminate risks of failure to achieve the following business objectives, and to only provide reasonable, but not absolute, assurance against material misstatement or loss:

- efficiency and effectiveness of operation
- reliability of financial reporting
- compliance with applicable laws and regulations
- effectiveness of risk management

Members of the Board and the management of the Company actively engage in the risk assessment, the review of response measures and the discussion with respect to major issues.

The Company has an internal audit department in place to be responsible for the implementation of risk management and internal control policies. In performing its responsibilities, the internal audit department has organized and coordinated the Company to identify and assess the risks exposed to the Group for the Board's consideration and motivate the management to design, implement and manage suitable internal control and risk management systems to facilitate policies adopted by the Board. In addition to the internal audit department, all employees are accountable for the implementation of risk management and internal control under each of scope of their responsibilities.

Systems Overview

Each business unit of the Company adopts the risk management and internal control systems of the Company during the ordinary course of business. The risk management portion within the Systems aims to provide clear and effective management procedures for each business units to identify, review and prioritize risks for the purpose of efficient resource allocation in conducting corresponding risk management. The management can also has an understanding of the significant risks exposed to the Group through the Systems, make and implement decisions on risk mitigation accordingly, in which enable its business to achieve a better performance. Further, the internal control portion within the Systems aims to offer a clear guidelines for each business unit to clarify the internal control objectives of each key business process and conduct regular review of the effectiveness of control activities adopted to achieve the control objectives.

Systems Structure and Communication Mechanism

The Board of the Company has been establishing the Audit Committee, which is currently comprised of 4 independent non-executive directors. Members of the Audit Committee have extensive experiences in the industry and ensure their full independence. The Company has also established and published the Terms of Reference for the Audit Committee, which expressly specifies the authorities and responsibilities of the Audit Committee, in accordance with the Listing Rules.

The Company has been adopting risk management and internal control systems at different levels of the Board, the senior management, the management center and its subsidiaries. The internal audit department is responsible for the overall planning and arrangement to carry out appraisal of the adequacy and effectiveness of internal control and risk management systems performed by the management center and the subsidiaries. Positions in relation to risk management and internal control are in place in some subsidiaries, which are responsible for organizing and carrying out specific work in risk management and internal control.

For the purpose of continuous monitoring of risk management and internal control by the Board and the management, the Company has established various communication channels, ensuring that relevant information are circulated in a timely and accurate manner among the Board and the management, and providing the Board with confirmation of implementation status on the Systems from the management:

- The internal audit department conducts risk assessment semi-annually. A comprehensive risk assessment questionnaire is completed by senior personnel of major business units respectively. Each risk assessment questionnaire is submitted to the internal audit department for consolidation, analysis and preparation of a risk assessment report. Major risk items are reported to the Board and management on a regular basis for oversight of the risk management; and

- The internal audit department reports regularly to the management, the Audit Committee and the Board with respect to risk management and internal control, ensuring the Board having known sufficient information for the fulfillment of its continuous responsibility for supervision.

Review Procedure for Systems Effectiveness

The Audit Committee of the Company, on behalf of the Board, makes a comprehensive assessment of the effectiveness of risk management and internal control systems at least semi-annually. The Audit Committee has strictly implemented the supervision function of risk management and internal control during the year ended 31 December 2021 (the "Year") in the following specific procedures:

- reviewed financial controls, internal control and risk management systems of the Company;
- discussed the risk management and internal control systems with the management to ensure that the management has performed its duty to have effective internal control and risk management systems. The discussion included whether the resources, staff qualification and experience, training and relevant budget of the Company in accounting, internal audit, and financial reporting functions, as to whether their relevant employee is sufficient or not;
- considered major investigation findings on risk management and internal control matters on its own initiative or as delegated by the Board and research on the management's response to these findings;
- ensured coordination between the internal and external auditors, and also ensure the internal audit function is sufficiently resourced and properly in place inside the Company, and review and supervise its effectiveness; and
- reported to the Board in relation to matters regarding code provision D.3 of the Corporate Governance Code.

The management of the Company takes responsibilities for implementing risk management and internal control systems on an on-going basis and reporting the implementation position to the Audit Committee and the Board at least semi-annually. The management has primarily conducted the following works in relation to risk management and internal control during the Year:

- The Company has been establishing an internal audit policy to clearly define the scope, duties and responsibilities, as well as reporting protocol of its internal audit function;
- The Company has established a unified risk framework and completed risk pool, and carried out internal risk examination and risk assessments on a regular basis;
- The Company has carried out relevant activities to analyze and monitor the major risks, in terms of strategic, operational, financial, marketing, technological and compliance aspects, in responses to the recent changes in the policies of the photovoltaic industry in mainland China;
- The Company has carried out quantitative risk management regularly with the aim of optimising quantitative risk measurement indexes to support the risk assessment and risk monitoring procedures;
- The Company has conducted review of internal control system through combination of quantitative self-assessment by the business units and qualitative evaluation by the internal audit department, so as to continuously monitored the operation of the internal control system;

- The Company has established risk-oriented internal audit work, effectively carried out the annual internal audit in accordance with the approved internal audit plan, regularly communicated with, and reported to, the management and the Audit Committee about significant findings from the annual internal audit; and

- The Company has appointed an independent professional consultant (the "External Consultant") to facilitate the maintenance of the internal audit function of the Company. The External Consultant has assisted the Audit Committee and the Board to conduct an independent review of the risk management and internal control systems of the Company for the Year.

The Audit Committee and the Board performed analysis and appraisal of the effectiveness and adequacy of the risk management and internal control systems of the Group through the outcome of the abovementioned review performed by the internal audit department and the External Consultant, considered and were of the opinion that the Group has maintained adequate and effective risk management and internal control systems for the Year.

Significant Risks and Management Program

During the Year, the Company has performed overall risk assessment, updated risk register and analyzed changes in risk result in previous year. Significant risks were identified below which need constant attention. Part of the mitigation measures adopted by the Group in relation to significant risks are set forth below:

- To cope with keen market competition in the photovoltaic industry, the Group would continuously promote low-energy-consumption granular silicon products, create a low-carbon industrial ecology, improve the quality and cost control of granular silicon, optimize the technical process of large-size silicon wafers, and sign long-term contracts with customers to strengthen the competitiveness of its own products;

- To cope with the risk of going concern of its subsidiaries, the Company was going to accelerate the return of funds through the large-scale sale of power plants;

- To cope with the risk of technical confidentiality, the Company would set up an Intellectual Property Working Group and determined roles and responsibilities of relevant staff for greater protection; and

- To cope with the risk of construction project management, the Company would enhance accountability of relevant staff and quality and cost control mechanism to increase the employees' awareness of high-quality project management.

Internal Controls for Handling Inside Information

An inside information committee has been set up since November 2012, which is currently comprises all executive Directors. The committee's principal function is to determine whether any confidential information arises from time to time is inside information or not. If the committee recognizes that the information constitutes inside information, it will report to the Board and recommend timely disclosure of such information pursuant to the relevant provisions under the Securities and Futures Ordinance and the Listing Rules. A monthly report of potential inside information, where appropriate, will be provided to the committee for continuous monitoring. A policy of inside information has been provided to the senior managers of the Group for implementation. The senior managers are encouraged to report to their superiors or the committee directly, in case of any incidents or information that constitutes as potential inside information when performing their duties.

Remuneration of Directors and Senior Management

Remuneration Committee

The Remuneration Committee comprises two INEDs and one executive Director, namely Ir. Dr. Ho Chung Tai, Raymond (chairman of the committee), Mr. Yip Tai Him and Mr. Zhu Yufeng. The Board resolved to adopt that the Remuneration Committee has the duty to determine, with delegated responsibility, the remuneration packages of individual executive Directors and senior management. A copy of the terms of reference setting out the operation, authorities and responsibilities of the Remuneration Committee is available at the Company's and the Stock Exchange's websites.

The primary responsibilities of the Remuneration Committee include:

- determining, with delegated responsibility, the remuneration packages of individual executive Directors and senior management;
- making remuneration recommendations of non-executive Directors to the Board;
- recommending the remuneration policy and structure for all Directors and senior management to the Board for approval; and
- reviewing and approving the compensation arrangement to executive Directors and senior management for any loss or termination of officer appointment to ensure that it is consistent with contractual terms and is fair and not excessive.

A meeting was held by the Remuneration Committee during the year 2021 and the attendance is set out in the following table:

Members of Remuneration Committee	Number of meetings attended/held
Ho Chung Tai, Raymond *(Chairman)*	1/1
Yip Tai Him	1/1
Zhu Yufeng	1/1

The Remuneration Committee had performed the following work during the year ended 31 December 2021 and up to the date of this report:

i. reviewed and recommended the Board on the remuneration policy of the executive Directors and senior management of the Company;
ii. reviewed, considered and approved the remuneration package of the existing executive Directors; and
iii. approved the adjustment of remuneration of the executive Directors.

Other Committee

Strategy and Investment Committee

During the year, the Strategic and Investment Committee comprised seven members, four INEDs (Ir. Dr. Ho Chung Tai, Raymond (who is also the chairman of the committee), Mr. Yip Tai Him, Dr. Shen Wenzhong and Mr. Wong Man Chung, Francis) and three executive Directors (Mr. Zhu Gongshan, Mr. Zhu Zhanjun and Mr. Yeung Man Chung, Charles). A copy of the terms of reference setting out the operation, authorities and responsibilities of such committee is available at the Company's and the Stock Exchange's websites.

The primary responsibilities of the Strategy and Investment Committee include:

- reviewing long-term strategic development plans;
- reviewing the annual performance of the Company and assessing implementation and progress of the long term strategic development plans;
- reviewing and recommending to the Board on opportunities of upgrading the facilities, expansion, mergers and acquisitions;
- reviewing and recommending to the Board with regard to the political, social and economic development in the PRC affecting or potentially affecting the business activities of the Group;
- reviewing and monitoring the relationship of the Company with its key strategic joint-venture partners or the relationship building with these partners; and
- reviewing, evaluation and recommendation to the Board of any significant investment and disposal proposals.

During the year, the Strategy and Investment Committee (i) reported to the Board and reviewed the long-term strategic development plan of the Group; and (ii) reviewed certain investment proposals and reported to the Board of its conclusion at the Board meeting from time to time.

Nomination Committee

The Nomination Committee comprises two INEDs, namely Mr. Yip Tai Him (chairman of the committee) and Ir. Dr. Ho Chung Tai, Raymond, and an executive Director, namely Mr. Yeung Man Chung, Charles. A copy of the terms of reference setting out the operation, authorities and responsibilities of the Nomination Committee is available at the Company's and the Stock Exchange's websites.

The duties of the Nomination Committee include reviewing the structure, size and composition of the Board at least annually and make recommendations on any proposed changes to the Board, identifying and making recommendations to the Board on the selection of individual nominated for directorships, assessing the independence of INEDs, and making recommendations to the Board on the appointment or re-appointment of Directors and succession planning for Directors.

A meeting was held by the Nomination Committee during the year 2021, the attendance is set out in the following table:

Members of Nomination Committee	Number of meetings attended/held
Yip Tai Him	1/1
Ho Chung Tai, Raymond	1/1
Yeung Man Chung, Charles	1/1

During the meeting, the committee had reviewed, assessed or made recommendations to the Board (where suitable) on (i) the independence of the INEDs against the criteria and guidelines as set out in Rule 3.13 of the Listing Rules and concluded that all INEDs had complied with the criteria; (ii) the composition of the existing Board members with reference to their age, sex, experience, qualification and expertise against the business scope of the Company and (iii) succession plan.

Nomination policy

The Company adopted a nomination policy (the "Nomination Policy") and board diversity policy ("Board Diversity Policy") with effect from 1 January 2019. A summary of the Nomination Policy is set out as follows:

1. Selection Criteria

The factors listed below would be used as reference by the Nomination Committee in assessing the suitability of a proposed candidate:

- Reputation for integrity
- Accomplishment and experience relevant in the principal activities of the group or photovoltaic and related industry
- Commitment in respect of available time and relevant interest
- Diversity in all its aspects, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service

These factors are for reference only, and not meant to be exhaustive and decisive. The Nomination Committee has the discretion to nominate any person, as it considers appropriate.

2. Nomination Procedures

1 The Secretary of the Nomination Committee shall call a meeting of the Nomination Committee, and invite nominations of candidates from Board members if any, for consideration by the Nomination Committee prior to its meeting. The Nomination Committee may also put forward candidates who are not nominated by Board members.

2 For filling a casual vacancy, the Nomination Committee shall make recommendations for the Board's consideration and approval.

3 Until the issue of the Members' circular, the nominated persons shall not assume that they have been proposed by the Board to stand for election at the general meeting.

Board Diversity Policy

With a view to achieving a sustainable and balanced development, the Company sees increasing diversity at the Board level as an essential element in supporting the attainment of its strategic objectives and its sustainable development. In designing the Board's composition, Board diversity has been considered from a number of aspects, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. All Board appointments will be based on meritocracy, and candidates will be considered against objective criteria, having due regard for the benefits of diversity on the Board.

A summary of the Board Diversity Policy is set out as follows:

Selection of candidates will be based on a range of diversity perspectives, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. The ultimate decision will be based on merit and contribution that the selected candidates will bring to the Board. The Board's composition (including gender, ethnicity, age, length of service) will be disclosed in the Corporate Governance Report annually.

The Nomination Committee will review this Policy, to ensure the effectiveness of this Policy. The Nomination Committee will discuss any revisions that may be required, and recommend any such revisions to the Board for consideration and approval.

Corporate Governance Committee

The Corporate Governance Committee comprises two INEDs, namely Ir. Dr. Ho Chung Tai, Raymond (chairman of the committee) and Mr. Yip Tai Him and an executive Director, namely Mr. Yeung Man Chung, Charles. A copy of the terms of reference setting out the operation, authorities and responsibilities of the Corporate Governance Committee is available at the Company's website.

The duties of the Corporate Governance Committee includes:

i. developing and reviewing the Company's policies and practices on corporate governance and make recommendations to the Board;
ii. reviewing and monitoring the training and continuous professional development of Directors and senior management;
iii. reviewing and monitoring the Company's policies and practices on compliance with legal and regulatory requirements;
iv. developing, reviewing and monitoring the code of conduct applicable to employees and Directors; and
v. reviewing the Company's compliance with the Code and disclosure in the Corporate Governance Report.

5 meetings were held by the committee during the year 2021 and up to the date of this report, the attendance is set out in the following table:

Members of Corporate Governance Committee	Number of meetings attended/held
Ho Chung Tai, Raymond	5/5
Yip Tai Him	5/5
Yeung Man Chung, Charles	5/5

The committee had reviewed and evaluated the effectiveness of (i) the performance of certain policies and practices adopted by the Company, including the whistle-blowing policy, the inside information policy and discloseable transaction policy and connected transaction policy; (ii) the Board committees, including the Audit Committee, Remuneration Committee, Nomination Committee and Strategy and Investment Committee; (iii) the policy in relation to the training and continuous professional development of Directors and senior management; (iv) the constitution, authority and responsibilities of the Strategy and Investment Committee which mainly deals with the investment proposals and make recommendations to the Board; and (v) the report on whistle-blowing policy. The committee concluded the adopted policies are effective.

Dividend Policy

The Company has adopted a dividend policy (the "Dividend Policy"). The Board would consider the following factors before declaring or recommending dividend to the Shareholders from time to time:

(a) financial results of the Company;
(b) Shareholders' interests;
(c) general business conditions, strategies and future expansion needs;
(d) the Company's capital requirements;
(e) the payment of cash dividends to the Company from its subsidiaries;
(f) possible effects on liquidity and financial position of the Company; and
(g) the amount of profit can be distributed under applicable accounting standards and other factors that the Board may deem relevant and appropriate.

Any dividend declared by the Company shall be conducted in accordance with the Cayman Islands Companies Law, the Memorandum and Articles of the Company and other applicable laws and regulations, and shall not affect the normal operation of the Company and its subsidiaries.

The Board will review the Dividend Policy, as appropriate, which will include an assessment of the effectiveness of the Dividend Policy and approve any amendments thereto if necessary.

Compliance with Model Code

The Board has adopted the model code with terms no less exacting than the required standard as set out in Appendix 10 of the Listing Rules as its own model code of conduct regarding Directors' securities transactions (the "Model Code"). Having made specific enquiry of all Directors, all Directors confirmed that they have complied with the required standard of dealings as set out in the Model Code throughout the year ended 31 December 2021.

Investor Relations and Communication with Shareholders

The Board recognizes the importance of communication with shareholders and has adhered to its established communication policy. The general communication policy includes timely dispatch full and accurate information to shareholders and investment public by announcement, financial reports and circulars through the website of the Stock Exchange and the Company's website; maintain dialogue with shareholders by disclosing the way of communication to the Board and in relation to share registration matters, the contact of the share registrar in Hong Kong; and by convening the general meetings (if any) and annual general meeting. On 2 December 2021, the Company convened an annual general meeting. At the meeting, the Directors, members and/or chairman of the Board committees had attended and answer questions raised by the shareholders.

Directors and our Investor Relations team also communicated from time to time with analysts, fund managers, institutional shareholders and media while keeping the stringent standard of not disclosing inside information to any selective group. The Directors, executives together with our Investor Relations team held/participated in meetings, presentations and conference with them. Details of investor relations activities were further described under the section headed "Major Investor Relations Activities" of this report.

There is no change in the Company's Memorandum and Articles of Association during the year. A copy of the Memorandum and Articles of Association is available at the websites of the Stock Exchange and the Company.

Shareholders' Rights

Procedures for members to convene extraordinary general meeting ("EGM")

The following procedures are subject to the Company's Articles of Association and applicable legislation and regulation.

1. Pursuant to Article 58 of the Articles of Association of the Company, any one or more members of the Company 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 two months after the deposit of such requisition. If within twenty-one days of such deposit the Board fails to proceed to convene such meeting, the requisitionist(s) himself (themselves) may do so in the same manner, and all reasonable expenses incurred by the requisitionist(s) as a result of the failure of the Board shall be reimbursed to the requisitionist(s) by the Company.

2. The requisitionist(s) shall deposit his/their requisition together with the proposals to be considered at such meeting at the principal place of business of the Company at Unit 1703B–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong or at any address notified by the Company from time to time and for the attention of the Chairman of the Board and the Company Secretary.

3. If the requisition is in order, the Company Secretary will ask the Board to convene an EGM by serving sufficient notice in accordance with the requirements under the Articles of Association to all the registered members. On the contrary, if the requisition is invalid, the members concerned will be advised of this outcome and accordingly, an EGM will not be convened as requested.

4. The notice period to be given to all the registered members for consideration of the proposal raised by the member(s) concerned at an EGM varies according to the nature of the proposal, as follows:

   — at least twenty-one (21) clear days' notice in writing if the proposal constitutes a special resolution of the Company, which cannot be amended other than to a mere clerical amendment to correct a patent error; and

   — at least fourteen (14) clear days' and not less than ten (10) clear business days' notice in writing if the proposal constitutes an ordinary resolution of the Company.

Members who have enquiries about the above procedures may write to the Company Secretary at Unit 1703–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong or at any address notified by the Company from time to time.

Procedures for a Member to Propose a Person for Election as a Director

The following procedures are subject to the Company's Articles of Association and applicable legislation and regulation.

1. If a member, who is duly qualified to attend and vote at the general meeting convened to deal with appointment/election of director(s), wishes to propose a person (other than the member himself/herself) for election as a director at that meeting, he/she can deposit a written notice at the Company's principal office at Unit 1703–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong, or at any address notified by the Company from time to time for the attention of the Company Secretary of the Company.

2. In order for the Company to inform all members of that proposal, the written notice must state the full name of the person proposed for election as a director, his/her biographical details as required by Rule 13.51(2) of the Listing Rules, and be signed by the member concerned and that person indicating his/her willingness to be elected.

3. The period for lodgment of such a written notice will commence on the day after the despatch of the notice of the general meeting and end no later than seven (7) clear days prior to the date of such general meeting. If the notice is received less than fifteen (15) business days prior to that general meeting (twenty (20) business days in case of annual general meeting), the Company will need to consider adjournment of the general meeting in order to (i) assess the suitability of the proposed candidate; and (ii) publish an announcement or circulate a supplementary circular in relation to the proposal to the members at least fourteen (14) clear days and not less than ten (10) business days prior to the general meeting (twenty (20) business days in case of annual general meeting).

Members who have enquiries about the above procedures may write to the Company Secretary at Unit 1703B–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong or at any address notified by the Company from time to time.

Enquiries to the Board

No procedure set in the Articles of Association of the Company is available for any member to put forward an enquiry to the Board. A member may, of course, at any time write to the board of directors of the Company at the Company's principal office at Unit 1703–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong or at any address notified by the Company from time to time. In relation to share registration matters in Hong Kong, a member shall contact the branch share registrar in Hong Kong, namely Tricor Investor Services Limited at Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong.

REPORT OF THE DIRECTORS

The directors of the Company (the "Directors" or the "Board") submit their report together with the audited consolidated financial statements of GCL Technology Holdings Limited (formerly known as GCL-Poly Energy Holdings Limited (the "Company")) and its subsidiaries (collectively the "Group") for the year ended 31 December 2021.

Principal Activities

The principal activities of the Group during the year 2021 are principally engaged in the manufacturing and sale of polysilicon and wafers products, and developing, owning and operation of solar farms.

The particulars of the Group's principal subsidiaries, interests in associates and interests in joint ventures are set out in notes 55, 19 and 20 of the consolidated financial statements, respectively.

Business Review

The Group's revenue is derived principally from the sales of polysilicon, wafer and electricity, which is primarily conducted in the PRC. An analysis of the Group's performance for the year by operating segment is set out in note 6 to the consolidated financial statements.

A fair review of the Group's business, including the important events affecting the Group that have occurred since the end of 2021 and the likely future developments of the Group's business, is set out in the Chairman's Statement, CEO's Review of Operations and Outlook, and the Management Discussion and Analysis sections on pages 23 to 44 of this report. Potential risks and uncertainties were reviewed and assessed by the Board, which was set out in the Corporate Governance Report under the Risk Management and Internal Controls section on pages 52 to 70. Details about the Group's financial risk management are set out in note 44 to the consolidated financial statements.

There was no incidence of non-compliance with the relevant laws and regulations in relation to the operations that have a significant impact on the Group's business.

Results and Appropriations

The results of the Group for the year ended 31 December 2021 are set out in the consolidated statement of profit or loss and other comprehensive income from pages 97 to 98. The Directors do not recommend the payment of any final dividend for the year ended 31 December 2021 (2020: nil).

Financial Summary

A summary of the consolidated results and of the assets and liabilities of the Group for the last five financial years is set out on page 2.

Property, Plant and Equipment

Movements in the property, plant and equipment of the Group during the year are set out in note 15 to the consolidated financial statements.

Share Capital

Details of movements in the issued share capital of the Company during the year are set out in note 40 to the consolidated financial statements.

Distributable Reserves

The distributable reserves of the Company as at 31 December 2021 amounted to RMB27,548.9 million (2020: RMB20,500.2 million).

Bank and Other Borrowings

Particulars of the Group's bank and other borrowings are set out in note 36 to the consolidated financial statements.

Donations

Donations by the Group for charitable and other purposes as at 31 December 2021 amounted to RMB276,900 (2020: RMB180,780).

Equity-linked Agreements

Save for the share option schemes, the share award scheme and the US subsidiary's equity incentive plan described below with details of movements set out in note 49 to the consolidated financial statements, no equity-linked agreements were entered into by the Group during the year ended 31 December 2021, or subsisted at the end of the year 2021.

Directors

The directors of the Company during the year and up to the date of this report are:

Executive Directors

Mr. Zhu Gongshan *(Chairman)*
Mr. Zhu Zhanjun *(Vice Chairman and Joint CEO)*
Mr. Lan Tianshi *(Joint CEO)(appointed on 21 February 2022)*
Mr. Zhu Yufeng
Ms. Sun Wei
Mr. Yeung Man Chung, Charles *(Chief Financial Officer and Company Secretary)*
Mr. Jiang Wenwu *(resigned on 18 June 2021)*
Mr. Zheng Xiongjiu

Independent Non-executive Directors

Ir. Dr. Ho Chung Tai, Raymond
Mr. Yip Tai Him
Dr. Shen Wenzhong
Mr. Wong Man Chung, Francis

Mr. Jiang Wenwu has resigned as an executive Directors of the Company with effect from 18 June 2021. As at the Company's announcement dated 18 June 2021 is setting out details of his resignation reason.

Mr. Zhu Zhanjun has been appointed as the Vice Chairman and re-designated as a Joint CEO; and Mr. Lan Tianshi has been appointed as an executive Director and a Joint CEO with effect from 21 February 2022.

In accordance with Article 86(3) of the Articles of Association of the Company, the newly appointed Executive Director, Mr. LAN Tianshi, with effect from 21 February 2022, will retire and being eligible, has offered himself for election at the AGM.

In accordance with Articles 87(1) and (2) of the Articles of Association of the Company, Ms. SUN Wei, Mr. YEUNG Man Chung, Charles, Mr. ZHENG Xiongjiu and Mr. YIP Tai Him will retire at the forthcoming annual general meeting and, being eligible, offer themselves for re-election.

The Company has received from each of its independent non-executive Directors an annual confirmation of his independence pursuant to Rule 3.13 of the Listing Rules. The Company has assessed their independence and considers that all the independent non-executive directors are independent in accordance with guidelines set out in the Listing Rules.

Directors' Services Contracts

Each of the independent non-executive directors has entered into a service contract with the Company for a fixed term of three years and will be terminated by not less than three months' notice in writing served by either party on the other. Upon the expiry of the notice period, the appointment will be terminated.

No Director proposed for re-election at the forthcoming annual general meeting has entered into any service agreements with any member of the Group which is not determinable within one year without payment of compensation, other than statutory compensation.

Directors' Interest in Contracts

Save as disclosed under the section headed "Connected Transactions and Continuing Connected Transactions" in this report of the Directors, no Director had a material interest, either directly or indirectly, in any contract of significance to the business of the Group to which the Company or any of its subsidiaries was a party, and which subsisted at the end of the year or at any time during the year.

Permitted Indemnity Provision

Subject to the applicable laws, every Directors, Company Secretary and other officers of the Company shall be indemnified out of the assets and profits of the Company against all actions, costs, charges, losses, damages and expenses incurred by him or her in the execution of his or her duties or in relation thereto pursuant to the Company's Articles of Associations, provided that this indemnity shall not extend to any matter in respect of any fraud or dishonesty which may attach to any of said persons. Such provisions were in force during the course of the financial year ended 31 December 2021 and remained in force as of the date of this report.

Directors' and Chief Executive's Interests and Short Positions in Shares, Underlying Shares and Debentures of the Company and Associated Company

As at 31 December 2021, the Directors and chief executive of the Company had the following interests and short positions in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the "SFO"), which were required (a) to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which they are taken or deemed to have under such provisions of the SFO); or (b) to be and were entered into the register required to be kept by the Company pursuant to Section 352 of the SFO; or (c) as otherwise notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") of the Listing Rules:

(A) Long position/short position in the shares and underlying shares of the Company:

Name of Director/ chief executive	Long/Short position	Number of ordinary shares held: Beneficiary of a trust	Corporate interests	Personal/ Family interests	Number of underlying Shares held	Total	Approximate percentage of issued share capital (note 4)
Zhu Gongshan	Long position	6,370,388,156 (note 1)	—	—	—	6,370,388,156	23.51%
	Short position	240,000,000 (note 3)	—	—	—	—	0.89%
Zhu Zhanjun	Long position	—	—	3,400,000	2,719,359 (note 2)	6,119,359	0.02%
Zhu Yufeng	Long position	6,370,388,156 (note 1)	—	—	1,510,755 (note 2)	6,371,898,911	23.51%
	Short position	240,000,000 (note 3)	—	—	—	—	0.89%
Sun Wei	Long position	—	—	5,723,000	1,712,189 (note 2)	7,435,189	0.03%
Yeung Man Chung, Charles	Long position	—	—	—	1,700,000 (note 2)	1,700,000	0.006%
Zheng Xiongjiu	Long position	—	—	250,000	2,517,924 (note 2)	2,767,924	0.01%
Ho Chung Tai, Raymond	Long position	—	—	—	1,007,170 (note 2)	1,007,170	0.004%
Yip Tai Him	Long position	—	—	—	1,007,170 (note 2)	1,007,170	0.004%

Notes:

(1) An aggregate of 6,370,388,156 shares of the Company are collectively held by Highexcel Investments Limited, Happy Genius Holdings Limited and Get Famous Investments Limited, which are wholly-owned by Golden Concord Group Limited, which in turn is wholly-owned by Asia Pacific Energy Holdings Limited. Asia Pacific Energy Holdings Limited is in turn wholly-owned by Asia Pacific Energy Fund Limited. Asia Pacific Energy Fund Limited is ultimately held under a discretionary trust with Credit Suisse Trust Limited as trustee and Mr. Zhu Gongshan and his family (including Mr. Zhu Yufeng, a Director of the Company and the son of Mr. Zhu Gongshan) as beneficiaries.

(2) These are share options granted by the Company to the Directors, pursuant to the share option scheme adopted by the shareholders of the Company on 22 October 2007. Such granted share options can be exercised by the Directors at various intervals during the period from 15 March 2016 to 28 March 2026 at an exercise price of HK$1.160 or HK$1.324.

(3) The short position was held as a result of an equity of derivative agreement entered by Happy Genius Holdings Limited.

(4) The total number of ordinary shares of the Company in issue as at 31 December 2021 is 27,099,010,448.

(5) Mr. Lan Tianshi has been appointed as an executive Director and a Joint CEO with effect from 21 February 2022. Mr. Lan owns 1,500,000 shares of the Company and was granted 9,390,000 award shares by the Company to him on 16 February 2022 under the share award scheme adopted by the Company on 16 January 2017.

(B) Long position in the shares and underlying shares of the Company's associated corporation, namely GCL New Energy Holdings Limited ("GNE"), in which the Company indirectly holds approximately 49.24% issued shares:

	Number of ordinary shares of GNE held					
Name of Director/ chief executive	**Beneficiary of a trust**	**Corporate interests**	**Personal interests**	**Number of underlying shares held**	**Total**	**Approximate percentage of issued share capital of GNE (note 3)**
Zhu Gongshan	1,905,978,301 (note 1)	—	—	—	1,905,978,301	9.04%
Zhu Yufeng	1,905,978,301 (note 1)	—	—	17,500,000 (note 2)	1,923,478,301	9.13%
Sun Wei	—	—	—	10,000,000 (note 2)	10,000,000	0.05%
Yeung Man Chung, Charles	—	—	—	5,000,000 (note 2)	5,000,000	0.02%

Notes:

1. 1,905,978,301 shares in GNE are beneficially owned by Dongsheng Photovoltaic Technology (Hong Kong) Limited ("Dongsheng PV"). Dongsheng PV is indirectly wholly-owned by GCL System Integration Technology Co., Ltd. ("GCL System Integration") and an aggregate of over 30% of the issued shares in GCL System Integration, is indirectly held by the Zhu Family Trust and Mr. Zhu Yufeng, an executive director of the Company and GNE and son of Mr. Zhu Gongshan.

2. These are share options granted by GNE. Such granted share options can be exercised by Mr. Zhu Yufeng, Ms. Sun Wei and Mr. Yeung Man Chung, Charles at the interval between 3 November 2022 and 2 November 2031 at an exercise price of HK$0.357 per share of GNE.

3. The total number of ordinary shares of GNE in issue as at 31 December 2021 is 21,073,715,441.

Save as disclosed above, as at 31 December 2021, none of the Directors and chief executive of the Company had any interests or short positions in the shares, underlying shares or debentures of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) which were required (a) to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which they are taken or deemed to have under such provisions of the SFO); or (b) to be and were entered into the register that was required to be kept under Section 352 of the SFO; or (c) as otherwise notified to the Company and the Stock Exchange pursuant to the Model Code.

Option Schemes

Share option scheme of the Company

The Company adopted a share option scheme (the "2007 Share Option Scheme") on 22 October 2007 which became effective on 13 November 2007. The purpose of the 2007 Share Option Scheme is to motivate personnel to optimize their future contributions to the Group and/or to reward them for their past contributions, to attract and retain or otherwise maintain on-going relationships with such personnel who are significant to and/or whose contributions are or will be beneficial to the performance, growth or success of the Group, and additionally in the case of executives of the Company, to enable the Group to attract and retain individuals with experience and ability and/or to reward them for their past contributions. The 2007 Share Option Scheme shall be valid and effective for a period of 10 years from 22 October 2007, after which no further options will be granted or offered but the provisions of the 2007 Share Option Scheme shall remain in full force and effect to the extent necessary to give effect to the exercise of any subsisting options granted prior to the expiry of the 10-year period or otherwise as may be required in accordance with the provisions of the 2007 Share Option Scheme.

At an extraordinary general meeting of the Company held on 26 November 2015, the shareholders of the Company approved the refreshment of the existing limit to an aggregate number of shares of the Company which may be allotted and issued pursuant to the exercise of options granted under the 2007 Share Option Scheme and any other share option scheme of the Company not exceeding 200,000,000 shares of the Company. During the year, no share options was granted, a total of 40,737,009 share options were lapsed, the outstanding share option under the 2007 Scheme Option Scheme as at 31 December 2021 is 55,126,458.

The purpose of 2022 Share Option Scheme is to replace 2007 Share Option Scheme and to is to motivate personnel to optimise their future contributions to the Group and/or to reward them for their past contributions, to attract and retain or otherwise maintain on-going relationships with such personnel who are significant to and/or whose contributions are or will be beneficial to the performance, growth or success of the Group, and additionally in the case of directors (including independent non-executive directors) and executive of the Company, to enable the Group to attract and retain individuals with experience and ability and/or to reward them for their past contributions. As of the date this report, no share options was granted under 2022 Share Option Scheme.

Details of the share options outstanding and movements under the Share Option Scheme of the Company during the year are as follows:

Name or category of participant	Date of grant (note 1)	Exercise period	Exercise Price per share (HK$)	Number of options: Outstanding as at 1.1.2021	Granted during the year	Lapsed or forfeited during the year	Cancelled during the year	Exercised during the year	Outstanding as at 31.12.2021
Directors/chief executive and their associates									
Zhu Yufeng	29.3.2016	18.4.2016 to 28.3.2026	1.324	1,510,755	—	—	—	—	1,510,755
Sun Wei	19.2.2016	15.3.2016 to 18.2.2026	1.16	1,712,189	—	—	—	—	1,712,189
Zhu Zhanjun	29.3.2016	18.4.2016 to 28.3.2026	1.324	2,719,359	—	—	—	—	2,719,359
Yeung Man Chung, Charles	29.3.2016	18.4.2016 to 28.3.2026	1.324	1,700,000	—	—	—	—	1,700,000
Zheng Xiongjiu	19.2.2016	15.3.2016 to 18.2.2026	1.16	2,517,924	—	—	—	—	2,517,924
Yip Tai Him	29.3.2016	18.4.2016 to 28.3.2026	1.324	1,007,170	—	—	—	—	1,007,170
Ho Chung Tai, Raymond	29.3.2016	18.4.2016 to 28.3.2026	1.324	1,007,170	—	—	—	—	1,007,170
Successor of Zhu Qingsong (note 2)	29.3.2016	18.4.2016 to 28.3.2026	1.324	1,007,170	—	—	—	—	1,007,170
Non-director employees (in aggregate)	12.1.2011	1.3.2011 to 11.1.2021	3.296	5,035,850	—	—	(5,035,850)	—	—
	15.7.2011	1.9.2011 to 14.7.2021	4.071	4,834,415	—	—	(4,834,415)	—	—
	5.7.2013	16.9.2013 to 4.7.2023	1.630	14,080,237	—	(3,589,005)	—	(5,465,902)	5,025,330
	24.3.2014	26.5.2014 to 23.3.2024	2.867	21,352,004	—	(18,733,362)	—	—	2,618,642
	19.2.2016	15.3.2016 to 18.2.2026	1.16	60,500,031	—	(18,414,642)	—	(12,518,339)	29,567,050
	29.3.2016	18.4.2016 to 28.3.2026	1.324	3,021,510	—	—	—	—	3,021,510
Other (note 3)	19.2.2016	15.3.2016 to 18.2.2026	1.16	1,712,189	—	—	—	—	1,712,189
Total				**123,717,973**		**(40,737,009)**	**(9,870,265)**	**(17,984,241)**	**55,126,458**

Notes:

1 The vesting period under the Share Option Scheme is 20% of the share options granted on the year of grant, the first, second, third and fourth anniversary of the date of grant, respectively. All share options granted will be fully vested on the fourth anniversary of the date of grant.

2 Mr. Zhu Qingsong passed away in 2021.

3 Mr. Jiang Wenwu resigned as a director of the Company in June 2021. The Board appreciates his services for the Company in the past few years. The Board decides the entitlement of share option shall remain unchanged.

(A) Share option scheme of a subsidiary

GCL New Energy Holdings Limited ("GNE"), a company incorporated in Bermuda with limited liability and the shares of which are listed on the Main Board of The Stock Exchange of Hong Kong Limited (stock code: 451), in which the Company indirectly owned 49.24% issued shares as at 31 December 2021, is a subsidiary of the Company.

GNE adopted a share option scheme (the "GNE Share Option Scheme") on 15 October 2014 for the purpose to motivate personnel to optimise their future contributions to GNE and its subsidiaries ("GNE Group") and/or to reward them for their past contributions, to attract and retain or otherwise maintain on-going relationships with such personnel who are significant to and/or whose contributions are or will be beneficial to the performance, growth or success of the GNE Group, and additionally in the case of executives of GNE, to enable GNE Group to attract and retain individuals with experience and ability and/or to reward them for their past contributions.

The GNE Share Option Scheme shall be valid and effective for a period of 10 years from 15 October 2014, after which no further options will be granted or offered. The total number of shares issued and to be issued upon exercise of the options granted to each eligible person (including both exercised and outstanding options) in any 12-month period must not exceed 1% of the shares of GNE in issue from time to time. Any offer of grant of options shall remain open for acceptance together with an acceptance remittance of HK$1.00 to be received by GNE shall not be more than 30 days from the date of offer. The exercise price of any options granted shall not be less than whichever is the highest of:

(a) the nominal value of the share of GNE;

(b) the closing price of a share of GNE as stated in the Stock Exchange's daily quotations sheet on the date of offer; and

(c) the average closing price of a share of GNE as stated in the Stock Exchange's daily quotation sheets for the five business days immediately preceding the date of offer.

During the year, no GNE share options was exercised. 431,016,250 GNE share options were granted, 42,955,620 GNE share options were lapsed and 285,169,780 GNE share options were cancelled during the year. For details of GNE share options granted and cancelled during the year, please refer to the announcements of GNE dated 26 February 2021 and 3 November 2021.

Details of the outstanding and movements of share options under the GNE Share Option Scheme during the year are as follows:

				Number of GNE share options				
Name or category of participant	Date of grant	Exercise period	Exercise Price per share (HK$)	Outstanding as at 1.1.2021	Granted during the year	Lapsed during the year	Cancelled during the year	Outstanding as at 31.12.2021
Directors/chief executive of the Company and GNE								
Mr. Zhu Yufeng	24.07.2015	24.07.2015 to 23.07.2025	0.606	3,523,100	—	—	(3,523,100)	—
	03.11.2021	03.11.2021 to 02.11.2031	0.357	—	17,500,000	—	—	17,500,000
Ms. Sun Wei	23.10.2014	24.11.2014 to 22.10.2024	1.1798	24,158,400	—	—	(24,158,400)	—
	24.07.2015	24.07.2015 to 23.07.2025	0.606	3,019,800	—	—	(3,019,800)	—
	03.11.2021	03.11.2021 to 02.11.2031	0.357	—	10,000,000	—	—	10,000,000
Mr. Yeung Man Chung, Charles	23.10.2014	24.11.2014 to 22.10.2024	1.1798	12,079,200	—	—	(12,079,200)	—
	24.07.2015	24.07.2015 to 23.07.2025	0.606	3,019,800	—	—	(3,019,800)	—
	03.11.2021	03.11.2021 to 02.11.2031	0.357	—	5,000,000	—	—	5,000,000
Other directors and eligible persons of GNE	23.10.2014	24.11.2014 to 22.10.2024	1.1798	216,942,432	—	(6,039,600)	(158,559,632)	52,343,200
	24.07.2015	24.07.2015 to 23.07.2025	0.606	179,688,166	—	(17,313,520)	(80,809,848)	81,564,798
	26.02.2021	26.02.2021 to 25.02.2031	0.384	—	370,516,250	(19,602,500)	—	350,913,750
	03.11.2021	03.11.2021 to 02.11.2031	0.357	—	28,000,000	—	—	28,000,000
Total				**442,430,898**	**431,016,250**	**(42,955,620)**	**(285,169,780)**	**545,321,748**

Please refer to the 2021 annual report of GNE under the section "Report of Directors" with the heading "Share Option Schemes" for the details of the GNE Share Option Scheme and the movements of options granted thereunder during the year and after reporting period.

Share Award Scheme

The Company has adopted a share award scheme (the "Share Award Scheme") on 16 January 2017 (the "Adoption Date"), pursuant to which existing shares of the Company ("Shares") may be purchased by the trustee from the market out of cash contributed by the Group and/or the Company may allot and issue new Shares to Computershare Hong Kong Trustees Limited (the "Trustee") in accordance with any specific mandate approved by the shareholders. Such Shares would be used to grant to certain eligible persons who are employees of the Company and its subsidiaries. The purpose of the Share Award Scheme is to effectively attract, retain and incentivise core employees of the Group and align their interests and growth with the Group as a whole.

The Share Award Scheme shall be subject to the administration of the Board, a committee (comprising Executive Director, Independent Non-executive Directors and senior executive) and the Trustee in accordance with the Share Award Scheme rules and the trust deed.

The maximum number of Shares that can be held by the Trustee under the Share Award Scheme is limited to 2% of the total number of issued Shares from time to time.

Save as disclosed above, during the year, neither the Company nor any of its subsidiaries is a party to any arrangement to enable the Directors of the Company to acquire benefits by means of the acquisition of shares in, or debt securities of, the Company or any associated corporation and none of the Directors had any right to subscribe for the securities of the Company, or had exercised any such right during the year.

Interests and Short Positions of Substantial Shareholders

As at 31 December 2021, so far as is known to any Director or chief executive of the Company, the following persons (other than a Director or chief executive of the Company) had an interest or short position in the shares or underlying shares of the Company as recorded in the register kept pursuant to Section 336 of the SFO:

(i) Long position in the shares and underlying shares of the Company

Name	**Capacity/nature of interest**	**Number of shares/ underlying shares**	**Approximate percentage of issued share capital of the Company** (Note 3)
Asia Pacific Energy Fund Limited	Interest in a controlled corporation (Note 1)	6,370,388,156	23.51%
于泳	Interest in a controlled corporation (Note 2)	1,781,631,000	6.57%

Notes:

1. An aggregate of 6,370,388,156 shares of the Company are collectively held by Highexcel Investments Limited, Happy Genius Holdings Limited and Get Famous Investments Limited, which are wholly-owned by Golden Concord Group Limited, which in turn is wholly-owned by Asia Pacific Energy Holdings Limited. Asia Pacific Energy Holdings Limited is in turn wholly-owned by Asia Pacific Energy Fund Limited. Asia Pacific Energy Fund Limited is ultimately held under a discretionary trust with Credit Suisse Trust Limited as trustee for Mr. Zhu Gongshan and his family (including Mr. Zhu Yufeng, a Director and the son of Mr. Zhu Gongshan) as beneficiaries.

2. According to the disclose of interest filing of 于泳 as at 17 December 2021, an aggregate of 1,781,631,000 shares of the Company are collectively held by 于泳, throught his controlling companies, including Cathay Fortune Corporation, 鴻商資本股權投資有限公司, 西藏永策投資有限公司, 西藏鴻銘投資有限公司 and 西藏鴻商資本投資有限公司.

   The long position in 1,056,617,000 under unlisted derivative interest of the Company through companies controlled by it is cash settled.

3. The total number of ordinary shares of the Company in issue as at 31 December 2021 is 27,099,010,448.

Save as disclosed aforesaid, so far as is known to any Directors or chief executive of the Company, as at 31 December 2021, no other persons (other than a Director or chief executive of the Company) who had an interest or short position in the shares or underlying shares of the Company as recorded in the register kept pursuant to Section 336 of the SFO.

Director's Interest in Significant Contracts

Save as disclosed in the heading "Connected Transactions and Continuing Connected Transactions", there is no transaction, arrangement or contract of significance subsisting during or at the end of the year in which a director of the Company is or was materially interested, either directly or indirectly.

Connected Transactions & Continuing Connected Transactions

The INEDs of the Company, have reviewed and considered the report from internal auditors in respect of the internal audit procedures taken and findings on the continuing connected transactions, confirmed that the continuing connected transactions for the year ended 31 December 2021 and that they were entered into:

i. in the ordinary course of the business of the Group;

ii. on normal commercial terms or better; and

iii. in accordance with the relevant written agreements governing them on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

Pursuant to Rule 14A.56 of the Listing Rules, the Company has engaged the auditor of the Company to conduct certain procedures in respect of the continuing connected transactions of the Group in accordance with the Hong Kong Standard on Assurance Engagement 3000 (Revised) "Assurance Engagement Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants.

The auditor has confirmed to the Board in writing that for the year ended 31 December 2021, the continuing connected transactions, which were entered into:

a. have received the approval of the Board;

b. have been in accordance with the pricing policies of the Company for transactions involving the provision of goods or services;

c. have been in accordance with the relevant agreement governing such transactions; and

d. have not exceeded the relevant announced cap amounts for the financial year ended 31 December 2021.

Details of the connected transactions and continuing connected transactions of the Company for the year ended 31 December 2021 that are subject to reporting and annual review requirements under the Listing Rules are as follows:

(A) Connected Transactions

The following is summary of transaction which was disclosed in the announcement of the Company during the year ended 31 December 2021:

The Heads of Agreement Dated 19 December 2021 Entered into between GNE Hong Kong and Poly-GCL Petroleum

Reference is made to the joint announcement of GCL-Poly Energy Holdings Limited ("GCL-Poly") and GCL New Energy Holdings Limited ("GNE") dated 19 December 2021 in relation to the heads of agreement ("HOA") entered into between GCL New Energy Hong Kong Investment Limited ("GNE Hong Kong") (as purchaser) and POLY-GCL Petroleum Group Limited ("POLY-GCL Petroleum") (as supplier) in respect of the transaction that GNE Hong Kong pay the deposit to POLY-GCL Petroleum under HOA.

As at 19 December 2021, GNE is a subsidiary of GCL-Poly. Mr. Zhu Gongshan and Mr. Zhu Yufeng are both executive directors of GCL-Poly and are therefore connected persons of GCL-Poly. As POLY-GCL Petroleum is an associate (as defined under the Listing Rules) of Mr. Zhu Gongshan and Mr. Zhu Yufeng, POLY-GCL Petroleum are connected persons of GCL-Poly and the payment of the Deposit by GNE Hong Kong under the HOA constitutes a connected transaction for GCL-Poly under Chapter 14A of the Listing Rules.

GNE Hong Kong is an indirect wholly-owned subsidiary of GNE. As at the date of this joint announcement, Mr. Zhu Yufeng is an executive director of GNE and is a connected person of GNE. As POLY-GCL Petroleum is an associate (as defined under the Listing Rules) of Mr. Zhu Yufeng, POLY-GCL Petroleum is a connected person of GNE and the payment of the deposit by GNE Hong Kong under the HOA constitutes a connected transaction for GNE under Chapter 14A of the Listing Rules.

Pursuant to the HOA, GNE Hong Kong (an indirect wholly-owned subsidiary of GNE) and POLY-GCL Petroleum shall endeavor to procure the conditions precedent to be fulfilled on or before the last day of the three months from the date of the HOA (i.e. 18 March 2022).

As the conditions precedent to the HOA have not been fulfilled on 18 March 2022, the HOA has expired and no deposit or any other compensation or amounts shall be payable by GNE Hong Kong to POLY-GCL Petroleum.

The respective boards of directors of GCL-Poly and GNE are of the view that the expiration of the HOA would have no material adverse impact on the financial and operational position of GCL-Poly and GNE.

Joint announcements dated 19 December 2021 and 20 March 2022 setting out details of the above-mentioned transaction were issued by the Company and GNE.

The above-mentioned connected transaction was one-off transaction.

(B) Continuing Connected Transactions

Details of the continuing connected transactions of the Company for the year ended 31 December 2021 are as follows:

(1) Steam supply

The Group entered into the following agreement dated 31 July 2020:

Reference is made to the announcement dated 31 July 2020, in relation to:

Yangzhou GCL and Yangzhou Power entered into the Yangzhou Steam Supply Agreement ("2020 Yangzhou Steam Supply Agreement") dated 31 July 2020 in relation to the supply of steam by Yangzhou Power to Yangzhou GCL after the expiry of the Existing Yangzhou Steam Supply Agreement on 31 May 2020.

On 31 July 2020, Zhu Gongshan Family Trust effectively holds 40.8% equity interests in Yangzhou Power, therefore, Yangzhou Power is an associate of Mr. Zhu and a connected person of the Company. Accordingly, the transaction contemplated under the Supplemental Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

The transaction amounts and the revised annual caps for the year ended 31 December 2021 under the New Yangzhou Steam Supply Agreement (as supplemented by the Supplemental Agreement) were as follows:

Agreement	**Transaction amount for the year ended 31 December 2021** (RMB)	**Annual Cap for the year ended 31 December 2021** (RMB)
2020 Yangzhou Steam Supply Agreement	2,299,913.6	6,740,229.6

An announcement dated 31 July 2020 setting out details of the above-mentioned transaction was issued by the Company.

(2) Lease of property

(i) Reference is made to the announcement of the Company dated 31 December 2019 in relation to the lease agreements.

Suzhou GCL Research, entered into the following lease agreements as landlord, dated 31 December 2019:

1. GCL Energy Technology as tenant in relation to the leasing of 2/F South Western Zone of Research Building for use as offices for a term of twenty-one months commencing from 1 January 2020 to 30 September 2021 (the "GCL Energy Technology Lease Agreement"); and

2. GCL Construction Management as tenant in relation to the leasing of 3/F South Eastern Zone of Research Building for use as offices for a term of twenty-one months commencing from 1 January 2020 to 30 September 2021 (the "GCL Construction Management Lease Agreement").

2/F & 3/F Research Building are spare space in the property of the Group. The leasing of such spare space could bring additional rental income to the Group.

As at 31 December 2019, the Zhu Family Trust is the ultimate controlling shareholder and a connected person of the Company. GCL System Integration Technology and GCL Energy Engineering are both subsidiaries of GCL System Integration, which is in turn ultimately controlled by Mr. Zhu Yufeng and the Zhu Family Trust, under which Mr. Zhu and his family (including Mr. Zhu Yufeng) are beneficiaries. GCL Energy Technology and GCL Construction Management are both ultimately held and controlled by the Zhu Family Trust. Accordingly, each of GCL System Integration Technology, GCL Energy Engineering, GCL Energy Technology and GCL Construction Management are therefore connected persons of the Company and the transactions under the Lease Agreements constitute continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

The transaction amounts and the annual caps for the year ended 31 December 2021 under the GCL Energy Technology Lease Agreement and GCL Construction Management Lease Agreement were as follows:

Agreements	**Transaction amount for the year ended 31 December 2021** (RMB)	**Annual Cap for the year ended 31 December 2021** (RMB)
GCL Energy Technology Lease Agreement(Note)	0	727,197.75
GCL Construction Management Lease Agreement(Note)	0	2,881,095.75

Note: The tenants ceased to occupy the properties since 1 January 2021, therefore, no actual transaction amount occurred under GCL Energy Technology Lease Agreement and GCL Construction Management Lease Agreement.

An announcement dated 31 December 2019 setting out details of the above-mentioned transactions were issued by the Company.

(ii) Reference is made to the announcement of the Company dated 27 September 2019 in relation to the lease agreements.

Suzhou GCL Research, entered into the following lease agreements as landlord, dated 27 September 2019:

The GCL Energy Technology Lease Agreement with GCL Energy Technology as tenant of 3/F Headquarter for use as offices for a term of two years commencing from 1 October 2019 to 30 September 2021 ("GCL Energy Technology Lease Agreement for Headquarter").

The 3/F of Headquarter are spare space in the property of the Group. The leasing of such spare space could bring additional rental income to the Group.

On 27 September 2019, GCL Energy Technology is an indirect subsidiary of Golden Concord Group Limited, which is in turn ultimately held by Zhu Family Trust, and is therefore an associate of the Zhu Family Trust and a connected person of the Company. Accordingly, the transactions under the GCL Energy Technology Lease Agreement constitutes a continuing connected transaction of the Company under Chapter 14A of the Listing Rules.

The transaction amounts and the annual caps for the year ended 30 September 2021 under the GCL Intelligent Energy Lease Agreement, the Jiangsu Jiarun Lease Agreement and GCL Energy Technology Lease Agreement were as follows:

Agreement	**Transaction amount for the year ended 30 September 2021** (RMB)	**Annual Cap for the year ended 30 September 2021** (RMB)
GCL Energy Technology Lease Agreement for Headquarter	13,713,502.5	13,713,502.5

An announcement dated 27 September 2019 setting out details of the above-mentioned transaction was issued by the Company.

(iii) Reference is also made to the announcement dated 30 September 2021 in relation to a Leases Agreement.

Suzhou GCL Research, entered into the following lease agreements as landlord, dated 30 September 2021:

1. GCL Energy Technology as tenant in relation to the leasing of the East, South and West 3 Zones of 3/F Headquarter for use as offices for a term of two years commencing from 1 October 2021 to 30 September 2023 (the "New GCL Energy Technology Lease Agreement for Headquarter");

2. GCL Power Sales as tenant in relation to the leasing of the North Zone of 3/F Headquarter for use as offices for a term of two years commencing from 1 October 2021 to 30 September 2023 (the "GCL Power Sales Lease Agreement"); and

3. GCL Intelligent Energy as tenant in relation to the leasing of the North Eastern Zone of 3/F Headquarter for use as offices for a term of one year commencing from 1 October 2021 to 30 September 2022 (the "GCL Intelligent Energy Lease Agreement").

3/F Research Building is spare space in the property of the Group. The leasing of such spare space could bring additional rental income to the Group.

As at 30 September 2021, the Zhu Family Trust is the shareholder and a connected person of the Company. Each of GCL Energy Technology, GCL Power Sales and GCL Intelligent Energy is an indirect subsidiary of Concord Group, which is in turn ultimately held by the Zhu Family Trust, and is therefore an associate of the Zhu Family Trust and a connected person of the Company as defined under Chapter 14A of the Listing Rules. Accordingly, the transactions contemplated under the Lease Agreements constitute continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

The transaction amounts and the revised annual caps for the year ended 31 December 2021 under the New GCL Energy Technology Lease Agreement for Headquarter, GCL Power Sales Lease Agreement and GCL Intelligent Energy Lease Agreement were as follows:

Agreements	**Transaction amount for the year ended 31 December 2021** (RMB)	**Annual Cap for the year ended 31 December 2021** (RMB)
New GCL Energy Technology Lease Agreement for Headquarter	3,981,892.5	3,981,892.5
GCL Power Sales Lease Agreement	286,875.0	286,875.0
GCL Intelligent Energy Lease Agreement	302,400.0	302,400.0

An announcement dated 30 September 2021 setting out details of the above-mentioned transactions were issued by the Company.

Directors' Interests in Competing Business

The following Director is considered to have interest in the business which competes or is likely compete, either directly or indirectly, with the business of the Group as required to be disclosed pursuant to the Listing Rules:

Names of Director	**Name of company in which the relevant Director has interest**	**Principal activities of the competing company**	**% interest in competing company**
Mr. Zhu Yufeng	錫林郭勒中能硅業有限公司 Xilingol Zhongneng Silicon Co., Ltd.* (Dormant and inactive)	Intend to produce polysilicon ingot upon completion of construction	Mr. Zhu Yufeng, through companies controlled by him, holds 70% interest

Note: * English name for identification only

Emolument Policy

The emolument policy of the Group to reward its employees is based on their performance, qualifications, competence and market comparables. Remuneration package generally comprises salary, contribution to pension schemes and bonuses relating to the profit of the relevant company and individual's performance. The remuneration package of the executive Directors and the senior management are also linked to the performance of the Group and the return to its shareholders. The remuneration policy of the executive Directors is reviewed by the Remuneration Committee of the Company.

The Group has adopted share option schemes as incentives to Directors, employees and eligible participants, details of the schemes are set out under the section headed "Option Schemes" in this report and in note 49 to the consolidated financial statements.

The Company has adopted a share award scheme on 16 January 2017. The purpose of such scheme is, through the grant of awards to certain eligible persons, to effectively attract, retain and incentivise core employees of the Group and align their interests and growth with the Group as a whole. Details of the scheme and the scheme rules are disclosed under an announcement of the Company dated 16 January 2017.

Pre-emptive Rights

There are no provisions for pre-emptive rights under the Company's Articles of Association or relevant laws of the Cayman Islands which would oblige the Company offer new Shares on a pro rata basis to the existing shareholders.

Major Customers and Suppliers

During the year, the Group's largest supplier accounted for approximately 31.8% of total purchases. The five largest suppliers accounted for approximately 52.8% of the Group's total purchases.

One of the five largest suppliers of the Company was Inner Mongolia Zhonghuan GCL Solar Material Co., Ltd. ("Inner Mongolia Zhonghuan"), which the Company interest held was approximately 12.2%, through its wholly-owned subsidiary and its non-wholly-owned subsidiary for the year ended 31 December 2021.

One of the five largest suppliers of the Company was Xinjiang GCL New Energy Materials Technology Co., Limited* (新疆協鑫新能源材料科技有限公司) ("Xinjiang GCL"). As at 31 December 2021, (i) a wholly-owned subsidiary of the Company held 38.5% interest in Xinjiang GCL; and (ii) an associated company of the Company held 34.5% interests in Xinjiang GCL.

During the year, the Group's five largest customers accounted for approximately 33.0% of the Group's total sales. The largest customer accounted for approximately 9.5% of the Group's total sales.

One of the five largest customers of the Company was Tianjin Zhonghuan Semiconductor Co., Ltd.* (天津中環半導體股份有限公司) and its subsidiaries ("Tianjin Zhonghuan Group").

The Company has an approximately 12.2% interest in Inner Mongolia Zhonghuan, through its wholly-owned subsidiary and its non-wholly-owned subsidiary. Inner Mongolia Zhonghuan is one of the subsidiary of Tianjin Zhonghuan Group for the year ended 31 December 2021.

As at 31 December 2021, Mr. Zhou Gongshen and Mr. Zhu Yufeng had interest in the Company as disclosed under the section of "Director's and Chief Executive's Interests and Short Positions in Shares, Underlying Shares and Debentures of the Company and Associated Company".

Save as disclosed above, to the best knowledge of the Directors, there is no other Directors or any of their associates or any shareholder who holds more than 5% of the ordinary shares of the Company has any interests in the suppliers or customers disclosed above.

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

On 14 January 2021, the Company and the placing agent entered into the placing agreement to place out 3,900,000,000 placing shares at a placing price of HK$1.08 per placing share with net proceeds of approximately HK$4,148 million to no fewer than six independent placees. The placing was completed on 21 January 2021. Upon completion, the placing shares represent approximately 15.57% of the Company's issued share capital as enlarged by the placing.

On 15 December 2021, the Company and the placing agent entered into the placing agreement to place out 2,036,588,000 placing shares at a placing price of HK$2.49 per placing share with net proceeds of approximately HK$4,994 million to no fewer than six independent placees. The placing was completed on 22 December 2021. Upon completion, the placing shares represent approximately 7.52% of the Company's issued share capital as enlarged by the placing.

Other than disclosed above, during the year ended 31 December 2021, neither the Company nor any of its subsidiaries had purchased, sold or redeemed any of the Company's listed securities.

Related Party Transactions

Details of the related party transactions undertaken in normal course of business are set out in note 53 to the consolidated financial statements. Details of the connected transactions/continuing connected transactions are set out under section of "Connected Transactions and Continuing Connected Transactions"

Public Float

As at the date of this report, based on the information that is publicly available to the Company and within the knowledge of the Directors, there is sufficient public float of not less than 25% of the Company's issued shares as required under the Listing Rules.

Changes in Information on Directors

As at the date of this report, the changes in information required to be disclosed by the Directors of the Company pursuant to Rule 13.51(B) of the Listing Rules since the published of 2021 Interim Report are set out below:

Name of Director	Details of Change	Effective Date
Mr. Zhu Zhanjun	Appointed as the Vice Chairman and re-designated as a Joint CEO of the Company in February 2022	February 2022
Mr. Lan Tianshi	Appointed as an executive Director and a Joint CEO of the Company in February 2022	February 2022
Mr. Yeung Man Chung, Charles	Resigned a director of Millennial Lithium Corp. in January 2022	January 2022
Ir. Dr. Ho Chung Tai, Raymond	Resigned as an independent non-executive director and a member of the Audit Committee of Fu Shek Financial Holdings Limited in October 2021	October 2021
Ms. Sun Wei	Appointed as a director of GCL System Integration Technology Co., Ltd. in February 2021	February 2021
De. Shen Wenzhong	Resigned as an independent non-executive director of Shanghai Aerospace Automobile Electromechanical Co., Ltd. in January 2021	January 2021

Auditor

Messrs. Deloitte Touche Tohmatsu tendered its resignation as the auditor of the Company with effect from 14 May 2021 and Crowe (HK) CPA Limited ("Crowe") was appointed as auditor of the Company with effect from 29 June 2021.

Crowe will retire and, being eligible, offer itself for re-appointment. A resolution for the re-appointment of Crowe will be proposed at the forthcoming annual general meeting of the Company.

Events After Reporting Period

Details of the events after reporting period are set out in note 51 to the consolidated financial statements.

On behalf of the Board
Zhu Gongshan
Chairman

Hong Kong, 28 March 2022

Independent Auditor's Report

國富浩華（香港）會計師事務所有限公司
Crowe (HK) CPA Limited
香港 銅鑼灣 禮頓道77號 禮頓中心9樓
9/F Leighton Centre,
77 Leighton Road,
Causeway Bay, Hong Kong

TO THE SHAREHOLDERS OF GCL-POLY ENERGY HOLDINGS LIMITED
保利協鑫能源控股有限公司
(incorporated in the Cayman Islands with limited liability)

OPINION

We have audited the consolidated financial statements of GCL-Poly Energy Holdings Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 97 to 327, which comprise the consolidated statement of financial position as at 31 December 2021, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and 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 2021, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS Standards") issued by the International Accounting Standards Board ("IASB") 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 ("HKSAs") issued by the Hong Kong Institute of Certified Public Accountants ("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"), together with any ethical requirement that are relevant to our audit of the consolidated financial statements in the Cayman Islands, and we have fulfilled our other ethical responsibilities in accordance with these requirement and 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. In addition to the matter described in the Material Uncertainty Related to Going Concern section, we have determined the matters described below to be the key audit matters to be communicated in our report.

Key audit matter	How our audit addressed the key audit matter
Revenue recognition on tariff adjustments on electricity sales	
We identified the recognition of the Group's revenue on tariff adjustments on electricity sales as a key audit matter due to the significant management judgement involved in determining whether each of the Group's operating solar power plants had qualified for, and had met, all the requirements and conditions as required under the prevailing government policies and regulations for entitlement of the tariff adjustments and accordingly, the timing and eligibility of accruing revenue on tariff adjustments. As described in note 6 to the consolidated financial statements, revenue on tariff adjustments on electricity sales of approximately RMB1,678 million was recognised for the year ended 31 December 2021 in which the Group had submitted the applications for tariff adjustments of all on-grid solar power plants and under government's approval process.	Our procedures in relation to the recognition of the Group's revenue on tariff adjustments on electricity sales included: • Obtaining an understanding of key controls in connection with the recognition of tariff adjustments and assessing the operating effectiveness of key controls; • Obtaining the relevant supporting documents, for example, power purchase agreements with relevant local grid companies, and an understanding of the policies and regulations set by the government authorities on tariff adjustments on sales of electricity in this industry to evaluate the appropriateness of management's judgement on recognising tariff adjustments on electricity sales; • Obtaining legal opinion from the Group's legal advisor in the People's Republic of China (the "PRC") in relation to the assessment that all of the Group's solar power plants currently in operation had met the requirement and conditions as stipulated in the prevailing government policies and regulations for the entitlement of the tariff adjustment when the electricity was delivered on grid; and • Assessing the appropriateness of the Group's entitlement of the tariff adjustments on electricity sales by checking the Group's applications of the tariff adjustments on electricity sales to their subsequent approvals issued by the PRC government as applicable.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

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.

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 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. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE 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 IFRS Standards issued by the IASB 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 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 either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

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. This report is made solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs 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 HKSAs, 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 the 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.

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 the relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

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.

Crowe (HK) CPA Limited
Certified Public Accountants
Hong Kong, 28 March 2022

Chan Wai Dune, Charles
Practising Certificate Number P00712

Consolidated Statement of Profit or Loss and Other Comprehensive Income

For the year ended 31 December 2021

	NOTES	2021 RMB'000	2020 RMB'000
Revenue	6	**19,697,978**	14,671,267
Cost of sales		**(12,350,393)**	(10,918,475)
Gross profit		**7,347,585**	3,752,792
Other income	7	**766,871**	641,546
Distribution and selling expenses		**(98,058)**	(93,942)
Administrative expenses		**(2,034,262)**	(1,814,180)
Finance costs	8	**(1,903,142)**	(3,155,293)
Impairment losses under expected credit loss model, net of reversal	9A	**(339,018)**	(649,147)
Other expenses, gains and losses, net	9B	**(1,021,553)**	(5,010,542)
Share of profits of associates	19	**2,651,636**	271,564
Share of losses of joint ventures	20	**(78,016)**	(103,553)
Profit (loss) before tax		**5,292,043**	(6,160,755)
Income tax expense	10	**(591,036)**	(110,496)
Profit (loss) for the year	11	**4,701,007**	(6,271,251)
Other comprehensive income (expense)			
Items that will not be reclassified to profit or loss:			
Fair value gain (loss) on investments in equity instruments at fair value through other comprehensive income		**20,610**	(20,784)
Share of other comprehensive income of associates		**22,402**	—
		43,012	**(20,784)**

Consolidated Statement of Profit or Loss and Other Comprehensive Income (CONTINUED)

For the year ended 31 December 2021

	2021	2020
	RMB'000	RMB'000
Item that may be reclassified subsequently to profit or loss:		
Exchange differences arising on translation of foreign operations	**5,098**	(69,855)
	5,098	(69,855)
Other comprehensive income (expense) for the year	**48,110**	(90,639)
Total comprehensive income (expense) for the year	**4,749,117**	(6,361,890)
Profit (loss) for the year attributable to:		
Owners of the Company	**5,083,952**	(5,667,864)
Non-controlling interests	**(382,945)**	(603,387)
	4,701,007	(6,271,251)
Total comprehensive income (expense) for the year attributable to:		
Owners of the Company	**5,126,565**	(5,742,520)
Non-controlling interests	**(377,448)**	(619,370)
	4,749,117	(6,361,890)

	NOTE	2021 RMB cents	2020 RMB cents
Earnings (loss) per share	14		
— Basic		**20.68**	(28.06)
— Diluted		**20.65**	(28.06)

Consolidated Statement of Financial Position

At 31 December 2021

	NOTES	2021 RMB'000	2020 RMB'000
NON-CURRENT ASSETS			
Property, plant and equipment	15	**18,292,536**	36,706,248
Right-of-use assets	16	**2,299,036**	3,432,600
Investment properties	17	**56,494**	61,149
Other intangible assets	18	**179,870**	213,338
Interests in associates	19	**9,605,159**	7,039,026
Interests in joint ventures	20	**693,944**	574,158
Other financial assets at fair value through profit or loss	21	**296,410**	321,267
Equity instruments at fair value through other comprehensive income	21	**41,683**	21,073
Deferred tax assets	23	**107,985**	289,814
Deposits, prepayments and other non-current assets	25	**2,179,398**	1,712,971
Contract assets	26	**40,941**	1,227,979
Amounts due from related companies — non-trade related	27	**24,481**	740,531
Pledged and restricted bank and other deposits	29	**464,640**	682,105
		34,282,577	53,022,259
CURRENT ASSETS			
Inventories	24	**950,575**	488,629
Trade and other receivables	25	**17,527,363**	16,487,802
Amounts due from related companies — trade related	27	**213,999**	210,750
Amounts due from related companies — non-trade related	27	**361,288**	386,565
Other financial assets at fair value through profit or loss	21	**421,790**	800,763
Held for trading investments	28	**1,473**	3,447
Tax recoverable		**88,027**	2,777
Pledged and restricted bank and other deposits	29	**2,765,122**	3,864,571
Bank balances and cash	29	**6,702,316**	1,709,585
		29,031,953	23,954,889
Assets classified as held for sale	30	**783,384**	3,525,749
		29,815,337	27,480,638

	NOTES	2021 RMB'000	2020 RMB'000
CURRENT LIABILITIES			
Trade and other payables	31	**13,853,080**	12,530,712
Amounts due to related companies — trade related	32	**254,876**	214,298
Amounts due to related companies — non-trade related	32	**2,489,143**	1,873,859
Loans from related companies	33	**32,325**	788,668
Contract liabilities	34	**896,128**	357,461
Bank and other borrowings — due within one year	36	**5,022,964**	22,884,812
Lease liabilities — due within one year	37	**316,819**	531,258
Notes payables — due within one year	38	**467,305**	3,312,863
Derivative financial instruments	39	**112,759**	60,561
Deferred income	35	**53,355**	40,136
Tax payables		**155,774**	134,483
		23,654,528	42,729,111
Liabilities associated with assets classified as held for sale	30	**562,365**	1,919,568
		24,216,893	44,648,679
NET CURRENT ASSETS (LIABILITIES)		**5,598,444**	(17,168,041)
TOTAL ASSETS LESS CURRENT LIABILITIES		**39,881,021**	35,854,218
NON-CURRENT LIABILITIES			
Contract liabilities	34	**36,000**	—
Loans from related companies	33	**—**	119,840
Bank and other borrowings — due after one year	36	**3,559,912**	13,351,853
Lease liabilities — due after one year	37	**468,301**	1,358,881
Notes payables — due after one year	38	**2,648,062**	—
Deferred income	35	**455,183**	518,448
Deferred tax liabilities	23	**411,958**	113,991
		7,579,416	15,463,013
NET ASSETS		**32,301,605**	20,391,205

Consolidated Statement of Financial Position (CONTINUED)

At 31 December 2021

	NOTE	**2021** **RMB'000**	2020 RMB'000
CAPITAL AND RESERVES			
Share capital	40	**2,359,030**	1,862,725
Reserves		**26,666,983**	14,726,394
Equity attributable to owners of the Company		**29,026,013**	16,589,119
Non-controlling interests		**3,275,592**	3,802,086
TOTAL EQUITY		**32,301,605**	20,391,205

The consolidated financial statements on pages 97 to 327 were approved and authorised for issue by the board of directors on 28 March 2022 and are signed on its behalf by:

Zhu Gongshan	**Yeung Man Chung, Charles**
DIRECTOR	*DIRECTOR*

Consolidated Statement of Changes in Equity

For the year ended 31 December 2021

	Attributable to owners of the Company														
	Share capital RMB'000	Share premium RMB'000	Shares held for share award scheme RMB'000 (Note i)	Capital redemption reserve RMB'000	Investments revaluation reserve RMB'000	Other reserve RMB'000 (Note ii)	Capital reserve RMB'000 (Note iii)	Statutory reserve funds RMB'000 (Note iv)	Special reserves RMB'000 (Note v)	Share options reserve RMB'000	Translation reserve RMB'000	Accumulated profits RMB'000	Sub-total RMB'000	Non-controlling interests RMB'000	Total RMB'000
At 1 January 2020	1,742,850	10,257,187	(236,629)	22,202	(84,363)	(619,157)	67,251	3,967,760	(2,075,257)	158,965	5,837	9,043,513	22,250,159	4,471,249	26,721,408
Exchange differences arising from translation of financial statements of foreign operations	—	—	—	—	—	—	—	—	—	—	(53,872)	—	(53,872)	(15,983)	(69,855)
Fair value loss on investments in equity instruments at FVTOCI	—	—	—	—	(20,784)	—	—	—	—	—	—	—	(20,784)	—	(20,784)
Loss for the year	—	—	—	—	—	—	—	—	—	—	—	(5,667,864)	(5,667,864)	(603,387)	(6,271,251)
Total comprehensive expense for the year	—	—	—	—	(20,784)	—	—	—	—	—	(53,872)	(5,667,864)	(5,742,520)	(619,370)	(6,361,890)
Exercise of share options	288	7,937	—	—	—	—	—	—	—	(4,888)	—	—	3,337	—	3,337
Forfeitures of share options	—	—	—	—	—	—	—	—	—	(8,396)	—	21,279	12,883	(12,883)	—
Issue of new shares (note 40(b))	119,587	123,174	—	—	—	—	—	—	—	—	—	—	242,761	—	242,761
Transaction costs attributable to the issue of new shares	—	(3,954)	—	—	—	—	—	—	—	—	—	—	(3,954)	—	(3,954)
Contributions into capital of a subsidiary by new investors (note 42(B)(v))	—	—	—	—	—	—	—	—	32,420	—	—	—	32,420	38,580	71,000
Disposal of partial interest in a subsidiary through the Transfer (as defined in note 42(B)(v))	—	—	—	—	—	—	—	—	10,315	—	—	—	10,315	9,685	20,000
Recognition of derivative financial instruments (note 39)	—	—	—	—	—	(22,585)	—	—	—	—	—	—	(22,585)	(15,976)	(38,561)
Dividend declared to non-controlling interests	—	—	—	—	—	—	—	—	—	—	—	—	—	(52,644)	(52,644)
Disposal of subsidiaries (note 42(B))	—	—	—	—	—	—	—	(107,699)	11,844	—	—	107,699	11,844	(301,904)	(290,060)
Transfer to reserves	—	—	—	—	—	—	—	292,475	—	—	—	(292,475)	—	—	—
Deemed disposal of partial interest in a subsidiary (note 42(B)(iv))	—	—	—	—	—	(265,850)	—	(88,479)	129,413	—	4,248	15,127	(205,541)	285,349	79,808
At 31 December 2020	1,862,725	10,384,344	(236,629)	22,202	(105,147)	(907,592)	67,251	4,064,057	(1,891,265)	145,681	(43,787)	3,227,279	16,589,119	3,802,086	20,391,205

Consolidated Statement of Changes in Equity (CONTINUED)

For the year ended 31 December 2021

	Share capital RMB'000	Share premium RMB'000	Shares held for share award scheme RMB'000 (Note i)	Capital redemption reserve RMB'000	Investments revaluation reserve RMB'000	Other reserve RMB'000 (Note ii)	Capital reserve RMB'000 (Note iii)	Statutory reserve funds RMB'000 (Note iv)	Special reserves RMB'000 (Note v)	Share options reserve RMB'000	Translation reserve RMB'000	Accumulated profits RMB'000	Sub-total RMB'000	Non-controlling interests RMB'000	Total RMB'000
	Attributable to owners of the Company														
Exchange differences arising from translation of financial statements of foreign operations	—	—	—	—	—	—	—	—	—	—	(399)	—	(399)	5,497	5,098
Fair value loss on investments in equity instruments at FVTOCI	—	—	—	—	43,012	—	—	—	—	—	—	—	43,012	—	43,012
Loss for the year	—	—	—	—	—	—	—	—	—	—	—	5,083,952	5,083,952	(382,945)	4,701,007
Total comprehensive expense for the year	—	—	—	—	43,012	—	—	—	—	—	(399)	5,083,952	5,126,565	(377,448)	4,749,117
Exercise of share options	1,509	39,600	—	—	—	—	—	—	—	(21,452)	—	—	19,657	—	19,657
Forfeitures of share options	—	—	—	—	—	—	—	—	—	(51,895)	—	51,895	—	—	—
Forfeitures of share options of GNE	—	—	—	—	—	—	—	—	—	—	—	62,129	62,129	(62,129)	—
Equity-settled share based payments recognised by GNE	—	—	—	—	—	—	—	—	—	—	—	—	—	20,718	20,718
Issue of new shares (note 40(c))	494,796	7,197,679	—	—	—	—	—	—	—	—	—	—	7,692,475	—	7,692,475
Transaction costs attributable to the issue of new shares	—	(116,750)	—	—	—	—	—	—	—	—	—	—	(116,750)	—	(116,750)
Acquisition of additional interest of subsidiaries	—	—	—	—	—	—	—	—	(331,748)	—	—	—	(331,748)	(1,254,824)	(1,586,572)
Contributions by non-controlling shareholders to newly incorporated subsidiaries	—	—	—	—	—	—	—	—	9,840	—	—	—	9,840	444,286	454,126
Deemed disposal of partial interest in a subsidiary by increase of paid-up capital of a subsidiary (note 42(A)(i)(b))	—	—	—	—	—	—	—	—	24,278	—	—	—	24,278	40,722	65,000
Recognition of derivative financial instruments (note 39 and 42(A)(i)(b))	—	—	—	—	—	(31,632)	—	—	—	—	—	—	(31,632)	—	(31,632)
Deemed disposal of partial interest in subsidiaries by change in the capital structure of subsidiaries (note 42(A)(i)(b))	—	—	—	—	—	(15,976)	—	—	(20,303)	—	—	—	(36,279)	36,279	—
Disposal of partial interest in GNE (note 42(A)(i)(a))	—	—	—	—	—	—	—	—	(39,464)	—	3,139	—	(36,325)	162,566	126,241
Deemed disposal of partial interest in GNE by share placement of GNE (note 42(A)(i)(a))	—	—	—	—	—	—	—	—	49,841	—	4,843	—	54,684	692,401	747,085
Disposal of subsidiaries (note 42(A)(ii))	—	—	—	—	—	—	—	(303,337)	—	—	—	303,337	—	(145,143)	(145,143)
Transfer to reserves	—	—	—	—	—	—	—	21,555	—	—	—	(21,555)	—	—	—
Dividend declared to non-controlling interests	—	—	—	—	—	—	—	—	—	—	—	—	—	(83,922)	(83,922)
At 31 December 2021	2,359,030	17,504,873	(236,629)	22,202	(62,135)	(955,200)	67,251	3,782,275	(2,198,821)	72,334	(36,204)	8,707,037	29,026,013	3,275,592	32,301,605

Notes:

(i) During 2017 and 2018, the Company paid in total of RMB236,629,000 to a trustee ("Trustee") to purchase 322,998,888 shares of the Company in the market pursuant to the Share Award Scheme (the "Scheme") established on 16 January 2017 ("Adoption Date") by the board of directors of the Company (the "Directors"). As at 31 December 2021, all the shares were held by the Trustee. More details are set out in note 49a(II).

(ii) Other reserve represents the equity (other than share capital) attributable to owners of the Company prior to the reverse acquisition, including share premium, capital reserve, contribution from a shareholder, other reserve, share options reserve, revaluation reserve and deficit. As the Company was accounted for as reverse acquisition by GCL Solar Energy Technology Holdings Inc. ("GCL Solar Energy") in 2009, such reserves attributable to owners of the Company were reclassified to other reserve upon the completion of the reverse acquisition.

Upon disposal of the non-solar power business in 2015, portion of the amount was realised and transferred to the share premium, share options reserve and accumulated profits of the Group.

Moreover, other reserve represents the initial recognition of put options granted to non-controlling interests by subsidiaries.

(iii) Capital reserve represents the amount of contribution from former immediate holding company of GCL Solar Energy of United States dollars ("US$") 15,009,000 (equivalent to RMB126,029,000) net of the 500,000 ordinary shares of GCL Solar Energy repurchased for a consideration of US$7,000,000 (equivalent to RMB58,778,000) and cancelled prior to 2009.

(iv) Pursuant to the relevant laws in the People's Republic of China (the "PRC"), each of the subsidiaries established in the PRC is required to transfer 5% — 10% (2020: 5% — 10%) of its profit after tax as per statutory financial statements (as determined by the management of the subsidiary) to the reserve funds (including the general reserve fund and enterprise development fund where appropriate). The general reserve fund is discretionary when the fund balance reaches 50% of the registered capital of the respective company and can be used to make up for previous years' losses or, expand the existing operations or can be converted into additional capital of the subsidiary. The enterprise development fund can only be used for development and is not available for distribution to shareholder.

(v) Special reserves represent (i) the difference between the consideration to acquire additional interests in subsidiaries and the respective share of the carrying amounts of the net assets acquired; (ii) the difference by which the non-controlling interests were adjusted and the fair value of consideration received in relation to the disposal of partial interest of a subsidiary; and (iii) change of interests in existing subsidiaries arising from restructuring.

Consolidated Statement of Cash Flows

For the year ended 31 December 2021

	NOTES	2021 RMB'000	2020 RMB'000
OPERATING ACTIVITIES			
Profit (loss) for the year		**4,701,007**	(6,271,251)
Adjustments for:			
Income tax expense		**591,036**	110,496
Finance costs		**1,903,142**	3,155,293
Interest income		**(109,697)**	(225,871)
Unrealised exchange gain, net		**(12,552)**	(428,521)
Depreciation of property, plant and equipment		**2,058,240**	3,267,293
Depreciation of right-of-use assets		**261,083**	390,487
Depreciation of investment properties		**4,655**	4,656
Amortisation of other intangible assets		**33,474**	32,986
Amortisation of deferred income		**(62,810)**	(57,425)
Loss on disposal of property, plant and equipment	9B	**41,557**	56,900
Gain on disposal of right-of-use assets	9B	**(6,092)**	—
Share of losses of joint ventures		**78,016**	103,553
Share of profits of associates		**(2,651,636)**	(271,564)
(Gain) loss on disposal of solar power plant projects, net	9B	**(84,669)**	218,004
(Gain) loss on disposal of subsidiaries, net	9B	**(16,134)**	81,477
(Gain) loss on disposal and deemed disposal of associates	9B	**(141,449)**	117,258
Gain on disposal and deemed disposal of a joint venture	9B	**(257,026)**	—
Share-based payment expenses	11	**20,718**	—
Loss on fair value change of held for trading investments	9B	**1,873**	656
Loss (gain) on fair value change of financial assets at fair value through profit or loss ("FVTPL")	9B	**51,902**	(39,677)
Loss (gain) on fair value change of derivative financial instruments	9B	**20,566**	(111,400)
Loss on fair value change of convertible bonds to a non-controlling shareholder of a subsidiary	9B	**35,180**	—

	NOTES	2021 RMB'000	2020 RMB'000
OPERATING ACTIVITIES			
Loss on fair value change of convertible bonds receivable	9B	—	403
Impairment loss on financial assets under expected credit loss ("ECL") model, net of reversal		339,018	649,147
(Reversal of) write-down of inventories	24	(14,467)	7,286
Impairment loss on property, plant and equipment	9B	331,404	4,248,251
Impairment loss on right-of-use assets	9B	—	84,086
Written off of deposits for acquisitions of property, plant and equipment	9B	—	14,720
Loss on measurement of assets classified as held for sale to fair value less costs to sell	9B	—	207,836
Write-back of other payables		(54,113)	—
Gain on early termination of leases	9B	(1,701)	(23,571)
Operating cash flows before movements in working capital		7,060,525	5,321,508
(Increase) decrease in inventories		(446,711)	220,461
Increase in trade and other receivables		(13,819,038)	(8,279,619)
(Increase) decrease in amounts due from related companies		(27,420)	21,237
Increase in trade and other payables		7,630,635	1,110,423
Increase (decrease) in amounts due to related companies		40,579	(1,047,083)
Decrease in contract assets		1,192,908	4,504,445
Increase (decrease) in contract liabilities		574,667	(10,232)
Increase in deposits, prepayments and other non-current assets		(101,495)	(70,822)
Cash generated from operations		2,104,650	1,770,318
Income taxes paid		(222,344)	(180,992)
NET CASH FROM OPERATING ACTIVITIES		1,882,306	1,589,326

	NOTES	2021 RMB'000	2020 RMB'000
INVESTING ACTIVITIES			
Interest received		**97,362**	209,053
Proceeds from disposal of property, plant and equipment		**177,609**	86,884
Proceeds from disposal of right-of-use assets		**49,157**	1,287
Payments for construction and purchase of property, plant and equipment		**(5,878,148)**	(2,099,669)
Payments for right-of-use assets		**(100,306)**	(23,188)
Payments for deposits of leases		**—**	(35,377)
Refund of deposits for acquisition of property, plant and equipment		**495,280**	—
Investments in associates		**(294,042)**	(31,648)
Investments in joint ventures		**(25,255)**	(23,300)
Dividends received from joint ventures		**24,197**	54,360
Dividends received from associates		**28,572**	7,592
Redemption of convertible bond		**—**	96,364
Proceeds from disposal of partial interest in GNE		**126,241**	—
Proceeds from disposal of an associate		**500,000**	333,212
Addition of other financial assets at FVTPL		**(114,291)**	(357,136)
Addition of other intangible assets		**(6)**	—
Proceeds from disposal of other intangible assets		**—**	1,399
Withdrawal of pledged and restricted bank and other deposits		**5,058,003**	7,258,411
Placement of pledged and restricted bank and other deposits		**(3,741,388)**	(4,909,050)
Advances to related companies		**—**	(6,348)
Repayment from related companies		**832,739**	532,239
Repayment from a borrower of other loan receivables		**—**	12,790
Repayment from non-controlling interests		**18,750**	—
Acquisition of additional equity interests in non-wholly owned subsidiaries		**(1,586,572)**	—
Proceeds from disposal of other financial assets at FVTPL		**490,677**	—
Deposit received from disposal of a subsidiary		**—**	79,000
Settlement of consideration payables for acquisition of subsidiaries with solar power plant projects		**—**	(1,000)
Settlement of consideration receivables from disposal of subsidiaries with solar power plant projects		**270,572**	168,696
Settlement of consideration receivables from disposal of associates		**3,685**	—
Settlement of consideration receivables from disposal of subsidiaries		**63,000**	—
Net cash inflow from disposal of subsidiaries	42	**4,247,034**	1,382,066
NET CASH FROM NVESTING ACTIVITIES		**742,869**	2,736,637

	NOTES	2021 RMB'000	2020 RMB'000
FINANCING ACTIVITIES			
Interest paid		**(1,511,971)**	(2,509,880)
New bank and other borrowings raised		**9,007,155**	13,806,856
Repayment of bank and other borrowings		**(12,612,271)**	(15,989,275)
Repayment of lease liabilities		**(560,940)**	(424,265)
Proceeds from re-sell of notes issued	38	**—**	76,742
Repayment of notes payables	38	**(213,559)**	(450,919)
Proceeds of loans from related companies		**10,000**	344,811
Repayment to loans from related companies		**(886,183)**	(544,242)
Advances from related companies		**861,907**	1,222,866
Repayment to related companies		**(246,623)**	(28,168)
Proceeds from disposal of partial interest in a subsidiary	42(v)	**—**	20,000
Contribution into capital of a subsidiary by new investors	42(v)	**519,126**	71,000
Dividends paid to non-controlling interests		**(289,582)**	(45,000)
Proceeds from exercise of share options		**19,657**	3,337
Proceeds from issue of new shares of the Company		**7,692,475**	242,761
Proceeds from issue of new shares of GNE		**747,085**	—
Transaction costs attributable to issue of new shares		**(116,750)**	(3,954)
Proceeds from issue of convertible bonds to a non-controlling shareholder of subsidiary		**—**	49,000
NET CASH FROM (USED IN) FINANCING ACTIVITIES		**2,419,526**	(4,158,330)
NET INCREASE IN CASH AND CASH EQUIVALENTS		**5,044,702**	167,633
CASH AND CASH EQUIVALENTS AT 1 JANUARY, represented by			
— Bank balances and cash		**1,709,585**	1,548,019
— Bank balances and cash classified as held for sale		**48,018**	—
		1,757,603	1,548,019

Consolidated Statement of Cash Flows (CONTINUED)

For the year ended 31 December 2021

	2021 RMB'000	2020 RMB'000
EFFECT OF EXCHANGE RATE CHANGES ON THE BALANCE OF BANK BALANCES AND CASH HELD IN FOREIGN CURRENCIES	**(76,638)**	41,951
CASH AND CASH EQUIVALENTS AT 31 DECEMBER, represented by		
— Bank balances and cash	**6,702,316**	1,709,585
— Bank balances and cash classified as held for sale	**23,351**	48,018
	6,725,667	1,757,603

1. GENERAL INFORMATION

GCL-Poly Energy Holdings Limited (the "Company") is an exempted company with limited liability incorporated in the Cayman Islands on 12 July 2006 under the Companies Law, Cap 22 of the Cayman Islands. The shares of the Company are listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") on 13 November 2007. The address of the registered office of the Company is at Cricket Square, Hutchins Drive, PO Box 2681, Grand Cayman, KY1-1111, Cayman Islands and the principal place of business is at Units 1703B–1706, Level 17, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong.

The Company is an investment holding company. The principal activities of its subsidiaries (together with the Company collectively referred to as the "Group"), associates and joint ventures are principally engaged in (1) the manufacturing and sales of polysilicon and wafers for the solar industry; and (2) the sales of electricity, development, investment, management and operation of solar projects.

The functional and presentation currency of the Company is Renminbi ("RMB").

2. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS

Change in presentation of consolidated statement of profit or loss and other comprehensive income

In prior years, management services income from operation and management services for solar power plants was included under "Other Income". From 2021 onwards, such income is presented under "Revenue", to more appropriately reflect the nature of such income. The comparative figures have been reclassified to conform with the revised presentation.

Statement of compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (the "IFRS Standards") issued by the International Accounting Standards Board (the "IASB"). For the purpose of preparation of the consolidated financial statements, information is considered material if such information is reasonably expected to influence decisions made by primary users. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on the Stock Exchange ("Listing Rules") and by the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

2. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Statement of compliance (Continued)

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, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2 *Share-based Payment*, leasing transactions that are accounted for in accordance with IFRS 16 Leases, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 *Inventories* or value in use in IAS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;

- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and

- Level 3 inputs are unobservable inputs for the asset or liability.

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS")

Amendments to IFRS Standards that are mandatorily effective for the current year

In the current year, the Group has applied the *Amendments to References to the Conceptual Framework in IFRS Standards* and the following amendments to IFRS Standards issued by the IASB for the first time, which are mandatorily effective for the annual periods beginning on or after 1 January 2021 for the preparation of the consolidated financial statements:

Amendments to IFRS 16	Covid-19-Related Rent Concessions
Amendments to IFRS 9, International Accounting Standard ("IAS") 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark Reform — Phase 2

Except as described below, the application of the amendments to IFRS Standards in the reporting period has had no material impact on the Group's financial positions and performance for the current and prior periods and/or on the disclosures set out in these consolidated financial statements.

3.1 Impacts and accounting policies on application of Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 "Interest Rate Benchmark Reform — Phase 2"

Financial instruments

Changes in the basis for determining the contractual cash flows as a result of interest rate benchmark reform

For changes in the basis for determining the contractual cash flows of a financial asset or financial liability to which the amortised cost measurement applies as a result of interest rate benchmark reform, the Group applies the practical expedient to account for these changes by updating the effective interest rate, such change in effective interest rate normally has no significant effect on the carrying amount of the relevant financial asset or financial liability.

A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if and only if, both these conditions are met:

- the change is necessary as a direct consequence of interest rate benchmark reform; and
- the new basis for determining the contractual cash flows is economically equivalent to the previous basis (i.e. the basis immediately preceding the change).

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS") (Continued)

Amendments to IFRS Standards that are mandatorily effective for the current year (Continued)

3.1 Impacts and accounting policies on application of Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 "Interest Rate Benchmark Reform — Phase 2" (Continued)

Leases

The Group as a lessee

Changes in the basis for determining the future lease payments as a result of interest rate benchmark reform

For changes in the basis for determining the future lease payments as a result of interest rate benchmark reform, the Group applies the practical expedient to remeasure the lease liabilities by discounting the revised lease payments using the unchanged discount rate, unless the change in lease payments results from a change in floating interest rates. In that case, the Group uses the revised discount rate that reflects change in the interest rate and makes a corresponding adjustment to the related right-of-use assets. A lease modification is required by interest rate benchmark reform if, and only if, both of these conditions are met:

- the modification is necessary as a direct consequence of interest rate benchmark reform; and
- the new basis for determining the lease payments is economically equivalent to the previous basis (i.e. the basis immediately preceding the modification).

If lease modifications are made in addition to those lease modifications required by interest rate benchmark reform, the Group applies the applicable requirements in IFRS 16 to account for all lease modifications made at the same time, including those required by interest rate benchmark reform.

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS") (Continued)

New and amendments to IFRS Standards in issue but not yet effective

The Group has not early applied the following new and amendments to IFRS Standards that have been issued but are not yet effective:

IFRS 17	Insurance Contracts and the related Amendments[1]
Amendment to IFRS 16	COVID-19-Related Rent Concessions beyond 30 June 2021[4]
Amendments to IFRS 3	Reference to the Conceptual Framework[2]
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[3]
Amendments to IAS 1	Classification of Liabilities as Current or Non-current[1]
Amendments to IAS 1 and IFRS Practice Statement 2	Disclosure of Accounting Policies[1]
Amendments to IAS 8	Definition of Accounting Estimates[1]
Amendments to IAS 16	Property, Plant and Equipment — Proceeds before Intended Use[2]
Amendments to IAS 37	Onerous Contracts — Cost of Fulfilling a Contract[2]
Amendments to IFRS Standards	Annual Improvements to IFRS Standards 2018–2020[2]
Amendments to IAS 12	Deferred tax related assets and liabilities arising from a single transaction[1]

[1] Effective for annual periods beginning on or after 1 January 2023.
[2] Effective for annual periods beginning on or after 1 January 2022.
[3] Effective for annual periods beginning on or after a date to be determined.
[4] Effective for annual periods beginning on or after 1 April 2021.

Except for the new and amendments to IFRS Standards mentioned below, the Directors anticipate that the application of all other new and amendments to IFRS Standards will have no material impact on the consolidated financial statements.

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS") (Continued)

Amendments to IFRS 3 Reference to the Conceptual Framework

The amendments:

- update a reference in IFRS 3 *Business Combinations* so that it refers to the *Conceptual Framework for Financial Reporting* issued by IASB in March 2018 (the "Conceptual Framework") instead of the International Accounting Standards Committee's *Framework for the Preparation and Presentation of Financial Statements* (replaced by the Conceptual Framework for Financial Reporting issued in September 2010);

- add a requirement that, for transactions and other events within the scope of IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* or IFRIC 21 *Levies*, an acquirer applies IAS 37 or IFRIC 21 instead of Conceptual Framework to identify the liabilities it has assumed in a business combination; and

- add an explicit statement that an acquirer does not recognise contingent assets acquired in a business combination.

The Group will apply the amendments prospectively to business combinations for which the date of acquisition is on or after the beginning of the first annual period beginning on or after 1 January 2022. The application of the amendments is not expected to have a significant impact on the financial position and performance of the Group.

Amendments to IAS 1 Classification of Liabilities as Current or Non-current

The amendments provide clarification and additional guidance on the assessment of right to defer settlement for at least twelve months from reporting date for classification of liabilities as current or non-current, which:

- specify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period. Specifically, the amendments clarify that:

  (i) the classification should not be affected by management intentions or expectations to settle the liability within 12 months; and

  (ii) if the right is conditional on the compliance with covenants, the right exists if the conditions are met at the end of the reporting period, even if the lender does not test compliance until a later date; and

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS") (Continued)

Amendments to IAS 1 Classification of Liabilities as Current or Non-current (Continued)

- clarify that if a liability has terms that could, at the option of the counterparty, result in its settlement by the transfer of the entity's own equity instruments, these terms do not affect its classification as current or non-current only if the entity recognises the option separately as an equity instrument applying IAS 32 *Financial Instruments: Presentation*.

Based on the Group's outstanding liabilities as at 31 December 2021 and the related terms and conditions stipulated in the agreements between the Group and the relevant lenders, the application of the amendments will not result in a reclassification of the Group's liabilities.

Amendments to IAS 1 and IFRS Practice Statement 2 *Disclosure of Accounting Policies*

IAS 1 is amended to replace all instances of the term "significant accounting policies" with "material accounting policy information". Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

The supporting paragraphs in IAS 1 are also amended to clarify that accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material. If an entity chooses to disclose immaterial accounting policy information, such information must not obscure material accounting policy information.

The amendments also explains how an entity can identify material accounting policy information. Such information is expected to be material if users of an entity's financial statements would need it to understand other material information in the financial statements.

IFRS Practice Statement 2 Making Materiality Judgements (the "Practice Statement") is also amended to illustrate how an entity could judge whether information about an accounting policy is material to its financial statements. Guidance and examples are added to the Practice Statement to help entities apply its "four-step materiality process" to accounting policy disclosures.

The directors of the Company do not expect the amendments will have material impact on the financial position or performance of the Group. The impacts of application on disclosures or presentation, if any, will be disclosed in the Group's future consolidated financial statements.

3. APPLICATION OF NEW AND AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRS STANDARDS") (Continued)

Amendments to IAS 8 Definition of Accounting Estimates

The amendments to define accounting estimates as "monetary amounts in financial statements that are subject to measurement uncertainty". Accounting policies may require items in financial statements to be measured in a way that involves measurement uncertainty — that is, the accounting policy may require such items to be measured at monetary amounts that cannot be observed directly and must instead be estimated. In such a case, an entity develops an accounting estimate to achieve the objective set out by the accounting policy. Developing accounting estimates involves the use of judgements or assumptions based on the latest available, reliable information.

In addition, the concept of changes in accounting estimates in IAS 8 is retained with the additional clarifications.

4. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies are set out below.

Basis of consolidation or asset acquisitions

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

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 listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Basis of consolidation or asset acquisitions (Continued)

Profit or loss and each item of other comprehensive income ("OCI") are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

Changes in the Group's interests in existing subsidiaries

Changes in the Group's interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's relevant components of equity and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries, including re-attribution of relevant reserves between the Group and the non-controlling interests according to the Group's and the non-controlling interests' proportionate interests.

Any difference between the amount by which the non-controlling interests are adjusted, and the fair value of the consideration paid or received is recognised directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, the assets and liabilities of that subsidiary and non-controlling interest (if any) are derecognised. A gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the carrying amount of the assets (including goodwill), and liabilities of the subsidiary attributable to the owners of the Company. All amounts previously recognised in OCI in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/ permitted by applicable IFRS Standards). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9 *Financial Instruments* ("IFRS 9") or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Business combinations

Operation concentration test

Effective from 1 January 2020, the Group can elect to apply an optional concentration test, on a transaction-by-transaction basis, that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The Concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. The gross assets under assessment exclude cash equivalents, deferred tax assets, and goodwill resulting from the effect of deferred tax liabilities. If the concentration test is met, the set of activities and assets is determined not to be a business and no further assessment is needed.

Asset acquisitions

When the Group acquires a subsidiary or group of assets and liabilities that do not constitute a business, the Group identifies and recognises the individual identifiable assets acquired and liabilities assumed by allocating the purchase price first to financial assets/financial liabilities at the respective fair values, the remaining balance of the purchase price is then allocated to the other identifiable assets and liabilities on the basis of their relative fair values at the date of purchase. Such a transaction does not give rise to goodwill or bargain purchase gain.

Acquisitions of businesses

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred 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. Acquisition-related costs are generally recognised in profit or loss as incurred.

Except for certain recognition exemptions, the identifiable assets acquired and liabilities assumed must meet the definitions of an asset and a liability in the International Accounting Standards Committee's *Framework for the Preparation and Presentation of Financial Statements* (replaced by the *Conceptual Framework for Financial Reporting* issued in September 2010).

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Business combinations (Continued)

Acquisitions of businesses (Continued)

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their fair value, except that:

- deferred tax assets or liabilities, and assets or liabilities related to employee benefit arrangements are recognised and measured in accordance with IAS 12 *Income Taxes* and IAS 19 *Employee Benefits respectively*;
- liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with IFRS 2 at the acquisition date (see the accounting policy below);
- assets (or disposal groups) that are classified as held for sale in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* are measured in accordance with that standard; and
- lease liabilities are recognised and measured at the present value of the remaining lease payments (as defined in IFRS 16) as if the acquired leases were new leases at the acquisition date, except for leases for which (a) the lease term ends within 12 months of the acquisition date; or (b) the underlying asset is of low value. Right-of-use assets are recognised and measured at the same amount as the relevant lease liabilities, adjusted to reflect favourable or unfavourable terms of the lease when compared with market terms. Except for right-of-use assets relating to leasehold lands in which the relevant acquires are the registered owners with full upfront lease payments, which are measured at fair value.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net amount of the identifiable assets acquired and the liabilities assumed as at acquisition date. If, after reassessment, the net amount of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognised immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the relevant subsidiary's net assets in the event of liquidation are initially measured at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets or at fair value. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at their fair value.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Investments in associates and joint ventures

An associate is an entity over which the Group has 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 joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates and joint ventures are incorporated in these consolidated financial statements using the equity method of accounting. The financial statements of associates and joint ventures used for equity accounting purposes are prepared using uniform accounting policies as those of the Group for like transactions and events in similar circumstances. Under the equity method, an investment in an associate or a joint venture is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and OCI of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

The Group assesses whether there is an objective evidence that the interest in an associate or a joint venture may be impaired. When any objective evidence exists, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with IAS 36 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised is not allocated to any asset, including goodwill, that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with IAS 36 to the extent that the recoverable amount of the investment subsequently increases.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Investments in associates and joint ventures (Continued)

When the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in the investee with a resulting gain or loss being recognised in profit or loss. When the Group retains an interest in the former associate or joint venture and the retained interest is a financial asset within the scope of IFRS 9, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition. The difference between the carrying amount of the associate or joint venture and the fair value of any retained interest and any proceeds from disposing of the relevant interest in the associate or joint venture is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognised in OCI in relation to that associate or joint venture on the same basis as would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognised in OCI by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) upon disposal/partial disposal of the relevant associate or joint venture.

When the Group reduces its ownership interest in an associate or a joint venture but the Group continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognised in OCI relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities.

When a group entity transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognised in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

Non-current assets and disposal groups held for sale

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the asset (or disposal group) is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such asset (or disposal group) and its sale is highly probable. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Non-current assets and disposal groups held for sale (Continued)

When the Group is committed to a sale plan involving loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the Group will retain a non-controlling interest in the relevant subsidiary after the sale.

When the Group is committed to a sale plan involving disposal of an investment, or a portion of an investment, in an associate or joint venture, the investment or the portion of the investment that will be disposed of is classified as held for sale when the criteria described above are met, and the Group discontinues the use of the equity method in relation to the portion that is classified as held for sale from the time when the investment (or a portion of the investment) is classified as held for sale.

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Immediately before the initial classification of the asset (or disposal group) as held for sale, the carrying amounts of the assets (or all the assets and liabilities in the group) are measured in accordance with applicable IFRSs.

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e., when "control" of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
- the Group's performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue from contracts with customers (Continued)

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

Revenue from sales of electricity is recognised at a point in time when the control of the electricity transferred, being at the point when electricity has generated and transmitted to the customer.

Operation and management service income, consultancy fee income and solar related supporting services income are recognised over time when services are rendered.

A contract asset represents the Group's right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents the Group's unconditional right to consideration, i.e., only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

Output method

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

As a practical expedient, if the Group has a right to consideration in an amount that corresponds directly with the value of the Group's performance completed to date, the Group recognises revenue in the amount to which the Group has the right to invoice.

Variable consideration

For contracts that contain variable consideration in relation to sales of electricity to the grid companies which contain tariff adjustments related to solar power plants yet to be enlisted in the List (as defined in note 6) by the PRC government, the Group estimates the amount of consideration to which it will be entitled using the most likely amount.

The estimated amount of variable consideration is included in the transaction price only to the extent that it is highly probable that such an inclusion will not result in a significant revenue reversal in the future when the uncertainty with the variable consideration is subsequently resolved.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue from contracts with customers (Continued)

Variable consideration (Continued)

At the end of each reporting period, the Group updates the estimated transaction price (including updating its assessment of whether an estimate of variable consideration is constrained) to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

Existence of significant financing component

In determining the transaction price, the Group adjusts the promised amount of consideration for the effects of the time value of money if the timing of payments agreed (either explicitly or implicitly) provides the customer or the Group with a significant benefit of financing the transfer of goods or services to the customer. In those circumstances, the contract contains a significant financing component. A significant financing component may exist regardless of whether the promise of financing is explicitly stated in the contract or implied by the payment terms agreed to by the parties to the contract.

For contracts where the period between payment and transfer of the associated goods or services is less than one year, the Group applies the practical expedient of not adjusting the transaction price for any significant financing component.

Leases

Definition of 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.

For contracts entered into or modified on or after the date of initial application or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16 at inception, modification date or acquisition date, as appropriate. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessee (Continued)

Allocation of consideration to components of a contract (Continued)

The Group applies practical expedient not to separate non-lease components from lease component, and instead account for the lease component and any associated non-lease components as a single lease component.

Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to 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 lease of low-value assets. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis or another systematic basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term are depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

When the group obtains ownership of the underlying leased assets at the end of the lease term, upon exercising purchase options the carrying amount of the relevant right-of-asset is transferred to property, plant and equipment.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessee (Continued)

Refundable rental deposits

Refundable rental deposits paid are accounted under IFRS 9 and initially measured at fair value. Adjustments to fair value at initial recognition are considered as additional lease payments and included in the cost of right-of-use assets.

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or rate, or there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, or there is a change arising from reassessment of whether the Group will be reasonably certain to exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The lease liability is also remeasured when there is a change in the scope of a lease or the consideration for a lease that is not originally provided for in the lease contract ("lease modification") that is not accounted for as a separate lease. In this case the lease liability is remeasured based on the revised lease payments and lease term using a revised discount rate at the effective date of the modification. The only exceptions are rent concessions that occurred as a direct consequence of the COVID-19 pandemic and met the conditions set out in paragraph 46B of HKFRS 16 *Leases*. In such cases, the Group has taken advantage of the practical expedient not to assess whether the rent concessions are lease modifications, and recognised the change in consideration as negative variable lease payments in profit or loss in the period in which the event or condition that triggers the rent concessions occurred.

In the consolidated statement of financial position, the current portion of long-term lease liabilities is determined as the present value of contractual payments that are due to be settled within twelve months after the reporting period.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessee (Continued)

Lease modifications

Changes in considerations of lease contracts that were not part of the original terms and conditions are accounted for as lease modifications, including lease incentives provided through forgiveness or reduction of rentals.

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and

- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The Group accounts for the remeasurement of lease liabilities by making corresponding adjustments to the relevant right-of-use asset.

The Group as a lessor

Classification and measurement of leases

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessor (Continued)

Refundable rental deposits

Refundable rental deposits received are accounted for under IFRS 9 and initially measured at fair value.

Sale and leaseback transactions

The Group applies the requirements of IFRS 15 to assess whether sale and leaseback transaction constitutes a sale by the Group.

The Group as a seller-lessee

For a transfer that does not satisfy the requirements as a sale, the Group as a seller-lessee continues to recognise the assets and accounts for the transfer proceeds as loans from a related company and other loans within the scope of IFRS 9.

If a sale and leaseback transaction results in a finance lease, any excess of sale proceeds over the carrying amount is not immediately recognised as income by the Group. Instead, it is deferred and amortised over the lease term. If the fair value at the time of a sale and leaseback transaction is less than the carrying amount of the asset, no adjustment is necessary unless there has been an impairment in value, in which case the carrying amount is reduced to the assets' recoverable amount.

Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the functional currency of that entity (foreign currencies) are recognised at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at the date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Foreign currencies (Continued)

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into the presentation currency of the Group (i.e., RMB) using exchange rate prevailing at the end of each reporting period. Income and expenses items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during the period, in which case, the exchange rates prevailing at the dates of transactions are used. Exchange differences arising, if any, are recognised in OCI and accumulated in equity under the heading of translation reserve (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, or a partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset), all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In addition, in relation to a partial disposal of a subsidiary that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences are re-attributed to non-controlling interests and are not recognised in profit or loss. For all other partial disposals (i.e., partial disposals of associates or joint arrangements that do not result in the Group losing significant influence or joint control), the proportionate share of the accumulated exchange differences is reclassified to profit or loss.

Borrowing costs

Borrowing costs are directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale.

Any specific borrowing that remain outstanding after the related asset is ready for its intended use or sale is included in the general borrowing pool for calculation of capitalisation rate on general borrowings. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Government grants

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants related to income that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable. Government grants relating to compensation of expenses are deducted from the related expenses, other government grants are presented under "other income".

Retirement benefit costs

Payments to defined contribution retirement benefit plans including state-managed retirement benefit schemes and the Mandatory Provident Fund Scheme are recognised as an expense when employees have rendered service entitling them to the contributions.

Short-term employee benefits

Short-term employee benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another IFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees (such as wages and salaries, annual leave and sick leave) after deducting any amount already paid.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Share-based payments

Equity-settled share-based payment transactions

Share options granted to employees

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date.

The fair value of the equity-settled share-based payments determined at the grant date without taking into consideration all non-market vesting conditions is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest, with a corresponding increase in equity (share options reserve). At the end of each reporting period, the Group revises its estimates of the number of equity instruments expected to vest based on assessment of all relevant non-market vesting conditions. The impact of the revision of the original estimates, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to share options reserve. For share options that vest immediately at the date of grant, the fair value of the share options granted is expensed immediately to profit and loss.

When share options are exercised, the amount previously recognised in share options reserve will be transferred to share premium. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in share options reserve will be transferred to accumulated profits.

Cash-settled share-based payment transactions

For cash-settled share-based payments, a liability is recognised for the goods or services acquired, measured initially at the fair value of the liability. The fair value of the cash-settled share-based payments is determined without taking into consideration all non-market vesting conditions.

At the end of each reporting period until the liability is settled, and at the date of settlement, the liability is remeasured to fair value. For cash-settled share-based payments that are already vested, any changes in fair value are recognised in profit or loss for the year. For cash-settled share based payments which are still subject to non-market vesting conditions, the effects of vesting and non-vesting conditions are accounted on the same basis as equity-settled share-based payments.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit/loss before tax because of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit. In addition, deferred tax liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary differences will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

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 profits will be available to allow all or part of the asset to be recovered.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Taxation (Continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rate (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies IAS 12 *Income Taxes* requirements to the leasing transaction as a whole. Temporary differences relating to right-of-use assets and lease liabilities are assessed on a net basis. Excess of depreciation on right-of-use assets over the lease payments for the principal portion of lease liabilities resulting in net deductible temporary differences.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied to the same taxable entity by the same taxation authority.

Current and deferred tax are recognised in profit or loss, except when they relate to items that are recognised in OCI or directly in equity, in which case, the current and deferred tax are also recognised in OCI or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

In assessing any uncertainty over income tax treatments, the Group considers whether it is probable that the relevant tax authority will accept the uncertain tax treatment used, or proposed to be use by individual group entities in their income tax filings. If it is probable, the current and deferred taxes are determined consistently with the tax treatment in the income tax filings. If it is not probable that the relevant taxation authority will accept an uncertain tax treatment, the effect of each uncertainty is reflected by using either the most likely amount or the expected value.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property, plant and equipment

Property, plant and equipment are tangible assets that are held for use in the production or supply of goods or services, or for administration purposes (other than properties under construction as described below). Property, plant and equipment are stated in the consolidated statement of financial position at cost less subsequent accumulated depreciation and subsequent accumulated impairment losses, if any.

Property, plant and equipment in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Costs include any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

When the Group makes payments for ownership interests of properties which includes both leasehold land and building elements, the entire consideration is allocated between the leasehold land and the building elements in proportion to the relative fair values at initial recognition. To the extent the allocation of the relevant payments can be made reliably, interest in leasehold land that is accounted for as an operating lease is presented as "right-of-use assets" in the consolidated statement of financial position. When the consideration cannot be allocated reliably between non-lease building element and undivided interest in the underlying leasehold land, the entire properties are classified as property, plant and equipment.

Depreciation is recognised so as to write off the cost of assets other than properties under construction less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation.

Investment properties are initially measured at cost, including any directly attribution expenditure. Subsequent to initial recognition, investment properties are stated at cost less subsequent accumulated depreciation and any accumulated impairment losses. Depreciation is recognised so as to write off the cost of investment properties over their estimated useful lives and after taking into account of their estimated residual value, using the straight-line method.

An investment property is derecognised upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposals. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognised.

Intangible assets

Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at costs less accumulated amortisation and any accumulated impairment losses. Amortisation for intangible assets with finite useful lives is recognised on a straight-line basis over their estimated useful lives. The estimated useful lives and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Internally-generated intangible assets — research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development activities (or from the development phase of an internal project) is recognised if, and only if, all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Intangible assets (Continued)

Internally-generated intangible assets — research and development expenditure (Continued)

- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognised for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally-generated intangible asset can be recognised, development expenditure is recognised in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortisation and accumulated impairment losses (if any), on the same basis as intangible assets that are acquired separately.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

Impairment on property, plant and equipment, right-of-use assets and intangible assets other than goodwill

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets and intangible assets with finite useful lives to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss (if any).

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Impairment on property, plant and equipment, right-of-use assets and intangible assets other than goodwill (Continued)

The recoverable amount of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the cash-generating unit ("CGU") to which the asset belongs.

In testing a CGU for impairment, corporate assets are allocated to the relevant CGU when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be established. The recoverable amount is determined for the CGU or group of CGUs to which the corporate asset belongs, and is compared with the carrying amount of the relevant CGU or group of CGUs. A portion of the carrying amount of a corporate asset is allocated to an individual cash-generating unit if the allocation can be done on a reasonable and consistent basis, or to the smallest group of cash-generating units if otherwise.

Recoverable amount is the higher of fair value less costs of disposal and value in use. 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 (or a CGU) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or the CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Inventories

Inventories are stated at the lower of cost and net realisable value. Costs of inventories are determined on a weighted average method. Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instruments. All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with IFRS 15. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and

- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Classification and subsequent measurement of financial assets (Continued)

Financial assets that meet the following conditions are subsequently measured at FVTOCI:

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at FVTPL, except that at the date of initial application of IFRS 9/initial recognition of a financial asset, the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in OCI if that equity investment is neither held for trading nor contingent consideration recognised by an acquirer in a business combination to which IFRS 3 *Business Combinations* applies.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

In addition, the Group may irrevocably designate a financial asset that is required to be measured at amortised cost or FVTOCI as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Classification and subsequent measurement of financial assets (Continued)

(i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost and debt instruments subsequently measured at FVTOCI. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit-impaired.

(ii) Equity instruments designated as at FVTOCI

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognised in OCI and accumulated in the investments revaluation reserve; and are not subject to impairment assessment. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, but will be transferred to accumulated profits.

Dividends from these investments in equity instruments are recognised in profit or loss when the Group's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the "other income" line item in profit or loss.

(iii) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI or designated as FVTOCI are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss. The net gain or loss recognised in profit or loss includes any dividend or interest earned on the financial asset and is included in the "other expenses, gains and losses, net" line item.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets, financial guarantee contracts and contract assets

The Group performs impairment assessment under ECL on financial assets (including trade and other receivables, amounts due from related companies, pledged and restricted bank and other deposits and bank balances), financial guarantee contracts and contract assets which are subject to impairment under IFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL ("12m ECL") represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessments are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables, amounts due from related companies (trade related) and contract assets, including those with significant financing component.

For all other instruments, the Group measures the loss allowance equals to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, 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. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets, financial guarantee contracts and contract assets (Continued)

(i) Significant increase in credit risk (Continued)

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g., a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor; and
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

For financial guarantee contracts, the date that the Group becomes a party to the irrevocable commitment is considered to be the date of initial recognition for the purposes of assessing impairment. In assessing whether there has been a significant increase in the credit risk since initial recognition of financial guarantee contracts, the Group considers the changes in the risk that the specified debtor will default on the contract.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets, financial guarantee contracts and contract assets (Continued)

(i) Significant increase in credit risk (Continued)

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Irrespective of the above, the Group considers that default has occurred when a financial asset is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events of default that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(e) the disappearance of an active market for that financial asset because of financial difficulties.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets, financial guarantee contracts and contract assets (Continued)

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over three years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e., the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

For a financial guarantee contract, the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instruments that is guaranteed. Accordingly, the expected losses is the present value of the expected payments to reimburse the holder for a credit loss that it incurs less any amounts that the Group expects to receive from the holder, the debtor or any other party.

For ECL on financial guarantee contracts for which the effective interest rate cannot be determined, the Group will apply a discount rate that reflects the current market assessment of the time value of money and the risks that are specific to the cash flows but only if, and to the extent that the risks are taken into account by adjusting the discount rate instead of adjusting the cash shortfalls being discounted.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets, financial guarantee contracts and contract assets (Continued)

(v) Measurement and recognition of ECL (Continued)

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit-impaired, in which case interest income is calculated based on amortised cost of the financial asset.

For financial guarantee contracts, the loss allowances are recognised at the higher of the amount of the loss allowance determined in accordance with IFRS 9; and the amount initially recognised less, where appropriate, cumulative amount of income recognised over the guarantee period.

Except for financial guarantee contracts, the Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables, amounts due from related companies (trade related) and contract assets where the corresponding adjustment is recognised through a loss allowance account.

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Derecognition of financial assets (Continued)

On derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss.

On derecognition of an investment in equity instrument which the Group has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to accumulated profits.

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognised and deducted directly in equity. No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

Financial liabilities

All financial liabilities are subsequently measured at amortised cost using the effective interest method or at FVTPL.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) held for trading or (ii) it is designated as at FVTPL.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial liabilities and equity (Continued)

Financial liabilities at FVTPL (Continued)

A financial liability is held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative, except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument.

Financial liabilities at amortised cost

Financial liabilities including trade and other payables, amounts due to related companies, loans from related companies, bank and other borrowings, notes payables are subsequently measured at amortised cost, using the effective interest method.

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of a debt instrument. Financial guarantee contract liabilities are measured initially at their fair values. It is subsequently measured at the higher of:

- the amount of the loss allowance determined in accordance with IFRS 9; and
- the amount initially recognised less, where appropriate, cumulative amortisation recognised over the guarantee period.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

4. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial liabilities and equity (Continued)

Derivative financial instruments

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and on hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition. Cash and cash equivalents are assessed for ECL in accordance with the policy set out above.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in note 4, the Directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Critical judgements in applying accounting policies

The following are the critical judgements, apart from those involving estimations (see below), that the Directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the consolidated financial statements.

Revenue recognition on tariff adjustments on sales of electricity

Tariff adjustments represent subsidy received and receivable from the government authorities in respect of the Group's solar power generation business.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Critical judgements in applying accounting policies (Continued)

Revenue recognition on tariff adjustments on sales of electricity (Continued)

Pursuant to the 2020 Measures (as defined in note 6) announced by the PRC government in January 2020, the grid companies will regularly announce a List (as defined in note 6) for solar power plants projects which are entitled to the tariff adjustments. For those on-grid solar power plants which are not yet enlisted in the List, they need to meet the relevant requirements and conditions for tariff subsidy as stipulated in the 2020 Measures and to complete the submission and application on the National Renewable Energy Information Management Platform ("Platform"). Grid companies will observe the principles set out in the 2020 Measures to determine eligibility and regularly announce the on-grid solar power plants that are enlisted in the List.

Tariff adjustments of RMB1,678 million (2020: RMB3,223 million) were included in the sales of electricity for the year ended 31 December 2021 as disclosed in note 6, of which the relevant tariff adjustments were recognised only to the extent that it is highly probable that such an inclusion will not result in a significant revenue reversal in the future on the basis that all of the Group's operating solar power plants had been qualified for, and had met, all the requirements and conditions as required based on the prevailing nationwide government policies on renewable energy for solar power plants, and taking into account the legal opinion as advised by the Group's legal advisor in the PRC, who considered that all of the Group's solar power plants currently in operation had met the requirements and conditions as stipulated in the New Tariff Notice issued in August 2013 for the entitlement of the tariff subsidy when electricity was delivered on grid, and also the requirements and conditions for the entitlement of the tariff subsidy under the 2020 Measures. Hence, the Group's operating solar power plants are able to be enlisted in the List subsequent to the year ended 31 December 2021 and the accrued revenue on tariff subsidy are fully recoverable.

During the year ended 31 December 2021, the Group recognised revenue of approximately RMB23 million (2020: RMB552 million) in respect of tariff adjustments recognised as revenue relating to solar power plants not yet registered in the List.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Key sources of estimation uncertainty

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Useful lives and estimated impairment of property, plant and equipment and right-of-use assets

Property, plant and equipment and right-of-use assets are stated at costs less accumulated depreciation and impairment, if any. In determining whether an asset is impaired, the Group has to exercise judgment and make estimation, particularly in assessing: (1) whether an event has occurred or any indicators that may affect the asset value; (2) whether the carrying value of an asset can be supported by the recoverable amount, in the case of value in use, the net present value of future cash flows which are estimated based upon the continued use of the asset; and (3) the appropriate key assumptions to be applied in estimating the recoverable amounts including cash flow projections and an appropriate discount rate. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the assets belongs, including allocation of corporate assets when a reasonable and consistent basis of allocation can be established, otherwise recoverable amount is determined at the smallest group of CGUs, for which the relevant corporate assets have been allocated. Changing the assumptions and estimates, including the discount rates or revenue growth rates in the cash flow projections, could materially affect the recoverable amounts. Furthermore, the growth rates and discount rates in the cash flow projections are subject to greater uncertainties in the current year due to uncertainty on how the COVID-19 pandemic may progress and evolve and volatility in financial markets and solar industry, including potential disruptions in the Group's solar material business segment.

The Group has made substantial investments in property, plant and equipment. The machineries and equipment are vulnerable to changes in market conditions and vulnerable to changes in government policies.

During the year ended 31 December 2021, for GCL New Energy Holdings Limited ("GNE") and its subsidiaries ("GNE Group"), due to the fact that consideration in relation to the disposals is lower than the carrying amount of net assets of certain subsidiaries, impairment loss on property, plant and equipment is recognised during the current year.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Key sources of estimation uncertainty (Continued)

Useful lives and estimated impairment of property, plant and equipment and right-of-use assets (Continued)

With the impairment indicators identified, the carrying amounts of the relevant CGUs may be higher than the recoverable amount which involved estimation uncertainty on assumptions of such recoverable amount.

Additionally, the Group determines the estimated useful lives and related depreciation charges for its property, plant and equipment and right-of-use assets. These estimates are based on the historical experience of the actual useful lives of property, plant and equipment of similar nature and functions. The management will increase the depreciation charge where useful lives are expected to be shorter than previously estimated. Actual economic lives may differ from estimated useful lives. Periodic review could result in a change in depreciable lives and therefore depreciation expense in future periods.

As at 31 December 2021, the carrying amount of property, plant and equipment and right-of-use assets, was approximately RMB18,293 million and RMB2,299 million (2020: RMB36,706 million and RMB3,433 million) respectively. During the year ended 31 December 2021, the Group recognised impairment on property, plant and equipment and right-of-use assets, amounting to approximately RMB331 million (2020: RMB4,248 million) and RMB nil (2020: RMB84 million) respectively (see note 15 and 16).

Provision of ECL on amounts due from related companies (non-trade related)

The Group measures loss allowance equal to 12m ECL for amounts due from related companies (non-trade related). Management regularly reviews the historical payment patterns, credit rating or financial position of counterparties and overdue status of the receivables. The amount of ECL reflects changes in credit risk since initial recognition and is sensitive to changes in estimates.

As at 31 December 2021, the carrying amounts due from related companies (non-trade related) were approximately RMB386 million (2020: RMB1,127 million).

The information about the ECL and the Group's amounts due from related companies (non-trade related) are disclosed in notes 44 and 27, respectively.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Key sources of estimation uncertainty (Continued)

Provision of ECL for trade receivables, amounts due from related companies (trade related) and contract assets

Trade receivables, amounts due from related companies (trade related) and contract assets with significant balances and credit-impaired are assessed for ECL individually.

In addition, the Group uses practical expedient in estimating ECL on trade receivables, amounts due from related companies (trade related) and contract assets which are not assessed individually using a provision matrix. The provision rates are based on internal credit ratings as groupings of various debtors taking into consideration the Group's historical default rates and forward-looking information that is reasonable, supportable and available without undue costs or effort. At every reporting date, the historical observed default rates are reassessed and changes in the forward-looking information are considered.

The provision of ECL is sensitive to changes in estimates. The information about the ECL and the Group's trade receivables, amounts due from related companies (trade related) and contract assets are disclosed in notes 44, 25, 27 and 26, respectively.

Determination of timing of settlement of tariff adjustments on sales of electricity

For the tariff adjustment yet to obtain approval for registration in the List by the PRC government at the end of the reporting period, the Group considered that it contained a significant financing component over the relevant portion of tariff adjustment until the settlement of the trade receivables. In determining the period of extended financing, the Group has to exercise judgement and make estimation in the timing of collection of the tariff adjustments with reference to historical pattern and experience for application and approval for registration in the List. The Group has adjusted the respective tariff adjustments for the financing component based on estimated timing of collection.

The adjustment for financing component is sensitive to changes in expected timing of settlement of the tariff adjustments. Change in facts and circumstances will result in the revision of the expected collection period of the tariff adjustments which will be reflected as an increase or a reduction in financing component adjustment for the period in which such a revision takes place.

The revenue of the Group was adjusted by approximately RMB31 million for the year ended 31 December 2021 (2020: RMB212 million) for this financing component and in relation to revision of expected timing of tariff settlement.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Key sources of estimation uncertainty (Continued)

Fair value measurement of financial instruments

Certain of the Group's financial assets and financial liabilities as described in note 45 are measured at fair values with fair values being determined based on unobserved inputs using valuation techniques. Judgement and estimation are required in establishing the relevant valuation techniques and the relevant inputs thereof. Changes in assumptions relating to these factors could affect the reported fair values of these instruments. See note 45 for further disclosures.

6. REVENUE AND SEGMENT INFORMATION

Information reported to the Executive Directors of the Company, being collectively the chief operating decision maker ("CODM"), for the purposes of resources allocation and assessment of segment performance focuses on types of goods delivered or services provided, except for the business operations of GNE, which is assessed by the CODM as a separate operating segment.

No operating segments identified by the CODM have been aggregated in arriving at the reportable segments of the Group.

The Group's reportable and operating segments under IFRS 8 Operating Segments are as follows:

(a) Solar material business — mainly manufactures and sales of polysilicon and wafer products to companies operating in the solar industry.

(b) Solar farm business — manages and operates solar farms located in the United States of America (the "USA") and the PRC. These solar farms were constructed or acquired by the Group prior to obtaining a controlling stake in GNE.

(c) New energy business — represents the business operations of GNE, which is principally engaged in the development, construction, operation and management of solar farms.

6. REVENUE AND SEGMENT INFORMATION (Continued)

Segment revenue and results

The following is an analysis of the Group's revenue and results by reportable and operating segments:

Year ended 31 December 2021

	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000 (Note)	Total RMB'000
Segment revenue	16,653,431	214,947	2,844,899	19,713,277
Elimination of inter-segment revenue	—	—	(15,299)	(15,299)
Revenue from external customers	16,653,431	214,947	2,829,600	19,697,978
Segment profit (loss)	5,533,824	45,995	(580,675)	4,999,144
Elimination of inter-segment profit				(183,676)
Unallocated income				55,414
Unallocated expenses				(92,103)
Gain on fair value change of financial assets at FVTPL				7,589
Loss on fair value change of held for trading investments (note 9B)				(1,873)
Impairment losses under expected credit loss model				(103,506)
Share of profits of joint ventures				20,018
Profit for the year				4,701,007

6. REVENUE AND SEGMENT INFORMATION (Continued)

Segment revenue and results (Continued)

Year ended 31 December 2020

	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000 (Note)	Total RMB'000
Segment revenue	9,225,026	460,521	5,023,754	14,709,301
Elimination of inter-segment revenue	—	—	(38,034)	(38,034)
Revenue from external customers	9,225,026	460,521	4,985,720	14,671,267
Segment (loss) profit	(4,866,776)	64,372	(1,262,882)	(6,065,286)
Elimination of inter-segment profit				(166,822)
Unallocated income				75,563
Unallocated expenses				(141,761)
Loss on fair value change of convertible bonds receivable (note 22)				(403)
Gain on fair value change of financial assets at FVTPL				26,650
Loss on fair value change of held for trading investments (note 9B)				(656)
Loss on disposal of an associate				(10,745)
Share of profit of an associate				13,317
Share of losses of joint ventures				(1,108)
Loss for the year				(6,271,251)

Note: The operating results of new energy business included allocated corporate expenses.

The accounting policies of the operating segments are the same as the Group's accounting policies described in note 4. Segment profit (loss) represents the profit (loss) of each respective segment excluding unallocated income, unallocated expenses, certain impairment losses under expected credit loss model, net of reversal, change in fair value of convertible bonds receivable, change in fair value of certain financial assets at FVTPL, change in fair value of held for trading investments and shares of profits (losses) of interests in certain associates and joint ventures. This is the measure reported to the CODM for the purpose of resources allocation and performance assessment.

6. REVENUE AND SEGMENT INFORMATION (Continued)

Segment assets and liabilities

The following is an analysis of the Group's assets and liabilities by reportable and operating segments:

	2021	2020
	RMB'000	RMB'000
Segment assets		
Solar material business	**44,607,760**	32,273,414
Solar farm business	**1,903,182**	2,015,984
New energy business	**15,888,176**	44,990,518
Total segment assets	**62,399,118**	79,279,916
Other financial assets as at FVTPL	**409,462**	452,937
Equity instruments at FVTOCI	**41,683**	21,073
Held for trading investments	**1,473**	3,447
Interests in joint ventures	**242,768**	196,932
Unallocated bank balances and cash	**632,082**	91,916
Unallocated corporate assets	**371,328**	456,676
Consolidated assets	**64,097,914**	80,502,897
Segment liabilities		
Solar material business	**22,123,122**	22,719,454
Solar farm business	**715,717**	800,954
New energy business	**8,855,862**	36,406,103
Total segment liabilities	**31,694,701**	59,926,511
Unallocated corporate liabilities	**101,608**	185,181
Consolidated liabilities	**31,796,309**	60,111,692

For the purpose of monitoring segment performance and allocating resources between segments:

- All assets are allocated to operating segments, other than unallocated corporate assets, corporate bank balances and cash and other assets (including certain other financial assets at FVTPL, equity instruments at FVTOCI, held for trading investments and certain interests in joint ventures) of the management companies and investment holding companies; and

- All liabilities are allocated to operating segments, other than unallocated corporate liabilities of the management companies and investment holding companies.

6. REVENUE AND SEGMENT INFORMATION (Continued)

Other segment information (included in the segment profit or loss or segment assets or regularly provided to the CODM)

Year ended 31 December 2021

	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000	Unallocated RMB'000	Elimination of inter-segment profit RMB'000	Total RMB'000
Amount included in the measure of segment profit or loss or segment assets:						
Interests in joint ventures	360,108	87,917	3,151	242,768	—	693,944
Interests in associates	8,254,246	—	1,350,913	—	—	9,605,159
Share of (losses) profits of joint ventures	(120,769)	22,719	16	20,018	—	(78,016)
Share of profits of associates	2,552,173	—	99,463	—	—	2,651,636
Addition to property, plant and equipment, and right-of-use assets	2,962,116	2,841	348,366	35,836	—	3,349,159
Depreciation of property, plant and equipment	(1,124,331)	(83,207)	(850,545)	(157)	—	(2,058,240)
Depreciation of right-of-use assets	(172,663)	(1,309)	(71,295)	(15,816)	—	(261,083)
Depreciation of investment properties	(4,655)	—	—	—	—	(4,655)
Amortisation of other intangible assets	(33,474)	—	—	—	—	(33,474)
Finance costs	(337,414)	(32,500)	(1,578,409)	(2,237)	47,418	(1,903,142)
Bank and other interest income	61,439	187	18,997	47,742	(47,418)	80,947
Interest arising from contracts containing significant financing components	—	—	28,750	—	—	28,750
Gain (loss) on fair value change of financial instruments	(121,518)	6,281	—	5,716	—	(109,521)
Gain (loss) on disposal of property, plant and equipment	(42,080)	—	523	—	—	(41,557)
Reversal of write-down of inventories, net	14,467	—	—	—	—	14,467
Impairment losses under ECL model, net of reversal	(174,997)	—	(60,515)	(103,506)	—	(339,018)
Impairment loss on property, plant and equipment	(61,303)	—	(270,101)	—	—	(331,404)
Gain on disposal of a subsidiary	16,134	—	—	—	—	16,134
Gain on disposal of solar power plant projects, net	—	—	84,669	—	—	84,669
Gain on disposal of an associate	141,449	—	—	—	—	141,449
Gain on disposal and deemed disposal of a joint venture	257,026	—	—	—	—	257,026
Research and development costs	(1,040,606)	—	—	—	—	(1,040,606)
Income tax credit (expense)	(528,056)	(15,936)	(47,044)	—	—	(591,036)

6. REVENUE AND SEGMENT INFORMATION (Continued)

Other segment information (included in the segment profit or loss or segment assets or regularly provided to the CODM) (Continued)

Year ended 31 December 2020

	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000	Unallocated RMB'000	Elimination of inter-segment profit RMB'000	Total RMB'000
Amount included in the measure of segment profit or loss or segment assets:						
Interests in joint ventures	274,169	99,922	3,135	196,932	—	574,158
Interests in associates	5,833,128	—	1,205,898	—	—	7,039,026
Share of (losses) profits of joint ventures	(133,170)	31,218	(493)	(1,108)	—	(103,553)
Share of profits of associates	155,852	—	102,395	13,317	—	271,564
Addition to property, plant and equipment, and right-of-use assets	345,795	59,791	159,980	—	—	565,566
Depreciation of property, plant and equipment	(1,742,197)	(161,556)	(1,363,384)	(156)	—	(3,267,293)
Depreciation of right-of-use assets	(269,676)	(2,533)	(95,998)	(22,280)	—	(390,487)
Depreciation of investment properties	(4,656)	—	—	—	—	(4,656)
Amortisation of other intangible assets	(32,986)	—	—	—	—	(32,986)
Finance costs	(594,012)	(101,008)	(2,450,370)	(18,455)	8,552	(3,155,293)
Bank and other interest income	128,719	5,198	22,882	524	(8,552)	148,771
Interest arising from contracts containing significant financing components	—	—	77,100	—	—	77,100
Gain on fair value change of financial instruments	111,400	—	13,027	25,591	—	150,018
Loss on disposal of property, plant and equipment	(56,815)	(85)	—	—	—	(56,900)
Loss on measurement of assets classified as held for sale to fair value less cost to sell	—	—	(207,836)	—	—	(207,836)
Write-down of inventories, net	(7,286)	—	—	—	—	(7,286)
Impairment losses under ECL model, net of reversal	(270,577)	—	(321,235)	(57,335)	—	(649,147)
Impairment loss on property, plant and equipment	(3,110,400)	—	(1,137,851)	—	—	(4,248,251)
Impairment loss on right-of-use assets	(84,086)	—	—	—	—	(84,086)
(Loss) gain on disposal of subsidiaries	(84,225)	2,748	—	—	—	(81,477)
Loss on disposal of solar power plant projects, net	—	—	(218,004)	—	—	(218,004)
Loss on disposal and deemed disposal of associates	(50,614)	(55,899)	—	(10,745)	—	(117,258)
Research and development costs	(529,045)	—	—	—	—	(529,045)
Income tax credit (expense)	62,832	(16,966)	(156,362)	—	—	(110,496)

6. REVENUE AND SEGMENT INFORMATION (Continued)

Revenue

(i) Disaggregation of revenue from contracts with external customers

Year ended 31 December 2021

Segments	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000	Total RMB'000
Types of goods or services				
Sales of wafer	8,456,880	—	—	8,456,880
Sales of electricity	—	214,947	2,694,979	2,909,926
Sales of polysilicon	5,964,921	—	—	5,964,921
Processing fees	1,665,103	—	—	1,665,103
Others (comprising the sales of ingots, operation and management services income and solar related supporting services income)	566,527	—	134,621	701,148
Total	16,653,431	214,947	2,829,600	19,697,978
Geographic markets				
The PRC	15,926,000	181,047	2,751,836	18,858,883
Others	727,431	33,900	77,764	839,095
Total	16,653,431	214,947	2,829,600	19,697,978
Timing of revenue recognition				
A point in time	14,988,328	214,947	2,694,979	17,898,254
Over time	1,665,103	—	134,621	1,799,724
Total	16,653,431	214,947	2,829,600	19,697,978

6. REVENUE AND SEGMENT INFORMATION (Continued)

Revenue (Continued)

(i) Disaggregation of revenue from contracts with external customers (Continued)

Year ended 31 December 2020

Segments	Solar material business RMB'000	Solar farm business RMB'000	New energy business RMB'000	Total RMB'000
Types of goods or services				
Sales of wafer	5,692,391	—	—	5,692,391
Sales of electricity	—	460,521	4,935,189	5,395,710
Sales of polysilicon	2,205,836	—	—	2,205,836
Processing fees	830,495	—	—	830,495
Others (comprising the sales of ingots, operation and management services income and solar related supporting services income)	496,304	—	50,531	546,835
Total	9,225,026	460,521	4,985,720	14,671,267
Geographic markets				
The PRC	8,510,017	423,725	4,900,013	13,833,755
Others	715,009	36,796	85,707	837,512
Total	9,225,026	460,521	4,985,720	14,671,267
Timing of revenue recognition				
A point in time	8,394,531	460,521	4,935,189	13,790,241
Over time	830,495	—	50,531	881,026
Total	9,225,026	460,521	4,985,720	14,671,267

6. REVENUE AND SEGMENT INFORMATION (Continued)

Revenue (Continued)

(ii) Performance obligations from contracts with customers

Revenue from the manufactures and sales of polysilicon and wafer are recognised at a point in time upon goods are delivered and titles have passed. The Group generally grants credit period of approximately one month to customers from the invoice date. For those customers with continuous business relationships, the Group generally would enter into supply framework contracts and receive certain percentage of deposits as advance payments from these customers. Advances from customers are recognised as revenue upon orders are fulfilled. Sales agreements typically do not contain product warranties except for return and replacement of defective products within 30 days from delivery.

Processing income are recognised over time and measured based on output method upon sawing and cutting services are rendered to customers. The Group generally grants credit period of approximately one month to customers from the invoice date.

Revenue arising on sales of electricity is recognised at a point in time. Substantially, all of the revenue is derived from electricity sales to local grid companies in the PRC for the years ended 31 December 2021 and 2020.

For sales of electricity, the Group generally entered into power purchase agreements with local grid companies with a term of one to five years which stipulate the price of electricity per watt hour. Revenue is recognised when control of the electricity has been transferred, being at the point when electricity has been generated and transmitted to the customer. The amount recognised as revenue during the year included approximately RMB1,677,966,000 (2020: RMB3,223,064,000) tariff adjustments. Except for trade receivables and contract assets relating to tariff adjustment, the Group generally grants credit period of approximately one month to customers from the date of invoice in accordance with the relevant power purchase agreements between the Group and the respective local grid companies. The Group will complete the remaining performance obligations in accordance with the relevant terms as stipulated in the power purchase agreements and the remaining aggregated transaction price will be equal to the quantity of electricity that can be generated and transmitted to the customers times the stipulated price per watt hour.

The financial resource for settlement of the tariff adjustment is the national renewable energy fund that is accumulated through a special levy on the consumption of electricity of end users. The PRC government is responsible to collect and allocate the fund to the respective state-owned grid companies for settlement to the solar power companies. Effective from March 2012, the application, approval and settlement of the tariff adjustment are subject to certain procedures as promulgated by Caijian [2012] No. 102 Notice on the Interim Measures for Administration of Subsidy Funds for Tariff Premium of Renewable Energy (可再生能源電價附加輔助資金管理暫行辦法). Caijian [2013] No. 390 Notice issued in July 2013 further simplified the procedures of settlement of the tariff adjustment.

6. REVENUE AND SEGMENT INFORMATION (Continued)

Revenue (Continued)

(ii) Performance obligations from contracts with customers (Continued)

In January 2020, the Several Opinions on Promoting the Healthy Development of Non-Hydro Renewable Energy Power Generation (Caijian [2020] No. 4)* (《關於促進非水可再生能源發電健康發展的若干意見》) (財建[2020]4號) and the Measures for Administration of Subsidy Funds for Tariff Premium of Renewable Energy (Caijian [2020] No. 5)* (《財政部國家發展改革委國家能源局關於印發〈可再生能源電價附加資金管理辦法〉的通知》) (財建[2020]5號) (the "2020 Measures") were jointly announced by the Ministry of Finance, National Development and Reform Commission and National Energy Administration. In accordance with the new government policy as stipulated in the 2020 Measures, the PRC government has simplified the application and approval process regarding the registration of tariff adjustments for non-hydro renewable energy power plant projects into the Renewable Energy Tariff Subsidy List (可再生能源發電補助項目清單, the "List"). The state grid companies will regularly announce the list based on the project type, time of grid connection and technical level of the solar power projects. For those on-grid solar power projects which have already started operation but yet to register into the List, these on-grid solar power projects are entitled to enlist into the List once they have met the conditions as stipulated on the Administration of Subsidy Funds for Tariff Premium of Renewable Energy (可再生能源電價附加資金管理辦法) and completed the submission and application in the Platform.

Tariff adjustments are recognised as revenue and due from grid companies in the PRC in accordance with the relevant power purchase agreements.

For those tariff adjustments that are subject to approval for registration in the List by the PRC government at the end of reporting period, the relevant revenue from these tariff adjustments are considered variable considerations, and are recognised only to the extent that it is highly probable that a significant reversal will not occur and are included in contract assets. Management assessed that all of the Group's operating solar power plants have qualified and met all the requirements and conditions as required based on the prevailing nationwide government policies on renewable energy for solar power plants. Contract assets are transferred to trade receivables upon the relevant solar power plants obtained the approval for registration in the List or when the relevant solar power plants is enlisted in the List since the release of the 2020 Measures.

* English name for identification only

6. REVENUE AND SEGMENT INFORMATION (Continued)

Revenue (Continued)

(ii) Performance obligations from contracts with customers (Continued)

Since certain of the tariff adjustments were yet to obtain approval for registration in the List by the PRC government, the management considered that it contained a significant financing component over the relevant portion of the tariff adjustments until settlement of the trade receivables. For the year ended 31 December 2021, the respective tariff adjustments were adjusted for this financing component based on an effective interest rate ranging from 2.34% to 2.76% (2020: 1.99% to 2.36%) per annum and the adjustments in relation to the revision of the expected timing of tariff collection. As such, the Group's revenue was adjusted by approximately RMB31 million (2020: RMB212 million) and interest income amounting to approximately RMB29 million (2020: RMB77 million) (note 7) was recognised.

Operation and management service income, and solar related supporting services income are recognised over time when services are rendered.

Solar related supporting services income represents the income from provision of solar related supporting services.

(iii) Transaction price allocated to the remaining performance obligation for contracts with customers

For contracts on sales of polysilicon and wafer products, the Group will complete the performance obligations in accordance with the relevant terms as stipulated in the supply contracts.

For contracts on sales of electricity, the Group will complete the remaining performance obligations in accordance with the relevant terms as stipulated in the power purchase agreements and the remaining aggregated transaction price will equal to the quantity of electricity that can be generated and transmitted to the customers times the stipulated price per watt hour.

6. REVENUE AND SEGMENT INFORMATION (Continued)

Geographical information

The Group's revenue from external customers by customer's location and information about its non-current assets by location of the assets are detailed below:

	Revenue from external customers		Non-current assets*	
	2021	2020	**2021**	2020
	RMB'000	RMB'000	**RMB'000**	RMB'000
The PRC	**18,858,883**	3,833,755	**31,665,679**	49,068,549
Taiwan	**102,511**	179,162	**—**	—
Thailand	**121,050**	76,691	**—**	—
Korea	**48,008**	7,070	**—**	—
India	**301,911**	265,326	**—**	—
Vietnam	**56,658**	42,876	**—**	—
The USA	**177,773**	138,190	**1,412,170**	1,565,026
Canada	**—**	67,800	**—**	—
Japan	**24,622**	52,437	**—**	77
South Africa	**—**	—	**87,917**	99,963
Others	**6,562**	7,960	**122,683**	109,180
	19,697,978	14,671,267	**33,288,449**	50,842,795

* Non-current assets excluded deferred tax assets and financial instruments.

Information about major customers

For the year ended 31 December 2021, the revenue from grid companies under common control of State Grid Corporation of China in total accounted for 14.2% (2020: 36.0%) of the Group's revenue.

7. OTHER INCOME

	2021 RMB'000	2020 RMB'000
Government grants (note 35)	**106,220**	120,274
Bank and other interest income	**80,947**	148,771
Interest arising from contracts containing significant financing Component	**28,750**	77,100
Sales of scrap materials	**419,182**	180,260
Management and consultancy fee income	**7,762**	13,122
Rental income	**30,870**	34,407
Forfeitures of deposits from customers	**—**	9,612
Write-back of other payables	**54,113**	—
Compensation income (Note)	**29,713**	50,325
Others	**9,314**	7,675
	766,871	641,546

Note: Amount in 2021 mainly represents the insurance claims received as compensation for damages to property, plant and equipment of the new energy business segment incidental to a typhoon (Note 47(ii)). Amount in 2020 mainly represents the insurance claims received as compensation for the suspension of operation of a production plant in the solar material business segment resulting from a power outage and other damages to property, plant and equipment of the new energy business segment incidental to a typhoon. The relevant production plant had resumed its operation subsequent to the power outage.

8. FINANCE COSTS

	2021 RMB'000	2020 RMB'000
Interest on financial liabilities at amortised cost		
— bank and other borrowings	**1,471,931**	2,598,909
— notes payables	**323,731**	313,494
— loans from related companies	**41,923**	150,920
Interest on lease liabilities	**71,070**	111,747
Total borrowing costs	**1,908,655**	3,175,070
Less: interest capitalised	**(5,513)**	(19,777)
	1,903,142	3,155,293

There was no borrowing costs capitalised during the years ended 31 December 2021 and 2020 from the general borrowing pool.

9A. IMPAIRMENT LOSSES UNDER EXPECTED CREDIT LOSS MODEL, NET OF REVERSAL

	2021 RMB'000	2020 RMB'000
Impairment losses recognised (reversed), net in respect of		
— trade receivables — goods and services	**9,039**	41,759
— other receivables	**335,139**	601,990
— contract assets	**(5,160)**	5,398
	339,018	649,147

Details of impairment assessment are set out in note 44.

9B. OTHER EXPENSES, GAINS AND LOSSES, NET

	2021 RMB'000	2020 RMB'000
Research and development costs	**1,040,606**	529,045
Exchange losses (gains), net	**5,536**	(373,446)
Loss on fair value change of convertible bonds receivable (note 22)	**—**	403
Loss (gain) on fair value change of other financial assets at FVTPL	**51,902**	(39,677)
Loss on fair value change of held for trading investments	**1,873**	656
Loss (gain) on fair value change of derivative financial instruments (note 39)	**20,566**	(111,400)
Loss on fair value change of convertible bonds to a non-controlling shareholder of a subsidiary	**35,180**	—
Impairment loss on property, plant and equipment (note 15)	**331,404**	4,248,251
Impairment loss on right-of-use assets	**—**	84,086
Written off of deposits for acquisitions of property, plant and equipment	**—**	14,720
Loss on disposal of property, plant and equipment	**41,557**	56,900
(Gain) Loss on disposal and deemed disposal of associates (note 19)	**(141,449)**	117,258
Gain on disposal and deemed disposal of a joint venture (note 20)	**(257,026)**	—
(Gain) loss on disposal of subsidiaries, net (note 42)	**(16,134)**	81,477
(Gain) loss on disposal of solar power plant projects, net (note 42)	**(84,669)**	218,004
Gain on disposal of right-of-use assets	**(6,092)**	—
Loss on measurement of assets classified as held for sale to fair value less costs to sell (Note)	**—**	207,836
Gain on early termination of leases	**(1,701)**	(23,571)
	1,021,553	5,010,542

Note: Loss on measurement of assets classified as held for sale to fair value less cost to sell amounting to RMB207,836,000 was recognised during the year ended 31 December 2020 with details as below.

(i) As disclosed in note 42(B)(i)(a), GNE Group entered into six share transfer agreements with Hua Neng No. 1 Fund and Hua Neng No. 2 Fund to dispose of its entire equity interests in six wholly-owned subsidiaries, of which the disposals of five out of these six wholly-owned subsidiaries were not completed as at 30 June 2020. Loss on measurement of assets classified as held for sale to fair value less cost to sell amounting to RMB80,548,000 was recognised in profit or loss during the year ended 31 December 2020.

(ii) As disclosed in note 42(B)(i)(f), GNE Group entered into a share transfer agreement with CDB New Energy (as defined in note 19) to dispose of its 75% equity interest in Jinhu (as defined in note 19) which had not yet been completed as at 30 June 2020. Loss on measurement of assets classified as held for sale to fair value less cost to sell amounting to RMB72,791,000 was recognised in profit or loss during the year ended 31 December 2020.

(iii) As disclosed in note 30(B), loss on measurement of assets in disposal groups classified as held for sale to fair value less cost to sell amounting to RMB54,497,000 was recognised during the year ended 31 December 2020.

10. INCOME TAX EXPENSE

	2021 RMB'000	2020 RMB'000
PRC Enterprise Income Tax ("EIT")		
Current tax	**160,268**	172,886
Overprovision in prior years	**(2,414)**	(2,214)
PRC dividend withholding tax	**920**	14,578
	158,774	185,250
USA Federal and State Income Tax		
Current tax	**340**	216
Underprovision in prior years	**6**	5
	346	221
Deferred tax (note 23)	**431,916**	(74,975)
	591,036	110,496

The PRC EIT for the year represents income tax in the PRC which is calculated at the prevailing tax rate on the taxable income of subsidiaries in the PRC.

Under the Law of the PRC on Enterprise Income Tax (the "EIT Law") and Implementation Regulation of the EIT Law, the tax rate of the PRC subsidiaries is 25% for both years, except for those subsidiaries described below. The overprovision of EIT in prior years arose mainly as a result of completion of tax clearance procedures by certain PRC subsidiaries with the respective tax authorities.

10. INCOME TAX EXPENSE (Continued)

Certain subsidiaries operating in the PRC have been accredited as a "High and New Technology Enterprise" for a term of three years, and have been registered with the local tax authorities for enjoying the reduced 15% EIT rate. Accordingly, the profits derived by these subsidiaries are subject to 15% EIT rate. The qualification as a High and New Technology Enterprise will be subject to annual review by the relevant tax authorities in the PRC.

Certain subsidiaries of GNE Group, being enterprises engaged in solar photovoltaic projects, under the EIT Law and its relevant regulations, are entitled to tax holidays of 3-year full exemption followed by 3-year 50% exemption commencing from the respective years in which their first operating income was derived. For the years ended 31 December 2021 and 2020, certain subsidiaries of GNE engaged in solar photovoltaic projects had their first year of the 3-year 50% exemption period.

Federal and State income tax rates in the USA were calculated at 21% and 8.84%, respectively, for both years.

On 21 March 2018, the Hong Kong Legislative Council passed The Inland Revenue (Amendment) (No. 7) Bill 2017 (the "Bill") which introduced the two-tiered profits tax rates regime. The Bill was signed into law on 28 March 2018 and was gazetted on the following day. Under the two-tiered profits tax rates regime, the first HK$2 million of profits of the qualifying group entity will be taxed at 8.25%, and profits above HK$2 million is taxed at 16.5%. The profits of group entities not qualifying for the two-tiered profits tax rates regime will continue to be taxed at a flat rate of 16.5%.

The Directors considered the amount involved upon implementation of the two-tiered profits tax rates regime as insignificant to the consolidated financial statements. Hong Kong Profits Tax is calculated at 16.5% of the estimated assessable profit for both years.

The Group's subsidiaries, associates and joint ventures that are tax residents in the PRC are subject to the PRC dividend withholding tax of 5% or 10% for those non-PRC tax resident immediate holding companies registered in Hong Kong and the British Virgin Islands ("BVI"), respectively, when and if undistributed earnings are declared to be paid as dividends out of profits that arose on or after 1 January 2008. Net deferred tax expenses of approximately RMB149,248,000 in respect of withholding tax on undistributed profits was debited to profit or loss during the current year (2020: deferred tax of RMB61,851,000 was credited to profit or loss).

10. INCOME TAX EXPENSE (Continued)

The tax charge for the year can be reconciled to the (loss) profit before tax per the consolidated statement of profit or loss and other comprehensive income as follows:

	2021 **RMB'000**	2020 RMB'000
Profit (loss) before tax	**5,292,043**	(6,160,755)
Tax at PRC EIT rate of 25% (Note)	**1,323,011**	(1,540,189)
Tax effect of expenses not deductible for tax purpose	**192,145**	311,281
Tax effect of income not taxable for tax purpose	**(294,819)**	(299,874)
Tax effect of share of profits of associates	**(662,909)**	(66,230)
Tax effect of share of losses of joint ventures	**19,504**	27,602
Tax effect of deductible temporary difference not recognised	**126,943**	1,179,165
Tax effect of tax losses not recognised	**283,504**	790,505
Utilisation of tax losses previously not recognised	**(371,157)**	(11,339)
Effect of tax exemption and tax concessions granted to certain subsidiaries in the PRC	**(172,982)**	(230,970)
Effect of different tax rates of group companies operating in jurisdictions other than the PRC	**36**	23
Withholding tax on undistributed profits	**149,248**	(61,847)
PRC dividend withholding tax	**920**	14,578
Overprovision in prior years, net	**(2,408)**	(2,209)
Income tax expense for the year	**591,036**	110,496

Note: The PRC EIT rate is used as it is the domestic tax in the jurisdiction where the operation of the Group is substantially based.

11. PROFIT (LOSS) FOR THE YEAR

	2021 RMB'000	2020 RMB'000
Profit (loss) for the year has been arrived at after charging (crediting) the following items:		
Staff costs, including directors' remuneration		
Salaries, wages and other benefits	**1,290,685**	1,148,237
Retirement benefits scheme contributions	**121,750**	39,137
Share-based payment expenses (Note)	**20,718**	—
Total staff costs	**1,433,153#**	1,187,374#
Depreciation of property, plant and equipment (Note 15)	**2,059,008**	3,237,172
Depreciation of right-of-use assets (Note 16)	**261,083**	390,487
Depreciation of investment properties (Note 17)	**4,655**	4,656
Amortisation of other intangible assets (Note 18)	**33,474**	32,986
Total depreciation and amortisation	**2,358,220**	3,665,301
Less: amounts absorbed in opening and closing inventories, net	**(768)**	30,121
	2,357,452*	3,695,422*
Auditors' remuneration	**17,294**	20,081

Cost of inventories included staff costs of approximately RMB524,308,000 (2020: RMB487,070,000).

* The amounts absorbed in inventories sold approximately RMB969,643,000 (2020: RMB1,588,796,000).

Note: The amount represents the share-based payment expenses recognised by GNE during the year ended 31 December 2021.

12. DIRECTORS', CHIEF EXECUTIVE'S EMOLUMENTS AND FIVE HIGHEST PAID EMPLOYEES

Particulars of the emoluments of the Directors, the Chief Executive and the five highest paid employees are as follows:

(a) Directors' and Chief Executive's emoluments

Directors' and Chief Executive's remuneration for the year, disclosed pursuant to the applicable Listing Rules and Hong Kong Companies Ordinance, is as follows:

Year ended 31 December 2021

Name of Director	Directors' fee RMB'000	Salaries and other benefits RMB'000	Performance-related bonuses RMB'000	Retirement benefits scheme contributions RMB'000	Share-based payments RMB'000	Total RMB'000
Executive Directors (Note 1)						
Mr. ZHU Gongshan	—	6,208	8,000	138	—	14,346
Mr. ZHU Zhanjun	—	3,967	5,000	69	—	9,036
Mr. ZHU Yufeng	—	4,833	7,000	69	146	12,048
Ms. SUN Wei	—	4,506	4,800	188	84	9,578
Mr. YEUNG Man Chung, Charles	—	4,544	4,600	113	42	9,299
Mr. JIANG Wenwu	—	217	—	11	—	228
Mr. ZHENG Xiongjiu	—	217	—	11	—	228
Independent Non-executive Directors (Note 2)						
Dr. HO Raymond Chung Tai	1,637	—	—	—	—	1,637
Mr. YIP Tai Him	1,474	—	—	—	—	1,474
Dr. SHEN Wenzhong	1,310	—	—	—	—	1,310
Mr. WONG Man Chung, Francis	1,310	—	—	—	—	1,310
	5,731	24,492	29,400	599	272	60,494

12. DIRECTORS', CHIEF EXECUTIVE'S EMOLUMENTS AND FIVE HIGHEST PAID EMPLOYEES (Continued)

(a) Directors' and Chief Executive's emoluments (Continued)

Year ended 31 December 2020

Name of Director	Directors' fee	Salaries and other benefits	Performance-related bonuses	Retirement benefits scheme contributions	Share-based payments	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive Directors (Note 1)						
Mr. ZHU Gongshan	—	6,759	4,000	—	—	10,759
Mr. ZHU Zhanjun	—	4,254	3,000	202	—	7,456
Mr. ZHU Yufeng	—	5,338	3,000	82	—	8,420
Ms. SUN Wei	—	4,891	3,957	205	—	9,053
Mr. YEUNG Man Chung, Charles	—	4,891	4,570	123	—	9,584
Mr. JIANG Wenwu	—	1,894	—	102	—	1,996
Mr. ZHENG Xiongjiu	—	2,622	—	78	—	2,700
Independent Non-executive Directors (Note 2)						
Dr. HO Raymond Chung Tai	448	—	—	—	—	448
Mr. YIP Tai Him	354	—	—	—	—	354
Dr. SHEN Wenzhong	208	—	—	—	—	208
Mr. WONG Man Chung, Francis	249	—	—	—	—	249
	1,259	30,649	18,527	792	—	51,227

12. DIRECTORS', CHIEF EXECUTIVE'S EMOLUMENTS AND FIVE HIGHEST PAID EMPLOYEES (Continued)

(a) Directors' and Chief Executive's emoluments (Continued)

Note 1: The executive directors' emoluments shown above were for their services in connection with the management of the affairs of the Company and the Group.

Note 2: The independent non-executive directors' emoluments shown above were for their services as directors of the Company.

Bonuses are discretionary and are based on the performance of the Group or its subsidiaries for the year.

Mr. Zhu Zhanjun was also the Chief Executive of the Company during the years ended 31 December 2021 and 2020 and his emoluments disclosed above include those for services rendered by him as the Chief Executive.

On 21 February 2022, Mr. Zhu Zhanjun has been appointed as vice chairman of the Company and redesignated as a Joint Chief Executive of the Company. In addition, Mr. Lan Tianshi has been appointed as an executive director and a Joint Chief Executive of the Company with effect from 21 February 2022.

There was no arrangement under which a director or the Chief Executive waived or agreed to waive any remuneration during both years.

No other directors waived any emoluments and no incentive paid on joining and no compensation for the loss of office during both years.

12. DIRECTORS', CHIEF EXECUTIVE'S EMOLUMENTS AND FIVE HIGHEST PAID EMPLOYEES (Continued)

(b) Five highest paid employees

The five highest paid employees of the Group during the year included four directors (2020: five directors), details of whose remuneration are set out in (a) above. The aggregate of the emoluments in respect of the another one (2020: Nil) individual are as follows:

	2021
	RMB'000
Salaries and other benefits	**2,160**
Performance related bonuses	**10,000**
Retirement benefits scheme contributions	**99**
	12,259

The emoluments of the individual (2020: nil) with the highest emoluments are within the following band:

	2021	2020
	Number of individual	Number of individual
HK$14,500,000–HK$15,000,000 (equivalent to approximately RMB11,855,000 to RMB12,265,000)	**1**	—

(c) Compensation of key management personnel

The remuneration of senior management personnel, comprising Directors' and Chief Executive's remuneration during the year was as follows:

	2021	2020
	RMB'000	RMB'000
Short-term benefits	**59,623**	50,435
Post-employment benefits	**599**	792
Share-based payments	**272**	—
	60,494	51,227

The remuneration of the Directors and other key executives was determined by the remuneration committee having regard to the performance of individuals and market trends.

13. DIVIDEND

No dividend was paid or proposed for ordinary shareholders of the Company during 2021, nor has any dividend been proposed since the end of the reporting period (2020: nil).

14. EARNINGS (LOSS) PER SHARE

The calculation of the basic and diluted earnings (loss) per share attributable to owners of the Company is based on the following data:

	2021	2020
	RMB'000	RMB'000
Earnings (Loss)		
Earnings (Loss) for the purpose of basic and diluted earnings (loss) per share (Profit (Loss) for the year attributable to owners of the Company)	**5,083,952**	(5,667,864)

	2021	2020
	'000	'000
Number of shares		
Weighted average number of ordinary shares for the purpose of basic earnings (loss) per share	**24,580,155**	20,196,570
Effect of dilutive potential ordinary shares		
— Share option issued by the Company	**37,606**	—
Weighted average number of ordinary shares for the purpose of dilutive earnings per share	**24,617,761**	20,196,570

For the years ended 31 December 2021 and 2020, the weighted average number of ordinary shares for the purpose of calculation of basic earnings (loss) per share had been adjusted for the effect of the 322,998,888 ordinary shares purchased by the Trustee from the market pursuant to the Scheme.

Diluted earnings per share for the year ended 31 December 2021 is calculated by adjusting the weighted average number of ordinary shares in issue during the period with the weighted average number of ordinary shares deemed to be issued assuming the dilutive impact on the share options.

Diluted loss per share for the year ended 31 December 2020 does not assume the exercise of share options granted by the Company, since the exercise would decrease the loss per share of the respective year.

Diluted earnings (loss) per share for the year ended 31 December 2021 and 2020 did not assume the exercise of share options granted by GNE since the exercise would result in increase in earnings per share in 2021 and decrease in loss per share in 2020.

15. PROPERTY, PLANT AND EQUIPMENT

	Buildings RMB'000	Plant and machinery RMB'000	Aircraft RMB'000	Office equipment RMB'000	Motor vehicles RMB'000	Construction in progress RMB'000	Total RMB'000
COST							
At 1 January 2020	8,359,040	68,641,514	—	989,221	180,120	1,904,521	80,074,416
Additions	13,512	182,347	—	2,792	2,260	275,150	476,061
Transfer	162,087	447,024	—	724	563	(610,398)	—
Transfer from right-of-use assets	—	257,287	176,135	—	—	—	433,422
Transfer to assets held for sale (note 30)	(91,771)	(3,233,652)	—	(2,874)	(1,630)	(3,417)	(3,333,344)
Disposal	(68,381)	(207,371)	—	(53,503)	(19,635)	(11,589)	(360,479)
Disposed on disposal of subsidiaries	(431,433)	(6,976,809)	—	(77,491)	(17,798)	(110,663)	(7,614,194)
Effect of foreign currency exchange difference	(14)	(134,688)	—	(25)	—	(3,881)	(138,608)
At 31 December 2020	7,943,040	58,975,652	176,135	858,844	143,880	1,439,723	69,537,274
Additions	60,266	942,765	—	126,014	18,795	2,041,469	3,189,309
Transfer	218,608	824,965	—	57,392	—	(1,100,965)	—
Transfer from right-of-use assets	61,800	350,111	—	—	—	—	411,911
Transfer to assets held for sale (note 30)	(27,691)	(618,425)	—	(683)	(417)	—	(647,216)
Disposal	(471,066)	(5,905,895)	—	(396,182)	(11,829)	(88,642)	(6,873,614)
Disposed on disposal of subsidiaries	(933,202)	(20,275,614)	—	(29,871)	(11,262)	—	(21,249,949)
Effect of foreign currency exchange difference	—	(23,137)	—	(7)	—	(1,284)	(24,428)
At 31 December 2021	6,851,755	34,270,422	176,135	615,507	139,167	2,290,301	44,343,287
ACCUMULATED DEPRECIATION AND IMPAIRMENT							
At 1 January 2020	2,489,318	24,149,946	—	485,791	113,879	422,587	27,661,521
Depreciation expense	395,101	2,716,776	14,337	93,558	17,400	—	3,237,172
Eliminated on disposals of assets	(23,202)	(57,487)	—	(42,282)	(16,107)	—	(139,078)
Eliminated on disposals of subsidiaries	(85,698)	(1,464,228)	—	(32,119)	(6,620)	—	(1,588,665)
Transfer to assets held for sale (note 30)	(15,689)	(547,932)	—	(1,523)	(1,405)	—	(566,549)
Impairment losses recognised in profit and loss	1,699	3,761,390	—	14,619	—	470,543	4,248,251
Effect of foreign currency exchange difference	(14)	(21,607)	—	(5)	—	—	(21,626)
At 31 December 2020	2,761,515	28,536,858	14,337	518,039	107,147	893,130	32,831,026
Depreciation expense	327,266	1,648,253	24,577	50,205	8,707	—	2,059,008
Transfer from right-of-use assets	7,081	333,424	—	—	—	—	340,505
Eliminated on disposals of assets	(436,535)	(5,808,509)	—	(339,895)	(10,754)	—	(6,595,693)
Eliminated on disposals of subsidiaries	(164,103)	(2,467,563)	—	(16,919)	(8,336)	—	(2,656,921)
Transfer to assets held for sale (note 30)	(3,604)	(249,130)	—	(293)	(258)	—	(253,285)
Impairment losses recognised in profit and loss	—	322,637	—	—	—	8,767	331,404
Effect of foreign currency exchange difference	—	(5,291)	—	(2)	—	—	(5,293)
At 31 December 2021	2,491,620	22,310,679	38,914	211,135	96,506	901,897	26,050,751
CARRYING AMOUNTS							
At 31 December 2021	4,360,135	11,959,743	137,221	404,372	42,661	1,388,404	18,292,536
At 31 December 2020	5,181,525	30,438,794	161,798	340,805	36,733	546,593	36,706,248

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

The above items of property, plant and equipment, except for construction in progress, are depreciated on a straight-line basis at the following rates per annum:

Buildings	Over the shorter of lease terms or 2%–5%
Plant and machinery	4%–25% or % calculated based on license period
Aircraft	$6^2/_3\%$
Office equipment	20%–33%
Motor vehicles	20%–30%

As at 31 December 2021, GNE Group was in the process of obtaining property ownership certificates in respect of property interests held under land use rights in the PRC with a carrying amount of approximately RMB162,650,000 (2020: RMB730,850,000). In the opinion of the directors of GNE, the absence of the property ownership certificates to these property interests does not impair their carrying value as GNE Group paid the full purchase consideration for these property interests and the probability of these being evicted on the ground of an absence of property ownership certificates is remote.

Impairment loss on solar material business segment

Year ended 31 December 2021

During the year ended 31 December 2021, the solar material business segment recognised an impairment loss of RMB61,303,000 on obsolete items of property, plant and equipment as these items were outdated or not in use by the solar material business segment.

Year ended 31 December 2020

During the year ended 31 December 2020, the solar material business segment recognised a segment loss (before impairment loss on property, plant and equipment and right-of-use assets) of approximately RMB1,673 million mainly due to the lower than expected demand under continuing unfavourable market conditions in the solar industry induced by the COVID-19 pandemic and the suspension of production of lower profit margin wafer products. With the impairment indicators identified, the Directors conducted a review of the recoverable amounts of several CGUs of the solar material business segment to which the property, plant and equipment and right-of-use assets belonged as at 31 December 2020.

The recoverable amounts of the relevant CGUs were either determined based on the higher of value in use calculations or fair value less costs to sell by the Directors with reference to the valuation reports of an independent valuer on the production plants in relation to the production of polysilicon and wafer of the solar material business segment as at 31 December 2020.

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on solar material business segment (Continued)

Year ended 31 December 2020 (Continued)

The value in use calculation uses cash flow projections covering the useful lives of those property, plant and equipment, right-of-use assets and other intangible assets in relation to the production of polysilicon and wafer products based on financial budgets approved by management, including the replacement of assets with shorter useful lives within the relevant CGUs (including an allocation of corporate assets). Key assumptions for the value in use calculations relating to the estimation of cash inflows/outflows included discount rates and revenue growth rates. Such estimation was based on past performance and management's expectations for the market. The revenue growth rates and discount rates were reassessed as at 31 December 2020 taking into consideration higher degree of estimation uncertainties in the current year due to the uncertainty on how the COVID-19 pandemic might progress and evolve and volatility in financial markets and solar industry, including the potential disruptions of the Group's solar material business operation. As a result, an impairment loss of approximately RMB3,110,400,000 and RMB84,086,000 was recognised on property, plant and equipment and right-of-use assets during the year ended 31 December 2020, respectively. The fair value less costs to sell of the CGUs was lower than the value in use. The impairment amount was allocated to each category of property, plant and equipment and right-of-use assets such that the carrying amount of each category of asset was not reduced below the highest of its fair value less cost of disposal, its value in use and zero.

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment

Year ended 31 December 2021

(i) As disclosed in note 30(A), GNE Group entered into four share transfer agreements with 國家電投集團新疆能源化工額敏有限責任公司 State Power Investment Group Xinjiang Energy Chemical Emin Co., Ltd.* on 16 November 2021 to dispose of its 100% equity interest in four wholly-owned subsidiaries, and the disposals have not been completed and the relevant assets and liabilities were classified as assets held for sale as at 31 December 2021.

Upon the date of the share transfer agreements, the management conducted a review of the recoverable amount of each of four subsidiaries, being the CGU to which the assets belongs when it is not possible to estimate the recoverable amount of the assets individually, including allocation of corporate assets when reasonable and consistent basis can be established.

The recoverable amount of the four subsidiaries has been determined at the higher of value in use and fair value less costs to sell, which approximates the aggregate consideration stipulated in the four share transfer agreements. As the recoverable amount is lower than the carrying amount of the net assets of certain four subsidiaries, impairment loss of RMB168,522,000 has been allocated to power generation and equipment as the management considered that such asset is the major asset of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets are immaterial.

(ii) As disclosed in note 51(f), GNE Group entered into a series of transfer agreements with 江蘇和盛新能源有限公司 Jiangsu Hesheng New Energy Co., Ltd.* ("Jiangsu Hesheng ") to sell its equity interest in six subsidiaries.

Upon the date of share transfer agreements, the management conducted a review of the recoverable amount of each of six subsidiaries, being the CGU to which the assets belongs when it is not possible to estimate the recoverable amount of the assets individually, including allocation of corporate assets when reasonable and consistent basis can be established.

The recoverable amount of the six subsidiaries has been determined at the higher of value in use and fair value less costs to sell, which approximates the consideration of each of six subsidiaries stipulated in the share transfer agreements. As the recoverable amount is lower than the carrying amount of the net assets of certain six subsidiaries, impairment loss of RMB42,140,000 has been allocated to power generation and equipment as the management considered that such asset is the major asset of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets are immaterial.

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment (Continued)

Year ended 31 December 2021 (Continued)

(iii) As disclosed in note 51(a), GNE Group entered into a transfer agreement with 湖南新華水利電力有限公司 Hunan Xinhua Water Conservancy and Electric Power Co., Ltd.* ("Hunan Xinhua") to sell its 100% equity interest in a subsidiary.

As at 31 December 2021, the management conducted a review of the recoverable amount of the subsidiary, being the CGU to which the assets belongs when it is not possible to estimate the recoverable amount of the assets individually, including allocation of corporate assets when reasonable and consistent basis can be established.

The recoverable amount of the subsidiary has been determined at the higher of value in use and fair value less costs to sell, which approximates the consideration of the subsidiary stipulated in the share transfer agreement. As the recoverable amount is lower than the carrying amount of the net assets of the subsidiary, impairment loss of RMB17,846,000 has been allocated to power generation and equipment as the management considered that such asset is the major asset of the CGU and the carrying amount of other category of property, plant and equipment and right-of-use assets are immaterial.

(iv) Apart from the impairment assessment of the operating subsidiaries, impairment loss of approximately RMB8,768,000 and RMB56,934,000 of certain in-progress solar projects in relation to the construction in progress and the power generation and equipment has been recognised in profit or loss, respectively, after taking into consideration of the financial resources of GNE Group as well as the equipment costs related to certain in-progress solar power plants, which are still in preliminary stage, the management is of the opinion that those in-progress solar projects will not generate future economic returns to GNE Group.

(v) The impairment loss on new energy business segment above for the year ended 31 December 2021 was reduced by RMB24,109,000 in respect of the elimination of the intra-group interest charged to and capitalised by the respective subsidiaries.

* English name for identification only

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment (Continued)

Year ended 31 December 2020

(i) On 16 November 2020, GNE Group entered into five share transfer agreements with Xuzhou State Investment (as defined in note 19) for the disposal of its equity interest in five subsidiaries. The disposals of Suzhou GCL Solar Power, Huaibei Xinneng and Dangshan Xinneng (all as defined in note 19) were completed during the year ended 31 December 2020.

Upon the date of share transfer agreements, the management of GNE conducted a review of the recoverable amount of each of the five subsidiaries that the disposals were not completed as at 31 December 2020, being the CGU to which the assets belong when it was not possible to estimate the recoverable amount of the assets individually, including allocation of corporate assets when a reasonable and consistent basis can be established.

The recoverable amount of the five subsidiaries was determined at the higher of value in use and fair value less costs to sell which approximated the consideration of each of the five subsidiaries stipulated in the share transfer agreements. As the recoverable amount was lower than the carrying amount of the net assets of the five subsidiaries, impairment loss of RMB2,776,000 was allocated to the power generation and equipment as the management of GNE considered that such assets were the major assets of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial.

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment (Continued)

Year ended 31 December 2020 (Continued)

(ii) On 22 November 2020, GNE Group entered into a series of five share transfer agreements with Xuzhou State Investment to sell its equity interests in five subsidiaries.

Upon the date of share transfer agreements, the management of GNE conducted a review of the recoverable amount of each of the five subsidiaries, being the CGU to which the assets belonged when it was not possible to estimate the recoverable amount of the assets individually, including the allocation of corporate assets when a reasonable and consistent basis can be established.

The recoverable amount of the five subsidiaries was determined at the higher of value in use and fair value less costs to sell which approximated the consideration of each of five subsidiaries stipulated in the share transfer agreements. As the recoverable amount was lower than the carrying amount of the net assets of certain subsidiaries, impairment loss of RMB27,266,000 was allocated to the power generation and equipment as the management of GNE considered that such assets were the major assets of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial.

(iii) On 19 November 2020, GNE Group entered into a series of fourteen share transfer agreements with 華能工融一號(天津)股權投資基金合夥企業有限公司 Huaneng Gongrong No.1 (Tianjin) Equity Investment Fund Partnership (Limited Partnership)* ("Hua Neng No.1 Fund") and 華能工融二號(天津)股權投資基金合夥企業有限公司 Huaneng Gongrong No.2 (Tianjin) Equity Investment Fund Partnership (Limited Partnership)* ("Hua Neng No.2 Fund") to sell its equity interests in fourteen subsidiaries.

Upon the date of share transfer agreements, the management of GNE conducted a review of the recoverable amount of each of the fourteen subsidiaries, being the CGU to which the assets belonged when it was not possible to estimate the recoverable amount of the assets individually, including the allocation of corporate assets when a reasonable and consistent basis could be established.

The recoverable amount of the fourteen subsidiaries was determined at the higher of value in use and fair value less costs to sell which approximated the consideration of each of the fourteen subsidiaries stipulated in the share transfer agreements. As the recoverable amount was lower than the carrying amount of the net assets of certain subsidiaries, an impairment loss of RMB301,629,000 was allocated to power generation and equipment as the management of GNE considered that such assets were the major assets of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial.

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment (Continued)

Year ended 31 December 2020 (Continued)

(iv) On 29 January 2021, GNE Group entered into a share transfer agreement with Beijing United Rongbang (as defined in note 30(B)(iii)) to sell its equity interest in 烏拉特後旗源海新能源有限責任公司 Wulate Houqi Yuanhai New Energy Ltd.* ("Wulate Houqi Yuanhai").

As at 31 December 2020, the management of GNE conducted a review of the recoverable amount of Wulate Houqi Yuanhai, being the CGU to which the assets belonged when it was not possible to estimate the recoverable amount of the assets individually, including the allocation of corporate assets when a reasonable and consistent basis could be established.

The recoverable amount of Wulate Houqi Yuanhai was determined at the higher of value in use and fair value less costs to sell which approximated the consideration stipulated in the share transfer agreements. As the recoverable amount was lower than the carrying amount of its net assets, an impairment loss of RMB38,686,000 was allocated to the power generation and equipment as the management of GNE considered that such assets were the major assets of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial.

(v) On 21 January 2020, GNE Group entered into six share transfer agreements with Hua Neng No. 1 Fund and Hua Neng No. 2 Fund to dispose of its entire equity interests in six wholly-owned subsidiaries. The disposals of all six subsidiaries were not completed as at 31 December 2020 and the underlying net assets were classified as assets held for sale.

Upon the date of the share transfer agreements, the management of GNE conducted a review of the recoverable amount of each of the six subsidiaries, being the CGU to which the assets belonged when it was not possible to estimate the recoverable amount of the assets individually, including the allocation of corporate assets when a reasonable and consistent basis could be established.

The recoverable amount of the six subsidiaries was determined at the higher of value in use and fair value less costs to sell. As the recoverable amount was lower than the carrying amount of the net assets of certain subsidiaries, an impairment loss of RMB153,339,000 was allocated to the power generation and equipment as the management of GNE considered that such assets were the major assets of the CGU and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial. In addition, loss on the measurement of assets classified as held for sale to fair value less cost to sell amounting to RMB54,497,000 was recognised during the year ended 31 December 2020.

* English name for identification only

15. PROPERTY, PLANT AND EQUIPMENT (Continued)

Impairment loss on new energy business segment (Continued)

Year ended 31 December 2020 (Continued)

Due to the fact that the consideration was lower than the carrying amount of the net assets of certain subsidiaries which resulted in an aggregate impairment loss of approximately RMB523,696,000 during the year ended 31 December 2020 as well as the effect of implementation of Circular 426, which shortens the entitlement period of tariff adjustments granted to solar plants from 25 years to 20 years which became effective from October 2020, the management of GNE Group considered there were impairment indicators and conducted impairment assessments on the recoverable amounts of GNE Group's property, plant and equipment and right-of-use assets.

The recoverable amount of the respective CGU, being each operating subsidiary, was determined based on value in use calculation. The calculation used cash flow projections based on financial budgets approved by the management of GNE's respective operating subsidiary covering the following 5 years with a pre-tax discount rate ranging from 11% to 12% as at 31 December 2020. The forecasted revenue was arrived at by reference to the historical on-grid electricity generated and the then existing selling prices under the power purchase agreements. The cash flows beyond the five-year are extrapolated using a zero growth rate. Another key assumption for the value in use calculated was the efficiency of the on-grid electricity which was determined based on the CGU's past performance and management expectation for market development.

Based on the result of the assessment, the management of GNE Group determined that the recoverable amount of certain CGUs were lower than their carrying amounts. The impairment amount was allocated to the power generation and equipment of each of CGUs as the management of GNE considered that such assets were the major assets of the relevant CGUs and the carrying amounts of other category of property, plant and equipment and right-of-use assets were immaterial. An impairment of RMB125,251,000 was recognised in profit or loss during the year ended 31 December 2020.

Apart from the impairment assessment of the operating subsidiaries, impairment loss of approximately RMB470,543,000 and RMB18,361,000 of certain in-progress solar power plants and the power generation and equipment was recognised in profit or loss, respectively, after taking into consideration of the financial resources of GNE Group as well as the equipment costs related to certain in-progress solar power plants, which were still in their preliminary stage, the management of GNE was of the opinion that those in-progress solar projects would not generate future economic returns to GNE Group.

16. RIGHT-OF-USE ASSETS

	Leasehold lands RMB'000	Plant and machinery RMB'000	Aircraft RMB'000	Properties RMB'000	Rooftops RMB'000	Others RMB'000	Total RMB'000
As at 31 December 2021							
Carrying amount	1,234,865	945,302	—	114,999	—	3,870	2,299,036
As at 31 December 2020							
Carrying amount	2,047,045	1,056,789	—	141,661	123,983	63,122	3,432,600
For the year ended 31 December 2021							
Depreciation charge	(64,647)	(101,932)	—	(57,036)	(4,700)	(32,768)	(261,083)
Eliminated on disposals of subsidiaries	(761,923)	—	—	—	(79,517)	(7,336)	(848,776)
Transfer to property, plant and equipment	(54,719)	(16,687)	—	—	—	—	(71,406)
Transfer to assets held for sale (note 30)	(10,855)	—	—	—	—	(12,224)	(23,079)
Transfer to an associate	(7,088)	—	—	—	—	—	(7,088)
Disposal	(43,065)	—	—	—	—	—	(43,065)
For the year ended 31 December 2020							
Depreciation charge	(94,269)	(184,941)	(10,241)	(63,749)	(5,930)	(31,357)	(390,487)
Eliminated on disposals of subsidiaries	(146,296)	—	—	—	—	—	(146,296)
Transfer to property, plant and equipment	—	(257,287)	(176,135)	—	—	—	(433,422)
Transfer to assets held for sale (note 30)	(52,916)	—	—	—	—	(22,135)	(75,051)
Impairment loss recognised in profit or loss	—	(84,086)	—	—	—	—	(84,086)

16. RIGHT-OF-USE ASSETS (Continued)

	2021 RMB'000	2020 RMB'000
Expenses relating to short-term leases	**(3,388)**	(6,178)
Total cash outflow for leases	**(685,861)**	(567,035)
Additions to right-of-use assets (including those arising from acquisition of subsidiaries)	**159,850**	89,505
Early termination of a lease	**(37,692)**	(24,870)
Effect of foreign currency exchange differences	**(1,225)**	(16,288)

For both years, the Group leased lands, plant and machinery, aircraft, properties, rooftops and other equipment for its operations. Lease contracts were entered into for fixed terms ranging from 2 to 50 years, and contained extension options as described below. Lease terms were negotiated on an individual basis and contained a wide range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applied the definition of a contract and determined the period for which each contract was enforceable.

In addition, the Group owns several leasehold lands where its manufacturing facilities, solar farms and office buildings are primarily located. The Group is the registered owner of these property interests. The GNE Group has obtained the land use right certificates for all leasehold lands except for those with a total carrying amount of approximately RMB8,195,000 (2020: RMB95,374,000) in which the GNE Group is in the process of obtaining. Lump sum payments were made upfront to acquire these property interests.

The Group regularly enters into short-term leases for offices, motor vehicles and staff quarters. As at 31 December 2021 and 2020, the portfolio of short-term leases is similar to the portfolio of short-term leases for which the short-term lease expense is as disclosed above.

16. RIGHT-OF-USE ASSETS (Continued)

The Group has extension options in a number of leases for the leasehold lands and properties. These are used to maximise operational flexibility in terms of managing the assets used in the Group's operations. The majority of extension options held are exercisable only by the Group and not by the respective lessors.

The Group assessed at lease commencement date whether it was reasonably certain to exercise the extension options. The Group was reasonably certain to exercise the extension options in leases for the leasehold lands and was not reasonably certain whether to exercise the extension options in leases for the properties. As at 31 December 2021, lease liabilities with the exercise of extension options of approximately RMB201,369,000 (2020: RMB616,990,000) were recognised. The potential exposures to these future lease payments for extension options in which the Group was not reasonably certain to exercise are summarised below:

	Lease liabilities recognised as at 31 December 2021 RMB'000	**Potential future lease payments not included in lease liabilities (undiscounted) 31 December 2021 RMB'000**	Lease liabilities recognised as at 31 December 2020 RMB'000	Potential future lease payments not included in lease liabilities (undiscounted) 31 December 2020 RMB'000
Properties — the PRC	**84,611**	**225,000**	123,266	225,000

In addition, the Group reassesses whether it is reasonably certain to exercise an extension option upon the occurrence of either a significant event or a significant change in circumstances that is within the control of the lessee. During both years, there was no such triggering event.

Details of the lease maturity analysis of lease liabilities are set out in notes 37 and 44b.

Sale and leaseback transactions — seller-lessee

To better manage the Group's capital structure and financing needs, the Group sometimes enters into sale and leaseback arrangements in relation to machinery leases. The transfer of legal title to the solar farms, plant and equipment does not satisfy the requirements of IFRS standards to be accounted for as a sale of the solar farms, plant and equipment. During the year ended 31 December 2021, there were no borrowings (2020: RMB398,505,000) in respect of such sale and leaseback arrangements. More details are set out in note 36.

17. INVESTMENT PROPERTIES

	RMB'000
COST	
As at 1 January 2020, 31 December 2020 and 31 December 2021	103,279
ACCUMULATED DEPRECIATION	
As at 1 January 2020	37,474
Provided for the year	4,656
As at 31 December 2020	42,130
Provided for the year	4,655
As at 31 December 2021	46,785
CARRYING AMOUNTS	
As at 31 December 2021	56,494
As at 31 December 2020	61,149

The investment properties are depreciated on a straight-line basis over the shorter of the lease terms of the leasehold land or 5% per annum.

The fair value of the Group's investment properties at 31 December 2021 and 2020 was approximately RMB65,142,000 and RMB61,451,000, respectively. The fair value was determined by the Directors with reference to recent market evidence of transaction prices for similar properties in similar locations and conditions.

In estimating the fair value of the properties, the highest and best use of the properties is their current use.

18. OTHER INTANGIBLE ASSETS

	Technical know-how RMB'000
COST	
At 1 January 2020	1,070,414
Disposal	(1,999)
At 31 December 2020	1,068,415
Addition	6
At 31 December 2021	1,068,421
ACCUMULATED AMORTISATION AND IMPAIRMENT	
At 1 January 2020	822,691
Amortisation expense	32,986
Eliminated on disposal	(600)
At 31 December 2020	855,077
Amortisation expense	33,474
At 31 December 2021	888,551
CARRYING AMOUNTS	
At 31 December 2021	179,870
At 31 December 2020	213,338

Technical know-how are mainly acquired by solar material business from third parties in relation to technical know-how of hydrochlorination production techniques and hydrochlorination recycling system, trichlorosilane fluidised bed reactor technics, Continuous Czochralski monosilicon technics, perovskite solar cells technics and technical know-how on production of polysilicon and wafer products.

Technical know-how have definite useful lives and are amortised on a straight-line basis over 10 years.

19. INTERESTS IN ASSOCIATES

	2021 RMB'000	2020 RMB'000
Cost of investments in associates	**6,447,509**	6,353,369
Share of post-acquisition profits and OCI, net of dividends received	**3,157,650**	685,657
	9,605,159	7,039,026

Details of the Group's associates at the end of the reporting period are as follows:

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	**2021**	2020	
新疆協鑫新能源材料科技有限公司 Xinjiang GCL New Energy Materials Technology Co., Limited* ("Xinjiang GCL") (Note a)	PRC	**38.50%**	38.50%	**38.50%**	38.50%	Production and sale of polysilicon
徐州中平協鑫產業升級股權投資基金（有限合夥） Xuzhou Zhongping GCL Industrial Upgrading Equity Investment Fund LLP* ("Zhongping GCL") (Note b)	PRC	**40.27%**	40.27%	**40.27%**	40.27%	Investment and asset management
內蒙古中環協鑫光伏材料有限公司 Inner Mongolia Zhonghuan-GCL Solar Material Co., Ltd.* ("Mongolia Zhonghuan-GCL") (Note c)	PRC	**12.19%**	16.04%	**12.19%**	16.04%	Production of silicon rods
樂山市仲平多晶硅光電信息產業基金合夥企業 (有限合夥) Leshan Zhongping Polysilicon Photovoltaic Information Industry Investment Fund Partnership (Limited Partnership)* ("Leshan Fund") (Note d)	PRC	**23.09%**	—	**23.09%**	—	Investment and asset management
樂山市中平能鑫企業管理諮詢合夥企業 (有限合夥) Leshan Zhongping Nengxin Enterprise Management Consultancy Partnership (Limited Partnership)* ("Zhongping Nengxin") (Note e)	PRC	**66.65%**	—	**66.65%**	—	Investment and asset management

19. INTERESTS IN ASSOCIATES (Continued)

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	**2021**	2020	
樂山矽材科技有限公司 Leshan Silicon Material Technology Company Limited* ("Leshan Silicon")	PRC	**30.00%**	—	**30.00%**	—	Provision of silicon subcontracting service
新疆協鑫硅業科技有限公司 Xinjiang GCL Silicon Industry Company Limited ("Xinjiang Silicon")* (Note 42(A)(i)(c))	PRC	**20.00%**	N/A	**20.00%**	N/A	Production and trading of silicon metal powder
徐州經濟技術開發區龍鑫市政工程有限公司 Xuzhou Economic Technology Development District Nengxin Civil Engineering Company Limited* ("Xuzhou Longxin")	PRC	**5.78%**	—	**5.78%**	—	Construction of factory
江蘇協鑫新能晶體科技有限公司 Jiangsu GCL New Energy Crystal Technology Company Limited* ("New Energy Crystal GCL")	PRC	**1.11%**	—	**33.33%**	—	Production and trading of silicon
喀什博思光伏科技有限公司 Kashgar Solbright Technology Co., Ltd.* ("Kashgar Solbright") (Note h)	PRC	**9.85%**	11.55%	**9.85%**	11.55%	Sale of solar products
華容縣協鑫光伏電力有限公司 Huarong County GCL Solar Power Co. Ltd.* ("Huarong") (Note h)	PRC	**9.85%**	11.55%	**9.85%**	11.55%	Operation of solar power plants in the PRC
北京華橋新能源諮詢有限公司 Beijing Hua Qiao New Energy Limited* ("Huaqiao") (Note h)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Provision of consultancy services on solar power plant
林州市新創太陽能有限公司 Linzhou City Xinchuang Solar Company Limited* ("Linzhou Xinchuang")* (Note i)	PRC	**9.85%**	11.55%	**9.85%**	11.55%	Operation of solar power plants in the PRC
汝州協鑫光伏電力有限公司 Ruzhou GCL Photovoltaic Power Co., Ltd.* ("Ruzhou") (Note j)	PRC	**22.16%**	25.99%	**22.16%**	25.99%	Operation of solar power plants in the PRC
新安縣協鑫光伏電力有限公司 Xinan County GCL Solar Power Co., Ltd.* ("Xinan") (Note j)	PRC	**22.16%**	25.99%	**22.16%**	25.99%	Operation of solar power plants in the PRC
江陵縣協鑫光伏電力有限公司 Jiangling County GCL Solar Power Co., Ltd.* ("Jiangling") (Note j)	PRC	**22.16%**	25.99%	**22.16%**	25.99%	Operation of solar power plants in the PRC

19. INTERESTS IN ASSOCIATES (Continued)

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	2021	2020	
山西協鑫新能源科技有限公司 Shanxi GCL New Energy Technologies Co., Ltd.* ("Shanxi GNE") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
汾西縣協鑫光伏電力有限公司 Fenxi County GCL Photovoltaic Co., Ltd.* ("Fenxi GCL") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
芮城縣協鑫光伏電力有限公司 Ruicheng County GCL Photovoltaic Co., Ltd.* ("Ruicheng GCL") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
盂縣晉陽新能源發電有限公司 Yu County Jinyang New Energy Power Generation Co., Ltd.* ("Yu County Jinyang") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
盂縣協鑫光伏電力有限公司 Yu County GCL Photovoltaic Co., Ltd.* ("Yu County GCL") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
邯能廣平縣光伏電力開發有限公司 Hanneng Guangping County Photovoltaic Development Co., Ltd.* ("Hanneng Guangping") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
河北協鑫新能源有限公司 Hebei GCL New Energy Co., Ltd.* ("Hebei GNE") (Note k)	PRC	**14.77%**	17.33%	**14.77%**	17.33%	Operation of solar power plants in the PRC
宿州協鑫光伏電力有限公司 Suzhou GCL Solar Power Co., Ltd.* ("Suzhou GCL Solar Power") (Note l)	PRC	**4.92%**	5.78%	**4.92%**	5.78%	Operation of solar power plants in the PRC

19. INTERESTS IN ASSOCIATES (Continued)

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	2021	2020	
淮北鑫能光伏電力有限公司 Huaibei Xinneng Solar Power Co., Ltd.* ("Huaibei Xinneng") (Note l)	PRC	4.92%	5.78%	4.92%	5.78%	Operation of solar power plants in the PRC
合肥建南电力有限公司 Hefei Jiannan Power Company Ltd.* ("Hefei Jiannan") (Note l)	PRC	4.92%	N/A	4.92%	N/A	Operation of solar power plants in the PRC
合肥久陽新能源有限公司 Hefei Jiuyang GCL New Energy Company Ltd.* ("Hefei Jiuyang") (Note l)	PRC	4.92%	N/A	4.92%	N/A	Operation of solar power plants in the PRC
金湖正輝太陽能電力有限公司 Jinhu Zhenghui Photovoltaic Co., Ltd.* ("Jinhu") (Note m)	PRC	7.63%	14.44%	7.63%	14.44%	Operation of solar power plants in the PRC
欽州鑫奧光伏電力有限公司 Qinzhou Xinao Photovoltaic Power Company Limited* ("Xinao") (Note n)	PRC	19.67%	23.10%	19.67%	23.10%	Inactive
阜南協鑫光伏電力有限公司 Funan GCL Photovoltaic Power Co., Ltd.* ("Funan GCL") (Note o)	PRC	4.92%	N/A	4.92%	N/A	Operation of solar power plants in the PRC
合肥鑫仁光伏電力有限公司 Hefei Xinren Solar Power Co., Ltd.* ("Hefei Xinren") (Note o)	PRC	4.92%	N/A	4.92%	N/A	Operation of solar power plants in the PRC
天長市協鑫光伏電力有限公司 Tianchang GCL Solar Energy Limited* ("Tianchang GCL") (Note o)	PRC	4.92%	N/A	4.92%	N/A	Operation of solar power plants in the PRC

19. INTERESTS IN ASSOCIATES (Continued)

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	2021	2020	
碭山協鑫光伏電力有限公司 Dangshan GCL Solar Power Co., Ltd.* ("Dangshan GCL") (Note o)	PRC	**4.92%**	N/A	**4.92%**	N/A	Operation of solar power plants in the PRC
横山晶合太陽能發電有限公司 Hengshan Jinghe Solar Energy Co., Ltd.* ("Hengshan Jinghe") (Note p)	PRC	**9.85%**	N/A	**9.85%**	N/A	Operation of solar power plants in the PRC
安福協鑫新能源有限公司 Anfu GCL New Energy Co., Ltd.* ("Anfu GCL") (Note q)	PRC	**24.13%**	N/A	**24.13%**	N/A	Operation of solar power plants in the PRC

* English name for identification only

Notes:

(a) In 2019, the Group entered into an agreement with Zhongping GCL (see note (b) below), an associate of the Group, to dispose of 31.5% out of its 70% equity interest in Xinjiang GCL for a consideration of approximately RMB2,490,850,000. Resolution for the disposal was duly passed by the shareholders of the Company at an extraordinary general meeting on 9 September 2019.

The Group still retained significant influence over Xinjiang GCL upon completion of the disposal. Following the completion of such disposal, the Group's equity interest in Xinjiang GCL was 38.5% which is accounted for using the equity method.

(b) In 2019, the Group entered into a partnership agreement with six independent investors to subscribe for a 40.27% equity interest in Zhongping GCL for a consideration of RMB1,350,000,000 which was fully injected.

Pursuant to the partnership agreement of Zhongping GCL, two-third of the votes of the investment committee is required to direct its activities. The Group is entitled to two out of eight voting rights in the investment committee. The Directors consider that the Group can exercise significant influence over Zhongping GCL and it is therefore classified as an associate of the Group.

(c) In November 2017, Mongolia Zhonghuan-GCL was established with certain independent third parties in which the Group injected RMB900,000,000 as capital for a 30% equity interest.

In December 2019, one of the existing shareholders and other investors further injected RMB2,500,000,000 into Mongolia Zhonghuan-GCL to increase its registered capital, which resulted in diluting the Group's equity interest in Mongolia Zhonghuan-GCL from 30% to 17.17%.

19. INTERESTS IN ASSOCIATES (Continued)

Notes: (Continued)

(c) (Continued)

In March 2020, the Group entered a capital injection agreement with the existing shareholders. It set out that one of the existing shareholders of Mongolia Zhonghuan-GCL further injected RMB480,000,000 in total into Mongolia Zhonghuan-GCL to increase its registered capital, which resulted in diluting the Group's equity interest in Mongolia Zhonghuan-GCL by approximately 1%. It further sets out that the Group, after the completion of the capital injection, was entitled to 30% equity interest of a production line held by Mongolia Zhonghuan-GCL.

In February 2021, the Group entered into a share transfer agreement that the Group agreed to sell 3.848% equity interest in Mongolia Zhonghuan-GCL to Leshan Fund (See note (d) below) at a consideration of RMB600 million and agreed to grant a put option to Leshan Fund upon the occurrence of certain specific events. The share transfer agreement further set out that, the Group's equity interest of a production line held by Mongolia Zhonghuan-GCL was reduced from 30% to 22.8%. The relevant gain on disposal resulting from decrease of equity interest was RMB141,449,000. Pursuant to the share transfer agreement, Leshan Fund has the right to request the Group to repurchase its 3.848% equity interest at a premium if Mongolia Zhonghuan-GCL failed to fulfil certain conditions. As this put option is a derivative financial instrument within the scope of IFRS 9, the Group measured it at fair value as at 31 December 2021.

As at 31 December 2021, the Group is given the right to appoint two out of seven directors on the board of Mongolia Zhonghuan-GCL, the Directors considered that the Group can exercise significant influence over Mongolia Zhonghuan-GCL and it is therefore continued to be classified as an associate of the Group.

(d) During 2020, the Group entered into a limited partnership agreement with certain independent third parties and an associate of the Group, Zhongping Nengxin (see note (e) below) for the establishment of an investment fund, Leshan Fund. The establishment of Leshan Fund was completed during 2021 and the Group were entitled to 23.09% equity interest of Leshan Fund. The principal activities of Leshan fund were to invest in silicon production related project in Leshan, Sichuan, and the Group's subsidiary, Leshan New Energy GCL ("樂山協鑫新能源科技有限公司").

Pursuant to the limited partnership agreement of Leshan Fund, the Group is given the right to appoint two out of seven directors on the investment committee which direct the investment activities of the Leshan Fund, the Directors considered that the Group can exercise significant influence over Leshan Fund and it is therefore classified as an associate of the Group.

(e) In the beginning of 2021, the Group entered into a limited partnership agreement with certain independent third parties for the establishment of an investment fund, Zhongping Nengxin. The Group were entitled to 66.7% equity interest of Zhongping Nengxin during the year ended 31 December 2021. The principal activities of Zhongping Nengxin is to invest in Leshan Fund and silicon production related projects.

Pursuant to the limited partnership agreement, the investment and operating activities of Zhongping Nengxin were solely controlled by the investment manager appointed under the limited partnership agreement, and the Group was given one-third of the voting right in the partnership meeting of Zhongping Nengxin to amend the partnership agreement. The Directors considered that the Group can exercise significant influence over Zhongping Nengxin and it is therefore classified as an associate of the Group.

(f) In December 2020, the Group entered into an agreement with an independent third party to dispose of its entire 5.97% equity interest in 芯鑫融資租賃有限公司 Xinxin Finance Leasing Company Limited* at a consideration of approximately RMB727,879,000, resulting in a loss of disposal of an associate approximately RMB11,951,000 which was recognised in profit or loss during the year ended 31 December 2020.

19. INTERESTS IN ASSOCIATES (Continued)

Notes: (Continued)

(g) In December 2020, the Group entered into an agreement with an independent third party to dispose of its entire 22.17% equity interest in 浙江瑞翌新材料科技股份有限公司 Zhejiang Ruiyi New Material Technology Co. Ltd.* at a consideration of approximately RMB3,686,000 to be received. This resulted in a loss of approximately RMB55,899,000 recognised in profit or loss during the year ended 31 December 2020.

(h) As at 31 December 2021, GNE, a 49.24%-owned subsidiary of the Group (2020: a 57,75%-owned subsidiary of the Group), holds 20%, 20% and 30% equity interest in Kashgar Solbright, Huarong and Huaqiao, respectively. Accordingly, as at 31 December 2021 and 2020, the Group indirectly holds 9.85% (2020: 11.55%), 9.85% (2020: 11.55%) and 14.77% (2020: 17.33%) equity interest in Kashgar Solbright, Huarong and Huaqiao, respectively.

(i) On 15 February 2019, GNE Group disposed of 80% equity interest in Linzhou Xinchuang to 中廣核太陽能開發有限公司 CGN Solar Energy Development Co., Ltd.* ("CGN Solar"), an independent third party and retains significant influence on Linzhou Xinchuang upon completion of the disposal. Accordingly, the remaining 20% equity interest in Linzhou Xinchuang is accounted for as an investment in an associate by GNE Group and as at 31 December 2021, the Group indirectly holds 9.85% equity interest in Linzhou Xinchuang (2020 11.55%).

(j) On 28 March 2019, GNE Group announced that it had entered into share transfer agreements with 五凌電力有限公司 Wuling Power Corporation Ltd.* ("Wuling Power"), a subsidiary of 中國電力國際發展有限公司 China Power International Development Limited*, for the disposal of 55% equity interest in Ruzhou, Jiangling and Xinan. Since GNE Group retains 45% equity interest in aggregate in Ruzhou, Jiangling and Xinan and has significant influence, these companies are accounted for as investments in associates by GNE Group and as at 31 December 2021, the Group indirectly holds 22.16% equity interest in Ruzhou, Jiangling and Xinan (2020: 25.99%).

(k) On 22 May 2019, GNE Group entered into a series of seven share transfer agreements with 上海榕耀新能源有限公司 Shanghai Rongyao New Energy Co., Ltd* ("Shanghai Rongyao"), an independent third party, in which GNE Group disposed of 70% of its equity interest in Shanxi GNE, Fenxi GCL, Ruicheng GCL, Yu County Jinyang, Yu County GCL, Hanneng Guangping and Hebei GNE. Since GNE Group retains 30% equity interest in aggregate in these companies and has significant influence, these companies are accounted for as investments in associates by GNE Group and as at 31 December 2021, the Group indirectly holds 14.78% equity interest in these companies (2020: 17.33%).

(l) On 16 November 2020, as disclosed in note 42(A)(ii)(i)(b), GNE Group announced that it has entered into a series of five share transfer agreements with 徐州國投環保能源有限公司 Xuzhou State Investment & Environmental Protection Energy Co., Ltd.* ("Xuzhou State Investment"), an independent third party, for the disposal of 90% equity interest in each of Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang and 67% equity interest in 碭山鑫能光伏電力有限公司 Dangshan Xinneng Photovoltaic Power Company Limited* ("Dangshan Xinneng"). As GNE Group has the right to appoint one out of five directors to Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang and therefore GNE Group retains significant influence on Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang upon completion of the disposal. Accordingly, the remaining 10% equity interest in Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang are accounted for as investments in associates by GNE Group and the Group indirectly holds 4.92% equity interest in these companies (2020: 5.78%).

(m) In July 2020, as disclosed in note 42(B)(i)(f), GNE Group disposed of 75% equity interest in Jinhu, a wholly-owned subsidiary, to 國際新能源科技有限公司 CDB New Energy Technology Co., Ltd.* ("CDB New Energy"), an independent third party. In June 2021, the GNE Group further entered into supplemental agreement with CDB New Energy to disposed of its 9.5% equity interest in Jinhu and retains significant influence on Jinhu upon completion of disposal. Accordingly, the remaining 15.5% equity interest in Jinhu is accounted for as an associate by GNE Group and the Group indirectly holds 7.63% equity interest in Jinhu (2020: 14.44%).

19. INTERESTS IN ASSOCIATES (Continued)

Notes: (Continued)

(n) On 21 August 2020, as disclosed in note 42(B)(i)(g), GNE Group disposed of a total of 60% equity interest in Xinao, a wholly-owned subsidiary to 國家電投集團貴州金元威寧能源有限公司 State Power Investment Corporation Limited* ("State Power Investment") and 廣西金元南方新能源有限公司 Guangxi Jinyuan South New Energy Limited* ("Guangxi Jinyuan"), which are independent third parties, and GNE Group retains significant influence on Xinao upon completion of the disposal. Accordingly, the remaining 40% equity interest in Xinao is accounted for as investment in an associate by GNE Group and the Group indirectly holds 19.67% equity interest in Xinao (2020: 23.10%).

(o) On 22 November 2020, as disclosed in note 42(A)(ii)(ii), GNE Group entered into five share transfer agreements with Xuzhou State Investment to dispose of its 90% equity interest in each of Dangshan GCL Solar Power Co., Ltd.* ("Dangshan GCL"), Funan GCL Photovoltaic Power Co., Ltd.* ("Funan GCL"), Hefei Xinren Solar Power Co., Ltd.* ("Hefei Xinren") and Tianchang GCL Solar Energy Limited* ("Tianchang GCL") and its 50% equity interest in Taihu Xinneng Solar Power Co., Ltd.* ("Taihu Xinneng"). As the GNE Group has right to appoint one out of five directors of Dangshan GCL, Funan GCL, Hefei Xinren and Tianchang GCL and therefore the GNE Group retains significant influence on Dangshan GCL, Funan GCL, Hefei Xinren and Tianchang GCL upon completion of the disposal. Accordingly, the remaining 10% equity interest in Dangshan GCL, Funan GCL, Hefei Xinren and Tianchang GCL are accounted for as associates by GNE Group and the Group indirectly holds 4.92% equity interest in these companies.

(p) On 1 April 2021, as disclosed in note 42(A)(ii)(vii), GNE Group entered into four share transfer agreements with 三峽資產管理有限公司 Three Gorges Asset Management Co., Ltd. ("Three Gorges") to dispose of its 98.4% equity interest in Jingbian GCL Solar Power Co., Ltd. ("Jingbian GCL"), its 80.3514% equity interest in Hengshan Jinghe Solar Energy Co., Ltd. ("Hengshan Jinghe") and its 100% equity interest in two wholly-owned subsidiaries, namely Yulin Longyuan Solar Energy Limited ("Yulin Longyuan ") and Yulin Yushen Industrial Area Energy Co., Ltd., ("Yulin Yushen"). As the GNE Group has right to appoint one out of five directors of Hengshan Jinghe and therefore the GNE Group retains significant influence on Hengshan Jinghe upon completion of the disposal. Accordingly, the remaining 20% equity interest in Hengshan Jinghe is accounted for as an associate by GNE Group and the Group indirectly holds 9.85% equity interest in Hengshan Jinghe.

(q) On 24 June 2021, as disclosed in note 42(A)(ii)(vi), GNE Group entered into six share transfer agreements with 重慶綠欣能源發展有限公司Chongqing Lvxin Energy Development Co., Ltd.* ("Chongqing Lvxin") to dispose of its 100% equity interest in four wholly-owned subsidiaries namely, Shiyan Yunneng Photovoltaic Development Co., Ltd.* ("Shiyan Yunneng"), Jingshan GCL Photovoltaic Power Co. Ltd.* ("Jingshan GCL"), Jingshan Xinhui Solar Power Ltd.* ("Jingshan Xinhui") and Shanggao County Lifeng GCL New Energy Co., Ltd.* ("Shanggao County Lifeng"), its 70% equity interest in Shicheng GCL Solar Power Co., Ltd.* ("Shicheng GCL") and its 51% equity interest in Anfu GCL New Energy Co., Ltd.* ("Anfu GCL"). As the GNE Group has right to appoint one out of five directors of Anfu GCL and therefore the GNE Group retains significant influence on Anfu GCL upon completion of the disposal. Accordingly, the remaining 49% equity interest in Anfu GCL is accounted for as an associate by GNE Group and the Group indirectly holds 24.13% equity interest in Anfu GCL.

* English name for identification only

All of the associates are accounted for using the equity method in these consolidated financial statements.

19. INTERESTS IN ASSOCIATES (Continued)

Summarised financial information of material associates

Summarised financial information in respect of the Group's material associates, Xinjiang GCL, Mongolia Zhonghuan-GCL and Zhongping GCL, is set out below.

Xinjiang GCL

	2021 RMB'000	2020 RMB'000
Current assets	**5,342,629**	3,697,274
Non-current assets	**5,950,378**	4,969,780
Current liabilities	**(3,382,074)**	(3,478,451)
Non-current liabilities	**(1,728,767)**	(3,502,834)

	2021 RMB'000	2020 RMB'000
Revenue	**8,892,844**	2,179,433
Profit for the year	**4,496,397**	11,434

Reconciliation of the above summarised financial information to the carrying amount of the interest in Xinjiang GCL recognised in the consolidated financial statements is set out below:

	2021 RMB'000	2020 RMB'000
Net assets of Xinjiang GCL	**6,182,166**	1,685,769
Proportion of the Group's ownership interest in Xinjiang GCL	**38.50%**	38.50%
The Group's share of net assets of Xinjiang GCL	**2,380,134**	649,021
Goodwill	**2,416,798**	2,416,798
Carrying amount of the Group's interest in Xinjiang GCL	**4,796,932**	3,065,819

19. INTERESTS IN ASSOCIATES (Continued)

Summarised financial information of material associates (Continued)

Mongolia Zhonghuan-GCL

	2021 RMB'000	2020 RMB'000
Current assets	**5,213,109**	4,235,175
Non-current assets	**14,871,806**	10,289,664
Current liabilities	**(4,004,391)**	(4,461,225)
Non-current liabilities	**(5,221,591)**	(1,508,908)

	2021 RMB'000	2020 RMB'000
Revenue	**28,486,321**	11,605,411
Profit for the year	**2,415,633**	787,264

Reconciliation of the above summarised financial information to the carrying amount of the interest in Mongolia Zhonghuan-GCL recognised in the consolidated financial statements is set out below:

	2021 RMB'000	2020 RMB'000
Net assets of Mongolia Zhonghuan-GCL	**10,858,933**	8,554,706
Proportion of the Group's ownership interest in Mongolia Zhonghuan-GCL	**12.19%**	16.04%
The Group's share of net assets of Mongolia Zhonghuan-GCL	**1,323,921**	1,372,175
Others*	**1,240**	—
Carrying amount of the Group's interest in Mongolia Zhonghuan-GCL	**1,325,161**	1,372,175

* Other adjustments mainly represent the adjustments of the Group's share of 22.8% (2020: 30%) of the net assets of a particular production line held by Mongolia Zhonghuan-GCL based on the contractual arrangement entered between the other shareholders of Mongolia Zhonghuan-GCL and the Group.

19. INTERESTS IN ASSOCIATES (Continued)

Summarised financial information of material associates (Continued)

Zhongping GCL

	2021 RMB'000	2020 RMB'000
Current assets	**179,246**	199,426
Non-current assets	**4,700,591**	3,145,830

	2021 RMB'000	2020 RMB'000
Profit (loss) for the year	**1,534,581**	(14,720)

Reconciliation of the above summarised financial information to the carrying amount of the interest in Zhongping GCL recognised in the consolidated financial statements is set below:

	2021 RMB'000	2020 RMB'000
Net assets of Zhongping GCL	**4,879,837**	3,345,256
Proportion of the Group's ownership interest in Zhongping GCL	**40.27%**	40.27%
Carrying amount of the Group's interest in Zhongping GCL	**1,965,110**	1,347,135

Aggregate information of associates that are not individually material

	2021 RMB'000	2020 RMB'000
The Group's share of profits	**92,184**	127,603
The Group's share of OCI	**22,402**	—
The Group's share of OCI	**114,586**	127,603

20. INTERESTS IN JOINT VENTURES

Details of the Group's investments in joint ventures are as follows:

	2021 RMB'000	2020 RMB'000
Cost of unlisted investment in joint ventures	**785,012**	838,058
Share of post-acquisition loss and OCI, net of dividends received	**(91,068)**	(263,900)
	693,944	574,158

Details of each of the Group's joint ventures at the end of the reporting period are as follows:

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	**2021**	2020	
SA Equity Holdco S.a.r.l ("SA Equity") (Note a)	Luxembourg/ South Africa	**51%**	51%	**51%**	51%	Investment holding of photovoltaic power generation projects in South Africa
江蘇鑫華半導體材料科技有限公司 Jiangsu Xinhua Semiconductor Material Technology Co., Ltd.* ("Jiangsu Xinhua") (Note b)	PRC	**29.99%**	50.98%	**29.99%**	50.98%	Production and trading of semiconductor polysilicon

20. INTERESTS IN JOINT VENTURES (Continued)

Name of company	Country of incorporation/ operation	Proportion of ownership interest held by the Group		Proportion of voting right held by the Group		Principal activities
		2021	2020	**2021**	2020	
蘇州協鑫景世豐股權投資管理有限公司Suzhou GCL Jingshifeng Investment Management Co., Ltd.* ("Jingshifeng") (Note c)	PRC	**63%**	53%	**63%**	53%	Investment and asset management
江蘇疌泉景世豐投資基金(有限合夥) Jiangsu Jiequan Jingshifeng Investment Fund (Limited Partnership)* ("Jiequan Jingshifeng") (Note d)	PRC	**55.32%**	58.80%	**55.32%**	58.80%	Investment and asset management
MIT GCL Investment Limited	Cayman Islands	**50%**	50%	**50%**	50%	Investment holding
GHC Investment Management Limited	Cayman Islands	**50%**	50%	**50%**	50%	Investment holding
啟創環球有限公司Qichuang Global Limited* ("Qichuang")	BVI/Japan	**—**	28.88%	**—**	28.88%	Deregistered during 2021
北京京糧協鑫科技有限公司Beijing Jing Liang Xie Xin GCL Technology Limited* ("Jingliang") (Note e)	PRC	**19.70%**	28.30%	**19.70%**	28.30%	Provision of consultancy services on solar power plant

* English name for identification only

Notes:

(a) At 31 December 2021 and 2020, the Group held a 51% equity interest in SA Equity which is an investment holding company holding a 76% equity interest in each of Solar Reserve GCL Soutdrift PV1 Proprietary Limited and Solar Reserve GCL Humansrus PV1 Proprietary Limited that together indirectly holds a 150MW photovoltaic power plant in South Africa.

Pursuant to the subscription agreement entered into by the Group and the other shareholder, the relevant activities of SA Equity require unanimous consent of the parties sharing control. As a result, SA Equity is accounted for as a joint venture of the Group.

20. INTERESTS IN JOINT VENTURES (Continued)

Notes: (Continued)

(b) In April 2016, the Group entered into a joint venture investment agreement ("Investment Agreement") with an independent investor ("JV Partner"), pursuant to which the Group invested 50.98% equity interest in Jiangsu Xinhua at a consideration of RMB520,000,000 in the form of property, plant and equipment which approximated the fair values of the relevant assets at the date of transfer.

During the year 2021, Jiangsu Xinhua disposed 7.5% of its equity interest to certain independent third parties. Following the completion of the disposal, the Group received consideration of RMB50,318,000, the Group's equity interest in Jiangsu Xinhua was 43.48% and relevant gain on disposal recognised in the Group's profit or loss was RMB27,751,000.

Moreover, in 2021, Jiangsu Xinhua entered into a share allotment agreement with another group of independent third parties, pursuant to which Jiangsu Xinhua agreed to issue and allot new shares, representing 31.03% of equity interest of Jiangsu Xinhua to Investor Group A for a consideration of RMB900 million. Following the completion of the share allotment, the Group's equity interest in Jiangsu Xinhua was diluted to 29.99% and relevant gain on deemed disposal recognised in the Group's profit or loss was RMB229,275,000.

According to the Investment Agreement, the relevant activities require unanimous consent of the parties sharing control. The Directors consider that the Group can exercise joint control over Jiangsu Xinhua and it is therefore classified as a joint venture of the Group.

Pursuant to the Investment Agreement, the JV Partner has the right to request the Group to repurchase its 49.02% equity interest at a premium if Jiangsu Xinhua failed to fulfil certain conditions. As this put option is a derivative financial instrument within the scope of IFRS 9, the Group measured it at fair value and recognised a gain on fair value change of derivative financial instruments of approximately RMB4,753,000 (2020: a gain of RMB111,400,000) to profit or loss for the year ended 31 December 2021.

(c) In 2017, the Group entered into an agreement with certain independent third parties pursuant to which the Group invested 53% equity interest and the independent third parties invested 42% and 5% in Jingshifeng at a consideration of RMB5,300,000, RMB4,200,000 and RMB500,000, respectively.

In 2021, the Group entered a share transfer agreement with a shareholder of Jingshifeng, who agreed to transfer its entire equity interest of 10% to the Group for RMB1,150,000. The Group's equity interest increased from 53% to 63% as at 31 December 2021.

According to the agreement, two-thirds of the votes are required to direct the relevant activities of Jingshifeng. The Directors consider that the Group can only exercise joint control over Jingshifeng and it is therefore classified as a joint venture of the Group.

(d) In August 2017, the Group entered into a partnership agreement with certain independent investors pursuant to which the Group committed to contribute RMB300,000,000 to the partnership for 50% equity interest and injected funds amounting to RMB90,000,000 as at 31 December 2017.

In November 2020, the Group further injected approximately RMB23,300,000 whereas the other investors injected approximately RMB700,000 into Jiequan Jingshifeng for the increase of its registered capital, resulting in the change in the equity interest in Jiequan Jingshifeng from 50% to 58.80%.

In August 2021, the Group enter into agreements with existing shareholders to reduce the partnership registered capital to RMB250,000,000.

In November 2021, the Group and the existing shareholders further injected approximately RMB25,000,000 and RMB21,000,000 respectively into Jiequan Jingshifeng for the increase of its registered capital, resulting in the change in the equity interest in Jiequan Jingshifeng from 58.80% to 55.32%.

Pursuant to the partnership agreement of Jiequan Jingshifeng, two-thirds of the votes are required to direct the relevant activities. The Directors consider that the Group can only exercise joint control over Jiequan Jingshifeng and the investment is therefore classified as a joint venture of the Group.

(e) At 31 December 2021, GNE, a 49.24% owned subsidiary of the Group (2020: 57.75%-owned subsidiary of the Group) holds 40% (2020: 49%) equity interest in Jingliang. Therefore, as at 31 December 2021, the Group indirectly held 19.7% (2020: 28.30%) equity interest in Jingliang.

* English name for identification only

20. INTERESTS IN JOINT VENTURES (Continued)

All of the joint ventures are accounted for using equity method in these consolidated financial statements. In the opinion of Directors of the Company all the joint ventures are not individually material for the year ended 31 December 2021 and 2020 and the aggregate information of joint ventures are as follow:

Aggregate information of joint ventures that are not individually material

	2021	2020
	RMB'000	RMB'000
The Group's share of losses	**(78,016)**	(103,553)

21. OTHER FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS/EQUITY INSTRUMENTS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	2021	2020
	RMB'000	RMB'000
Current assets		
Other financial assets at FVTPL:		
Unlisted investments (Note a)	**421,790**	800,763
Non-current assets		
Other financial assets at FVTPL:		
Unlisted investments (Note b)	**203,870**	241,310
Unlisted equity investments (Note c)	**92,540**	79,957
	296,410	321,267
Equity instruments at FVTOCI:		
Listed equity investments (Note d)	**41,683**	21,073

Notes:

(a) The unlisted investments represent the financial products issued by financial institutions and banks in Hong Kong and the PRC. The Directors consider the fair values of the unlisted investments, which are based on the prices provided by the financial institutions and banks, that is the prices they would pay to redeem the financial products at the end of the reporting period, approximated their carrying value.

21. OTHER FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS/EQUITY INSTRUMENTS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME (Continued)

Notes: (Continued)

(b) The Group invested in the form of interests as limited partners in certain private entities, which held a portfolio of unlisted investments. The primary objective of the investments is to earn income and for capital gain. Pursuant to investment agreements, the beneficial interests held by the Group in these unlisted investments are in the form of participating shares or interests which primarily provide the Group with the share of returns from the unlisted investments but not any decision making power nor any voting right to involve in and control the daily operation. The unlisted investments mainly made up of private entities incorporated in the PRC and liquid financial assets (including cash and cash equivalents).

(c) Unlisted equity investments

(i) The amount of RMB48,826,000 (2020: RMB79,957,000) mainly represents the investments in unlisted equity instruments issued by private entities established in the PRC, Hong Kong and the USA.

During the year ended 31 December 2020, the Company disposed of 80% equity interest in Funing Xinneng, Ningxia Hengyang and Baoying Xingneng (as defined in note 42(B)(iii)), all wholly-owned subsidiaries, and retained the remaining 20% equity interest in these companies. The Group was not given the right to appoint any directors, and therefore the Directors considered that the Group was not able to exercise significant influence over these companies. Such equity investments were therefore accounted for as equity instruments at FVTPL as at 31 December 2020.

(ii) During the year ended 31 December 2021, GNE Group disposed of 99.635% equity interest in Jingbian County Shunfeng (as defined in note 42(A)(ii)(xv)(a)) and disposed of 98.4% equity interest in Jingbian GCL, the wholly-owned subsidiaries, and retained the remaining 0.365% and 1.6% equity interest respectively in the companies. GNE Group also disposed of 90% equity interest in Shenmu Jingpu Power Co., Ltd.* ("Shenmu Jingpu"), Shenmu Jingfu Solar Power Co., Ltd* ("Shenmu Jingfu"), Shenmu Ping Xi Power Co., Ltd.*, Shenmu Ping Yuan Power Co., Ltd.,* 神木縣晶登電力有限公司 Shenmu County Jingdeng Power Co., Ltd.* ("Jingdeng") and 西咸新區協鑫光伏電力有限公司 Xixian New District GCL Photovoltaic Power Co., Ltd* ("Xixian New District"). GNE Group was not given the right to appoint any directors, and therefore the directors of GNE considered that GNE Group was not able to exercise significant influence over these companies. Such equity investments amounted to RMB43,714,000 (2020: Nil) were therefore accounted for as equity instruments at FVTPL as at 31 December 2021.

(d) The amount mainly represents the listed equity investments in Lamtex Holdings Limited ("Lamtex"), whose shares are listed on the Stock Exchange, and Millennial Lithium Corp. ("Millennial"), whose shares are listed on TSX Venture Exchange.

Since 3 August 2020 and up to the date of approval of these consolidated financial statements for issuance, trading of Lamtax's shares on the Stock Exchange has been suspended. In addition, Lamtax received a winding up petition due to its insolvency position and inability to pay its debt. The Directors consider the fair value of the investment in Lamtax approaches zero based on its latest financial position.

In 2018, the Group subscribed for 1,822,514 units in the capital of Millennial for Canadian dollars 6,379,000 (equivalent to RMB31,860,000), with each unit comprising of one common share in Millennial and one half of one warrant, each warrant entitling the holder to purchase one common share in Millennial at a specific price within a specific period which expired in March 2020.

These investments are not held for trading; instead, they are held for long-term strategic purpose. The Directors have elected to designate these investments in equity instruments as at FVTOCI as they believe that recognising short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes and realising their performance potential in the long run.

22. CONVERTIBLE BONDS RECEIVABLE

The Directors have classified the convertible bonds receivable subscribed in 2018 as financial assets at FVTPL on initial recognition. The fair values of the convertible bonds receivable at initial recognition and as at 31 December 2019 were determined with reference to the valuations prepared by an independent professionally qualified valuer, DTZ Cushman & Wakefield Limited, based on the Binomial Lattice Model. The convertible bonds were fully redeemed on 14 July 2020.

The reconciliation of the change in fair value of the convertible bonds receivable is as follows:

	RMB'000
As at 1 January 2020	101,097
Receipt of interests	(4,330)
Change in fair value charged to profit or loss (note 9B)	(403)
Redemption of convertible bonds	(96,364)
As at 31 December 2020 and 2021	—

Note: Exchange gain of the convertible bonds receivable of approximately RMB2,115,000 together with change in fair value was recognised in profit or loss during the year ended 31 December 2020.

23. DEFERRED TAXATION

For the purpose of presentation in the consolidated statement of financial position, certain deferred tax assets and liabilities have been offset. The following is the analysis of the deferred tax balances for financial reporting purposes:

	2021 **RMB'000**	2020 RMB'000
Deferred tax assets	**107,985**	289,814
Deferred tax liabilities	**(411,958)**	(113,991)
	(303,973)	175,823

23. DEFERRED TAXATION (Continued)

The following are the deferred tax assets (liabilities) recognised and movements thereon during the year:

	Property, plant and equipment RMB'000	Withholding tax on undistributed profits RMB'000	Unrealised profits on inventories RMB'000	Fair value uplift of interest in an associate RMB'000	Others RMB'000	Total RMB'000
At 1 January 2020	579,244	(123,352)	49,989	(357,326)	(43,592)	104,963
Credit (charge) to profit or loss	58,454	61,851	(48,677)	—	3,347	74,975
Disposal of solar power plant projects	(15,409)	—	—	—	11,294	(4,115)
At 31 December 2020	622,289	(61,501)	1,312	(357,326)	(28,951)	175,823
Credit (charge) to profit or loss	(283,970)	(149,248)	4,780	—	(3,478)	(431,916)
Disposal of solar power plant projects	(87,486)	—	—	—	39,606	(47,880)
At 31 December 2021	250,833	(210,749)	6,092	(357,326)	7,177	(303,973)

Under the tax law of the PRC, withholding tax is imposed on dividends declared in respect of profits earned by the PRC subsidiaries from 1 January 2008 onwards.

Deferred taxation has not been provided for in the consolidated financial statements in respect of temporary differences attributable to accumulated profits of the PRC subsidiaries of GNE Group amounting to approximately RMB149,930,000 (2020: RMB2,340,768,000) as GNE Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future. During the year ended 31 December 2021, withholding tax of approximately RMB920,000 (2020: RMB14,578,000) was charged to profit or loss for the dividends declared and paid by the PRC subsidiaries of GNE Group amounted to RMB18,400,000 (2020: RMB291,560,000).

At the end of the reporting period, the Group had unused tax losses of approximately RMB6,167,342,000 (2020: RMB6,446,001,000) available for offset against future profits. No deferred tax asset had been recognised due to the unpredictability of future profit streams. Unrecognised tax losses of approximately RMB4,470,733,000 (2020: RMB6,237,810,000) will expire from 2022 to 2026 (2020: 2021 to 2025) and other losses may be carried forward indefinitely.

23. DEFERRED TAXATION (Continued)

At the end of the reporting period, the Group had deductible temporary differences mainly in respect of impairment of certain assets in aggregate of approximately RMB7,302,981,000 (2020: RMB8,904,662,000). A deferred tax asset had been recognised in respect of approximately RMB424,649,000 (2020: RMB2,085,853,000) of such deductible temporary differences. No deferred tax asset had been recognised in relation to the remaining deductible temporary differences of approximately RMB6,878,332,000 (2020: RMB6,818,809,000) as it is not probable that taxable profit will be available against which the deductible temporary differences can be utilised.

24. INVENTORIES

	2021 **RMB'000**	2020 RMB'000
Raw materials	**418,284**	174,462
Work in progress	**168,172**	107,510
Semi-finished goods (Note)	**282,355**	175,736
Finished goods	**81,030**	30,170
Solar modules	**734**	751
	950,575	488,629

Note: Semi-finished goods mainly represented polysilicon.

During the year ended 31 December 2021, cost of inventories of approximately RMB11,173,410,000 (2020: RMB8,923,618,000) recognised as cost of sales included reversal of write-down of inventories, net of approximately RMB14,467,000 (2020: write-down of inventories, net, of approximately RMB7,286,000) because the cost of certain inventories were higher than their net realisable values.

25. DEPOSITS, PREPAYMENTS AND OTHER NON-CURRENT ASSETS/ TRADE AND OTHER RECEIVABLES

Deposits, prepayments and other non-current assets

	2021 RMB'000	2020 RMB'000
Deposits for acquisitions of property, plant and equipment (Note b)	**1,916,768**	527,212
Consideration receivables (note 42)	**58,929**	124,679
Refundable value-added tax	**141,625**	981,075
Others	**62,076**	80,005
	2,179,398	1,712,971

Trade and other receivables

	2021 RMB'000	2020 RMB'000
Trade receivables (Note a)	**11,608,482**	13,504,618
Other receivables:		
— Refundable value-added tax	**311,583**	621,048
— Consideration receivables	**1,322,236**	1,349,641
— Receivables for modules procurement	**62,800**	63,376
— Prepayments	**686,458**	252,671
— Amounts due from former subsidiaries (note c)	**2,917,863**	224,406
— Others	**1,788,638**	1,322,732
	18,698,060	17,338,492
Less: allowance for credit losses (Trade)	**(94,804)**	(109,936)
Less: allowance for credit losses (Non-Trade)	**(1,075,893)**	(740,754)
	17,527,363	16,487,802

25. DEPOSITS, PREPAYMENTS AND OTHER NON-CURRENT ASSETS/ TRADE AND OTHER RECEIVABLES (Continued)

Trade and other receivables (Continued)

Notes:

(a) The Group allows a credit period of approximately one month from the invoice date for trade receivables (excluding sales of electricity) and may further extend it for 3 to 6 months for settlement through bills issued by banks and financial institutions obtained from customers.

The following is an aged analysis of trade receivables (excluding sales of electricity and bills held by the Group for future settlement), net of allowance for credit losses, presented based on the invoice date at the end of the reporting period:

	2021	2020
	RMB'000	RMB'000
Within 3 months	**185,580**	259,570
3 to 6 months	**642**	42,536
Over 6 months	**78,420**	129,557
	264,642	431,663

For sales of electricity, the Group generally grants credit period of approximately one month to power grid companies in the PRC from the date of invoice in accordance with the relevant electricity sales contracts between the Group and the respective grid companies.

The following is an aged analysis of trade receivables arising from sales of electricity (excluding bills held by the Group for future settlement), net of allowance for credit losses, presented based on the invoice date at the end of the reporting period:

	2021	2020
	RMB'000	RMB'000
Unbilled (Note)	**1,492,086**	6,717,763
Within 3 months	**108,200**	197,194
3 to 6 months	**72,706**	177,946
Over 6 months	**256,141**	282,419
	1,929,133	7,375,322

Note: Amount represents unbilled basic tariff receivables for solar power plants operated by the Group, and tariff adjustment receivables of those solar power plants already registered in the List. The Directors expect the unbilled tariff adjustments would be generally billed and settled within one year from the end of the reporting period.

25. DEPOSITS, PREPAYMENTS AND OTHER NON-CURRENT ASSETS/ TRADE AND OTHER RECEIVABLES (Continued)

Trade and other receivables (Continued)

Notes: (Continued)

(a) (Continued)

Note: (Continued)

The aged analysis of the unbilled trade receivables, which is based on revenue recognition date, are as follows:

	2021 RMB'000	2020 RMB'000
0–90 days	**246,631**	948,875
91–180 days	**127,517**	283,537
181–365 days	**233,434**	1,051,020
Over 365 days	**884,504**	4,434,331
	1,492,086	6,717,763

As at 31 December 2021, total bills received amounting to approximately RMB9,319,903,000 (2020: RMB5,587,697,000) were held by the Group for future settlement of trade receivables, of which certain bills were further discounted/endorsed by the Group. The Group continued to recognise their full carrying amount at the end of the reporting period and details are disclosed in note 46. All bills received by the Group were with a maturity period of less than one year.

The Directors closely monitored the credit quality of trade and other receivables and considered the trade and other receivables, which are neither past due nor impaired, are of a good credit quality in view of the good historical repayment record.

As at 31 December 2021, included in the Group's trade receivables balance (excluding sales of electricity and bills held by the Group for future settlement) were debtors with aggregate carrying amount of approximately RMB153,028,000 (2020: RMB221,300,000) which were past due as at the reporting date. Out of the past due balances, approximately RMB78,957,000 (2020: RMB149,345,000) had been past due 121 days or more but was not considered as in default as part of such receivables was either supported by letters of credit issued by banks or offset by advances from customers or substantially settled subsequent to the end of the reporting period.

As at 31 December 2021, included in these trade receivables arising from sales of electricity were debtors with aggregate carrying amount of RMB390,903,000 (2020: RMB558,786,000) which was past due as at the end of the reporting date. These trade receivables related to a number of customers representing the local grid companies in the PRC, for whom there was no recent history of default. The Group did not hold any collaterals over these balances.

25. DEPOSITS, PREPAYMENTS AND OTHER NON-CURRENT ASSETS/ TRADE AND OTHER RECEIVABLES (Continued)

Trade and other receivables (Continued)

Notes: (Continued)

(b) As at 31 December 2020, an amount of RMB510 million was included in the deposits for acquisition of property, plant and equipment of which approximately RMB495.28 million was received subsequently in April 2021. Approximately RMB14.72 million was recognised as expense in the consolidated statement of profit or loss and other comprehensive income for the year ended 31 December 2020.

On 9 April 2021, the former auditor of the Company, issued a letter (the "Auditor Letter") addressing the Audit Committee bringing to its attention that during the performance of the audit of the 2020 Annual Results, the former auditor encountered an issue relating to a prepayment in the amount of RMB510 million made by a subsidiary of the Company, 江蘇中能硅業科技發展有限公司 Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.* ("Jiangsu Zhongneng") for the purposes of an engineering, procurement and construction project ("EPC Contract"). On 28 April 2021, the Company established a special audit issue committee of Directors comprising the Independent Non-Executive Directors (the "Special Committee") to undertake an independent investigation to assess the outstanding issues under the Auditor Letter. On 7 May 2021, the Company and the Special Committee engaged Mazars Certified Public Accountants LLP (the "Forensic Accountant") to conduct a forensic investigation addressing various concerns raised by the former auditor in the Auditor Letter. The forensic investigation and supplemental forensic investigation were completed in July 2021 and September 2021 respectively and the Forensic Accountant's findings adequately address the concerns in relation to the EPC Contract raised by the former auditor in the Auditor Letter.

Based on reports from the Forensic Accountant, the directors concluded that the various concerns in relation to the EPC Contract raised by the former auditor in the Auditor Letter did not have any material impact and the related balances and expenses have been properly reflected on the consolidated financial statements for the year ended 31 December 2020.

(c) The amount represents amounts due from former subsidiaries of which the Group disposal of the entire interests during the years ended 31 December 2021 and 2020. The amounts are non-trade in nature, unsecured, non-interest bearing and have not fixed term of repayment.

* English name for identification only

Details of impairment assessment of the trade and other receivables are set out in note 44.

26. CONTRACT ASSETS

	2021 RMB'000	2020 RMB'000
Arising from sales of electricity	**41,179**	1,233,377
Less: Allowance for credit loss	**(238)**	(5,398)
	40,941	1,227,979

The contract assets primarily related to the portion of tariff adjustments for electricity sold to grid companies in the PRC in which the relevant on-grid solar power plants are still pending registration to the List at the end of reporting period. Tariff adjustments is recognised as revenue upon the sale of electricity as disclosed in note 6. Pursuant to the 2020 Measures, for those on-grid solar power plants yet to be registered on the List, they are required to meet the relevant requirements and conditions for tariff subsidy as stipulated and to complete the submission and application on the Platform. Local grid companies will observe the principles set out in the 2020 Measures to determine eligibility and regularly announce the on-grid solar farms that are enlisted in the List. The Group considered the settlement terms contained a significant financing component, and had adjusted the respective tariff adjustments for the financing component based on an effective interest rate with reference to state treasury bonds of the PRC, as well as the estimated timing of collection. Accordingly, the amount of consideration is adjusted for the effects of the time value of money taking into consideration the credit characteristics of the relevant counterparties. The revenue of the Group was adjusted by approximately RMB31 million for the year ended 31 December 2021 (2020: RMB212 million) for this financing component and in relation to a revision of the expected timing of receipt of tariff adjustments in the contract assets.

Contract assets are reclassified to trade receivables at the point the respective on-grid solar power plant projects are enlisted on the List. The balances as at 31 December 2021 and 2020 were classified as non-current as they were expected to be received after twelve months from the reporting date.

Details of the impairment assessment are set out in note 44.

27. AMOUNTS DUE FROM RELATED COMPANIES

The related companies included associates, joint ventures, other related parties of the Group and companies controlled by Mr. Zhu Gongshan, the chairman of the Group, and his family members which hold in aggregate approximately 23.51% (2020: 30%) of the Company's share capital as at 31 December 2021 and exercise significant influence over the Company.

	2021 RMB'000	2020 RMB'000
Amounts due from related companies		
— Trade related (Note a)	333,273	431,814
— Non-trade related (Note b)	6,977	8,639
	340,250	440,453
Amounts due from associates		
— Trade related (Note a)	59,787	59,778
— Non-trade related (Note c)	358,792	1,110,515
	418,579	1,170,293
Amounts due from joint ventures		
— Trade related (Note a)	3	738
— Non-trade related (Note b)	—	7,942
	3	8,680
Amounts due from other related parties		
— Trade related (Note a)	126,687	—
— Non-trade related (Note d)	20,000	—
	146,687	—
	905,519	1,619,426
Less: allowance for credit losses	(305,751)	(281,580)
	599,768	1,337,846
Analysed for reporting purposes as:		
— Current assets	575,287	597,315
— Non-current assets	24,481	740,531
	599,768	1,337,846
— Trade related	213,999	210,750
— Non-trade related	385,769	1,127,096
	599,768	1,337,846

27. AMOUNTS DUE FROM RELATED COMPANIES (Continued)

Notes:

(a) The amounts are unsecured, non-interest-bearing and the credit period is normally within 30 days (2020: 30 days).

(b) The amounts are unsecured, non-interest-bearing and with no fixed term of repayment.

The maximum amount outstanding during 2021 is approximately RMB8,639,000 (2020: RMB19,686,000) for non-trade related amounts due from companies in which Mr. Zhu Gongshan and his family have control.

The following is an aged analysis of amounts due from related companies, associates and joint ventures (trade related), net of allowance for credit losses, at the end of the reporting period, presented based on the invoice date which approximated the respective revenue recognition dates:

	2021 **RMB'000**	2020 RMB'000
Within 3 months	**190,472**	66,648
3 to 6 months	**5,130**	6,052
More than 6 months	**18,397**	138,050
	213,999	210,750

(c) As at 31 December 2021, the amounts are unsecured, non-interest-bearing and with no fixed term of repayment, except for an amount of approximately RMB24,481,000 which, in the opinion of the directors of GNE, is expected to be received after twelve months from the end of the reporting period and was classified as non-current assets.

As at 31 December 2020, the amounts are unsecured, non-interest-bearing and with no fixed term of repayment, except for (i) loans to Xinjiang GCL of approximately RMB743,635,000 which were unsecured, bearing interest at fixed rates of 5.22% to 5.655% (2020: 5.22% to 5.655%) per annum, of which an amount of RMB700,000,000 was agreed to be repaid after one year and was therefore classified as non-current assets. The remaining balance of the loans to Xinjiang GCL was with no fixed term of repayment and was therefore classified as current assets; and (ii) an amount of approximately RMB40,529,000 which, in the opinion of the directors of GNE, is expected to be received after twelve months from the end of the reporting period and was classified as non-current assets.

(d) The other related parties represent the non-controlling interest shareholders of subsidiaries of the Group. The amounts are unsecured, non-interest-bearing and with no fixed term of repayment.

The Directors closely monitors the credit quality of amounts due from related companies and consider those accounts, which are neither past due nor impaired, are of a good credit quality in view of the good historical repayment records of such parties. Except for the amounts due from related companies with gross carrying amount of approximately RMB324,341,000 (2020: RMB401,909,000) which were credit-impaired because there was a default of payment from the counterparty, and therefore, an impairment loss of approximately RMB24,171,000 (2020: nil) was recognised for the year ended 31 December 2021.

Details of impairment assessment of amounts due from related companies are set out in note 44.

28. HELD FOR TRADING INVESTMENTS

	2021 RMB'000	2020 RMB'000
Listed securities:		
— Equity securities listed in Hong Kong	**1,473**	3,447

29. PLEDGED AND RESTRICTED BANK AND OTHER DEPOSITS AND BANK BALANCES

Bank balances

Bank balances carry interest at floating rates which range from 0.01% to 2% (2020: 0.01% to 1.5%) per annum or fixed rates which range from 0.3% to 4.14% (2020: 0.35% to 2.75%) per annum.

Pledged bank and other deposits

Pledged bank and other deposits represent deposits pledged to banks and other financial institutions to secure banking facilities granted to the Group. Deposits amounting to approximately RMB366,240,000 (2020: RMB291,420,000) were pledged to secure the Group's short-term borrowings and lease liabilities in the PRC and the USA, which were due within one year and were therefore classified as current assets. The remaining deposits amounting to approximately RMB432,866,000 (2020: RMB669,055,000) were pledged to secure long-term borrowings granted to the Group and lease liabilities which were due after one year, and were therefore classified as non-current assets.

Pledged bank deposits carried fixed interest rates ranging from 0.35% to 2.55% (2020: 0.40% to 4.18%) per annum.

As at 31 December 2021, pledged other deposits of approximately RMB216,573,000 (2020: RMB428,725,000) were non-interest-bearing.

Restricted bank deposits

The deposits carried interest at floating rates from 0.3% to 2.22% (2020: 0.35% to 2.22%) per annum or fixed rates ranging from 0.30% to 3.99% (2020: 0.30% to 3.55%) per annum and will be released upon the settlement or discharge of the relevant letters of credit and guarantee.

Restricted bank deposits amounting to approximately RMB2,398,882,000 (2020: RMB3,573,150,000) were utilized to secure bills and short-term letters of credit for trade and other payables, and were therefore classified as current assets. The remaining deposits amounting to approximately RMB31,774,000 (2020: RMB13,050,000) were utilized to secure lease liabilities and other payables which were due after one year, and were therefore classified as non-current assets.

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE

Disposal groups classified as held for sale

(A) Year ended 31 December 2021

On 16 November 2021, GNE Group entered into four share transfer agreements with 國家電投集團新疆能源化工額敏有限責任公司 State Power Investment Group Xinjiang Energy Chemical Emin Co., Ltd.* ("State Power Investment"), an independent third party to dispose of its 100% equity interest in four wholly-owned subsidiaries, namely 海東市源通光伏發電有限公司 Haidong Yuantong Photovoltaic Power Generation Co., Ltd.* ("Haidong Yuantong"), 互助昊陽光伏發電有限公司 Huzhu Haoyangyangfu Power Generation Co., Ltd.* ("Huzhu Haoyangyangfu"), 化隆協合太陽能發電有限公司 Hualong Xiehe Solar Power Co., Ltd.* ("Hualong Xiehe"), 青海百能光伏投資管理有限公司 Qinghai Baineng Photovoltaic Investment Management Co., Ltd.* ("Qinghai Baineng") for consideration in aggregate of RMB22,800,000. The Group and State Power Investment mutually agreed to reduce the consideration from RMB22,800,000 to RMB20,666,000 during the current year. The subsidiaries operate solar power plant projects with in aggregate capacity of 98.08MW in Qinghai, the PRC.

As at 31 December 2021, the disposal of Haidong Yuantong, Huzhu Haoyangyangfu, Hualong Xiehe and Qinghai Baineng have not been completed and presented the relevant assets and liabilities were classified as held for sale as disposal groups held for sale.

* English name for identification only

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

(A) Year ended 31 December 2021 (Continued)

As at 31 December 2021, the major classes of assets and liabilities of the disposal group are as follows:

	RMB'000
Property, plant and equipment (note 15)	393,931
Right-of-use assets (note 16)	23,079
Other non-current assets	119,424
Other current assets	81
Trade and other receivables	223,518
Bank balances and cash	23,351
Total assets classified as held for sale	783,384
Other payables	(98,045)
Bank and other borrowings — due within one year	(128,000)
Bank and other borrowings — due after one year	(326,680)
Lease liabilities — current	(843)
Lease liabilities — non-current	(8,769)
Tax payable	(28)
Total liabilities directly associated with assets classified as held for sale	(562,365)
Net asset of solar power plant projects classified as held for sale	221,019
Intragroup balances	(200,353)
Net assets of disposal group	20,666

The carrying amounts of the above other borrowings are repayable:

	RMB'000
Other borrowings — due within one year	124,000

Lease liabilities payable:

	2021 **RMB'000**
Within one year	**843**
Within a period of more than one year but not more than two years	**793**
Within a period of more than two years but not more than five years	**2,111**
Within a period of more than five years	**5,865**
	9,612

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

(A) Year ended 31 December 2021 (Continued)

The following is an aged analysis of trade receivables presented based on the invoice date at 31 December 2021, which approximated the respective revenue recognition date:

	RMB'000
0–90 days	18,598
91–180 days	16,602
Over 180 days	162,260
	197,460

For the electricity sale business, the Group generally granted credit period of approximately one month to power grid companies in the PRC from the date of invoice in accordance with the relevant electricity sales contract between the Group and the respective local grid companies.

The carrying amounts of the above bank borrowings are repayable:

	RMB'000
Within one year	4,000
More than one year, but not exceeding two years	30,640
More than two years, but not exceeding five years	97,230
More than five years	198,810
	330,680
Less: Bank borrowings — due within one year	(4,000)
Bank borrowings — due after one year	326,680

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

(B) Year ended 31 December 2020

Below disposals of subsidiaries were completed during the year ended 31 December 2021 and the relevant assets and liabilities of these subsidiaries were classified as held for sale as at 31 December 2020.

(i) On 29 September 2020, GNE Group entered into six share transfer agreements with Hua Neng No. 1 Fund and Hua Neng No. 2 Fund to dispose of its 100% equity interest in six wholly-owned subsidiaries, namely 湖北省麻城市金伏太陽能電力有限公司 Hubei Macheng Photovoltaic Power Company Limited* ("Hubei Macheng"), 輝縣市協鑫光伏電力有限公司 Huixian City GCL Photovoltaic Power Company Limited* ("Huixian City GCL"), 淇縣協鑫新能源有限公司 Qixian GCL New Energy Limited* ("Qixian GCL"), 汝陽協鑫新能源有限公司 Ruyang GCL New Energy Limited* ("Ruyang GCL"), 包頭市中利騰暉光伏發電有限公司 Baotou Zhonglitenghui Photovoltaic Power Company Limited* ("Baotou Zhonglitenghui") and 寧夏中衛協鑫光伏電力有限公司 Ningxia Zhongwei Photovoltaic Power Company Limited* ("Ningxia Zhongwei") at an aggregate consideration of RMB576,001,000 and the repayment of interest in shareholder's loan as at the date of disposals (the "Disposal Date A"). The subsidiaries operate solar farm projects with an aggregate capacity of 403MW in Henan, the PRC (the "Project A").

The disposals of Huixian City GCL and Qixian GCL were completed during the year ended 31 December 2020 with an aggregate consideration of RMB117,515,000. During the year ended 31 December 2021, the disposals of Hubei Macheng, Ruyang GCL,Baotou Zhonglitenghui and Ningxia Zhongwei with an aggregate consideration of RMB449,924,000 were completed.

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

(B) Year ended 31 December 2020 (Continued)

(ii) On 16 November 2020, GNE Group entered into five share transfer agreements with Xuzhou State Investment to dispose of its 90% equity interest in each of Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and 合肥久陽新能源有限公司 Hefei Jiuyang GCL New Energy Company Limited ("Hefei Jiuyang") and 67% equity interest in Dangshan Xinneng, at an aggregate consideration of RMB276,437,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. GNE Group and Xuzhou State Investment mutually agreed to reduce the consideration from RMB276,437,000 to RMB269,267,000 during the year ended 31 December 2020. The subsidiaries operate solar farm projects with an aggregate capacity of 174MW in Anhui, the PRC.

(iii) On 4 December 2020, GNE Group entered into a share transfer agreement with北京聯合榮邦新能源科技有限公司 Beijing United Rongbang New Energy Technology Co., Ltd.* ("Beijing United Rongbang"), an independent third party, to dispose of all of its 99.2% in Zhenglanqi State Power Photovoltaic Company Limited* ("Zhenglanqi") for an aggregate consideration of RMB209,600,000 and the repayment of interest in shareholder's loan as at the date of disposal. During the year ended 31 December 2020, RMB79,000,000 was received and recognised as other payables as at 31 December 2020. Zhenglanqi has a solar farm project with installed capacity of approximately 50MW in Inner Mongolia, the PRC.

(iv) The GNE Group entered into a share swap agreement with 上海綠璟投資有限公司 Shanghai Lujing Investment Management Limited ("Shanghai Lujing"). Pursuant to the terms of the share swap agreement, the GNE Group will acquire 20% of equity interests in each of Shenmu Jingpu, Shenmu Jingfu and Shenmu Jingdeng (all as defined in note 55a) at consideration of combination of cash of RMB69,260,000 and 80% equity interest in Shenmu Guotai (as defined in note 55a).

* English name for identification only

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

As at 31 December 2020, the major classes of assets and liabilities of the disposal group are as follows:

	2020 RMB'000
Property, plant and equipment (note 15)	2,613,456
Right-of-use assets (note 16)	75,051
Other non-current assets	81,784
Trade and other receivables	718,055
Pledged bank deposits	43,882
Bank balances and cash	48,018
	3,580,246
Less: Loss on measurement of assets classified as held for sale to fair value less costs to sell (note 9B)	(54,497)
Total assets classified as held for sale	3,525,749
Other payables	(148,414)
Loan from a related company — due within one year (Note)	(3,085)
Bank and other borrowings — due within one year	(329,800)
Bank and other borrowings — due after one year	(1,383,066)
Lease liabilities — current	(3,035)
Lease liabilities — non-current	(48,823)
Tax payable	(3,345)
Total liabilities associated with assets classified as held for sale	(1,919,568)
Net assets of solar power plant projects classified as held for sale	1,606,181
Intragroup balances	(820,206)
Net assets of solar power plant projects	785,975

Note: The loan from a related company is unsecured, non-interest-bearing and repayable on demand.

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal groups classified as held for sale (Continued)

The following is an aged analysis of trade receivables presented, based on the invoice date at 31 December 2020, which approximated the respective revenue recognition date:

	2020 RMB'000
Unbilled (Note)	703,332
0–90 days	5,795
	709,127

Note: The aged analysis of the unbilled trade receivables, which is based on revenue recognition date, are as follows:

	2020 RMB'000
0–90 days	98,008
91–180 days	79,308
181–365 days	151,429
Over 365 days	374,587
	703,332

For sales of electricity, the Group generally grants credit period of approximately one month to power grid companies in the PRC from the date of invoice in accordance with the relevant electricity sales contracts between the Group and the respective grid companies.

The carrying amounts of the above bank borrowings are repayable:

	2020 RMB'000
Within one year	173,800
More than one year, but not exceeding two years	165,325
More than two years, but not exceeding five years	473,600
More than five years	546,541
	1,359,266
The carrying amount of bank loans that are repayable on demand due to breach of loan covenants# (shown under current liabilities)	156,000
Less: Bank borrowings — due within one year	(329,800)
Bank borrowings — due after one year	1,185,466

30. ASSETS CLASSIFIED AS HELD FOR SALE/LIABILITIES ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE (Continued)

Disposal group classified as held for sale (Continued)

The carrying amounts of the above other borrowings are repayable:

	2020 RMB'000
Within one year	—
More than one year, but not exceeding two years	27,151
More than two years, but not exceeding five years	123,299
More than five years	47,150
Other borrowings — due after one year	197,600

The repayable amounts of bank and other borrowings are based on scheduled repayment dates set out in the respective loan agreements.

Lease liabilities payable:

	2020 RMB'000
Within one year	3,035
Within a period of more than one year but not more than two years	2,410
Within a period of more than two years but not more than five years	8,343
Within a period of more than five years	38,070
	51,858

31. TRADE AND OTHER PAYABLES

	2021 **RMB'000**	2020 RMB'000
Trade payables (Note a)	**8,201,524**	5,885,594
Construction payables (Note a)	**3,042,857**	3,968,270
Payables to vendors of solar power plants	**32,011**	66,320
Other payables	**903,259**	1,381,183
Convertible bonds to a non-controlling shareholders of subsidiary (Note c)	**84,180**	49,000
Salaries and bonus payable	**532,808**	348,964
Dividend payables to non-controlling shareholders of subsidiaries	**31,721**	237,381
Other tax payables	**289,815**	83,642
Interest payables	**236,044**	217,802
Advance from engineering, procurement and construction ("EPC") contractors (Note b)	**37,400**	80,244
Accruals	**461,461**	212,312
	13,853,080	12,530,712

31. TRADE AND OTHER PAYABLES (Continued)

Notes:

(a) Included in the trade payables and construction payables are (i) RMB2,262,548,000 (2020: RMB2,281,285,000) and RMB217,394,000 (2020: RMB338,496,000), respectively, against which the Group issued bills to the relevant creditors for settlement and (ii) an aggregate amount of approximately RMB6,691,685,000 (2020: RMB2,869,460,000) being bills received endorsed to creditors with recourse. All these bills were with a maturity period of less than one year.

(b) The advance represents the amounts received from EPC contractors for the procurement of modules which were to be used in the construction of GNE Group's solar power plants.

(c) In September 2020, the Group entered into an investment agreement with a non-controlling shareholder, pursuant that (i) the Group agreed to allot and the non-controlling shareholder agreed to subscribe RMB92,000 new registered capital of Kunshan GCL Optoelectronic Material Co., Ltd* 昆山協鑫光電材料有限公司 ("Kunshan GCL") at a consideration of RMB1 million, representing 0.15% of the registered capital of Kunshan GCL; and (ii) the non-controlling shareholder agreed to subscribe a convertible bonds with principal amount of RMB49 million being issued by Kunshan GCL.

Pursuant to the investment agreement in relation to the convertible bonds, the non-controlling shareholder were given the right, under certain condition, to request Kunshan GCL to convert the loan to equity interest of Kunshan GCL at the date of conversion by reference to the amount of the accrued interest plus the business valuation at the date of the investment agreement and the business valuation of subsequent new capitol injection into Kunshan GCL.

* English name for identification only

The credit period for trade payables is within 3 to 6 months (2020: 3 to 6 months).

The following is an aged analysis of trade payables (excluding bills presented by the Group for settlement) presented based on the invoice date at the end of the reporting period:

	2021 RMB'000	2020 RMB'000
Within 3 months	**2,664,015**	1,461,865
3 to 6 months	**3,226,551**	1,912,708
More than 6 months	**48,410**	229,736
	5,938,976	3,604,309

32. AMOUNTS DUE TO RELATED COMPANIES

The related companies included associates, joint ventures, other related parties of the Group and companies controlled by Mr. Zhu Gongshan, the chairman of the Group, and his family members which held in aggregate approximately 23.51% (2020: 30%) of the Company's share capital as at 31 December 2021 and exercise significant influence over the Company.

	2021 RMB'000	2020 RMB'000
Amounts due to related companies		
— Trade related (Note a)	**6,816**	13,893
— Non-trade related (Note b)	**35,182**	229,616
	41,998	243,509
Amounts due to associates		
— Trade related (Note a)	**215,823**	157,001
— Non-trade related (Note b)	**2,339,172**	1,610,088
	2,554,995	1,767,089
Amount due to a joint venture		
— Trade related (Note a)	**24,772**	43,404
— Non-trade related (Note b)	**—**	34,155
	24,772	77,559
Amounts due to other related parties		
— Trade related (Note a)	**7,465**	—
— Non-trade related (Note c)	**114,789**	—
	122,254	—
	2,744,019	2,088,157
Analysed for reporting purposes as:		
— Trade related	**254,876**	214,298
— Non-trade related	**2,489,143**	1,873,859
	2,744,019	2,088,157

32. AMOUNTS DUE TO RELATED COMPANIES (Continued)

Notes:

(a) The amounts are unsecured, non-interest-bearing and the credit period is normally within 30 days (2020: 30 days).

The following is an ageing analysis of amounts due to related companies, associates and a joint venture (trade related) at the end of the reporting period, presented based on the invoice date:

	2021 RMB'000	2020 RMB'000
Within 3 months	247,622	137,517
3 to 6 months	2,769	37,976
More than 6 months	4,485	38,805
	254,876	214,298

(b) The amounts are unsecured, non-interest-bearing and have no fixed terms of repayment.

(c) The other related parties represent the non-controlling interest shareholders of subsidiaries of the Company. The amounts are unsecured, non-interest bearing and have no fixed terms of repayment.

33. LOANS FROM RELATED COMPANIES

	2021 RMB'000	2020 RMB'000
Loans from:		
— companies controlled by Mr. Zhu Gongshan and his family (Note a)	32,325	908,508
	32,325	908,508
Analysed for reporting purposes as:		
— Current liabilities	32,325	788,668
— Non-current liabilities	—	119,840
	32,325	908,508

33. LOANS FROM RELATED COMPANIES (Continued)

Notes:

(a) As at 31 December 2020, it represents loans from 協鑫集團有限公司 GCL Group Limited*, 南京鑫能陽光產業投資基金企業 (有限合夥) Nanjing Xinneng Solar Property Investment Fund Enterprise (Limited Partnership)*, 江蘇協鑫建設管理有限公司 Jiangsu GCL Construction Management Limited*, 江蘇協鑫房地產有限公司 Jiangsu GCL Real Estate Limited* 協鑫光伏系統有限公司 GCL Solar System Company Limited*, 新疆國信煤電能源有限公司 Xinjiang Guoxin Coal Power Company Limited* and 阜寧協鑫房地產開發有限公司 Funing Property Development Limited* in total amounted to approximately RMB908,508,000. Except for the loan from 協鑫光伏系統有限公司 GCL Solar System Company Limited* which was non-interest-bearing, these loans were unsecured, bearing interest at 8% to 12% per annum.

* English name for identification only

34. CONTRACT LIABILITIES

	2021	2020
	RMB'000	RMB'000
Sales of polysilicon and wafer		
Current	**896,128**	357,461
Non-current	**36,000**	—
	932,128	357,461

The Group entered into supply framework contracts with customers with continuous business relationships and received advance payments from these customers. When the Group receives certain percentage of deposits as an advance payment upon signing the supply framework contract, this will give rise to contract liabilities at the start of a contract, until revenue is recognised upon the order is fulfilled.

Contract liabilities are classified as current liabilities and non-current liabilities based on the agreed portion of advance payments to be utilised for the estimated amounts of purchase of goods as stated in the respective supply framework contracts within one year and after one year, respectively.

35. GOVERNMENT GRANTS

	2021 RMB'000	2020 RMB'000
Amounts credited to profit or loss during the year:		
Incentive subsidies (Note a)	**43,411**	62,849
Subsidies related to property, plant and equipment (Note b)	**43,212**	36,832
Value-added tax refunds related to depreciable assets (Note c)	**6,515**	6,515
Energy income credit ("ITC") (Note d)	**13,082**	14,078
	106,220	120,274

	2021 RMB'000	2020 RMB'000
Deferred income related to government grants:		
Subsidies related to property, plant and equipment (Note b)	**149,420**	171,535
Value-added tax refunds related to depreciable assets (Note c)	**18,072**	24,588
ITC (Note d)	**341,046**	362,461
Total	**508,538**	558,584
Less: current portion (included in deferred income)	**(53,355)**	(40,136)
Non-current portion (included in deferred income)	**455,183**	518,448

Notes:

(a) Incentive subsidies were received from the relevant PRC government for improvement of working capital and financial assistance to the operating activities to enhance the competitiveness in the industry. The amount also includes grants for relevant expenses incurred such as those for research and development activities and interest subsidies. The subsidies were granted on a discretionary basis to the Group during the year.

(b) The Group received government subsidies for capital expenditure incurred for the plant and machinery. The amounts are deferred and amortised over the estimated useful lives of the respective assets.

(c) The Group received value-added tax refunds on purchases of domestic manufactured plant and machinery. The amounts are deferred and amortised over the estimated useful lives of the respective plant and machinery.

35. GOVERNMENT GRANTS (Continued)

Notes: (Continued)

(d) Pursuant to the relevant prevailing federal policies in the USA, taxpayers that construct or acquire on or before 31 December 2019 qualified energy property are allowed to claim an ITC at 30% for the taxable year in which such property is placed into service by the taxpayer. The directors of GNE analysed the facts and circumstances of the ITC and determined that it was of the nature of a government grant provided to GNE Group in the form of tax benefits relating to construction or acquisition of qualified energy property.

Against this, GNE Group entered into an inverted lease arrangement in February 2017 for its qualified solar farm projects in the USA ("Qualified Assets") with a third party financial institution, which acted as a tax equity investor, and the arrangement allowed GNE Group to pass its entitled ITC ("ITC Benefit") that constituted the right to offset against future tax payables to the tax equity investor for cash receipts in exchange. During the year ended 31 December 2017, ITC Benefit of GNE Group related to the Qualified Assets amounted to US$34,090,000 (equivalent to approximately RMB222,751,000) and was recognised as a government grant ("Grant") as there was a reasonable assurance that the relevant requirements for the tax benefit had been met. The Grant would be amortised over the useful lives of the Qualified Assets. Pursuant to the arrangement, the ITC Benefit was passed on by GNE Group to the tax equity investor and accordingly, the ITC Benefit was derecognised during the year that the invested lease arrangement was entered into with the tax equity investor. Approximately US$1,136,000 (equivalent to approximately RMB7,239,000 (2020: US$1,136,000 (equivalent to approximately RMB7,412,000)) of the Grant was recognised in profit or loss for the year as a government grant income and included in other income.

During the year ended 31 December 2018, GNE Group entered into another financing arrangement for its four qualified solar farm projects in the USA with a third party financial institution, under which GNE Group passed its ITC Benefit to the financial institution that constituted the right to offset against future tax payables to the financial institution for cash receipts in exchange. During the year ended 31 December 2021, ITC Benefit of GNE Group related to the four projects amounted to US$24,520,000 (equivalent to approximately RMB156,334,000 (2020: US$25,449,000 (equivalent to approximately RMB166,052,000)) and was recognised as a Grant as there was a reasonable assurance that the relevant requirements for the tax benefit had been met. The Grant would be amortised over the useful lives of the Qualified Assets. Pursuant to the arrangement, the ITC Benefit was passed on by GNE Group to the financial institution and accordingly, the relevant ITC Benefit was derecognised during year ended 31 December 2021. Approximately US$906,000 (equivalent to approximately RMB5,843,000 (2020: US$906,000 (equivalent to approximately RMB6,666,000)) of the Grant was recognised in profit or loss for the year as a government grant income and included in other income.

36. BANK AND OTHER BORROWINGS

Details of the bank and other borrowings are as follows:

	2021 **RMB'000**	2020 RMB'000
Bank loans	**6,113,548**	19,124,773
Other loans	**2,469,328**	17,111,892
	8,582,876	36,236,665
Representing:		
Secured	**7,828,060**	33,355,132
Unsecured	**754,816**	2,881,533
	8,582,876	36,236,665

36. BANK AND OTHER BORROWINGS (Continued)

The carrying amounts of the above borrowings are repayable*:

	Bank loans		Other loans	
	2021	2020	**2021**	2020
	RMB'000	RMB'000	**RMB'000**	RMB'000
The carrying amounts of the above borrowings are repayable*:				
Short-term borrowings	**3,364,121**	7,764,796	**—**	281,733
Long-term borrowings				
Within one year	**694,156**	2,153,882	**751,562**	4,745,957
More than one year, but not exceeding two years	**1,096,460**	1,057,642	**399,104**	1,851,012
More than two years, but not exceeding five years	**567,568**	2,559,302	**777,955**	3,984,880
More than five years	**391,243**	1,775,880	**327,582**	2,123,138
	2,749,427	7,546,706	**2,256,203**	12,704,987
	6,113,548	15,311,502	**2,256,203**	12,986,720
The carrying amounts of borrowings that are repayable on demand due to inability to respect loan covenants (shown under current liabilities)	**—**	3,813,271	**213,125**	4,125,172
Less: amounts due within one year shown under current liabilities	**(4,058,277)**	(13,731,950)	**(964,687)**	(9,152,862)
Amounts due after one year	**2,055,271**	5,392,823	**1,504,641**	7,959,030
Analysed as:				
Fixed-rate borrowings	**2,479,411**	8,363,700	**153,124**	7,048,259
Variable-rate borrowings	**3,634,137**	10,761,073	**2,316,204**	10,063,633
	6,113,548	19,124,773	**2,469,328**	17,111,892

* The amounts due are based on scheduled repayment dates set out in the loan agreements.

36. BANK AND OTHER BORROWINGS (Continued)

Included in the other loans are approximately RMB5,969 million (2020: RMB11,626 million) representing financing arrangements with financial institutions for leases on assets with lease terms ranging from 1 to 12 years (2020: 1 to 12 years), with legal title of the respective equipment transferred to the financial institutions. The Group continued to operate and manage the relevant equipment during the lease term without any involvement from the financial institutions. The Group is entitled to purchase back the equipment at a minimal consideration upon the maturity of the respective leases, except for one of the financing arrangements with a financial institution that the Group can either exercise the early buyout option granted to the Group to purchase back the relevant equipment at a pre-determined price at the end of the seventh year of the lease term, or to purchase back the equipment from this financial institution at fair value upon the end of the lease period. Despite the arrangement involves the legal form of a lease, it does not constitute a sale and leaseback transaction in accordance with the substance of the arrangement. Effective from 1 January 2019, the Group applies the requirements of IFRS standards to assess whether sale and leaseback transactions constitute a sale as disclosed in note 16.

The ranges of effective interest rates (which are also equal to contracted interest rates) on the Group's borrowings are analysed as follows:

	2021	2020
Fixed-rate borrowings		
RMB borrowings	**1.2% to 8.1%**	1.2% to 18%
US$ borrowings	**1.72% to 5%**	1.72% to 5%
HK$ borrowings	**9.75%**	8% to 11%
Variable-rate borrowings		
RMB borrowings	**93% to 170% of Benchmark Rate**	100% to 180% of Benchmark Borrowing Rate of the People's Bank of China ("Benchmark Rate")
	LPR +0.15% to 2.48%	Loan Prime Rate ("LPR") +0.3% to 1.37%
US$ borrowings	**London Interbank Offered Rate ("LIBOR") 2.7% to 4.3%**	London Interbank Offered Rate ("LIBOR") + 3% to 4.30%
HK$ borrowings	**—**	Prime Rate + 1.63% to 5%

36. BANK AND OTHER BORROWINGS (Continued)

The Group's borrowings are denominated in currencies other than the functional currency of the relevant group entities are set out below:

	2021	2020
	RMB'000	RMB'000
HK$	**178,237**	276,886
US$	**664,148**	2,947,060

Certain borrowings are secured by property, plant and equipment, right-of-use assets and bank deposits as set out in note 48. In addition, as at 31 December 2020, part of the shares of a non-wholly-owned subsidiary of the Group were pledged to secure other borrowings totalling approximately RMB91,734,000 granted to the Group. The other borrowings were fully repaid during the year ended 31 December 2021.

During the year ended 31 December 2021, the Group discounted bills arising from future settlement of trade receivables with recourse in aggregated amount of approximately RMB1,361,114,000 (2020: RMB3,077,513,000) to banks for short-term financing. At 31 December 2021, the associated borrowings amounted to approximately RMB651,321,000 (2020: RMB1,802,544,000).

The Group is required to comply with certain restrictive financial and other covenants and undertaking requirements.

During the year ended 31 December 2021, the GNE Group's involvement in certain litigation cases relating to claims by relevant claimants exceeded the limit of litigation amounts stipulated in the financial covenants of certain other borrowings (2020: the default on the repayment of a bank borrowing by the Company, the GNE Group's involvement in certain litigation cases relating to claims by relevant claimants exceeded the limit of litigation amounts stipulated in the financial covenants of certain bank borrowings and the GNE Group's default in certain bank and other borrowings have triggered the cross default clauses of certain of the GNE Group's bank and other borrowings as set out in the respective loan agreements between GNE and several banks and financial institutions). Accordingly, other borrowings of the Group amounting to RMB89 million (2020: bank and other borrowings of the Group amounting to RMB4,541 million) is reclassified from non-current liabilities to current liabilities as at 31 December 2021. The management of the GNE Group considers that the claims arising from the litigation will not have material impact to the GNE Group as majority of the claims have been provided and included in payables for purchase of plant and machinery and construction costs as at 31 December 2021.

37. LEASE LIABILITIES

	2021 RMB'000	2020 RMB'000
Lease liabilities payable:		
Within one year	**316,819**	531,258
Within a period of more than one year but not exceeding two years	**153,359**	409,926
Within a period of more than two years but not exceeding five years	**78,712**	353,505
Within a period of more than five years	**236,230**	595,450
	785,120	1,890,139
Less: amount due for settlement with 12 months shown under current liabilities	**(316,819)**	(531,258)
Amount due for settlement after 12 months shown under non-current liabilities	**468,301**	1,358,881

The weighted average incremental borrowing rates applied to lease liabilities is approximately 6.00% (2020: 6.00%).

Lease obligations that are denominated in currencies other than the functional currencies of the relevant group entities are set out below:

	2021 RMB'000	2020 RMB'000
HK$	**33,040**	20,057

38. NOTES PAYABLES

The carrying amounts of the Group's notes payables are as follows:

	2021 **RMB'000**	2020 RMB'000
Principal amount of notes payables (Note a)	**—**	51,764
Senior notes (Note b)	**3,115,367**	3,261,099
	3,115,367	3,312,863
Less: amount due within one year shown under current liabilities	**(467,305)**	(3,312,863)
Amount due for settlement after one year shown under non-current liabilities	**2,648,062**	—

Notes:

(a) On 30 October 2015, 保利協鑫(蘇州)新能源有限公司 GCL-Poly (Suzhou) New Energy Co., Limited* ("GCL-Poly Suzhou") issued notes payable in an aggregate principal amount of RMB1,000,000,000 to qualified investors in the PRC. The maturity date of the notes payable was 28 October 2020. If the option to resell is elected by the investors, the maturity date of the notes payable would be 28 October 2018. The notes payable carried interest at 5.60% per annum, which was payable annually on 28 October in each year up to maturity date. If any investor elects to sell the notes held back to GCL-Poly Suzhou, the interest payable date would be on 28 October in each year up to 28 October 2018. The interest commencement date was 28 October 2015.

On 28 October 2018, certain investors exercised the option to resell the notes with a total face value of RMB289,176,000 back to GCL-Poly Suzhou and the amounts were repaid accordingly. In 2018, 江蘇中能硅業科技發展有限公司 Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.* ("Jiangsu Zhongneng"), a wholly-owned subsidiary of the Company, repurchased notes with a total face value of RMB503,307,000 through the secondary market.

During the year ended 31 December 2019, Jiangsu Zhongneng repurchased notes with a total face value of RMB196,825,000 through the secondary market. Besides, the notes with a total face value of RMB413,733,000 held by Jiangsu Zhongneng were sold to qualified investors through the secondary market during the year ended 31 December 2019. As at 31 December 2019, the notes repurchased and held by the group entities amounted to RMB286,399,000.

During the year ended 31 December 2020, Jiangsu Zhongneng repurchased notes with a total face value of RMB563,000 through the secondary market. GCL-Poly Suzhou then settled the notes held by Jiangsu Zhongneng and other investors of RMB286,962,000 and RMB372,098,000, respectively, during the year. In addition, GCL-Poly Suzhou obtained consent from an investor to extend the settlement of the remaining balance which matured on 28 October 2020. The amount was fully repaid in January 2021.

* English name for identification only

38. NOTES PAYABLES (Continued)

Notes: (Continued)

(b) On 23 January 2018, GNE Group issued senior notes of US$500 million (equivalent to approximately RMB3,167 million) ("2018 Senior Notes"), which bear interest at 7.1% per annum and mature on 30 January 2021. The net proceeds of the notes, after deduction of underwriting discounts and commissions and other expenses, amounted to approximately US$493 million (equivalent to approximately RMB3,119 million).

During the year ended 31 December 2021, the restructuring of the 2018 Senior Notes (the "Restructuring") was implemented and completed under the Bermuda Scheme (i.e. the scheme of arrangement under Part VII of the Bermuda Companies Act 1981). On 16 June 2021, the Restructuring has become effective, i.e., the 2018 Senior Notes was replaced by the New Senior Notes (defined below) was issued. Under the restructuring support agreement ("RSA"), 5% of the original principal amount of US$25 million (the "Upfront Consideration") was repaid to the holders of the 2018 Senior Notes. The original principal amount and all accrued and unpaid interest on the senior notes less the Upfront Consideration was settled through issuance of new senior note (the "New Senior Notes").

The principal amount of the New Senior Notes amounted to US$511,638,814, bearing interest at 10% per annum payable as follows:

	2021 US$	2021 RMB'000 equivalent
Within one year		
— Payable on 30 January 2022	**76,745,822**	**467,305**
Over one year		
— Payable on 30 January 2023	**179,073,585**	**1,090,378**
— Payable on 30 January 2024	**255,819,407**	**1,557,684**
	511,638,814	**3,115,367**

39. DERIVATIVE FINANCIAL INSTRUMENTS

	2021 **RMB'000**	2020 RMB'000
Put option of interest		
— Jiangsu Xinhua[(1)]	**17,247**	22,000
— Kunshan GCL[(2)]	**18,023**	38,561
— Mongolia Zhonghuan GCL[(3)]	**77,489**	—
	112,759	60,561

(1) In April 2016, the Group entered into the Investment Agreement with a JV Partner pursuant to which the JV Partner is given a right to request the Group to repurchase its 49.02% equity interest in Jiangsu Xinhua at a premium under the following circumstances:

(a) If Jiangsu Xinhua failed to complete a qualified initial public offering ("IPO") at a mutually-agreed stock exchange within a specified time frame;

(b) If Jiangsu Xinhua met the listing requirements of the specified stock exchanges but failed to complete a qualified IPO due to external factors such as a change in government policy or other factors out of Jiangsu Xinhua's control;

(c) If Jiangsu Xinhua failed to produce polysilicon to the level of quality and specification stipulated under the Investment Agreement within a specified time frame; or

(d) If there was a significant breach by the Group of the relevant terms of the Investment Agreement or actions brought by the Group resulting in a significant adverse impact to the joint venture and the Group failed to remediate such breach within the period required by the JV Partner.

In December 2020, the Group entered into a supplementary agreement with the JV Partner to replace the circumstance (c) by the following circumstance:

(e) If Jiangsu Xinhua failed to meet any of the annual operational or strategic requirements by 2021, 2022 and 2023 as set out in the supplementary agreement, respectively.

The Directors had recognised the put option of interests in Jiangsu Xinhua as a derivative financial instrument and initially recognised it at fair value with subsequent changes in fair value recognised in profit or loss. During the year ended 31 December 2021, the Group remeasured the fair value and a gain on fair value change of the derivative financial instrument of approximately RMB4,753,000 (2020: RMB111,400,000) was recognised in profit or loss.

39. DERIVATIVE FINANCIAL INSTRUMENTS (Continued)

(2) In 2020, the Group entered into the Investment Agreement with certain investors pursuant to which the investors were given the right to request the Group to repurchase their equity interest in Kunshan GCL Optoelectronic Material Co., Ltd ("昆山協鑫光電材料有限公司") ("Kunshan GCL") at a premium under the following circumstances:

- If Kunshan GCL failed to complete a qualified initial public offering ("IPO") at a mutually agreed stock exchange within a specified time frame;

- If Kunshan GCL met the listing requirements of the specified stock exchanges but failed to complete a qualified IPO due to external factors such as a change in government policy or other factors out of Kunshan GCL's control;

- If Kunshan GCL failed to produce perovskite to the level of quality and specification stipulated under the Investment Agreement within a specified time frame; or

- If there was a significant breach by the Group of the relevant terms of the Investment Agreement or actions brought by the Group resulting in significant adverse impact to Kunshan GCL and the Group failed to remediate such breach within the period required by the new investors.

The Directors had recognised the put option of interests in Kunshan GCL as derivative financial instruments. At initial recognition, the obligation arising from the put option represented the present value of the estimated value of the amount the Group could be required to pay the investors amounting to RMB38,561,000. The put option was designated as at FVTPL with subsequent changes in fair value recognised in profit or loss.

For the year ended 31 December 2021, the investors further injected RMB65 million to Kunshan GCL and the investors were given additional right to request the Group to repurchase their additional equity interest in Kunshan GCL and the obligation arising from the put option represented the present value of the estimated value of the amount of the Group required to pay the investors amounting to RMB31,632,000. During the year ended 31 December 2021, the Group remeasured the fair value and a gain on fair value change of the derivative financial instrument of approximately RMB52,170,000 (2020: Nil) was recognised in profit or loss.

Details of the inputs and assumption adopted in the valuation are described in note 45.

39. DERIVATIVE FINANCIAL INSTRUMENTS (Continued)

(3) In February 2021, the Group entered into a share transfer agreement with an associate, 樂山市仲平多晶硅光電信息產業基金合夥企業（有限合夥）Leshan Zhongping Polysilicon Photovoltaic Information Industry Investment Fund Partnership (Limited Partnership)* ("Leshan Fund") in which the Group agreed to sell and Leshan Fund agreed to purchase 3.848% equity interest in 內蒙古中環協鑫光伏材料有限公司 Inner Mongolia Zhonghuan — GCL Solar Material Co., Ltd.* ("Mongolia Zhonghuan GCL") at a consideration of RMB600 million. The Group agreed to grant a put option to Leshan Fund upon the occurrence of certain specific events, pursuant to which the Leshan Fund are given rights to request the Group to repurchase their equity interest in Mongolia Zhonghuan GCL at a premium under the following circumstances:

- If Mongolia Zhonghuan GCL failed to be involved in merger and acquisition with an independent third parties given that Mongolia Zhonghuan GCL has completely executed the given clause under the agreement entered between Leshan Fund and the Group at the share transfer date.

The Directors recognised the put option of interests in Mongolia Zhongshan GCL as derivative financial instruments. As at 31 December 2021, the obligation arising from the put option represented the present value of the estimated value of the amount the Group could be required to pay the Leshan Fund. During the year ended 31 December 2021, the Group measured the fair value and a loss on fair value change of derivative financial instrument of approximately RMB77,489,000 was recognised in profit or loss.

Details of the inputs and assumption adopted in the valuation are described in note 45.

* English name for identification purpose only

40. SHARE CAPITAL

	Number of shares '000	Amount HK$'000
Ordinary shares of HK$0.1 each		
Authorised		
At 1 January 2020, 31 December 2020, 1 January 2021 and 31 December 2021	30,000,000	3,000,000
Issued and fully paid		
At 1 January 2020	19,841,049	1,984,105
Exercise of share options (Note a)	3,389	339
Issue of shares on placement (Note b)	1,300,000	130,000
At 31 December 2020 and 1 January 2021	21,144,438	2,114,444
Exercise of share options (Note a)	17,984	1,798
Issue of shares on placement (Note c)	5,936,588	593,659
At 31 December 2021	27,099,010	2,709,901

	2021 RMB'000	2020 RMB'000
Shown in the financial statements as	**2,359,030**	1,862,725

Notes:

(a) During the year ended 31 December 2021, share option holders exercised their rights to subscribe for 5,465,902 and 12,518,339 (2020: 3,389,000) ordinary shares in the Company at HK$1.63 and HK$1.16 (2020: HK$1.16) per share, respectively, with the net proceeds of approximately RMB19,657,000 (2020: RMB3,337,000).

(b) On 16 June 2020, the Company entered in a placing agreement with CCB International Capital Limited as placing agent, which is independent and not connected to the Company. Pursuant to the placing agreement, the placing agent agreed to place up to 1,300,000,000 placing shares to third parties independent of the Company and connected persons of the Company at HK$0.203 per placing share. The placing was completed on 24 June 2020, with net proceeds of approximately HK$260,000,000 (equivalent to approximately RMB238,807,000).

(c) On 21 January 2021, a placement of 3,900,000,000 new shares of the Company at a price of HK$1.08 per share with net proceeds of approximately HK$4,148,263,000 (equivalent to approximately RMB3,491,178,000) was completed.

On 22 December 2021, a placement of 2,036,588,000 new shares of the Company at a price of HK$2.49 per share with net proceeds of approximately HK$4,994,179,000 (equivalent to approximately RMB4,084,547,000) was completed.

None of the Company's subsidiaries purchased, sold or redeemed any of the Company's listed securities during both years.

All shares issued during the years ended 31 December 2021 and 2020 rank pari passu in all respects with the then existing shares of the Company.

41. ACQUISITION OF ADDITIONAL INTEREST IN SUBSIDIARIES

During the year ended 31 December 2021, the GNE Group entered into equity transfer agreements with the non-controlling shareholders to acquire additional equity interest of 7.18% in Suzhou GCL New Energy Investment Limited ("Suzhou GCL New Energy") and 19% in Shicheng GCL Power Co., Ltd* ("Shicheng GCL") at consideration of RMB1,485,533,000 and RMB101,039,000 respectively. The difference between the considerations to acquire additional equity interest in above subsidiaries and the relevant carrying amount of non-controlling interest is recognized in special reserve in consolidated statement of changes in equity.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES

(A) Year ended 31 December 2021

(i) Disposal of subsidiaries by the Group

(a) Deemed disposal of partial interest in a subsidiary

On 5 January 2021, a disposal of 638,298,000 GNE shares from the Elite Time Global Limited, a wholly-owned subsidiary of the Company ("Elite Time") at price of HK$0.235 per share with net proceeds of approximately HK$145 million (equivalent to approximately RMB126 million) was completed.

On 10 February 2021, the GNE Group announced that the Elite Time, the Company and the placing agents under which up to a total of 2,000 million of new shares of the Group to be issued (the "Transaction"). The Transaction has been completed on 17 and 19 February 2021 and net proceeds of the Transaction, after taking into account all related costs, fees, expenses and commission of the Transaction, were approximately HK$895 million (equivalent to RMB747 million).

As a result, Elite Time's equity interest in GNE was reduced from 57.75% to 49.24%. As the change in the Group's interests in GNE did not result in a loss of control, such change was accounted for as an equity transaction, whereby an adjustment was made to the amounts of controlling and non-controlling interests within consolidated statement of changes in equity to reflect the change in the relative interests.

(b) Deemed disposal of partial interest in a subsidiary through newly-increased registered capital/Change of shareholding of subsidiaries

In 2020, the Group entered into certain investment agreements (the "Agreements") with certain investors, (i) the Group agreed to transfer RMB2,389,000 registered capital of Kunshan GCL to an investor of Kunshan GCL at a consideration of RMB20 million, representing 3.82% of the registered capital of Kunshan GCL; and (ii) the certain investors agreed to subscribe RMB12,593,000 new registered capital of Kunshan GCL in cash at RMB136 million, representing 20.12% of the registered capital of Kunshan GCL. Pursuant to the Agreements which the certain investors were given the right to request the Group to repurchase their equity interest in Kunshan GCL at a premium under certain circumstances.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(i) Disposal of subsidiaries by the Group (Continued)

(b) Deemed disposal of partial interest in a subsidiary through newly-increased registered capital/Change of shareholding of subsidiaries (Continued)

In September 2020, the Group entered into an investment agreement with a non-controlling shareholder, pursuant that (i) the Group agreed to allot and the non-controlling shareholder agreed to subscribe RMB92,000 new registered capital at a consideration of RMB1 million, representing 0.15% of the registered capital of Kunshan GCL; and (ii) the non-controlling shareholder, agreed subscribe a convertible bonds with principal amount of RMB49 million being issued by Kunshan GCL.

Moreover, during 2021, the Group, three employees of the Group and a non-controlling interest, which was held by five other employees entered an equity share reduction agreement intending to reduce the equity shares of 41.43% of an investor of Kunshan GCL, namely Xiamen Weihua Phovoltaic Company Limited* 廈門惟華光能有限公司 held by the three employees and the non-controlling interest to zero with zero consideration. At the same time, the Group in return, granted the eight employees equity interest of 26.03% of Kunshan GCL under a share award scheme agreement.

As at 31 December 2021, the transactions were completed, the contribution received from the certain investors for the new registered capital were RMB65 million.

Consequently, the Group's equity interest of Kunshan GCL changed from 49.29% as at 31 December 2020 to 50.03% as at 31 December 2021 and Kunshan GCL remained as the subsidiary of the Group.

(c) In November 2021, the Group entered into a share transfer agreement with an associate Xinjiang GCL to dispose 80% of the equity interest in 新疆協鑫硅業科技有限公司 Xinjiang GCL Silicon Industry Company Limited ("Xinjiang Silicon") for a consideration of approximately RMB16 million and the gain on disposal of a subsidiary of RMB16,134,000 was recognised in profit or loss. Following the completion of the above disposal, the Group holds 20% equity interest in Xinjiang Silicon, which become an associate of the Group.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment

(i) Disposal groups classified as held for sale as at 31 December 2020

(a) Hua Neng Phase 2

On 29 September 2020, the GNE Group entered into six share transfer agreements with Hua Neng No.1 Fund and Hua Neng No.2 Fund to dispose of its 100% equity interest in six wholly-owned subsidiaries, namely Hubei Macheng, Huixian City GCL, Qixian GCL, Ruyang GCL, Baotou Zhonglitenghui, Ningxia Zhongwei at an aggregate consideration of RMB576,001,000 and the repayment of corresponding interest in shareholder's loan as at the date of disposals (the "Disposal Date B"). The GNE Group and Hubei Macheng mutually agreed to reduce the consideration from RMB576,001,000 to RMB567,439,000 during the year ended 31 December 2021. The subsidiaries operate solar power plant projects with an aggregate capacity of 403MW in Henan, the PRC ("the Project A").

The disposals of Huixian City GCL and Qixian GCL were completed during the year ended 31 December 2020 with an aggregate consideration of RMB117,515,000. During the year ended December 2021, the disposals of Hubei Macheng, Ruyang GCL,Baotou Zhonglitenghui and Ningxia Zhongwei with an aggregate consideration of RMB449,924,000 were completed.

The GNE Group has granted a put option to Hua Neng No. 1 Fund and Hua Neng No. 2 Fund, pursuant to which the GNE Group has agreed that if the Project A fails to fully receive the balance of the tariff adjustment receivables (the "Tariff Adjustment Receivables") as at the disposal date during the four-year period after the disposal or the operation of the Project A is disrupted for more than six months due to the reasons stipulated in the share transfer agreements, the GNE Group shall repurchase the entire equity interest in the Project A from Hua Neng No. 1 Fund and Hua Neng No. 2 Fund at a repurchase price which is the higher of (1) equity value of the Project A assessed by The State-owned Assets Supervision and Administration Commission of the State Council or (2) a repurchase price calculated in accordance with terms specified in the share transfer agreements, together with any outstanding shareholder's loan advanced to the Project A by Hua Neng No. 1 Fund and Hua Neng No. 2 Fund. As the Project A has already registered in the List and receipt of tariff adjustment receivables is stable, in the opinion of the Directors, it is highly probable that the balance of the Tariff Adjustment Receivables will be collected within four years after the disposal date and therefore, the possibility regarding the occurrence of the specified events as stipulated in the share transfer agreements that would trigger the repurchase event is remote, and the fair value of the put option as at 31 December 2021 is considered as insignificant.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(i) Disposal groups classified as held for sale as at 31 December 2020 (Continued)

(b) Hefei Jiannan & Hefei Jiuyang

On 16 November 2020, the GNE Group entered into five share transfer agreements with Xuzhou State Investment to dispose of its 90% equity interest in each of Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang and 67% equity interest in Dangshan Xinneng, at an aggregate consideration of RMB276,437,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Xuzhou State Investment mutually agreed to reduce the consideration from RMB276,437,000 to RMB269,267,000 during the year ended 31 December 2020. The subsidiaries operate solar power plant projects with an aggregate capacity of 174MW in Anhui, the PRC.

The disposals of Suzhou GCL Solar Power, Huaibei Xinneng and Dangshan Xinneng were completed during the year ended 31 December 2020 with an aggregate consideration of RMB166,476,000. During the year ended 31 December 2021, the disposals of Hefei Jiannan and Hefei Jiuyang with an aggregate consideration of RMB102,791,000 were completed.

(c) Zhenglanqi

On 4 December 2020, the GNE Group entered into a share transfer agreement with Beijing United Rongbang to disposal of all of its 99.2% equity interests in Zhenglanqi at an aggregate consideration of RMB211,100,000 and the repayment of interest in shareholder's loan as at the date of disposal. During the year ended 31 December 2020, RMB79,000,000 has been received and recognised as other payables as at 31 December 2020. The GNE Group and Beijing United Rongbang mutually agreed to reduce the consideration from RMB211,100,000 to RMB209,600,000. Zhenglanqi has a solar power plant project with installed capacity of approximately 50MW in Inner Mongolia, the PRC. The disposal was completed in September 2021.

(d) Shenmu Guotai

On 10 December 2020, the GNE Group entered into an agreement with Shanghai Lujing and 陝西省神木縣國祥綠化生態有限公司 Shaanxi Shenmu Guoxiang Green Ecology Co., Ltd.* ("Shenmu Guoxiang"). Pursant to the agreement, Shanghai Lujing and Shenmu Guoxiang transferred their equity interests (i.e. 20%) in Shenmu County Jingdeng to the GNE Group and the GNE Group transferred its controlling right (i.e. 80% equity interest) in Shenmu Guotai. The transaction has been completed on Jan 2021. After the completion of the transaction, the Group holds 100% of equity interests in Shenmu County Jingdeng and has no any equity interests in Shenmu Guotai.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(ii) Five subsidiaries in Anhui

On 22 November 2020, the GNE Group entered into five share transfer agreements with Xuzhou State Investment to dispose of its 90% equity interest in each of Dangshan GCL, Funan GCL, Hefei Xinren and Tianchang GCL and its 50% equity interest in Taihu Xinneng, at an aggregate consideration of RMB312,728,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Xuzhou State Investment mutually agreed to reduce the consideration from RMB312,728,000 to RMB307,898,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 217MW in Anhui, the PRC. The disposals were completed from January to April 2021.

(iii) Hua Neng Phase 3

On 19 November 2020, the GNE Group entered into fourteen share transfer agreements with Hua Neng No.1 Fund and Hua Neng No.2 Fund to dispose of its 100% equity interest in twelve wholly-owned subsidiaries, namely Baoying Xinyuan Photovoltaic Power Co., Ltd.* ("Baoying Xinyuan"), Lianshui Xinyuan Photovoltaic Power Co., Ltd.* ("Lianshui Xinyuan"), Lanxi Jinrui Photovoltaic Power Co., Ltd.* ("Lanxi Jinrui"), Zhongli Tenghui Hainan Electric Power Co., Ltd.* ("Zhongli Tenghui"), Delingha Energy Power Co., Ltd.* ("Delingha Energy"), Gaotang County GCL Jinghui Photovoltaic Co., Ltd.* ("Gaotang County GCL"), Hetian GCL Photovoltaic Power Co., Ltd.* ("Hetian GCL"), Liaocheng Xiechang Photovoltaic Power Co., Ltd.* ("Liaocheng Xiechang"), Yanbian Xinneng Photovoltaic Power Co., Ltd.* ("Yanbian Xinneng"), Delingha Century Concord Photovoltaic Power Co., Ltd.* ("Delingha Century Concord"), Delingha Shidai New Energy Power Co., Ltd.* ("Delingha Shidai"), Hainanzhou Shineng Photovoltaic Power Co., Ltd.* ("Hainanzhou Shineng"), it 51% equity interest in Yuncheng Xinhua Energy Development Co., Ltd.* ("Yuncheng Xinhua") and its 56.5131% equity interest in Yili GCL Energy Limited ("Yili GCL") at an aggregate consideration of RMB666,654,000 and the repayment of interest in shareholder's loan as at the date of disposals (the "Disposal Date B"). The GNE Group and Hua Neng No. 1 Fund and Hua Neng No. 2 Fund mutually agreed to reduce the consideration from RMB666,654,000 to RMB572,003,000 during the year ended 31 December 2021. The subsidiaries operate solar power plant projects with in aggregate capacity of 430MW in Yangzhou, Qinghai, Xinjiang, Shandong, Zhejiang and Sichuan, the PRC (the "Project B").

During the year ended 31 December 2021, the disposals of Baoying Xinyuan, Lianshui Xinyuan, Lanxi Jinrui, Zhongli Tenghui, Delingha Energy, Hetian GCL, Liaocheng Xiechang, Yanbian Xinneng, Yili GCL, Delingha Century Concord, Delingha Shidai, Hainanzhou Shineng with an aggregate consideration of RMB572,003,000 were completed. The diposals of Gaotang County GCL and Yuncheng Xinhua have been cancelled.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(iii) Hua Neng Phase 3 (Continued)

The GNE Group has granted a put option to Hua Neng No. 1 Fund and Hua Neng No. 2 Fund, pursuant to which the GNE Group has agreed that if the Project B fails to fully receive the balance of the tariff adjustment receivables (the "Tariff Adjustment Receivables") as at the Disposal Date B during the four-year period after the Disposal Date B, or the operation of the Project B is disrupted for more than six months due to the reasons stipulated in the share transfer agreements, the GNE Group shall repurchase the entire equity interest in the Project B from Hua Neng No. 1 Fund and Hua Neng No. 2 Fund at a repurchase price which is the higher of (1) equity value of the Project B assessed by The State-owned Assets Supervision and Administration Commission of the State Council or (2) a repurchase price calculated in accordance with terms specified in the share transfer agreements, together with any outstanding shareholder's loan advanced to the Project B by Hua Neng No. 1 Fund and Hua Neng No. 2 Fund. As the Project B has already registered in the List and receipt of tariff adjustment receivables is stable, in the opinion of the Directors, it is highly probable that the balance of the Tariff Adjustment Receivables will be collected within four years after the Disposal Date B and therefore, the possibility regarding the occurrence of the specified events as stipulated in the share transfer agreements that would trigger the repurchase event is remote, and the fair value of the put option as at 31 December 2021 is considered as insignificant.

(iv) Six subsidiaries in Henan

On 31 March 2021, the GNE Group entered into six share transfer agreements with Three Gorges to dispose of its 100% equity interest in four wholly-owned subsidiaries, namely Sanmenxia Xie Li Solar Power Co., Ltd.* ("Sanmenxia Xie Li"), Kaifeng Huaxin New Energy Development Co., Ltd.* ("Kaifeng Huaxin"), Shangshui GCL Photovoltaic Electric Power Co, Ltd.* ("Shangshui GCL") and Queshan Zhuiri New Energy Power Company Limited* ("Queshan Zhuiri") and its 50% equity interest in each of Taiqian GCL Photovoltaic Power Company Limited* ("Taiqian GCL") and Nanzhao Xin Li Photovoltaic Electric Power Co, Ltd.* ("Nanzhao Xin Li"), at an aggregate consideration of RMB364,650,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Three Gorges mutually agreed to reduce the consideration from RMB364,650,000 to RMB342,796,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 321MW in Henan, the PRC. The disposals were completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(v) Ceheng Solar and Liuzhi GCL

On 30 April 2021, the GNE Group entered into two share transfer agreements with State Power Investment Corporation Guizhou Jinyuan Weining to dispose of its 100% equity in two wholly-owned subsidiaries namely, Ceheng Solar Power Co., Ltd.* ("Ceheng Solar") and Liuzhi GCL Photovoltaic Power Co., Ltd.* ("Liuzhi GCL"), at an aggregate consideration of RMB225,561,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The subsidiaries operate solar power plant projects with an aggregate capacity of 134MW in Guizhou, the PRC. The disposals were completed during the year ended 31 December 2021.

(vi) Six subsidiaries in Hubei and Jiangxi

On 24 June 2021, the GNE Group entered into six share transfer agreements with Chongqing Lvxin to dispose of its 100% equity interest in four wholly-owned subsidiaries namely, Shiyan Yunneng, Jingshan GCL, Jingshan Xinhui and Shanggao County Lifeng, its 70% equity interest in Shicheng GCL and its 51% equity interest in Anfu GCL, at an aggregate consideration of RMB275,264,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Chongqing Lvxin mutually agreed to reduce the consideration from RMB275,264,000 to RMB272,864,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 149MW in Hubei and Jiangxi, the PRC. The disposals were completed during the year ended 31 December 2021.

(vii) Yongcheng Xin Neng

On 7 May 2021, the GNE Group entered into a share transfer agreement with 國家電投集團重慶電力有限公司 State Power Investment Corporation Chongqing Electric Power Co., Ltd.* ("State Power Investment Corporation Chongqing") to dispose of its 100% equity interest in a wholly-owned subsidiary namely, Yongcheng Xin Neng Photovoltaic Electric Power Co, Ltd.* ("Yongcheng Xin Neng"), at a consideration of RMB193,000,000 and the repayment of interest in shareholder's loan as at the date of completion of disposal. The GNE Group and State Power Investment Corporation Chongqing mutually agreed to reduce the consideration from RMB193,000,000 to RMB166,584,000. The subsidiary operate solar power plant project with a capacity of 86MW in Henan, the PRC. The disposal was completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(viii) Seven Subsidiaries in Yunnan

On 25 June 2021, the GNE Group entered into seven share transfer agreements with Three Gorges to dispose of its 100% equity interest in six wholly-owned subsidiaries, namely Hong He Xian Rui Xin Photovoltaic Power Generation Company Limited* ("Hong He Xian Rui Xin"), Kun Ming Xu Feng Photovoltaic Power Generation Company Limited* ("Kun Ming Xu Feng"), Luquan GCL Solar Power Generation Company Limited* ("Luquan GCL"), Heqing Xinhua Photovoltaic Power Co., Ltd.* ("Heqing Xinhua"), Menghai GCL Solar Agricultural Power Co., Ltd.* ("Menghai GCL") and Yuxi Zhongtai New Energy Technology Co., Ltd.* ("Yuxi Zhongtai") and its 80% equity interest in Yuanmou Green Power New Energy Development Limited* ("Yuanmou"), at an aggregate consideration of RMB218,960,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Three Gorges mutually agreed to reduce the consideration from RMB218,960,000 to RMB216,330,000.The subsidiaries operate solar power plant projects with an aggregate capacity of 229MW in Yunnan, the PRC. The disposals were completed during the year ended 31 December 2021.

(ix) Sixteen Subsidiaries in Jiangsu

On 21 July 2021, the GNE Group entered in a series of sixteen share transfer agreements with 宜興和 創新能源有限公司 Yixing Hechuang New Energy Co., Ltd.* ("Yixing Hechuang") to dispose of its equity interests in Funing Xinyuan Photovoltaic Power Co., Ltd.* ("Funing Xinyuan"), Guanyun GCL Photovoltaic Power Co., Ltd.* ("Guanyun"), Donghai GCL Photovoltaic Power Co., Ltd.* ("Donghai"), Peixian Xinri Photovoltaic Power Co., Ltd.* ("Peixian Xinri"), Xuzhou Xinhui Photovoltaic Power Co., Ltd.* ("Xuzhou Xinhui"), Huaian Xinyuan Photovoltaic Power Co., Ltd.* ("Huaian Xinyuan"), Huaian Ronggao Photovoltaic Power Generation Co., Ltd.* ("Huaian Ronggao"), Zhenjiang Xinli Photovoltaic Power Co., Ltd.* ("Zhenjiang Xinli"), Zhenjiang Xinlong Photovoltaic Power Co., Ltd.* ("Zhenjiang Xinlong"), Zhangjiagang GCL Photovoltaic Power Co., Ltd.* ("Zhangjiagang"), Nantong GCL New Energy Co., Ltd.* ("Nantong GCL"), Lianyungang Xinzhong Photovoltaic Power Co., Ltd.*("Lianyungang Xinzhong"), Xinyi Xinri Photovoltaic Power Co., Ltd.* ("Xinyi Xinri"), Jurong Xinda Photovoltaic Power Generation Co., Ltd.* ("Jurong Xinda"), Nanjing Xinri Photovoltaic Power Generation Co., Ltd.* ("Nanjing Xinri") and Baoying GCL Photovoltaic Power Co., Ltd.* ("Baoying GCL") the subsidiaries, at an aggregate consideration of RMB481,314,000 and repayment of corresponding interest in shareholder's loan as at the date of disposal. The GNE Group and Yixing Hechuang mutually agreed to reduce the consideration from RMB481,314,000 to RMB475,983,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 50MW in Jiangsu, the PRC. The disposals were completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(x) Yanyuan Baiwu New Energy Technology Co., Ltd.

On 12 July 2021, the GNE Group entered into an agreement with Hunan Xinhua to sell its equity interests in Yanyuan Baiwu New Energy Technology Co., Ltd.* ("Yanyuan Baiwu") at a consideration of RMB170,387,000 and repayment of corresponding interest in shareholder's loan as at the date of disposal. The subsidiaries operate solar power plant projects with an aggregate capacity of 50MW in Sichuan, the PRC. The disposal was completed during the year ended 31 December 2021.

(xi) Five subsidiaries in Hunan

On 27 August 2021 and 1 September 2021, the GNE Group entered into six share transfer agreements with Guizhou West Power to dispose of its 100% equity interest in five wholly-owned subsidiaries, namely Taoyuan Xinhui Photovoltaic Power Co., Ltd.* ("Taoyuan Xinhui"), Taoyuan Xinneng Photovoltaic Power Co., Ltd.* ("Taoyuan Xinneng"), Taoyuan Xinyuan Photovoltaic Power Co., Ltd.* ("Taoyuan Xinyuan"), Yongzhou Xiexin Photovoltaic Power Co., Ltd.* ("Yongzhou Xiexin") and Changsha Xinjia Photovoltaic Power Co., Ltd.* ("Changsha Xinjia") at an aggregate consideration of RMB118,161,000 and the repayment of interest in shareholder's loan as at the date of disposals. The GNE Group and Guizhou West Power mutually agreed to reduce the consideration from RMB118,161,000 to RMB102,300,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 101MW in Hunan, the PRC. The disposals of all above companies were completed during the year ended 31 December 2021.

(xii) Four subsidiaries in Shanxi

On 1 April 2021, the GNE Group entered into four share transfer agreements with Three Gorges to dispose of its 98.4% equity interest in Jingbian GCL, its 80.3514% equity interest in Hengshan Jinghe and its 100% equity interest in two wholly-owned subsidiaries, namely Yulin Longyuan and Yulin Yushen at an aggregate consideration of RMB1,250,207,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Three Gorges mutually agreed to reduce the consideration from RMB1,250,207,000 to RMB1,249,997,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 469MW in Shanxi, the PRC. The disposals of all above companies were completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(xiii) Four subsidiaries in Shaanxi

On 30 August 2021, the GNE Group entered into four share transfer agreements with 寧夏含光新能源有限公司 Ningxia Hanguang New Energy Co., Ltd.* ("Ningxia Hanguang") to dispose of its 100% equity interests in Shenmu Pingyuan Power Co., Ltd.* ("Shenmu Pingyuan"), Shenmu Pingxi Power Co., Ltd.* ("Shenmu Pingxi"), Shenmu County Jingdeng and Xixian New District at an aggregate consideration of RMB270,934,000 and repayment of corresponding interest in shareholder' loan as at the date of disposal. The GNE Group and Ningxia Hanguang mutually agreed to reduce the consideration from RMB270,934,000 to RMB267,929,000.The subsidiaries operate solar power plant projects with an aggregate capacity of 271MW in Shaanxi, the PRC. The disposals of 90% of Shenmu County and Xixian New District was completed in October 2021. The disposals of 90% of Shenmu Pingyuan and Shenmu Pingxi was completed in November 2021. The disposals of all above companies were completed during the year ended 31 December 2021.

(xiv) Shenmu Jingfu and Shenmu Jingpu

On 13 September 2021, the GNE Group entered into two share transfer agreements with Ningxia Hanguang to dispose of its 100% equity interest in two wholly-owned subsidiaries, namely Shenmu Jingfu Power Co., Ltd.* ("Shenmu Jingfu") and Shenmu Jingpu Power Co., Ltd.* ("Shenmu Jingpu") at an aggregate consideration of RMB215,576,000. The GNE Group and Ningxia Hanguang mutually agreed to reduce the consideration from RMB215,576,000 to RMB213,173,000.The subsidiaries operate solar power plant projects with an aggregate capacity of 198MW in Shaanxi, the PRC. The disposals of 90% of Shenmu Jingfu and Shenmu Jingpu was completed during the year ended 31 December 2021.

(xv) Others

(a) Jingbian County Shunfeng

On 1 April 2021, the GNE Group entered into a share transfer agreement with Three Gorges to dispose of its 99.6353% equity interest in Jingbian County Shunfeng New Energy Limited* ("Jingbian County Shunfeng"), at a consideration of RMB72,036,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. Jingbian County Shunfeng operates a solar power plant project with a capacity of 42MW in Shaanxi, the PRC. The disposal was completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(xv) Others (Continued)

(b) Zhenyuan County Xuyang

On 5 May 2021, the GNE Group entered into a share transfer agreement with 中電投新疆能源 化工集團隴西新能源有限責任公司 CPI Xinjiang Energy Chemical Group Longxi New Energy Co. Ltd.* ("CPI Xinjiang") to dispose of its 100% equity interest in a wholly-owned subsidiary, namely Zhenyuan County Xuyang New Energy Technologies Co., Ltd.* ("Zhenyuan County Xuyang"), at a consideration of RMB22,500,000 and the repayment of interest in shareholder's loan as at the date of completion of disposal. Zhenyuan County Xuyang operates a solar power plant project with a capacity of 20MW in Gansu, the PRC. The disposal was completed during the year ended 31 December 2021.

(c) Ceheng Jingzhun and Luodian GCL

On 26 April 2021, the GNE Group entered into two share transfer agreements with 國家電投集 團貴州金元威寧能源股份有限公司 State Power Investment Corporation Guizhou Jinyuan Weining Energy Co., Ltd.* ("State Power Investment Corporation Guizhou Jinyuan Weining") to dispose of its 99% equity interest in Ceheng Jingzhun Solar Power Co., Ltd.* ("Ceheng Jingzhun") and its 100% equity interest in a wholly-owned subsidiary, namely Luodian GCL Photovoltaic Power Company Limited* ("Luodian GCL"), at an aggregate consideration of RMB35,228,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and State Power Investment Corporation Guizhou Jinyuan Weining mutually agreed to reduce the consideration from RMB35,228,000 to RMB14,500,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 70MW in Guizhou, the PRC. The disposals were completed during the year ended 31 December 2021.

(d) Dingan GCL and Suixi GCL

On 26 April 2021, the GNE Group entered into two share transfer agreements with 廣東金元新 能源有限公司 Jinyuan New Energy Co., Ltd.* ("Jinyuan New Energy") to dispose of its 100% equity in two wholly-owned subsidiaries namely, Dingan GCL Solar Power Co., Ltd.* ("Dingan GCL") and Suixi GCL Photovoltaic Power Co., Ltd.* ("Suixi GCL"), at an aggregate consideration of RMB117,723,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The subsidiaries operate solar power plant projects with an aggregate capacity of 57MW in Hainan and Guangdong, the PRC. The disposals were completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(xv) Others (Continued)

(e) Hai Nan Yi Cheng and Yingde GCL

On 30 April 2021, the GNE Group entered into two share transfer agreements with Jinyuan New Energy to dispose of its 88.373% equity in Hai Nan Yi Cheng New Energy Company Limited * ("Hai Nan Yi Cheng") and its 90.1% equity in Yingde GCL Photovoltaic Power Co., Ltd.* ("Yingde GCL"), at an aggregate consideration of RMB91,051,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Jinyuan New Energy mutually agreed to reduce the consideration from RMB91,051,000 to RMB89,301,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 48MW in Guizhou, the PRC. The disposals were completed during the year ended 31 December 2021.

(f) Nanjing GCL

On 25 January 2021, the GNE Group entered into a share transfer agreement with an independent third party and agreed to sell 100% equity interest of Nanjing GCL New Energy Technology Co., Ltd* ("Nanjing GCL") at a consideration of RMB13,000,000. The disposal was completed during the year ended 31 December 2021.

(g) Wulate Houqi Yuanhai

On 29 January 2021, the GNE Group entered into a share transfer agreement with Beijing United Rongbang to dispose of its 100% equity interest in a wholly-owned subsidiary namely, Wulate Houqi Yuanhai, at a consideration of RMB52,550,000 and the repayment of interest in shareholder's loan as at the date of completion of disposal. The GNE Group and Beijing United Rongbang mutually agreed to reduce the consideration from RMB52,550,000 to RMB38,050,000. The subsidiary operates solar power plant project with a capacity of 53MW in Inner Mongolia, the PRC. The disposal was completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

(ii) Disposal of subsidiaries of new energy business segment (Continued)

(xv) Others (Continued)

(h) Haifeng County GCL and Anlong Maoan

On 21 May 2021, the GNE Group entered into two share transfer agreements with Guizhou West Power Construction Co., Ltd ("Guizhou West Power") to dispose of its 100% equity interest in two wholly-owned subsidiaries, namely Haifeng County GCL Solar Power Co., Ltd ("Haifeng County GCL") and Anlong Maoan New Energy Development Company Limited ("Anlong Maoan"), at an aggregate consideration of RMB82,264,000 and the repayment of interest in shareholder's loan as at the date of completion of disposals. The GNE Group and Guizhou West Power mutually agreed to reduce the consideration from RMB82,264,000 to RMB79,189,000. The subsidiaries operate solar power plant projects with an aggregate capacity of 131MW in Guangdong and Guizhou, the PRC. The disposals were completed during the year ended 31 December 2021.

(i) Eshan GCL

On 5 July 2021, the GNE Group entered into an agreement with Guizhou West Power to sell its equity interests in Eshan GCL Solar Power Generation Company Limited* ("Eshan GCL") at a consideration of RMB43,100,000 and repayment of corresponding interest in shareholder's loan as at the date of disposal. The GNE Group and Guizhou West Power mutually agreed to reduce the consideration from RMB43,100,000 to RMB40,236,000.The subsidiaries operate solar power plant projects with an aggregate capacity of 50MW in Yunnan, the PRC. The disposal was completed during the year ended 31 December 2021.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(A) Year ended 31 December 2021 (Continued)

The net assets of the solar plant projects at the date of disposal were as follows:

	Disposal groups classified as held for sale RMB'000 Note (i)	Five subsidiaries in Anhui RMB'000 Note (ii)	Hua Neng Phase 3 RMB'000 Note (iii)	Six subsidiaries in Henan RMB'000 Note (iv)	Ceheng Solar and Liuzhi GCL RMB'000 Note (v)	Six subsidiaries in Hubei and Jiangxi RMB'000 Note (vi)	Yongcheng Xin Neng RMB'000 Note (vii)	Seven subsidiaries in Yunnan RMB'000 Note (viii)	Sixteen subsidiaries in Jiangsu RMB'000 Note (ix)	Yanyuan Baiwu RMB'000 Note (x)	Five subsidiaries in Hunan RMB'000 Note (xi)	Four subsidiaries in Shanxi RMB'000 Note (xii)	Four subsidiaries in Shaanxi RMB'000 Note (xiii)	Shenmu Jingfu and Shenmu Jingpu RMB'000 Note (xiv)	Others RMB'000 Note (xv)	Total RMB'000
Consideration:																
Consideration received during:																
— current year	683,315	307,898	572,003	342,796	225,560	272,864	166,584	154,926	429,417	170,387	55,037	1,249,997	267,929	213,173	419,128	5,531,014
— prior year	79,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	79,000
Consideration receivable	—	—	—	—	—	—	—	61,404	46,566	—	47,263	—	—	—	67,407	222,640
Deemed consideration received	19,979	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19,979
	782,294	307,898	572,003	342,796	225,560	272,864	166,584	216,330	475,983	170,387	102,300	1,249,997	267,929	213,173	486,535	5,852,633
Property, plant and equipment	2,558,959	1,226,309	2,002,740	1,407,267	648,228	734,225	376,481	1,281,229	1,578,834	184,958	519,518	3,386,299	1,441,853	1,178,333	2,626,754	21,151,987
Right-of-use assets	75,051	42,848	80,716	148,369	18,677	22,015	31,409	35,703	161,907	18,805	15,914	91,725	62,011	—	118,677	923,827
Other non-current assets	81,784	52,066	95,592	123,231	32,543	52,497	39,000	33,808	101,868	2,286	28,959	80,278	100,746	56,140	54,508	935,306
Deferred tax assets	—	2,704	6,299	13,575	6,599	6,891	3,762	6,159	8,393	—	—	10,245	—	155	22,704	87,486
Trade and other receivables	718,055	563,855	1,219,233	761,080	277,233	253,267	164,788	478,812	1,241,982	192,584	210,043	1,932,128	635,164	600,019	952,942	10,201,185
Pledged bank deposits	43,882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43,882
Bank balances and cash	48,018	69,003	29,376	56,063	4,036	23,047	11,540	16,712	86,452	42,445	16,945	694,173	73,073	50,659	78,279	1,299,821
Other payables	(154,844)	(754,899)	(94,928)	(49,022)	(313,680)	(258,193)	(165,594)	(224,256)	(91,760)	(87,907)	(308,378)	(71,956)	(198,174)	(191,708)	(1,641,547)	(4,606,846)
Bank and other borrowings	(1,712,866)	(813,260)	(2,420,787)	(2,408,941)	(491,764)	(493,442)	(327,084)	(1,268,585)	(2,484,764)	(208,000)	(291,215)	(5,023,704)	(1,793,179)	(1,328,291)	(1,490,063)	(22,555,945)
Lease liabilities	(51,858)	(42,355)	(44,755)	(145,651)	(16,038)	(16,635)	(36,793)	(17,224)	(170,946)	—	(16,750)	(20,101)	(15,305)	—	(52,472)	(646,883)
Deferred tax liabilities	—	(866)	(28,518)	(3,248)	(302)	(1,664)	(550)	—	—	(501)	(638)	—	(1,004)	—	(2,315)	(39,606)
Intragroup balances	(820,206)	—	(306,677)	388,373	—	—	—	(9,627)	—	—	—	—	—	—	3,962	(744,175)
Net assets disposed of	785,975	345,405	538,291	291,096	165,532	322,008	96,959	332,731	431,966	144,670	174,398	1,079,087	305,185	365,307	671,429	6,050,039
Gain on disposal of subsidiaries:																
Total consideration, net of transaction cost	782,294	307,898	572,003	342,796	225,560	272,864	166,584	216,330	475,983	170,387	102,300	1,249,997	267,929	213,173	486,535	5,852,633
Non-controlling interest	4,721	—	26,861	—	—	73,780	—	19,802	—	—	—	—	19,979	—	—	145,143
Fair value residual interest	9,220	25,234	—	—	—	600	—	—	—	—	—	59,181	23,655	18,834	208	136,932
Net assets disposed of	(785,975)	(345,405)	(538,291)	(291,096)	(165,532)	(322,008)	(96,959)	(332,731)	(431,966)	(144,670)	(174,398)	(1,079,087)	(305,185)	(365,307)	(671,429)	(6,050,039)
(Loss) gain on disposal	10,260	(12,273)	60,573	51,700	60,028	25,236	69,625	(96,599)	44,017	25,717	(72,098)	230,091	6,378	(133,300)	(184,686)	84,669
Net cash inflow (outflow) arising from disposal:																
Cash consideration received	762,315	307,898	572,003	342,796	225,560	272,864	166,584	154,926	429,417	170,387	55,037	1,249,997	267,929	213,173	419,128	5,610,014
Less: bank balances and cash disposed of	(48,018)	(69,003)	(29,376)	(56,063)	(4,036)	(23,047)	(11,540)	(16,712)	(86,452)	(42,445)	(16,945)	(694,173)	(73,073)	(50,659)	(78,279)	(1,299,821)
	714,297	238,895	542,627	286,733	221,524	249,817	155,044	138,214	342,965	127,942	38,092	555,824	194,856	162,514	340,849	4,310,193

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020

(i) Disposal of subsidiaries of new energy business segment

(a) Six subsidiaries in Ningxia, Xinjiang and Jiangxi

On 21 January 2020, GNE Group entered into six share transfer agreements with Hua Neng No. 1 Fund and Hua Neng No. 2 Fund to dispose of its entire equity interests in six wholly-owned subsidiaries namely 餘幹縣協鑫新能源有限責任公司 Yugan County GCL New Energy Limited* ("Yugan County"), 寧夏金信光伏電力有限公司 Ningxia Jinxin Photovoltaic Electric Power Co., Ltd.* ("Ningxia Jinxin"), 寧夏綠昊光伏發電有限公司 Ningxia Luhao Photovoltaic Power Generation Company Limited* ("Ningxia Luhao"), 哈密歐瑞光伏發電有限公司 Hami Ourui Power Generation Company Limited* ("Hami Ourui"), 哈密耀輝光伏電力有限公司 Hami Yaohui Photovoltaic Company Limited* ("Hami Yaohui") and 寧夏金禮光伏電力有限公司 Ningxia Jinli Photovoltaic Electric Power Co., Ltd.* ("Ningxia Jinli") at an aggregate cash consideration of RMB850,500,000 and the repayment of interest in shareholder's loan as at the date of completion of the disposals. The subsidiaries operated solar farm projects with an aggregate capacity of 294MW in Ningxia, Xinjiang and Jiangxi, the PRC (the "Project B"). The disposals were completed in the second half of 2020 (the "Disposal Date B").

GNE Group granted a put option to Hua Neng No. 1 Fund and Hua Neng No. 2 Fund, pursuant to which GNE Group agreed that if Project B failed to fully receive the balance of the tariff adjustment receivables (the "Tariff Adjustment Receivables") as at Disposal Date B during the four-year period after Disposal Date B, or the operation of Project B was disrupted for more than six months due to the reasons stipulated in the share transfer agreements, GNE Group shall repurchase the entire equity interest in Project B from Hua Neng No. 1 Fund and Hua Neng No. 2 Fund at a repurchase price which is the higher of (1) equity value of the Project B assessed by The State-owned Assets Supervision and Administration Commission of the State Council or (2) a repurchase price calculated in accordance with terms specified in the share transfer agreements, together with any outstanding shareholder's loan advanced to the Project B by Hua Neng No. 1 Fund and Hua Neng No. 2 Fund. As Project B had already registered in the Catalogue/List and eligibility for the receipt of tariff adjustment receivables was assured, in the opinion of the directors of GNE, it is highly probable that the balance of the Tariff Adjustment Receivables will be collected within four years after Disposal Date B and therefore, the possibility regarding the occurrence of the specified events as stipulated in the share transfer agreements that would trigger the repurchase event is remote, and the fair value of the put option as at Disposal Date B and 31 December 2020 was considered as insignificant.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(i) Disposal of subsidiaries of new energy business segment (Continued)

(b) Two subsidiaries in Henan

As disclosed in note 30(B)(i), GNE Group entered into six share transfer agreements dated 29 September 2020 with Hua Neng No. 1 Fund and Hua Neng No. 2 Fund to dispose of its 100% equity interest in six wholly-owned subsidiaries with an aggregate consideration of RMB117,515,000. The disposals of Huixian City GCL and Qixian GCL were completed in the second half of 2020.

(c) Three subsidiaries in Anhui

As disclosed in note 30(B)(ii), GNE Group entered into five share transfer agreements dated 16 November 2020 with Xuzhou State Investment to dispose of its 90% equity interest in each of Suzhou GCL Solar Power, Huaibei Xinneng, Hefei Jiannan and Hefei Jiuyang and 67% equity interests in Dangshan Xinneng. The disposals of Suzhou GCL Solar Power, Huaibei Xinneng and Dangshan Xinneng with an aggregate consideration of RMB170,870,000 were completed as at 31 December 2020. GNE Group retains 10% equity interest in each of Suzhou GCL Solar Power and Huaibei Xinneng after the disposals and exercises significant influence, accordingly, these two companies were accounted for as associates of GNE Group and indirectly-owned associates of the Group as at 31 December 2020. GNE Group and Xuzhou State Investment mutually agreed to reduce the consideration from RMB170,870,000 to RMB166,476,000 during the year ended 31 December 2020.

(d) Four subsidiaries in Guangxi and Hainan

GNE Group entered into four share transfer agreements dated 10 December 2020 with State Power Investment to dispose of all of its 100%, 70.36%, 67.95% and 100% equity interest in 南寧金伏電力有限公司 Nanning Jinfu Electric Power Company Limited* ("Nanning Jinfu"), 欽州鑫金光伏電力有限公司 Qinzhou XinJin Photovoltaic Power Company Limited* ("Qinzhou XinJin"), 上林協鑫光伏電力有限公司 Shanglin GCL Photovoltaic Power Company Limited* ("Shanglin GCL"), and 海南天利科新能源項目投資有限公司 Hainan Tianlike New Energy Project Investment Company Limited* ("Hainan Tianlike"), respectively, at an aggregate consideration of RMB291,300,000. The subsidiaries operate solar farm projects with an aggregate capacity of 185MW in Guangxi and Hainan, the PRC and the disposals were completed in the second half of 2020. GNE Group and State Power Investment mutually agreed to reduce the consideration from RMB291,300,000 to RMB281,075,000 during the year ended 31 December 2020.

* English name for identification only

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(i) Disposal of subsidiaries of new energy business segment (Continued)

(e) Two subsidiaries in Anhui and Jiangsu

GNE Group entered into two share transfer agreements dated 21 January 2020 with 中核(南京)能源發展有限公司 CNI (Nanjing) Energy Development Company Limited* to dispose of its entire equity interest in 阜陽衡銘太陽能電力有限公司 Fuyang Hengming Photovoltaic Power Company Limited* ("Fuyang Hengming") and 鎮江協鑫新能源有限公司 Zhen Jiang GCL New Energy Company Limited* ("Zhen Jiang GCL") at an aggregate consideration of RMB77,476,000. The subsidiaries operated solar farm projects with an aggregate capacity of 40MW in Anhui and Jiangsu, the PRC. The disposals were completed in the first half of 2020.

(f) Jinhu

GNE Group entered into a share transfer agreement dated 29 June 2020 with CDB New Energy to dispose of its 75% equity interest in Jinhu for an aggregate consideration of RMB136,624,000. Jinhu had a solar farm project with an installed capacity of approximately 100MW in operation. The disposal was completed in July 2020. GNE Group retains 25% equity interest in Jinhu after the disposal and exercises significant influence. Accordingly, Jinhu was accounted for as an associate of GNE Group and indirectly-owned associate of the Group as at 31 December 2020.

(g) Xinao

GNE Group entered into a share transfer agreement dated 21 August 2020 with State Power Investment and Guangxi Jinyuan to dispose of its 60% equity interests in Xinao for an aggregate consideration of RMB1,199,000. Xinao was an inactive company established in the PRC. The disposal was completed in August 2020. GNE Group retains 40% equity interest in Xinao upon the disposal and retains significant influence. Accordingly, Xinao was accounted for as an associate of GNE Group and indirectly-owned associate of the Group as at 31 December 2020.

(h) 鳳陽協鑫光伏電力有限公司 ("Fengyang")

On 21 August 2019, GNE Group entered into a share transfer agreement with an independent third party for the disposal of 100% equity interest in Fengyang at a cash consideration of RMB2,000,000. The disposal was completed on 8 December 2020.

(i) 榆林協能華鑫能源管理有限公司 ("Yulin")

On 22 September 2020, GNE Group entered into a share transfer agreement with an independent third party for the disposal of 100% equity interest of Yulin at a cash consideration of RMB500,000. The disposal was completed on 24 September 2020.

* English name for identification only

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(i) Disposal of subsidiaries of new energy business segment (Continued)

The net assets of the solar power plant projects at the date of disposal were as follows:

	Six subsidiaries in Ningxia, Xinjiang and Jiangxi RMB'000 (Note a)	Two subsidiaries in Henan RMB'000 (Note b)	Three subsidiaries in Anhui RMB'000 (Note c)	Four subsidiaries in Guangxi and Hainan RMB'000 (Note d)	Two subsidiaries in Anhui and Jiangsu RMB'000 (Note e)	Jinhu RMB'000 (Note f)	Xinao RMB'000 (Note g)	Fengyang RMB'000 (Note h)	Yulin RMB'000 (Note i)	Total RMB'000
Consideration:										
Consideration received	821,378	—	166,476	174,780	48,876	129,632	—	—	—	1,341,142
Consideration receivable	29,122	117,515	—	106,295	28,600	6,992	1,199	2,000	500	292,223
	850,500	117,515	166,476	281,075	77,476	136,624	1,199	2,000	500	1,633,365
Analysis of assets and liabilities over which control was lost:										
Property, plant and equipment	1,813,053	426,314	746,968	881,849	226,649	611,040	1,579	1,419	14,158	4,723,029
Right-of-use assets	9,414	13,677	51,268	30,300	10,387	12,733	2,084	—	—	129,863
Other non-current assets	85,659	8,592	34,576	69,693	9,640	6,146	—	20	106	214,432
Trade and other receivables	640,745	220,237	102,268	455,823	65,303	204,631	1,236	587	1,053	1,691,883
Bank balances and cash	26,014	4,840	74,742	28,968	5,501	28,114	126	25	6,288	174,618
Trade and other payables	(249,981)	(287,227)	(253,249)	(256,619)	(165,916)	—	(267)	(51)	(21,105)	(1,234,415)
Bank and other borrowings	(1,148,881)	(209,000)	(552,634)	(838,872)	(54,770)	(441,570)	—	—	—	(3,245,727)
Lease liabilities	(10,802)	(13,453)	(47,273)	(16,657)	(11,078)	(13,337)	(2,012)	—	—	(114,612)
Intragroup balances	(228,525)	17,251	75,901	43,250	(9,248)	(235,701)	(747)	—	—	(337,819)
Net assets disposed of	936,696	181,231	232,567	397,735	76,468	172,056	1,999	2,000	500	2,001,252
(Loss) gain on disposal of subsidiaries:										
Total consideration, net of transaction cost	828,931	117,515	166,476	281,075	77,476	129,632	1,199	2,000	500	1,604,804
Non-controlling interest	—	—	22,016	97,857	—	—	—	—	—	119,873
Fair value of residual interest	—	—	12,230	—	—	45,541	800	—	—	58,571
Net assets disposed of	(936,696)	(181,231)	(232,567)	(397,735)	(76,468)	(172,056)	(1,999)	(2,000)	(500)	(2,001,252)
(Loss) gain on disposal	(107,765)	(63,716)	(31,845)	(18,803)	1,008	3,117	—	—	—	(218,004)
Net cash inflow (outflow) arising on disposal:										
Cash consideration received	821,378	—	166,476	174,780	48,876	129,632	—	—	—	1,341,142
Less: bank balances and cash disposed of	(26,014)	(4,840)	(74,742)	(28,968)	(5,501)	(28,114)	(126)	(25)	(6,288)	(174,618)
	795,364	(4,840)	91,734	145,812	43,375	101,518	(126)	(25)	(6,288)	1,166,524

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(ii) Disposal of a subsidiary of solar material business segment

(a) 四川協鑫硅業科技有限公司 Sichuan GCL Silicon Technology Co., Ltd. ("Sichuan GCL")*

In May 2020, the Group entered into an agreement with an independent third party to dispose of its 100% equity interest in Sichuan GCL and the intragroup payable to the Group at a consideration of RMB90,000,000. The disposal was completed in May 2020 and a loss on disposal of approximately RMB85,025,000 was recognised in profit or loss during the year ended 31 December 2020.

Pursuant to the sale and purchase agreement, the cash consideration of approximately RMB20,802,000 was settled during the current year, the consideration of approximately RMB6,198,000 was offsetted certain trade payables of Sichuan GCL Listed in the agreement and the outstanding consideration receivable of RMB63,000,000, carrying interest at 8% per annum will be settled by ten instalments up to November 2024. Such consideration receivable was recorded in the consolidated statement of financial position of the Group at 31 December 2020 as follows:

	RMB'000
Consideration receivable (note 25):	
— Current	14,000
— Non-current	49,000
	63,000

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(ii) Disposal of a subsidiary of solar material business segment (Continued)

(a) 四川協鑫硅業科技有限公司 Sichuan GCL Silicon Technology Co., Ltd. (“Sichuan GCL”) (Continued)*

The aggregate net assets of the Sichuan GCL at the date of disposal were as follows:

	RMB’000
Analysis of assets and liabilities over which control was lost:	
Property, plant and equipment	136,469
Right-of-use assets	8,331
Inventories	4,691
Trade and other receivables	7,019
Bank balances and cash	341
Trade and other payables	(21,981)
Intragroup balances	28,312
Net assets disposed of	163,182
Loss on disposal of subsidiaries:	
Total consideration	90,000
Net assets disposed of	(163,182)
Release of reserve upon disposal	(11,843)
Loss on disposal	(85,025)
Net cash inflow arising on disposal:	
Cash consideration received	20,802
Less: bank balances and cash disposal of	(341)
	20,461

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(ii) Disposal of a subsidiary of solar material business segment (Continued)

(b) 蘇州鑫能財務顧問有限公司 Xinneng Financial Consultancy Ltd. ("Xinneng")*

In May 2020, the Group entered into an agreement with an independent third party to dispose of its 100% equity interest in Xinneng at a consideration of RMB1. The disposal was completed in May 2020 and a gain on disposal of approximately RMB800,000 was recognised in profit or loss during the year ended 31 December 2020.

	RMB'000
Consideration:	
Consideration received	—

The aggregate net liabilities of the Xinneng at the date of disposal were as follows:

Analysis of assets and liabilities over which control was lost:	
Property, plant and equipment	76
Trade and other receivables	1,570
Bank balances and cash	562
Trade and other payables	(4,548)
Intragroup balances	1,540
Net liabilities disposed of	(800)
Gain on disposal of subsidiaries:	
Total consideration	—
Net liabilities disposed of	800
Gain on disposal	800
Net cash outflow arising on disposal:	
Cash consideration received	—
Less: bank balances and cash disposed of	(562)
	(562)

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(iii) Disposal of subsidiaries of solar farm business segment

During the year ended 31 December 2020, the Group entered into several agreements with independent third parties to dispose of its entire equity interests in寧夏慶陽新能源有限公司 Ningxia Qingyang New Energy Co., Ltd.* ("Ningxia Qingyang") and 霍城縣圖開新能源科技開發有限公司 Huocheng Xian Tukai New Energy Technology Development Co., Ltd.* ("Huocheng Xian Tukai"), and 80% out of 100% equity interest in 阜寧新能光伏電力有限公司 Funing Xinneng Solar Energy Co., Ltd.* ("Funing Xinneng"), 寧夏恒陽新能源有限公司 Ningxia Hengyang New Energy Co., Ltd.* ("Ningxia Hengyang") and 寶應興能可再生能源有限公司 Baoying Xingneng Renewable Energy Co., Ltd.* ("Baoying Xingneng") for an aggregate cash consideration of approximately RMB333,970,000. The disposals were completed in December 2020 and a net gain on disposal of approximately RMB2,748,000 was recognised in profit or loss during the year ended 31 December 2020.

Upon such disposals, the Group held 20% equity interest in Funing Xinneng, Ningxia Hengyang and Baoying Xingneng. Since the Group was not given the right to appoint any directors, the Directors consider that the Group was not able to exercise significant influence over these companies and such equity investments were accounted for as equity instruments at FVTPL at 31 December 2020.

For Funing Xinneng, Ningxia Hengyang and Baoying Xingneng, one of the buyers granted to the Group a right, but not an obligation, to request the buyer to purchase the remaining 20% equity interest in the three aforesaid target companies in two years after the completion date. In the opinion of the Directors, the fair value of the option was considered insignificant at completion date and 31 December 2020.

In addition, the Group granted a put option to the buyers of the aforesaid five companies, pursuant to which, upon the occurrence of any of the following events: (i) the existence of undisclosed information, including but not limited to, undisclosed liabilities or undisclosed contracts of at least RMB10 million which may have a material impact on the operation of these companies; or (ii) the existence of material misrepresentations or omissions from the Group resulting in material adverse impact to the interests of the buyers. In the opinion of the Directors, the fair value of the option was considered insignificant at completion date and 31 December 2020.

Pursuant to the sale and purchase agreement, part of the considerations of approximately RMB75,679,000 will be settled upon the settlement of the aforesaid companies' trade receivables from the local grid companies. The buyers have settled the cash considerations of approximately RMB229,550,000 during the current year and the remaining balance of the consideration receivables was recorded on the consolidated statement of financial position of the Group.

* English name for identification only

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(iii) Disposal of subsidiaries of solar farm business segment (Continued)

The aggregate net assets of the subsidiaries of solar farm business segment at the date of disposal were as follows:

	RMB'000
Consideration:	
Consideration received	229,550
Consideration receivables (note 25)	
— Current	28,741
— Non-current	75,679
	104,420
	333,970
Analysis of assets and liabilities over which control was lost:	
Property, plant and equipment	1,166,003
Right-of-use assets	23,867
Trade and other receivables	481,439
Pledged and restricted bank and other deposits	11,871
Bank balances and cash	33,907
Trade and other payables	(78,983)
Bank and other borrowings	(954,000)
Lease liabilities	(17,210)
Tax payables	(1,439)
Intragroup balances	(116,569)
Net assets disposed of	548,886
Gain on disposal of subsidiaries	
Total consideration	333,970
Non-controlling interests	182,029
Other financial assets at fair value through profit or loss	35,635
Net assets disposed of	(548,886)
Gain on disposal	2,748
Net cash inflow arising on disposal:	
Cash consideration received	229,550
Less: bank balances and cash disposed of	(33,907)
	195,643

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(iv) Deemed disposal of partial interest in a subsidiary

On 28 August 2019, Elite Time Global Limited ("Elite Time") (as borrower), a wholly-owned subsidiary of the Company, and Bentley Rothschild Capital 5 Limited (the "Lender"), an independent third party, entered into a loan agreement ("Loan Agreement") pursuant to which the Lender agreed to lend up to US$60 million to Elite Time, to be secured by shares in GNE. The Lender subsequently executed a letter of confirmation dated 26 September 2019 confirming that the loan of US$60 million would be lent to Elite Time in four tranches, with the initial three tranches being US$16 million per tranche and the final tranche being US$12 million. The GNE shares to be pledged by Elite Time was to have a fair market value calculated based on an agreed formula, of twice the amount loaned.

As at 2 October 2019, a total of 11,880,000,000 shares in GNE were held by Elite Time, of which 865,100,000 shares in GNE were transferred ("Pledged Shares") as security for the first tranche of the loan, to Elite Time's account held with the depository broker (the "Depository Broker"). Despite the transfer of the Pledged Shares, the Lender failed to fund the agreed amount of the loan. In February 2020, Elite Time received a total of US$2.2 million, which sum was significantly below the amount agreed to be loaned by the Lender.

On 18 May 2020, Elite Time received a notice of default from the Lender alleging that there had been a breach of the Loan Agreement. The Company does not accept the notice of default is justified, and despite communications with the Lender regarding the outstanding amount of the loan to be funded by the Lender, and potential alternative arrangements with respect to the loan, no additional funds were advanced by, nor new terms agreed with, the Lender.

In May 2021, Elite Time was informed that, on or around 6 June 2020, the Lender had sent an entitlement order to the Depository Broker purporting to exercise its security interests over the Pledged Shares, and that as a result, the Lender had taken direct custody of all of the Pledged Shares. At the relevant time, Elite Time was not provided with a copy of the entitlement order nor informed that such an order had been issued. Upon further enquiry with the Depository Broker, Elite Time received an email from an entity claiming to be the successor entity of the Lender stating that the Pledged Shares "was forfeited and disposed". Prior to this, Elite Time had not been notified by the Lender of such purported forfeiture and disposal.

Since then, the Company has engaged FTI Consulting (Hong Kong) Limited, an independent investigation firm, to conduct investigations, among others, into the Lender, the purported successor entity to the Lender, the Depository Broker, and key individuals associated with those entities who were involved in the Loan Agreement transaction.

42. DISPOSAL OF SUBSIDIARIES/PARTIAL INTEREST IN SUBSIDIARIES (Continued)

(B) Year ended 31 December 2020 (Continued)

(iv) Deemed disposal of partial interest in a subsidiary (Continued)

Based on the investigation findings and other available information (including CCASS shareholding records), the Company considers that it is more likely than not that 865,100,000 pledged shares are no longer held by or on behalf of Elite Time or any other member of the Group.

As a result, Elite Time's equity interest in GNE was reduced from 62.28% to 57.75%. As the change in the Group's interests in GNE did not result in a loss of control, such change was accounted for as an equity transaction, whereby an adjustment was made to the amounts of controlling and non-controlling interests within consolidated statement of changes in equity to reflect the change in the relative interests, and the fair value of the Pledged Shares forfeited were set off against the outstanding loan amount due to the lender.

(v) Disposal of partial interest in a subsidiary through the Transfer (as defined below) and newly-increased registered capital

In 2020, the Group entered into certain investment agreements (the "Agreements") with certain investors, under which (i) the Group agreed to transfer RMB2,389,000 registered capital of Kunshan GCL to an investor at a consideration of RMB20 million (the "Transfer"), representing 3.82% of the registered capital of Kunshan GCL; and (ii) certain investors agreed to subscribe for RMB12,593,000 new registered capital of Kunshan GCL in cash at RMB136 million (the "Subscription"), representing 20.12% of the enlarged registered capital of Kunshan GCL. Pursuant to the Agreements, these investors were given the right to request the Group to repurchase their equity interest in Kunshan GCL at a premium under certain circumstances within 5 years.

As at 31 December 2020, the Transfer was completed, and the contributions from the investors for the new registered capital were RMB71 million and the outstanding capital contribution by the investors as at 31 December 2020 was RMB65 million.

As a result, the Group's effective equity interest in Kunshan GCL was 49.29%, which represented the total contribution by the Group to Kunshan GCL over the total paid-up capital of Kunshan GCL as at 31 December 2020. As the change in the Group's interests in Kunshan GCL did not result in a loss of control, such change was accounted for as an equity transaction, whereby an adjustment was made to the amounts of controlling and non-controlling interests within consolidated statement of changes in equity to reflect the change in the relative interests.

43. CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximising the return to shareholders through the optimisation of the debt and equity balance. The Group's overall strategy remains unchanged from 2020.

The capital structure of the Group consists of net debt, which mainly includes loans from related companies, bank and other borrowings, lease liabilities, notes payables, net of cash and cash equivalents, and equity attributable to owners of the Company, comprising issued share capital and reserves.

The Directors review the capital structure on a regular basis. As part of this review, the Directors consider the cost of capital and the risks associated with each class of capital. Based on recommendations of the Directors, the Group will balance its overall capital structure through the payment of dividends, new share issues and share buy-backs as well as the issue of new debts or the redemption of existing debt.

44. FINANCIAL INSTRUMENTS

44a. Categories of financial instruments

	2021	2020
	RMB'000	RMB'000
Financial assets		
FVTPL:		
Mandatorily measured at FVTPL		
— Held for trading	**1,473**	3,447
— Other financial assets at FVTPL	**718,200**	1,122,030
Equity instruments at FVTOCI	**41,683**	21,073
Financial assets at amortised cost	**27,223,114**	24,640,853
Financial liabilities		
FVTPL:		
Derivative financial instruments	**112,759**	60,561
Convertible bonds to a non-controlling shareholders of subsidiary	**84,180**	49,000
Amortised cost	**28,701,392**	56,541,846

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies

Management provides services to the Group's business units, co-ordinates access to domestic and international financial markets, monitors and manages the financial risks relating to the operations of the Group through internal risk reports which analyse exposures by degree and magnitude of risks. These risks include market risk (including foreign currency risk, interest rate risk and other price risk), credit risk and liquidity risk.

Management reports periodically to the Directors who monitor risks and implemented policies to mitigate exposures.

There has been no change to the types of the Group's exposure in respect of financial instruments or the manner in which it measures and manages the risks.

Market risk

Foreign currency risk management

The Group's exposure to foreign currency risk arose from certain pledged and restricted bank deposits and bank balances, bank and other borrowings, lease liabilities, trade and other receivables and payables, amounts due from related companies, notes payables that are denominated in foreign currencies. The Group currently does not have a currency risk hedging policy. However, the management monitors foreign currency risk exposure by closely monitoring the movement of foreign currency rates and considers hedging against it should the need arise.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

	Assets		**Liabilities**	
	2021	2020	**2021**	2020
	RMB'000	RMB'000	**RMB'000**	RMB'000
The Group				
EUR	**2,299**	17,372	**399**	190
HK$	**2,589,272**	51,602	**287,234**	295,133
US$	**222,203**	164,441	**3,490,380**	5,936,839
Inter-company balances				
HK$	**105,570**	173,169	**—**	79,885
US$	**657,460**	667,772	**469,889**	613,847
JPY	**—**	11	**21,495**	—

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Market risk (Continued)

Foreign currency risk management (Continued)

The foreign currency assets in 2021 and 2020 mainly related to the HK$ denominated bank balances, US$ denominated trade and other receivables, amounts due from related companies, pledged and restricted bank and other deposits and bank balances, and EUR denominated pledged and restricted bank and other deposits and bank balances as set out in notes 25, 27 and 29, respectively.

The foreign currency liabilities in 2021 and 2020 mainly related to the EUR, HK$ and US$ denominated trade and other payables, bank and other borrowings, lease liabilities, and US$ denominated notes payables as set out in notes 31, 36, 37 and 38, respectively.

Foreign currency sensitivity analysis

The following sensitivity analysis details the Group's sensitivity to a 5% (2020: 5%) increase or decrease in the functional currency of the respective entities against the relevant foreign currencies. 5% (2020: 5%) is the sensitivity rate used when reporting foreign currency risk internally to management and represents management's assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes outstanding foreign currency denominated monetary items and adjusts their translation at the end of the reporting period for a 5% (2020: 5%) change in foreign currency rates. The sensitivity analysis also includes inter-company balances where the denomination of the balance is in a currency other than the functional currency of the lender or the borrower. Where the functional currency of the respective entities had strengthened 5% (2020: 5%) against the relevant foreign currencies, profit or loss of the respective year would be affected as follows. For a 5% (2020: 5%) weakening of the functional currency of the respective entities against the relevant foreign currency, there would be an equal and opposite impact on profit or loss for the respective year.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Market risk (Continued)

Foreign currency sensitivity analysis (Continued)

The Group

	EUR RMB'000	HK$ RMB'000	US$ RMB'000
2021			
Increase (decrease) in profit for the year	**(71)**	**(86,326)**	**122,557**
2020			
(Increase) decrease in loss for the year	(644)	9,132	216,465

Inter-company balances

	HK$ RMB'000	US$ RMB'000	JPY RMB'000
2021			
Increase (decrease) in profit for the year	**(3,959)**	**(7,034)**	**806**
2020			
(Increase) decrease in loss for the year	(3,498)	(2,022)	—

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate risk management

The Group is exposed to fair value interest rate risk in relation to fixed-rate amounts due from (to) related companies, loans from related companies, pledged and restricted bank and other deposits, bank and other borrowings, notes payables (see notes 27, 32, 33, 29, 36 and 38 for details of the above financial instruments, respectively). The Group currently has not entered into interest rate swaps to hedge against its exposure to changes in fair values of such financial assets and financial liabilities.

The Group is also exposed to cash flow interest rate risk in relation to variable-rate restricted bank deposits and bank balances and variable-rate bank borrowings (see notes 29 and 36).

The management has considered the Group's exposure to cash flow interest rate risk in relation to variable-rate pledged and restricted bank and other deposits and bank balances (see note 29) to be limited because the current market interest rates on general deposits are relatively low and stable.

It is the Group's policy to maintain an appropriate level between its fixed-rate and variable-rate borrowings so as to minimise the fair value and cash flow interest rate risk.

Interest income from financial assets that are measured at amortised cost or FVTOCI is as follows:

	2021 **RMB'000**	2020 RMB'000
Financial assets at amortised cost	**80,947**	148,771

Interest expense on financial liabilities not measured at FVTPL is as follows:

	2021 **RMB'000**	2020 RMB'000
Financial liabilities at amortised cost	**1,837,585**	3,063,323

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate sensitivity analysis

The sensitivity analysis below has been determined based on the Group's exposure to interest rates for non-derivative instruments. The analysis is prepared assuming the financial instruments outstanding at the end of the reporting period were outstanding for the whole year. The following sensitivity analysis is used when reporting interest rate risk internally to management and represents management's assessment of the reasonably possible change in interest rates.

Variable-rate borrowings

If interest rates had been 50 basis points higher/lower on LIBOR, HIBOR and the lending benchmark interest rate stipulated by Benchmark Rate and all other variables were held constant, the Group's profit for the year ended 31 December 2021 would have decreased/increased by approximately RMB22,314,000 (2020: loss for the year would have increased/decreased by approximately RMB78,093,000). This is mainly attributable to the Group's exposure to interest rates on its variable-rate borrowings. The Group's exposure to cash flow interest rate risk has increased during the current year mainly due to the increase in variable-rate borrowings. On the other hand, the Group's exposure to fair value interest rate risk has decreased during the year mainly due to the decrease in fixed-rate borrowings.

A fundamental reform of major interest rate benchmarks is being undertaken globally, including the replacement of some interbank offered rates ("IBORs") with alternative nearly risk-free rates. As at 31 December 2021, the Group has two (2020: two) LIBOR bank loans that may be subject to the interest rate benchmark reform. The Group is closely monitoring the transition to new benchmark interest rates.

Other price risk

The Group is exposed to price risk through its quoted and unquoted investments measured at FVTPL and measured at FVTOCI. The Group's equity price risk is mainly concentrated on equity instruments of entities operating in solar, and securities and financial service industries sector quoted on the Stock Exchange. In addition, the Group has monitored the price risk and will consider hedging the risk exposure should the need arise.

Other price risk sensitivity analysis

Other than sensitivity analysis of certain investments as disclosed in note 45(i), sensitivity on other investments is not provided as the amount is considered insignificant.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group's credit risk is primarily attributable to trade and other receivables, amounts due from related companies, contract assets, pledged and restricted bank and other deposits and bank balances.

Except for the financial guarantees given by the Group as set out below and in note 53, the Group does not provide any other guarantees which expose the Group to credit risk. The maximum exposure to credit risk in respect of these financial guarantees at the end of the reporting period is disclosed below and in note 53.

The Group does not hold any collateral or other credit enhancements to cover its credit risk associated with its financial assets and financial guarantee contracts.

Trade receivables, amounts due from related companies (trade related) and contract assets arising from contracts with customers

In order to minimise the credit risk, each major operating business has a policy of credit control in place under which credit evaluations of customers are performed on all customers requiring credit.

Credit terms are granted to customers which are either secured by bills or with letters of credit issued by banks or good credit quality customers. The management also has monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In this regard, the Directors consider that the Group's credit risk is significantly reduced. In addition, the Group performs impairment assessment under ECL model on trade balances individually or collectively.

Credit risk on sales of polysilicon and wafer products is not significant as the major customers are listed entities with good repayment history, and significant portion of trade receivables are either secured by bills or with letters of credit issued by banks or advance payments from customers.

Trade receivables arising from sales of electricity are mainly due from the local grid companies in various provinces in the PRC. The management considered the probability of default of trade receivables is low by taking into the account the past default experience of the debtors, adjusted for general economic conditions of the solar industry and an assessment of both current as well as forecast direction of market conditions at the reporting date. Accordingly, the management is of the opinion that the credit risk of trade receivables is limited.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Trade receivables, amounts due from related companies (trade related) and contract assets arising from contracts with customers (Continued)

In relation to contract assets of tariff adjustment receivables, the management performs impairment assessment on a periodic basis. Based on the assessment, the management is of the opinion that the probability of defaults of the relevant counterparties are insignificant since the solar industry is well supported by the PRC government. In addition, as detailed in note 5, management is confident that all of the Group's operating solar farms are able to be enlisted in the List in due course and the accrued revenue on tariff subsidy is fully recoverable but only subject to the timing of allocation of funds. Accordingly, the credit risk regarding contract assets of tariff adjustment receivables is limited.

For sales of polysilicon and wafer, the Group's concentration of credit risk by geographical location is mainly the PRC, which accounted for approximately 70% (2020: 99%) of the trade receivables arising from sales of polysilicon and wafer as at 31 December 2021. The remaining 30% of the trade receivables arising from sales of polysilicon and wafer were from other Asian countries. (2020: 1%)

For sales of electricity, the Group's concentration of credit risk by geographical location is mainly the PRC, which accounted for over 99% (2020: 99%) of the trade receivables arising from sales of electricity as at 31 December 2021.

As at 31 December 2021, the Group had concentration of credit risk mainly on related companies which are known to the Group to be under common control (2020: related companies which are known to the Group to be under common control). The gross carrying amount of amounts due from the aforesaid related companies (trade related) was approximately RMB333,273,000 (2020: RMB431,814,000).

Other receivables and amounts due from related companies (non-trade related)

The credit quality of other receivables and amounts due from related parties (non-trade related) excluding prepayments has been assessed with reference to historical information about the counterparties' past payment histories and financial position. The Directors closely monitor the credit quality of other receivables and amounts due from related companies (non-trade related) and consider those amounts, which are neither past due nor impaired, are of good credit quality in view of the good historical repayment record of such parties.

In addition, the Group performs impairment assessment under ECL model on these balances individually.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Other receivables and amounts due from related companies (non-trade related) (Continued)

For the purpose of impairment assessment of other receivables, consideration receivables, dividend receivables, receivables for modules procurement, other loan receivables, amounts due from former subsidiaries and related companies (non-trade related), the loss allowance is measured at an amount equals to 12m ECL. In determining the ECL for these assets, the Directors have taken into account the financial position of the counterparties, the industries they operate, as well as their latest available operating results, in estimating the probability of default of each of these financial assets occurring within their respective loss assessment time horizon, as well as the loss upon default in each case.

As at 31 December 2021 and 2020, the Group had concentration of credit risk on consideration receivables as the gross carrying amount of consideration receivables as at 31 December 2021 were approximately RMB1,381 million (2020: approximately RMB1,474 million). As at 31 December 2021, the Group has no other significant concentration of credit risk on the amounts due from related companies (non-trade nature) (2020: the Group had concentration of credit risk mainly on one associate as included in "amounts due from related companies (non-trade related)" amounted to approximately RMB743,635,000).

Pledged and restricted bank and other deposits and bank balances

The Group's exposure to credit risk arising from pledged and restricted bank and other deposits and bank balances is limited because the counterparties are reputable banks and other financial institutions with high credit ratings assigned by international credit rating agencies in the PRC, Hong Kong and the USA.

The Group assessed 12m ECL for bank balances and pledged and restricted bank and other deposits by reference to information relating to the probability of default and loss given default of the respective credit rating grades published by external credit rating agencies. Based on the average loss rates, the ECL on bank balances and pledged and restricted bank and other deposits is considered to be insignificant.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Financial guarantee contracts

For financial guarantee contracts, the maximum amount that the Group has guaranteed under the respective contracts was RMB6,236,854,000 (2020: RMB10,019,228,000) if the guarantees were called upon in their entirely, of which approximately RMB477,000,000 (2020: RMB2,005,008,000) and RMB5,759,854,000 (2020: RMB8,014,220,000) were provided to third parties and related parties, respectively, as at 31 December 2021. The details of the financial guarantees provided to the related parties are set out in note 53. The credit risks on financial guarantee contracts is limited as either the underlying borrowings are adequately secured by assets of the relevant borrowers or the relevant borrowers are with good historical repayment record.

In addition to those financial guarantees provided to related parties as set out in note 53, the Group also provided financial guarantees to certain third parties, former wholly-owned subsidiaries, for certain of their bank and other borrowings amounting to approximately RMB477,000,000 (2020: RMB2,005,008,000) as at 31 December 2021. These bank and other borrowings are secured by the borrowers' (i) property, plant and equipment, and (ii) trade receivables, contract assets and fee collection right in relation to sales of electricity.

At the end of the reporting period, the Directors performed impairment assessments on these financial guarantee contracts, and concluded that there has been no significant increase in credit risk since their initial recognition. Loss allowance is measured at 12m ECL. In the opinion of the Directors, the fair value of the guarantees was considered insignificant at initial recognition, and the ECLs as at 31 December 2021 and 2020 were insignificant.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

The Group's internal credit risk grading assessment comprising the following categories:

Internal credit rating	Description	Trade receivables/ contract assets	Other financial assets/other items
Low risk	The counterparty has a low risk of default	Lifetime ECL (not credit-impaired)	12m ECL
Medium risk	Debtor frequently repays after due dates but usually settle in full	Lifetime ECL (not credit-impaired)	12m ECL
High risk	There has been significant increases in credit risk since initial recognition through information developed internally or external resources	Lifetime ECL (not credit-impaired)	Lifetime ECL (not credit-impaired)
Loss	There is evidence indicating the asset is credit-impaired	Lifetime ECL (credit-impaired)	Lifetime ECL (credit-impaired)
Write-off	There is evidence indicating that the debtor is in severe financial difficulty and the Group has no realistic prospect of recovery	Amount is written off	Amount is written off

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

The tables below detail the credit risk exposures of the Group's financial assets, contract assets and financial guarantee contracts, which are subject to ECL assessment:

	Notes	External credit rating	Internal credit rating	12m or lifetime ECL	Gross carrying amount 2021 RMB'000	2020 RMB'000
Financial assets at amortised costs						
Trade receivables — goods and services (excluding sales of electricity)	25	N/A	(Note 1)	Lifetime ECL not credit-impaired	**276,230**	451,794
		N/A	Loss (Note 1)	Credit-impaired	**80,324**	79,805
		Baa2–Aaa (2020: Baa2–Aaa)*	Low risk (Note 1)	Lifetime ECL	**9,270,014**	5,434,299
Trade receivables — sales of electricity	25	N/A	(Note 1)	Lifetime ECL not credit-impaired	**1,932,025**	7,385,322
		Baa2–Aaa (2020: Baa2–Aaa)*	Low risk (Note 1)	Lifetime ECL	**49,889**	153,398
Amounts due from related companies (trade related)	27	N/A	Low risk (Note 1)	Lifetime ECL	**195,409**	90,421
			Loss (Note 1)	Credit-impaired	**324,341**	401,909
Amounts due from related companies (non-trade related)	27	N/A	(Note 2)	12m ECL	**385,769**	1,127,096
Other receivables	25	N/A	(Note 2)	12m ECL	**4,758,446**	2,046,345
		N/A	Loss (Note 1)	Credit-impaired	**1,454,096**	967,049
			Write off	Amounts is written off	**—**	71,440
Pledged and restricted bank and other deposits	29	N/A or Ba1–Aaa (2020: N/A or Ba1–Aaa)	N/A	12m ECL	**3,229,762**	4,546,676
Bank balances	29	Ba3–Aaa (2020: Ba3–Aaa)	N/A	12m ECL	**6,702,316**	1,709,585
Contract assets	26	N/A	Low risk (Note 1)	Lifetime ECL not credit-impaired	**41,179**	1,233,377
Financial guarantee contracts	44(b), 53	N/A	Low risk (Note 3)	12m ECL	**6,236,854#**	10,019,228#

* These represent credit rating grades of the relevant banks which issued the bills.

The amounts represent the maximum amount of the Group has guaranteed under the respective contracts.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Notes:

1. For trade receivables, amounts due from related companies (trade related) and contract assets, the Group has applied the simplified approach in IFRS 9 to measure the loss allowance at lifetime ECL. Except for debtors with significant outstanding balances, credit-impaired or to be settled by bills, the Group determines the ECL on these items collectively for debtors, grouped by internal credit rating.

   Trade receivables with bills received from trade customers amounted to approximately RMB9,319,903,000 (2020: RMB5,587,697,000) as at 31 December 2021. The Directors consider the ECL for these trade receivables is insignificant because the bills are issued by reputable banks with high credit ratings assigned by international credit rating agencies in the PRC.

   The following table provides information about the exposure to credit risk for trade receivables (excluding sales of electricity) which are assessed collectively as at 31 December 2021 within lifetime ECL (not credit-impaired). Debtors with significant balances and credit-impaired with gross carrying amounts of approximately RMB61,585,000 (2020: RMB149,130,000) and RMB80,324,000 (2020: RMB79,805,000) as at 31 December 2021 were assessed individually, respectively.

Internal credit rating	Trade receivables (excluding sales of electricity)			
	2021		2020	
	Range of loss rate	Gross carrying amount RMB'000	Range of loss rate	Gross carrying amount RMB'000
Low risk	0.5%–2.5%	214,645	0.5%–2.5%	302,664
Medium risk	10%	24,984	10%	33,473
High risk	25%	36,601	25%	115,657
		276,230		451,794

   The estimated loss rates are based on any historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information (for example, the current and forecasted economic growth rates in the PRC, which reflect the general economic conditions of the industry in which the debtors operate) that is available without undue cost or effort. Such forward-looking information is used by the management of the Group to assess both the current as well as the forecast direction of conditions at the reporting date. The grouping is regularly reviewed by management to ensure relevant information about specific debtors is updated.

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Notes: (Continued)

1. (Continued)

The following table provides information about the exposure to credit risk for trade receivables and contract assets in relation to its sales of electricity operation in the PRC which are assessed collectively within lifetime ECL (not credit-impaired).

Internal credit rating	2021 Trade receivables (sales of electricity) Average loss rate	2021 Trade receivables (sales of electricity) Gross carrying amount RMB'000	2021 Contract assets Average loss rate	2021 Contract assets Gross carrying amount RMB'000	2020 Trade receivables (sales of electricity) Average loss rate	2020 Trade receivables (sales of electricity) Gross carrying amount RMB'000	2020 Contract assets Average loss rate	2020 Contract assets Gross carrying amount RMB'000
Low risk	**0.15%**	**1,981,914**	**0.59%**	**41,179**	0.24%	7,385,322	0.34%	1,233,377

The Group always measures the loss allowance for trade receivables for sales of electricity and contract assets, including those with significant financing component at an amount equal to lifetime ECL. The estimated loss rates are based on historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information that is available without undue cost or effort. During the year ended 31 December 2021, GNE Group has recognised reversal of impairment loss on trade receivables and contract assets of approximately RMB7,108,000 (2020: recognised impairment loss of RMB10,000,000) and RMB5,160,000 (2020: recognised impairment loss of RMB5,398,000), respectively.

The following tables show the movement in lifetime ECL that has been recognised for trade receivables (excluding sales of electricity) and amounts due from related companies (trade related) under simplified approach:

Trade receivables (excluding sales of electricity)

	Lifetime ECL (not credit-impaired) RMB'000	Lifetime ECL (credit-impaired) RMB'000	Total RMB'000
At 1 January 2020	10,081	92,588	102,669
Transfer to credit-impaired	(3,564)	3,564	—
Impairment loss recognised	14,282	19,189	33,471
Impairment loss reversed	(67)	(1,645)	(1,712)
Amounts written off as uncollectible	—	(34,492)	(34,492)
At 31 December 2020	20,732	79,204	99,936
Transfer to credit-impaired	(5,653)	5,653	—
Impairment loss recognised	31,540	30,881	62,421
Impairment loss reversed	(35,031)	(35,414)	(70,445)
At 31 December 2021	11,588	80,324	91,912

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Notes: (Continued)

1. (Continued)

During the year ended 31 December 2021, impairment allowance for trade receivables of approximately RMB70,445,000 (2020: RMB1,712,000) was reversed as a result of subsequent settlement from the debtors.

For amounts due from related companies (trade related), debtors with significant balances with gross carrying amounts of approximately RMB519,750,000 (2020: RMB492,330,000) as at 31 December 2021 were assessed individually, in which the Directors considered the receivables of gross carrying amount of approximately RMB324,341,000 (2020: RMB401,909,000) from related companies were credit-impaired because there was a default of payment from the counterparty. An accumulated impairment loss of RMB305,751,000 (2020: RMB281,580,000) was recognised as at 31 December 2021 for such receivables. As the counterparty was actively pursuing additional financing, the Directors considered no further impairment to be recognised for the years ended 31 December 2021 and 2020. Credit risk of the remaining amounts due from related companies (trade related) is considered as limited because the related companies are with good repayment history and with positive operating results/cashflows.

Amounts due from related companies (trade related)

	Lifetime ECL (credit-impaired) RMB'000
At 1 January 2020 and 31 December 2020	281,580
Impairment loss recognised	24,171
At 31 December 2021	305,751

The following table shows movement in ECL that has been recognised for other receivables.

	Lifetime ECL (credit-impaired)			
	Consideration receivables RMB'000	**Other loan receivables** RMB'000	**Other receivables** RMB'000	**Total** RMB'000
At 1 January 2020	140,000	—	70,204	210,204
Impairment loss recognised	140,000	1,250	460,740	601,990
Amounts written off	—	(1,250)	(70,190)	(71,440)
At 31 December 2020	280,000	—	460,754	740,754
Impairment loss recognised	247,460	—	87,679	335,139
At 31 December 2021	527,460	—	548,433	1,075,893

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Notes: (Continued)

1. (Continued)

(i) For consideration receivables, the Directors considered the consideration receivables from the disposal of a former subsidiary with a gross carrying amount of approximately RMB510,000,000 as at 31 December 2021 were credit-impaired because there were defaults of payments from the counterparty since 2019. Such consideration receivables were assessed for ECL individually. A further impairment loss of approximately RMB151,308,000 (2020: RMB140,000,000) was recognised in the current year and which was mainly attributable to the increase in loss given default of the counterparty. The counterparty has pledged 100% (2020: 65%) of its equity interest in the former subsidiary as a collateral over these balances to the Group.

The Group disposed of its entire equity interest in an associate to an independent third party at a consideration of approximately RMB727,879,000 and received the consideration of RMB346,730,000 during the year ended 31 December 2020. Subsequent to the reporting period, further consideration of RMB89,943,000 was received. The Directors considered the consideration receivables from the disposal of a former associate with a gross carrying amount of RMB381,149,000 as at 31 December 2021 were credit-impaired because there were defaults of payments from the counterparty. Such consideration receivables were assessed for ECL individually. An impairment loss of approximately RMB96,152,000 was recognised for the year ended 31 December 2021.

(ii) For other loan receivables, during the year ended 31 December 2020, GNE Group has fully collected the loan receivable of RMB13,000,000 from a major borrower. For the remaining balance of RMB1,250,000, GNE Group considered the amount is not recoverable and had written-off the entire amount.

(iii) During the year ended 31 December 2021, the GNE Group recognised impairment loss on other receivables of RMB72,783,000 since the Directors of GNE considered the two counterparties are in severe financial difficulty.

During the year ended 31 December 2020, (1) GNE Group recognised full impairment loss on other receivables of approximately RMB304,587,000 since the directors of GNE considered the two counterparties are in severe financial difficulty; (2) the Group also recognised full impairment loss on a receivable of approximately RMB57,334,000 from the Lender (as defined in note 42), being the excess of the fair value of the Pledged Shares (as defined in note 42) over the relevant loan payable to the Lender, since, based on the information available, the directors of the Company considered it is difficult to recover the excess amount; (3) the impairment loss of approximately RMB98,819,000 for other receivables was recognised in profit or loss since the directors of the Company believed that it was difficult to recover such receivable.

Changes in the loss allowance for other receivables are mainly due to:

	Increase in lifetime ECL (credit-impaired)	
	2021	2020
	RMB'000	RMB'000
Other receivables with gross carrying amounts of RMB485,797,000 (2020: RMB968,299,000) defaulted and transferred to credit-impaired	**335,139**	601,990

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

Notes: (Continued)

2. For purposes of internal credit risk management, the Group uses past due information to assess whether credit risk has increased significantly since initial recognition.

   As at 31 December 2021 and 2020, the balance of other receivables and pledged deposits was not past due and the internal credit rating was considered as low risk. These are measured at lifetime ECL (not credit-impaired), except for other receivables as mentioned in note 1 above. Therefore, the ECL of balances of other receivables and pledged deposits was considered to be insignificant.

   As at 31 December 2021, amounts due from related companies (non-trade related) of approximately RMB6,455,000 (2020: RMB6,455,000) were past due. The ECL of these balances was considered to be insignificant.

3. For financial guarantee contracts, the gross carrying amount represents the maximum amount that the Group has guaranteed under the relevant contracts. The Directors assessed and considered the ECL for the financial guarantee contracts is insignificant.

Liquidity risk

In the management of the liquidity risk, the Group monitors and maintains a level of cash and cash equivalents deemed adequate by the management to finance the Group's operations and mitigate the effects of fluctuations in cash flows. The management monitors the utilisation of bank borrowings to ensure unutilised banking facilities are adequate and ensures compliance with loan covenants or to obtain waiver from the relevant banks if the Group is not able to satisfy any of the covenant requirements.

The Group's current assets exceeded its current liabilities by approximately RMB5,598 million as at 31 December 2021 (2020: the Group's current liabilities exceeded current assets by approximately RMB17,168 million). Further, the Group had cash and cash equivalents of RMB6,702 million (2020: RMB1,710 million) with total borrowings due within one year amounted to RMB5,839 million (2020: RMB27,518 million).

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Liquidity risk (Continued)

The Group finances its capital intensive operations by short-term and long-term bank and other borrowings and shareholders' equity.

The following tables detail the Group's remaining contractual maturity for its non-derivative financial liabilities and the Group's liquidity analysis for its derivative financial instrument. The tables have been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The maturity dates for other non-derivative financial liabilities are based on the contractual repayment dates.

The tables include both interest and principal cash flows. To the extent that interest are at floating rate, the undiscounted amount is derived from interest rate at the end of the reporting period.

Liquidity and interest risk tables

	Weighted average interest rate	On demand or within 1 year	1–2 years	2–5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	%	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 31 December 2021							
Non-derivative financial liabilities							
Trade and other payables	—	13,441,685	—	—	—	13,441,685	13,441,685
Amounts due to related companies	—	2,744,019	—	—	—	2,744,019	2,744,019
Loans from related companies	5.26%	34,027	—	—	—	34,027	32,325
Bank and other borrowings							
— fixed-rate	2.37%	1,798,909	755,097	148,307	149,543	2,851,856	2,632,535
— variable-rate	5.04%	3,415,453	1,089,566	1,153,469	658,151	6,316,639	5,950,341
Notes payables	10%	538,239	1,076,478	1,812,187	—	3,426,904	3,115,367
Lease liabilities	6%	351,592	159,810	109,786	340,693	961,881	785,120
Sub-total		22,323,924	3,080,951	3,223,749	1,148,387	29,777,011	28,701,392
Derivative financial instrument							
Put option of interest in Jiangsu Xinhua (Note 39)	—	17,247	—	—	—	17,247	17,247
Put option of interest in Kunshan GCL (Note 39)	—	18,023	—	—	—	18,023	18,023
Put option of interest in Mongolia Zhonghuan GCL (Note 39)	—	77,489	—	—	—	77,489	77,489
		112,759	—	—	—	112,759	112,759
Convertible bonds to non-controlling shareholders of a subsidiary	4.75	24,500	30,319	—	—	54,819	84,180
		22,461,183	3,111,270	3,223,749	1,148,387	29,944,589	28,898,331
Financial guarantee contracts (Note 1 below)	—	6,236,854	—	—	—	6,236,854	—

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Liquidity risk (Continued)

Liquidity and interest risk tables (Continued)

	Weighted average interest rate	On demand or within 1 year	1–2 years	2–5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	%	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 31 December 2020							
Non-derivative financial liabilities							
Trade and other payables	—	12,105,514	—	—	—	12,105,514	12,105,514
Amounts due to related companies	—	2,088,157	—	—	—	2,088,157	2,088,157
Loans from related companies	7.87	946,352	156,582	—	—	1,102,934	908,508
Bank and other borrowings							
— fixed-rate	5.41	13,454,169	497,976	1,150,900	737,182	15,840,227	15,411,959
— variable-rate	5.04	5,270,580	3,113,833	8,995,890	5,780,461	23,160,764	20,824,706
Notes payables	7.08	3,430,031	—	—	—	3,430,031	3,312,863
Lease liabilities	6.0	582,915	445,275	424,223	1,343,167	2,795,580	1,890,139
Sub-total		37,877,718	4,213,666	10,571,013	7,860,810	60,523,207	56,541,846
Derivative financial instrument							
Put option of interest in Jiangsu Xinhua (Note 39)	—	22,000	—	—	—	22,000	22,000
Put option of interest in Kunshan GCL (Note 39)	—	38,561	—	—	—	38,561	38,561
	—	60,561	—	—	—	60,561	60,561
Convertible bonds to non-controlling shareholders of subsidiary	4.75	24,500	30,319	—	—	54,819	49,000
		37,962,779	4,243,985	10,571,013	7,860,810	60,638,587	56,651,407
Financial guarantee contracts (Note 1 below)	—	10,019,228	—	—	—	10,019,228	—

44. FINANCIAL INSTRUMENTS (Continued)

44b. Financial risk management objectives and policies (Continued)

Liquidity risk (Continued)

Liquidity and interest risk tables (Continued)

The amounts included above for variable-rate borrowings are subject to change if changes in variable interest rates differ to those estimates of interest rates determined at the end of the reporting period.

The bank and other borrowings that are repayable on demand due to breach of loan covenants which the cross default clauses in several banks of the GNE Group have been triggered as a result of the GNE Group's involvement in certain litigation cases relating to claims by relevant claimants exceeded the limit of litigation amounts stipulated in the financial covenants of certain borrowings, as disclosed in notes 36, are included in the "on demand or within 1 year" time band in the above maturity analysis. As at 31 December 2021, the aggregate carrying amounts of these bank and other borrowings that are repayable on demand due to breach of loan covenants amounted to RMB213,125,000 (2020: RMB7,938,443,000). GNE Group has not received any request from any borrowers to accelerate the repayments of bank and other borrowings as a result of breach of financial covenants mentioned above. GNE Group is actively pursuing additional financing including, but not limited to, equity financing from issuance of new shares, extension of payment date for bank and other borrowings that are due for maturity and divesting certain of its existing solar farm projects in exchange for cash proceeds.

The following table details the Group's aggregate principal and interest cash outflows based on scheduled repayments dates set out in the loan agreements for bank and other borrowings that became repayable on demand due to the aforesaid breach of loan covenants. To the extent that interest flows are at variable rate, the undiscounted amount is derived from the weighted average interest rate at the end of the reporting period.

	Weighted average effective interest rate %	Less than 1 year RMB'000	1–2 years RMB'000	2–5 years RMB'000	Over 5 years RMB'000	Total undiscounted cash flow RMB'000	Carrying amount RMB'000
As at 31 December 2021	**5.41**	**130,346**	**22,853**	**77,478**	**8,309**	**238,986**	**231,125**
As at 31 December 2020	6.70	3,452,826	765,793	2,831,823	1,654,697	8,705,139	7,938,443

Notes:

1. The amounts included above for financial guarantee contracts are the maximum amounts the Group could be required to settle under the arrangements for the full guaranteed amounts if that amount is claimed by the counterparty to the guarantee. Based on expectations at the end of the reporting period, the Group considers that it is more likely than not that no amount will be payable under the arrangements. However, this estimate is subject to change depending on the probability of the counterparty claiming under the guarantee which is the likelihood that the financial receivables held by the counterparty which are guaranteed suffer credit losses.

45. FAIR VALUE MEASUREMENTS

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period. The following table gives information about how the fair values of these financial assets and financial liabilities are determined (in particular, the valuation techniques and inputs used).

Financial assets/financial liabilities	Fair value as at 2021 RMB'000	Fair value as at 2020 RMB'000	Fair value hierarchy	Valuation techniques and key inputs	Significant unobservable inputs	Relationship of significant unobservable inputs to fair value
1) Listed equity securities classified as held for trading investments	**1,473**	3,447	Level 1	Quoted bid price in an active market.	N/A	N/A
2) Listed equity investments measured at equity instruments at FVTOCI	**41,683**	21,073	Level 1	Quoted bid price in an active market.	N/A	N/A
3) Unlisted equity investments measured at financial assets at FVTPL	**6,910**	44,321	Level 3	Market comparison approach — in this approach, fair value was determined with reference to recent transaction price.	Adjusted market price between comparables and the underlying property held by the unlisted equity investments.	An increase in the price per square meter used would result in an increase in fair value measurement of the underlying property, and vice versa.
	41,916	35,636	Leve 3 (2020: Level 2)	Adjusted net assets value (2020: Quoted prices from recent transaction price.)	Net assets value (2020: N/A)	An increase in the net assets value would result in an increase in fair value and vice versa (2020: N/A)
	43,714	—	Level 2	Quoted prices from recent transaction price	N/A	N/A
4) Unlisted investments measured at financial assets at FVTPL	**203,870**	241,310	Level 3	Adjusted net assets value	Net assets value	An increase in the net assets value would result in an increase in fair value and vice versa
	421,790	800,763	Level 2	Quoted price from third party financial institutions which determined with reference to the value of underlying investments which mainly composed of listed shares and bonds.	N/A	N/A
5) Put option of interest in Jiangsu Xinhua classified as derivative financial instruments (Note a)	**17,247**	22,000	Level 3	Binomial Option Pricing Model, the key inputs are: underlying share price, risk free interest rate, probability, share price volatility and dividend yield.	Share price volatility of 68.2% and discount rate of 10.8% (2020: 70.3% and 11.1% respectively). Dividend yield of 0% (2020: 0%), taking into account management's experience and knowledge of the dividend to be paid. Probability to exercise of 10% (2020:10%)	The higher the volatility, the higher the fair value. The higher the discount rate, the lower the fair value. The higher the dividend yield, the lower the fair value. The higher the probability to exercise, the higher the fair value.

45. FAIR VALUE MEASUREMENTS (Continued)

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (Continued)

Financial assets/financial liabilities	Fair value as at 2021 RMB'000	2020 RMB'000	Fair value hierarchy	Valuation techniques and key inputs	Significant unobservable inputs	Relationship of significant unobservable inputs to fair value
6) Put option of interest in Kunshan GCL classified as derivative financial instrument (note b)	**18,023**	38,561	Level 3	Binomial Option Pricing Model, the key inputs are underlying share price, exercise price, risk free interest rate, probability, share price volatility and dividend yield.	Share price volatility of 71.96% to 72.09% (2020: 60.59% to 61.29%) Risk free rate of 2.64% to 2.65% (2020: 2.78% — 2.8%) Dividend yield of 0% (2020: 0%), taking into account management experience and knowledge of the dividend to the paid. Probability to exercise of 20% (2020: 20%)	The higher of volatility, the higher of fair value. The higher of risk free rate, the lower of fair value. The higher of dividend yield the lower of fair value. The higher the probability to exercise, the higher of fair value.
7) Put option of interest in Mongolia Zhonghuan GCL classified as derivative financial instrument (note c)	**77,489**	—	Level 3	Binomial Option Pricing Model, the key inputs are underlying share price, exercise price, risk free interest rate, probability, share price volatility and dividend yield.	Share price volatility of 55.1% — 57.1% (2020: N/A) Risk free rate of 2.57% to 2.7% Discount rate of 10.6% (2020: N/A) Probability to exercise of 20% (2020: N/A)	The higher of volatility, the higher of fair value. The higher of discount rate, the lower of fair value. The higher the probability to exercise, the higher of fair value.
8) Convertible bonds to non-controlling shareholders of subsidiary	**84,180**	49,000	Level 3	Binomial Option Pricing Model, the key inputs are underlying share price, exercise price, risk free interest rate, probability, share price volatility and dividend yield.	Share price volatility of 68.38% to 74.88% and risk free rate of 2.30% to 2.49% (2020: 71.69% to 81.67% and 2.56% to 2.65% respectively). Dividend yield of 0% (2020: 0%), taking into account management's experience and knowledge of the dividend to be paid. Probability to exercise of 95% (2020: 95%)	The higher of volatility, the higher of fair value. The higher of risk free rate, the lower of fair value. The higher of dividend yield the lower of fair value. The higher the probability to exercise, the higher of fair value.

Notes:

(a) If the share price volatility of the underlying shares was 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the derivative financial instruments would increase by approximately RMB851,000/ decrease by approximately RMB582,000 for the year ended 31 December 2021 (2020: RMB1,092,000 and RMB1,107,000 respectively).

If the discount rate used was 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the derivative financial instruments would increase by approximately RMB1,075,000/decrease by approximately RMB1,220,000 for the year ended 31 December 2021 (2020: RMB1,430,000 and RMB1,575,000 respectively).

If the probability used was 30% higher/10% lower while all the other variables were held constant, the loss on change in fair value of the derivative financial instruments would increase by approximately RMB51,602,000/decrease by approximately RMB17,201,000 for the year ended 31 December 2021.

(b) If the share price volatility of the underlying shares was 5% higher/lower while all the other variables were held constant, the loss on change in fair value of the derivative financial instruments would increase by approximately RMB1,068,000/ decrease by approximately RMB1,092,000 for the year ended 31 December 2021 (2020: RMB75,000 and RMB67,000 respectively).

If the discount rate used was 5% higher/lower while all the other variables were held constant, the loss on change in fair value of the derivative financial instruments would decrease by approximately RMB130,000/increase by approximately RMB130,000 for the year ended 31 December 2021 (2020: RMB146,000 and RMB147,000 respectively).

If the probability used was 30% higher/20% lower while all the other variables were held constant, the loss on change in fair value of the derivative financial instruments would increase by approximately RMB27,034,000/decrease by approximately RMB18,023,000 for the year ended 31 December 2021.

45. FAIR VALUE MEASUREMENTS (Continued)

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (Continued)

Notes: (Continued)

(c) If the share price volatility of the underlying shares was 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the derivative financial instrument would increase by approximately RMB12,192,000/decrease by approximately RMB12,159,000 for the year ended 31 December 2021.

If the discount rate used was multiplied by 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the derivative financial instrument would decrease by approximately RMB748,000/increase by approximately RMB755,000 for the year ended 31 December 2021.

If the probability used was 30% higher/20% lower while all the other variables were held constant, the loss on change in fair value of the derivative financial instruments would increase by approximately RMB21,936,000/decrease by approximately RMB14,624,000 for the year ended 31 December 2021.

(d) If the share price volatility of the underlying shares was 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the convertible bonds payables would increase by approximately RMB581,000/decrease by approximately RMB582,000 for the year ended 31 December 2021.

If the risk-free rate used was 5% higher/lower while all the other variables were held constant, the gain on change in fair value of the convertible bonds payables would decrease by approximately RMB20,000/increase by approximately RMB21,000 for the year ended 31 December 2021.

If the probability used was 5% higher/30% lower while all the other variables were held constant, the loss on change in fair value of the convertible bonds payables would increase by approximately RMB108,000/decrease by approximately RMB650,000 for the year ended 31 December 2021.

Other than an unlisted equity investments measured at financial assets at FVTPL which was transferred from level 2 to level 3 during the year ended 31 December 2021, there is no transfer among the different levels of the fair value hierarchy for the year ended 31 December 2021.

Other than the listed equity investment measured at equity instruments at FVTOCI (see note 21) which was transferred from level 1 to level 3 during the year ended 31 December 2020, there is no transfer among the different levels of the fair value hierarchy for the year ended 31 December 2020.

The Directors consider that the carrying amounts of financial assets and financial liabilities and associated interest receivables and interest payables recorded at amortised cost in the consolidated financial statements approximate their fair values.

Included in other expenses, gains and losses set out in note 9B, a net loss of RMB109,521,000 is related to financial assets and financial liabilities measured at FVTPL held during 2021 (2020: a net gain of RMB150,018,000).

45. FAIR VALUE MEASUREMENTS (Continued)

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (Continued)

Fair value hierarchy as at 31 December 2021

	Level 1 RMB'000	Level 2 RMB'000	Level 3 RMB'000	Total RMB'000
Financial assets at FVTPL				
Listed equity securities classified as held for trading investments	1,473	—	—	1,473
Other financial assets at FVTPL	—	465,504	252,696	718,200
Equity instruments at FVTOCI	41,683	—	—	41,683
Total	43,156	465,504	252,696	761,356
Financial liabilities				
Put option of interest in Jiangsu Xinhua classified as derivative financial instruments	—	—	17,247	17,247
Put option of interest in Kunshan GCL classified as derivative financial instrument	—	—	18,023	18,023
Put option of interest in Mongolia Zhonghuan GCL	—	—	77,489	77,489
Convertible bonds to non-controlling shareholders of subsidiary	—	—	84,180	84,180
Total	—	—	196,939	196,939

45. FAIR VALUE MEASUREMENTS (Continued)

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (Continued)

Fair value hierarchy as at 31 December 2020

	Level 1 RMB'000	Level 2 RMB'000	Level 3 RMB'000	Total RMB'000
Financial assets at FVTPL				
Listed equity securities classified as held for trading investments	3,447	—	—	3,447
Other financial assets at FVTPL	—	836,399	285,631	1,122,030
Equity instruments at FVTOCI	21,073	—	—	21,073
Total	24,520	836,399	285,631	1,146,550
Financial liabilities				
Put option of interest in Jiangsu Xinhua classified as derivative financial instruments	—	—	22,000	22,000
Put option of interest in Kunshan GCL classified as derivative financial instrument	—	—	38,561	38,561
Convertible bonds to non-controlling shareholders of subsidiary	—	—	49,000	49,000
Total	—	—	109,561	109,561

(ii) Reconciliation of Level 3 fair value measurements

31 December 2021

	Put option of interest in Jiangsu Xinhua classified as derivative financial instruments RMB'000	Put option of interest in Kunshan GCL classified as derivative financial instruments RMB'000	Put option of interest in Mongolia Zhonghuan GCL classified as derivative financial instruments RMB'000	Unlisted investments/ equity instruments measured at financial assets as FVTPL RMB'000	Convertible bonds to non-controlling shareholders of subsidiary RMB'000	Total RMB'000
Opening balance	(22,000)	(38,561)	—	285,631	(49,000)	176,070
(Loss) gain in profit or loss	4,753	52,170	(77,489)	(37,850)	(35,180)	(93,596)
Disposal of investment	—	—	—	(30,721)	—	(30,721)
Transfer from Level 2	—	—	—	35,636	—	35,636
Initial recognition	—	(31,632)	—	—	—	(31,632)
Closing balance	(17,247)	(18,023)	(77,489)	252,696	(84,180)	55,757

45. FAIR VALUE MEASUREMENTS (Continued)

(ii) Reconciliation of Level 3 fair value measurements

31 December 2020

	Convertible bonds receivable RMB'000	Listed equity investment measured at FVTOCI RMB'000	Put option of interest in Jiangsu Xinhua classified as derivative financial instruments RMB'000	Put options of interest in Kunshan GCL classified as derivative financial instruments RMB'000	Asset management plans investments held by GNE measured at financial assets at FVTPL RMB'000	Unlisted investments/ equity instruments measured at financial assets as FVTPL RMB'000	Convertible bonds to non-controlling shareholders of subsidiary RMB'000	Total RMB'000
Opening balance	101,097	—	(133,400)	—	100,000	257,542	—	325,239
Transfer from Level 1	—	31,927	—	—	—	—	—	31,927
Capital contribution	—	—	—	—	—	20,000	—	20,000
(Loss) gain in profit or loss	(403)	—	111,400	—	13,027	11,922	—	135,946
Loss in OCI	—	(31,927)	—	—	—	—	—	(31,927)
Receipt of interests	(4,330)	—	—	—	—	(3,833)	—	(8,163)
Redemption of convertible bonds	(96,364)	—	—	—	—	—	—	(96,364)
Disposal of investment	—	—	—	—	(113,027)	—	—	(113,027)
Initial recognition	—	—	—	(38,561)	—	—	(49,000)	(87,561)
Closing balance	—	—	(22,000)	(38,561)	—	285,631	(49,000)	176,070

Of the total losses for the year included in profit or loss, RMB93,596,000 (2020: total gain for the year, RMB135,946,000) related to put options of interest in Jiangsu Xinhua, Kunshan GCL and Mongolia Zhonghuan GCL, convertible bonds receivable, unlisted investments/equity instruments measured at financial assets at FVTPL, asset management plans investments measured at financial assets at FVTPL and convertible bonds to non-controlling shareholders of shareholders of a subsidiary held at the end of the reporting period which fair value gains or losses were included in other expense, gains and losses, net.

Fair value measurements and valuation processes

In estimating the fair value of an asset or a liability, the Group uses market-observable data to the extent they are available. Where Level 1 inputs are not available, the Group performs discounted cash flow to derive the present value of other investments or engages third party qualified valuers to perform the valuation of convertible bonds, the put option of interest in Jiangsu Xinhua, Kunshan GCL and Mongolia Zhonghua GCL classified as derivative financial instruments, unlisted investments measured at financial assets at FVTPL, unlisted equity investments measured at financial assets at FVTPL and asset management plans investments held by GNE recognised as financial assets at FVTPL and convertible bonds to non-controlling shareholders of shareholders of a subsidiary. The Directors work closely with the qualified valuers to establish appropriate valuation techniques and inputs to the model. The management of the Group reports the findings to the Directors every half year to explain the cause of fluctuations in the fair value of the assets and liabilities.

Information about the valuation techniques and inputs used in determining the fair value of various assets and liabilities are disclosed above.

46. TRANSFERS OF FINANCIAL ASSETS

During the current year, the Group endorsed certain bills received from customers for the settlement of payables for the purchase of plant and machinery, construction costs and trade and other payables; and discounted certain bills received by the Group to banks for financing.

The following were bills received by the Group as at 31 December 2021 and 2020 that were discounted to banks or endorsed to creditors, respectively, on a full recourse basis. As the Group has not transferred the significant risks and rewards relating to these bills, it continues to recognise the full carrying amount of trade receivables and recognised the cash received on the transfer as secured borrowings or the amounts outstanding with the creditors remain to be recognised as trade and other payables. These financial assets are carried at amortised cost in the Group's consolidated statement of financial position.

At 31 December 2021

	Bills discounted to banks with full recourse RMB'000	**Bills endorsed to creditors with full recourse RMB'000**	**Total RMB'000**
Carrying amount of transferred assets	**651,321**	**6,691,685**	**7,343,006**
Carrying amount of associated liabilities	**(651,321)**	**(6,691,685)**	**(7,343,006)**
Net position	**—**	**—**	**—**

At 31 December 2020

	Bills discounted to banks with full recourse RMB'000	Bills endorsed to creditors with full recourse RMB'000	Total RMB'000
Carrying amount of transferred assets	1,802,544	2,869,460	4,672,004
Carrying amount of associated liabilities	(1,802,544)	(2,869,460)	(4,672,004)
Net position	—	—	—

The Directors consider that the carrying amounts of the endorsed and discounted bills approximate their fair values.

The finance costs recognised for bills discounted to banks were included in interest on bank and other borrowings (note 8).

47. COMMITMENTS, CONTINGENT ASSETS AND LIABILITIES

(i) Commitments

	2021 **RMB'000**	2020 RMB'000
Capital commitments		
Capital expenditure in respect of acquisitions of property, plant and equipment contracted for but not provided for	**8,846,821**	500,587
Other commitments		
Commitment to contribute share capital to investments in joint ventures, associates and/or other investments contracted for but not provided for	**900,000**	1,628,500
Commitment to contribute share capital to financial assets at FVTPL contracted for but not provided for	**60,000**	60,000
	9,806,821	2,189,087

(ii) Contingent asset

During the year ended 31 December 2019, the power generator and related equipment of a solar power plant of the GNE Group located in Jiangsu Province and Yunnan Province, the PRC, was damaged during the typhoon. The GNE Group has insurance policies in place to cover damages to property, plant and equipment amounting to RMB16,715,000 (2020: RMB53,437,000) incidental to the typhoon. The Group received RMB24,895,000 (2020: RMB3,798,000) from insurance claim as compensation income. During the year ended 31 December 2021, the GNE Group fully claimed the remaining compensation.

(iii) Contingent liabilities

Except for the financial guarantee contracts provided by the Group as disclosed in note 53, the Group had no any other material contingent liability as at 31 December 2021 and 2020.

48. PLEDGE OF OR RESTRICTIONS ON ASSETS

Pledge of assets

At the end of the reporting period, the Group had pledged the following assets to secure credit facilities of the Group:

	2021 RMB'000	2020 RMB'000
Bank and other borrowings secured by:		
Pledged and restricted bank and other deposits (included pledged and restricted bank and other deposits classified as held for sale)	**717,480**	929,787
Right-of-use assets	**562,908**	661,264
Investment properties	**56,494**	61,148
Property, plant and equipment	**7,604,712**	21,748,494
Trade receivables and contract assets	**2,485,850**	10,060,583
	11,427,444	33,461,276
Lease liabilities secured by:		
Pledged and restricted bank and other deposits	**113,400**	87,620
Total	**11,540,844**	33,548,896

Certain subsidiaries pledged their fee collection rights in relation to the sales of electricity. As at 31 December 2021, trade receivables and contract assets in respect of such fee collection rights pledged amounted to approximately RMB1,842,685,000 (2020: RMB8,061,158,000).

As at 31 December 2021, the Group had pledged property, plant and equipment and right-of-use assets of approximately RMB65,421,000 (2020: RMB135,473,000) and RMB125,538,000 (2020: RMB146,875,000), respectively, to secure bank and other borrowings of an associate and a joint venture of the Group.

In addition to the pledged assets above, there are property, plant and equipment of approximately RMB47,514,000 (2020: RMB51,321,000), the right-of-use assets of approximately RMB10,830,000 (2020: nil), restricted bank deposits of approximately RMB2,398,882,000 (2020: RMB3,573,150,000) and trade receivables of approximately RMB752,791,000 (2020: RMB561,674,000) which had been pledged to secure the issuance of bills and short-term letters of credit for trade and other payables.

48. PLEDGE OF OR RESTRICTIONS ON ASSETS (Continued)

Restrictions on assets

In addition, lease liabilities of approximately RMB785,120,000 (2020: RMB1,890,139,000) were recognised against related right-of-use assets of approximately RMB1,353,734,000 (2020: RMB2,375,811,000) as at 31 December 2021. The lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessors. Leased assets may not be used as security for borrowing purposes.

49. SHARE-BASED PAYMENT TRANSACTIONS

49a. The Company

(I) Equity-settled share option scheme

On 22 October 2007, a Pre-IPO Share Option Scheme ("Pre-IPO Share Option Scheme") and a Share Option Scheme ("Share Option Scheme") were adopted by the Company pursuant to the resolution of the sole shareholder. Under the schemes, the Company may grant option to directors, employees of the Company and its subsidiaries and qualifying grantees to subscribe for shares of the Company. Options granted are exercisable during the period after the respective vesting date to the last day of the ten-year period after the grant date.

At 31 December 2021, the number of shares in respect of which options had been granted and remained outstanding under the Company's share option schemes was 55,126,458 (2020: 123,717,973) shares, representing 0.2% (2020: 0.6%) of the issued share capital of the Company at that date.

The total number of shares in respect of which options may be granted under the Share Option Scheme are not permitted to exceed 10% of the shares of the Company in issue at any point in time, without prior approval from the Company's shareholders. The number of shares issued and to be issued in respect of which options granted and may be granted to any individual in any one year is not permitted to exceed 1% of the shares of the Company in issue at any point in time, without prior approval from the Company's shareholders.

The exercise price is determined by the Directors and will not be less than the higher of (i) the closing price of the Company's shares on the date of grant; (ii) the average closing price of the shares of the Company for the five business days immediately preceding the date of grant; and (iii) the nominal value of the Company's share.

Pursuant to the terms of the Pre-IPO Share Option Scheme and Share Option Scheme, the exercise price and number of share options were being adjusted as a result of the determination of entitlements to a rights issue of the Company on 26 January 2016. Details of the adjustments are disclosed in the announcement of the Company on 26 January 2016.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49a. The Company (Continued)

(I) Equity-settled share option scheme (Continued)

Movements of share options granted during the year are as follows:

(i) Share Option Scheme

2021

	Exercise price	Date of grant	Exercisable period	Number of shares issuable under options: Outstanding at 1 January 2021	During the year: Transfer (Note 2)	During the year: Exercised (Note 1)	During the year: Forfeited	During the year: Expired	Outstanding at 31 December 2021
Directors	HK$1.16	19.02.2016	15.03.2016 to 18.02.2026	5,942,302	(1,712,189)	—	—	—	4,230,113
	HK$1.324	29.03.2016	18.04.2016 to 28.03.2026	7,944,454	—	—	—	—	7,944,454
Employees and others	HK$3.296	12.01.2011	01.03.2011 to 11.01.2021	5,035,850	—	—	—	(5,035,850)	—
	HK$4.071	15.07.2011	01.09.2011 to 14.07.2021	4,834,415	—	—	—	(4,834,415)	—
	HK$1.630	05.07.2013	16.09.2013 to 04.07.2023	14,080,237	—	(5,465,902)	(3,589,005)	—	5,025,330
	HK$2.867	24.03.2014	26.05.2014 to 23.03.2024	21,352,004	—	—	(18,733,362)	—	2,618,642
	HK$1.16	19.02.2016	15.03.2016 to 18.02.2026	60,500,031	1,712,189	(12,518,339)	(18,414,642)	—	31,279,239
	HK$1.324	29.03.2016	18.04.2016 to 28.03.2026	4,028,680	—	—	—	—	4,028,680
				123,717,973	—	(17,984,241)	(40,737,009)	(9,870,265)	55,126,458
Exercisable at 1 January 2021/ 31 December 2021				123,717,973	—				55,126,458
Weighted average exercise price (HK$)				1.72	—	1.30	1.99	3.68	1.32

2020

	Exercise price	Date of grant	Exercisable period	Number of shares issuable under options: Outstanding at 1 January 2020	During the year: Exercised (Note 1)	During the year: Forfeited	Outstanding at 31 December 2020
Directors	HK$1.16	19.02.2016	15.03.2016 to 18.02.2026	5,942,302	—	—	5,942,302
	HK$1.324	29.03.2016	18.04.2016 to 28.03.2026	7,944,454	—	—	7,944,454
Employees and others	HK$3.296	12.01.2011	01.03.2011 to 11.01.2021	5,035,850	—	—	5,035,850
	HK$4.071	15.07.2011	01.09.2011 to 14.07.2021	4,834,415	—	—	4,834,415
	HK$1.630	05.07.2013	16.09.2013 to 04.07.2023	15,354,308	—	(1,274,071)	14,080,237
	HK$2.867	24.03.2014	26.05.2014 to 23.03.2024	21,352,004	—	—	21,352,004
	HK$1.16	19.02.2016	15.03.2016 to 18.02.2026	73,054,277	(3,389,000)	(9,165,246)	60,500,031
	HK$1.324	29.03.2016	18.04.2016 to 28.03.2026	4,028,680	—	—	4,028,680
				137,546,290	(3,389,000)	(10,439,317)	123,717,973
Exercisable at 1 January 2020/ 31 December 2020				119,127,748			123,717,973
Weighted average exercise price (HK$)				1.67	1.16	1.22	1.72

Notes:

1. In respect of the share options exercised during the year, the weighted average share price at the dates of exercise was HK$2.56 (2020: HK$1.45).

2. Mr. Jiang Wenwu resigned as a director of the Company in June 2021. The Board appreciates his services for the Company in the past few years. The Board decides the entitlement of share option shall remain unchanged.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49a. The Company (Continued)

(II) Equity-settled share award scheme

(i) Share award scheme

The Company adopted the Scheme on the Adoption Date for a duration of the later of (i) the 10th anniversary of the Adoption Date, and (ii) such date that all awards outstanding are fully vested, settled, lapsed, forfeited or cancelled. The purpose of the Scheme is, through the grant of the share awards to certain of the Directors and employees ("Eligible Persons") of the Group, to effectively attract, retain and incentivise core employees of the Group and align their interests and growth with the Group as a whole.

The Company has entered into a trust deed with the Trustee for the purpose of facilitating the purchase, holding and sale of shares in the Group for the benefit of the Eligible Persons of the Group. The maximum number of shares that can be held by the Trustee under the Scheme is limited to 2% of the issued share capital of the Company from time to time. All the shares purchased by the Group through the Trustee on the Stock Exchange are recorded as shares held for the share award scheme in the Group's reserves and are for the Scheme only.

The board of the directors of the Company (the "Board") may, from time to time, at its absolute discretion, select any Eligible Persons to participate in the Scheme as grantees ("Award Grantees"), subject to the terms and conditions set out in the rule of the Scheme. In determining the Award Grantees, the Board shall take into consideration matters including, but without limitation, the present and expected contribution of the relevant Award Grantees to the Group. An Award Grantee may be granted an award by the Company during the award period which will vest over a period of time and on such other conditions to be determined by the Board in its absolute discretion.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49a. The Company (Continued)

(II) Equity-settled share award scheme (Continued)

(i) Share award scheme (Continued)

The Board may from time to time while the Scheme is in force and subject to all applicable laws, determine such vesting criteria and conditions or periods for the award to be vested thereunder. Details of the Scheme are set out in the announcement of the Company dated 16 January 2017. For the purpose of the Scheme, the Company purchased its own ordinary shares through the Trustee as follows:

Month of purchase	**Number of ordinary shares**	**Aggregate consideration paid**	**Equivalent aggregate consideration paid**
		HK$'000	RMB'000
May 2017	182,998,888	163,258	141,692
June 2017	40,000,000	32,729	28,405
June 2018	100,000,000	81,385	66,532
	322,998,888	277,372	236,629

No award shares were granted for both years.

(III) Cash-settled share award scheme

US Equity Incentive Plan granted by GCL US II

GCL Solar Materials US II, LLC ("GCL US II") adopted an equity plan on 31 March 2017 ("Plan Date") pursuant to a resolution passed on the same date for the purpose of providing incentives to eligible employees and which will expire on the later of (i) the sixth anniversary of adoption date, or (ii) such date that all class B units of GCL US II ("Class B Units") outstanding are fully vested, settled, lapsed, forfeited or cancelled (as the case may be) (the "US Equity Incentive Plan"). Under the US Equity Incentive Plan, the board of directors of GCL US II may grant Class B Units of GCL US II to eligible employees. Class B Units shall be non-voting and the aggregate number of Class B Units authorised for issuance shall be 12,750,000 which represents up to 10% of the fully diluted equity of GCL US II as of the closing date of the SunEdison Agreement on 31 March 2017 (i.e. US$127,500,000).

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49a. The Company (Continued)

(III) Cash-settled share award scheme (Continued)

US Equity Incentive Plan granted by GCL US II (Continued)

In 2017, GCL US II issued Class B Units to the grantees of the US Equity Incentive Plan (the "US Grantees") which will be vested in full in three years with one-third to be vested on each of the first, the second and the third anniversary of the Plan Date, respectively.

Movement of Class B Units granted during the year is as follows:

	Number of Class B Units
Outstanding at 1 January 2020	3,118,513
Exercised during the year	(3,074,265)
Forfeited during the year	(44,248)
Outstanding at 31 December 2020 and 2021	—

The US Grantee shall be entitled, on the first and second anniversaries of the Plan Date, to sell 50% of the Class B Units vested to GCL US II or another member of the Group selected by GCL US II at a price equal to US$1 each (the "Floor Price"). The Grantee shall be entitled on the third anniversary of the Plan Date to sell all the vested Class B Units to GCL US II or another member of the Group selected by GCL US II at the higher of valuation of the Class B Units as of the third anniversary of the Plan Date or the Floor Price. If, on the third anniversary of the Plan Date, the Group at its sole and absolute discretion, does not intend to make an IPO of the solar material business unit in the USA in the 36 months following the third anniversary of the Plan Date, GCL US II shall purchase all the vested Class B Units at the price set out above. Valuation shall include GCL Solar Materials US I, LLC, GCL US II, GCL Solar Materials US III, LLC, GCL Solar Materials US IV, LLC and assets and operations acquired pursuant to the SunEdison Agreement, however and wherever held by the Group and take into account all monetisation transactions as defined in the US Equity Incentive Plan for the purposes of valuation.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49a. The Company (Continued)

(III) Cash-settled share award scheme (Continued)

US Equity Incentive Plan granted by GCL US II (Continued)

In the event there is an IPO prior to the sixth anniversary of the Plan Date and Class B Units are outstanding at the time of such IPO, such Class B Units will be converted into shares of common stock of the company whose shares are sold in the IPO (the "New IPO Company"). The Group will set the conversion rate of Class B Units into shares of the common stock of the New IPO Company upon the conversion date. If there are any vested Class B Units remaining as of the sixth anniversary of the Plan Date and there has been no IPO by that time, there shall be a valuation and GCL US II shall purchase all the remaining vested Class B Units at the price determined based on the higher of valuation of the Class B Units as of the sixth anniversary of the Plan Date or the Floor Price.

The settlements mention above for the vested Class B Units shall be made, in the sole discretion of GCL US II in (i) cash; (ii) shares of a Group entity that is publicly listed in the USA or (iii) a combination of (i) and (ii).

In the opinion of the Directors, the fair value of the outstanding Class B Units as at 31 December 2019 is not higher than US$1 per unit. No liabilities were recorded in its consolidated statement of financial position as at 31 December 2020 in respect of the cash-settled share award. During the year ended 31 December 2020, certain US Grantees exercised their rights to sell the Class B units to GCL US II at US$1 per units, resulting in a payment of RMB21,412,000. As at 31 December 2021 and 2020, there were no outstanding number of Class B units.

49b. Share option plan of GNE

Equity-settled share option scheme

GNE's new share option scheme was adopted pursuant to a resolution passed on 15 October 2014 ("New Share Option Scheme") for the primary purpose of providing incentives to the directors of GNE and eligible employees. Under the New Share Option Scheme, the board of directors of GNE may grant options to eligible employees, including the directors of GNE, to subscribe for shares in GNE. Additionally, GNE may, from time to time, grant share options to independent third parties for settlement in respect of goods or services provided to GNE.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49b. Share option plan of GNE (Continued)

Equity-settled share option scheme (Continued)

On 26 February 2021 and 3 November 2021, the GNE granted 370,516,200 and 60,500,000 share options to the employees and directors under the New Share Option Scheme respectively. Each share option entitles the holder to subscribe for one share of HK$0.00416 and HK$0.00416 of the GNE at an exercise price of HK$0.384 and HK$0.357 respectively. The contractual life of these share options is the period from the date on which an option certificate is issued after acceptance by the grantees and expiring on 25 February 2031 and 2 November 2031 respectively. Further details are set out in the GNE's announcement dated 26 February 2021 and 3 November 2021 respectively.

The following table discloses the terms and conditions of the grants are as follows, whereby all options are settled by physical delivery of shares:

	Number of options	Vesting conditions	Contractual life of options
Options granted to directors of GNE:			
24 July 2015	8,052,800	Exercisable in five even tranches immediately from 24 July of each year from 2015 to 2019	Expire at the close of business on 23 July 2025
3 November 2021	60,500,000	Exercisable in four even tranches immediately from 3 November of each year from 2022 to 2025	Expire at the close of business on 2 November 2031
Options granted to employees:			
23 October 2014	52,343,000	Exercisable in five even tranches immediately from 24 November of each year from 2014 to 2018	Expire at the close of business on 22 October 2024
24 July 2015	73,511,998	Exercisable in five even tranches immediately from 24 July of each year from 2015 to 2019	Expire at the close of business on 23 July 2025
26 February 2021	370,516,250	Exercisable in four even tranches immediately from 26 February of each year from 2022 to 2025	Expire at the close of business on 25 February 2031

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49b. Share option plan of GNE (Continued)

Equity-settled share option scheme (Continued)

The options outstanding at 31 December 2021 had a weighted average remaining contractual life of 8.23 years (2020: 4.13 years).

The fair value of services received in return for share options granted during the year ended 31 December 2021 is measured by reference to the fair value of share options granted. The estimate of the fair value of the share options granted was measured based on the Binomial Option pricing model for share options granted on 23 October 2014, 26 February 2021 and 3 November 2021, while based on the Monte Carlo mode for share options granted on 24 July 2015. The contractual life of the share option and expectations of early exercise were incorporated into the respective models.

	Granted on 26 February 2021	**Granted on 3 November 2021**
Fair value of and assumptions for share options		
Fair value at measurement date	HK$0.12	HK$0.12
Share price	HK$0.375	HK$0.330
Exercise price	HK$0.384	HK$0.357
Weighted average volatility	64.71%	63.42%
Weighted average share option life	10 years	10 years
Expected dividends	0%	0%
Risk-free interest rate (based on Exchange Fund Notes)	1.43%	1.50%

The expected volatility is based on the historic volatility (calculated based on the weighted average remaining life of the share options), adjusted for any expected changes to future volatility based on publicly available information. Expected dividends were based on historical dividends. Changes in the subjective input assumptions could materially affect the fair value estimate.

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49b. Share option plan of GNE (Continued)

Equity-settled share option scheme (Continued)

At 31 December 2021, the number of shares which had been granted under the New Share Option Scheme and remained outstanding was approximately 545,321,748 (2020: 442,430,898) shares, representing 2.6% (2020: 2.3%) of the issued share capital of GNE at that date. The maximum number of shares which may be issued upon exercise of all options to be granted under the New Share Option Scheme shall not in aggregate exceed 10% of the shares of GNE in issue at the date of approval of the New Share Option Scheme. The maximum entitlement for any one participant is that the total number of shares issued or to be issued upon exercise of the options granted to each participant in any twelve-month period shall not exceed 1% of the total number of shares in issue.

The exercise price is determined by the directors of GNE, and will not be less than the higher of (i) the closing price of GNE's shares on the date of grant, (ii) the average closing price of GNE's shares for the five business days immediately preceding the date of grant; and (iii) the nominal value of GNE's share.

The following table discloses movements of GNE's share options:

2021

				Number of shares issuable under options			
	Exercise price	Date of grant	Exercisable period	Outstanding at 1 January 2021	During the year Granted	During the year Forfeited	Outstanding at 31 December 2021
Directors of GNE	HK$1.1798	23.10.2014	24.11.2014 to 22.10.2024	58,382,800	—	(58,382,800)	—
	HK$0.606	24.07.2015	24.07.2015 to 23.07.2025	24,460,380	—	(16,407,580)	8,052,800
	HK$0.357	3.11.2021	3.11.2021 to 2.11.2031	—	60,500,000	—	60,500,000
Employees and others providing similar services	HK$1.1798	23.10.2014	24.11.2014 to 22.10.2024	194,797,232	—	(142,454,032)	52,343,200
	HK$0.606	24.07.2015	24.07.2015 to 23.07.2025	164,790,486	—	(91,278,488)	73,511,998
	HK$0.384	26.02.2021	26.02.2021 to 25.02.2031	—	370,516,250	(19,602,500)	350,913,750
				442,430,898	431,616,250	(328,125,400)	545,321,748
Exercisable at 1 January 2021/ 31 December 2021				253,180,032			52,343,200
Weighted average exercise price (HK$)				0.9344	0.3802	0.9439	0.4906

49. SHARE-BASED PAYMENT TRANSACTIONS (Continued)

49b. Share option plan of GNE (Continued)

Equity-settled share option scheme (Continued)

2020

	Exercise price	Date of grant	Exercisable period	Number of shares issuable under options Outstanding at 1 January 2020	During the year Forfeited	Outstanding at 31 December 2020
Directors	HK$1.1798	23.10.2014	24.11.2014 to 22.10.2024	58,382,800	—	58,382,800
	HK$0.606	24.07.2015	24.07.2015 to 23.07.2025	40,565,980	(16,105,600)	24,460,380
Employees and others providing similar services	HK$1.1798	23.10.2014	24.11.2014 to 22.10.2024	214,929,232	(20,132,000)	194,797,232
	HK$0.606	24.07.2015	24.07.2015 to 23.07.2025	194,183,206	(29,392,720)	164,790,486
				508,061,218	(65,630,320)	442,430,898
Exercisable at 1 January 2020/31 December 2020				273,312,032		253,180,032
Weighted average exercise price (HK$)				0.9147	0.7820	0.9344

During the current year, share-based payment expense of RMB20,718,000 (2020: nil) had been recognized in profit or loss in respect of equity-settled share option scheme. In addition, certain share options granted to employees were forfeited after the vesting period, approximately RMB62,129,000 (2020: RMB21,279,000) was transferred to the Group's accumulated profits from share options reserve and non-controlling interests.

At each reporting date, the Group revises its estimates of the number of options that are expected to ultimately vest. The impact of the revision of the estimates, if any, is recognized in profit or loss, with a corresponding adjustment to the share options reserve.

50. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flow were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Dividend payables RMB'000 (note 31)	Interest payables RMB'000 (note 31)	Amounts due to related companies (non-trade) RMB'000 (note 32)	Loans from related companies RMB'000 (note 33)	Bank and other borrowings RMB'000 (note 36)	Lease liabilities RMB'000 (notes 37)	Notes payables RMB'000 (note 38)	Total RMB'000
At 1 January 2020	236,453	395,339	554,927	1,775,561	47,262,722	2,441,519	3,892,717	56,559,238
Financing cash flows	(45,000)	(721,518)	1,194,696	(267,733)	(3,513,194)	(502,292)	(685,421)	(4,540,462)
Exchange realignment	—	—	—	2,103	(132,720)	4,966	(207,927)	(333,578)
Finance costs (note 8)	—	546,824	—	62,440	2,120,788	111,747	313,494	3,155,293
Interest capitalised (note 8)	—	12,810	—	—	6,967	—	—	19,777
Dividends declared to non-controlling interests	52,644	—	—	—	—	—	—	52,644
Disposal of subsidiaries	(3,920)	(11,841)	(320)	(87,970)	(4,123,896)	(131,822)	—	(4,359,769)
New leases entered	—	—	—	—	—	66,320	—	66,320
Lease terminated	—	—	—	—	—	(48,441)	—	(48,441)
Set off with advance to non-controlling interests	(2,796)	—	—	—	—	—	—	(2,796)
Set off with amounts due from associates			(293,844)	(62,994)	—	—	—	(356,838)
Net off with other investment	—	—	—	—	(113,027)	—	—	(113,027)
Set off with amount due from a related party	—	—	—	—	(8,000)	—	—	(8,000)
Set off with other receivable	—	—	418,400	—	(41,185)	—	—	377,215
Reclassification from loans from a related company				(509,814)	509,814			—
Transfer to liabilities associated with assets classified as held-for-sale	—	(3,812)	—	(3,085)	(1,712,866)	(51,858)	—	(1,771,621)
Non-cash settlement of discounted bills	—	—	—	—	(4,018,738)	—	—	(4,018,738)
At 31 December 2020	**237,381**	**217,802**	**1,873,859**	**908,508**	**36,236,665**	**1,890,139**	**3,312,863**	**44,677,217**
Financing cash flows	**(289,582)**	**(10,361)**	**615,284**	**(918,106)**	**(5,034,141)**	**(591,603)**	**(213,559)**	**(6,442,068)**
Exchange realignment	**—**	**(2,364)**	**—**	**—**	**(54,042)**	**—**	**(74,569)**	**(130,975)**
Finance costs (note 8)	**—**	**—**	**—**	**41,923**	**1,466,418**	**71,070**	**323,731**	**1,903,142**
Interest capitalised (note 8)	**—**	**—**	**—**	**—**	**5,513**	**—**	**—**	**5,513**
Dividends declared to non-controlling interests	**83,922**	**—**	**—**	**—**	**—**	**—**	**—**	**83,922**
Disposal of subsidiaries	**—**	**(202,132)**	**—**	**—**	**(20,843,079)**	**(595,025)**	**—**	**(21,640,236)**
New leases entered	**—**	**—**	**—**	**—**	**—**	**59,544**	**—**	**59,544**
Lease terminated	**—**	**—**	**—**	**—**	**—**	**(39,393)**	**—**	**(39,393)**
Reclassify to interest payable from senior notes	**—**	**233,099**	**—**	**—**	**—**	**—**	**(233,099)**	**—**
Transfer to liabilities associated with assets classified as held-for-sale	**—**	**—**	**—**	**—**	**(454,680)**	**(9,612)**	**—**	**(464,292)**
Non-cash settlement of discounted bills	**—**	**—**	**—**	**—**	**(2,739,778)**	**—**	**—**	**(2,739,778)**
At 31 December 2021	**31,721**	**236,044**	**2,489,143**	**32,325**	**8,582,876**	**785,120**	**3,115,367**	**15,272,596**

Note: The cash flows from dividends payables, interest payables, amounts due to related companies (non-trade), loans from related companies, bank and other borrowings, lease liabilities, notes payables make up the net amount of proceeds and repayments in the consolidated statement of cash flows.

51. EVENTS AFTER REPORTING PERIOD

Other than those disclosed elsewhere in these consolidated financial statements, the Group has the following significant events after the reporting period:

(a) On 25 January 2022, the GNE Group entered into a share transfer agreement with Hunan Xinhua to dispose of its 100% equity interest in a wholly-owned subsidiary, namely Ningxia Xinken Jianquan Photovoltaic Power Company Limited (寧夏鑫墾簡泉光伏電力有限公司), at a consideration of RMB8,800,000 minus expected rectification costs of RMB2,280,000. The disposal was completed during the period from 1 January 2022 to the date of approval of these consolidated financial statements. The director considered that such disposal did not have material financial impact to the GNE Group.

(b) On 16 February 2022, the Board of directors of the Company has resolved to award an aggregate of 214,300,000 Award Shares at a grant price of HK$0.86 per Award Share to 152 Eligible Persons pursuant to the terms and conditions of the Scheme. The 2022 Award Shares represent approximately 0.791% of the Company's total number of issued Shares as at the date of the announcement made by the Company on 16 February 2022.

(c) On 21 February 2022, the Board announced that it proposed to change: (a) its English name from "GCL-Poly Energy Holdings Limited" to "GCL Technology Holdings Limited"; and (b) its dual foreign name in Chinese from "保利協鑫能源控股有限公司" to "協鑫科技控股有限公司", subject to the conditions set out in the circular being fulfilled.

(d) On 9 March 2022, the Board proposed an adoption of new share option scheme, since the expiry of the share option scheme on 21 October 2017, no new share option scheme has been adopted by the Company. In order to provide the Company with the flexibility of granting share options to the directors and employees of the Group as incentives or rewards for their contribution or potential contribution to the Group, the Board proposes to adopt the new share option scheme, which will be valid for 10 years from the adoption date, pursuant to Chapter 17 of the Listing Rules and a resolution will be proposed at the EGM for the adoption of the new share option scheme. The purpose of the new share option scheme is to replace the expired share option scheme and to is to motivate personnel to optimise their future contributions to the Group and/or to reward them for their past contributions, to attract and retain or otherwise maintain on-going relationships with such personnel who are significant to and/or whose contributions are or will be beneficial to the performance, growth or success of the Group, and additionally in the case of directors (including independent non-executive directors) and executive of the Company, to enable the Group to attract and retain individuals with experience and ability and/or to reward them for their past contributions.

51. EVENTS AFTER REPORTING PERIOD (Continued)

(e) On 16 March 2022, with reference to the announcement made by the GNE dated 8 March 2022 in relation to the launch of the offer to purchase (the "Offer") for cash of up to a total of US$53,400,000 (equivalent to approximately RMB337,605,000) of the outstanding principal amount at face value of the Outstanding 10.00% Senior Notes Due 2024 (the "Notes") at a purchase price ("Purchase Price") of US$0.975 per US$1 principal amount of the Notes, the GNE has accepted purchase validly tendered senior notes in an aggregate principal amount outstanding at face value of approximate US$53,398,000 (equivalent to approximately RMB337,593,000) (the "Accepted Notes"). The GNE has made payment of the Purchase Price and the accrued interest in respect of the Accepted Notes on 18 March 2022. Following the completion of the offer, all of the Accepted Notes has been cancelled and the aggregate outstanding principal amount at face value of the Notes after such cancellation was approximately US$443,472,000 (equivalent to approximately RMB2,803,719,000). Details are set out in the GNE's announcements dated 8 March 2022 and 18 March 2022.

(f) On 16 March 2022, the GNE Group entered into six share transfer agreements with Jiangsu Hesheng New Energy Co., Ltd. ("Jiangsu Hesheng") to dispose of its 100% equity interest in five wholly-owned subsidiaries, namely Gaoyou GCL Photovoltaic Power Co., Ltd. (高郵協鑫光伏電力有限公司), Nantong Haide New Energy Co., Ltd.* ("Nantong Haide") (南通海德新能源有限公司), Pizhou GCL Photovoltaic Power Co., Ltd.* (邳州協鑫光伏電力有限公司), Suqian Green Energy Power Co., Ltd.* (宿遷綠能電力有限公司) and Suzhou Industrial Park Dingyu Solar Power Co., Ltd.* (蘇州工業園區鼎裕太陽能電力有限公司) and its 60% equity interest in Jiangsu GCL Haibin New Energy Technology Development Co., Ltd.* (江蘇協鑫海濱新能源科技發展有限公司), at an aggregate consideration of approximate RMB90,380,000 minus rectification costs of approximate RMB1,176,000, and agreed to grant a put option that is applicable to disposal of 100% equity interest in Nantong Haide to Jiangsu Hesheng upon certain solar plants are unable to register in the List within 3 years from the date of share transfer agreement. The Directors of GNE are still assessing the financial impact of the disposals. Details are set out in the GNE's announcement dated 16 March 2021. The disposals were not completed at the date of approval of these consolidated financial statements.

(g) On 18 March 2022, the head of agreement ("HOA") that the GNE Group entered into with POLY-GCL Petroleum on 19 December 2021 regarding the exclusivity of a 12-month period to enter into a sale and purchase agreement with POLY-GCL Petroleum for possible purchase of natural gas was expired, given the conditions precedent to the HOA have not been fulfilled. No deposit or any other compensation or amounts shall be payable by the GNE Group to POLY-GCL Petroleum. The Directors of GNE Group are of the view that the expiration of the HOA would have no material adverse impact on the financial position of the GNE Group. Details are set out in the GNE's announcements dated 19 December 2021 and 20 March 2022.

(h) On 21 March 2022, the GNE Group entered into a share transfer agreement with Hunan Xinhua to dispose its 100% equity interest in Ningxia Shengjing Solar Power Technology Company Limited (寧夏盛景太陽能科技有限公司), at a consideration of RMB153,913,000 minus expected maximum rectification costs of RMB3,470,000 and expected transaction costs of RMB1,000,000. The disposal was not completed at the date of approval of these consolidated financial statements.

* *English name for identification only.*

52. RETIREMENT BENEFITS SCHEMES

(a) The PRC

The Group's full-time employees in the PRC are covered by a government sponsored defined contribution pension scheme, and are entitled to a monthly pension from their retirement dates. The PRC Government is responsible for the pension liability to these retired employees. The Group is required to make annual contributions to the retirement plan at a rate of 20% (2020: 12% to 20%) of employees' salaries, which are charged to profit or loss as an expense when the contributions are due. During the year ended 31 December 2021 and 2020, subject to the discretions of respective municipal government in the PRC, certain retirement benefit concession were given due to COVID-19.

(b) Hong Kong

The Group participates in a pension scheme, which was registered under the Mandatory Provident Fund Schemes Ordinance (the "MPF Ordinance"), for all its employees in Hong Kong. The scheme is a defined contribution scheme and is funded by contributions from employers and employees according to the provisions of the MPF Ordinance.

(c) The USA

In 2015, GNE established a 401(k) savings trust plan ("401(k) Plan"), a defined contribution plan and is funded by employers and employees in the USA that qualifies as an Inland Revenue Service ("IRS") deferred salary arrangement under Section 401(k) of the US Internal Revenue Code. Under the 401(k) Plan, participating employees may elect to contribute up to a maximum amount subject to certain IRS limitations.

(d) Japan

GNE Group participates in an employee's pension fund for all its employees in Japan. The scheme is a defined contribution scheme and is funded by contribution from employers and employees according to Employee's Pension Insurance Act.

During the year ended 31 December 2021, total amounts contributed by the Group to the schemes in the PRC, Hong Kong, the USA and Japan and charged to profit or loss, which represent contributions payable to the schemes by the Group at rates specified in the rules of the schemes are approximately RMB121,750,000 (2020: RMB39,137,000).

53. RELATED PARTY DISCLOSURES

Other than as disclosed elsewhere in the consolidated financial statements, during the year, the Group entered into the following material transactions with related parties:

	2021 **RMB'000**	2020 RMB'000
Transactions with companies in which Mr. Zhu Gongshan and his family have control:		
Rental income	**18,491**	22,442
Management fee income	**5,720**	8,728
Consultancy service fee expense	**(11,123)**	(2,969)
Interest expense	**(41,923)**	(104,771)
Management fee expense	**(9,884)**	(212)
Purchase of steam	**(2,110)**	(4,807)
Purchase of energy service	**(1,110)**	(1,132)
Purchase of equipment	**(5,892)**	—
Loan guarantee service fee	**—**	(3,499)
Transactions with joint ventures:		
Sales of other raw materials	**256,793**	54,891
Rental income	**2,671**	1,281
Management fee income	**136,376**	52,500
Purchase of polysilicon	**(112,077)**	(14,480)
Purchase of water	**(172)**	—
Transactions with associates:		
Sales of other raw materials	**152,679**	195,775
Interest income	**—**	176
Management fee income	**15,239**	12,457
Rental Income	**—**	230
Interest expense	**—**	(46,149)
Purchase of polysilicon	**(664,923)**	(223,416)
Purchase of silicon rods	**(3,459,011)**	(2,274,527)
Purchase of other raw materials	**(158,855)**	—
Transactions with other related parties (Note a):		
Sales of polysilicon	**1,397,108**	—
Processing fee income	**199,766**	—
Purchase of equipment	**(34,100)**	—
Purchase of other raw materials	**(11,376)**	—
Purchase of steam	**(1,347)**	(287)

Note a: The other related parties represent the noncontrolling interest shareholders of subsidiaries of the Company.

At 31 December 2021, the Group provided total guarantees of approximately RMB3,319,000,000 and RMB900,000,000 (2020: RMB4,064,458,000 and RMB900,000,000) to several banks and financial institutions in respect of banking and other facilities of Xinjiang GCL and Jiangsu Xinhua, respectively. The Directors consider that the fair value of the guarantees at the date of inception, and the ECL as at 31 December 2021 and 2020 was insignificant.

53. RELATED PARTY DISCLOSURES (Continued)

As at 31 December 2021, GNE Group provided guarantee to its associates, including Shanxi GNE, Ruicheng GCL, Yu County Jinyang, Yu County GCL, Fenxi GCL, Hanneng Guanping and Hebei GNE and their subsidiaries, for certain of their bank and other borrowings with maximum amount of RMB1,540,854,000 (2020: RMB3,049,762,000). These bank and other borrowings were secured by the borrowers' (i) property, plant and equipment, (ii) trade receivables, contract assets and fee collection right in relation to sales of electricity. In the opinion of the directors of GNE, the fair value of the guarantee was considered insignificant at initial recognition and the ECL as at 31 December 2021 and 2020 were insignificant.

As at 31 December 2021, the companies in which Mr. Zhu Gongshan and his family have control provided guarantee to the Group for certain of the Group's bank and other borrowings with maximum amount of RMB810,000,000 (2020: RMB1,498,021,000).

Details of balances and other arrangements with related parties are disclosed in the consolidated statement of financial position and notes 27, 32 and 33.

* English name for identification only

54. MAJOR NON-CASH TRANSACTIONS

Apart from those disclosed elsewhere in this consolidated financial statement of the Group, the Group has the below major non-cash transactions.

Year ended 31 December 2021

(i) The GNE Group entered into two share transfer agreements with 神木市晶元控股集團有限公司 Shenmu Jingyuan Group Holdings Limited* ("Shenmu Jingyuan") to acquire 20% equity interest in each of Shenmu Jingpu and Shenmu Jingfu at considerations of RMB53,280,000 and RMB15,080,000 respectively. The consideration payables had been offset with the balance due with Shenmu Jingyuan.

(ii) Short-term borrowings/advances drawn on discounted bills with recourse of approximately RMB2,739,778,000 have been settled through bills discounted to the relevant financial institutions.

Year ended 31 December 2020

(i) GNE Group entered into an offsetting agreement with 7 associates and related companies. Upon signing of agreement, the amounts due from those associates of RMB356,838,000 were extinguished by offsetting loans from related companies of RMB62,994,000 with amounts due to associates amounting to RMB293,844,000.

(ii) GNE Group entered into an asset transfer agreement with a financial institution to settle its other borrowings of RMB113,027,000 with its investment of RMB113,027,000.

(iii) Short-term borrowings/advances drawn on discounted bills with recourse of approximately RMB4,019 million have been settled through bills discounted to the relevant financial institution.

(iv) As disclosed in note 19, the Group disposed of the entire equity interests in Xinxin to an independent third party and the loan from a related company of RMB509,814,000 was reclassified to other borrowings as at 31 December 2020 accordingly.

Other borrowing of RMB8,000,000 was extinguished by offsetting amount due from a related party, Xinxin, during the year ended 31 December 2020.

(v) As disclosed in Note 42(B)(iv), in May 2021, the Group was informed that 865,100,000 shares in GNE, the Pledged Shares (as defined in note 42(B)(iv)) for a loan agreement entered in 2019 were forfeited in June 2020 and the fair value of the Pledged Shares forfeited were offset against the outstanding loan amount due to the lender.

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES

55a. General information of subsidiaries

Details of the Group's material subsidiaries at the end of the reporting period are set out below.

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group		Principal activities
			2021 %	2020 %	
Directly held:					
Incorporated in the Cayman Islands					
Universe Solar Energy Holdings Inc. 環宇光伏電力控股有限公司	Cayman Islands/ Hong Kong	US$10,500	100	100	Investment holding
Incorporated in the BVI					
Elite Time 傑泰環球有限公司	BVI	US$1	100	100	Investment holding
Indirectly held:					
Solar material business *Established in the PRC*					
Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd*[8] 江蘇中能硅業科技發展有限公司	PRC	RMB7,261,031,330	100	100	Manufacture and sale of polysilicon
江蘇協鑫硅材料科技發展有限公司 Jiangsu GCL Silicon Material Technology Development Co., Ltd.*[8]	PRC	RMB3,099,650,000	100	100	Manufacture and sale of ingot and wafer
高佳太陽能股份有限公司 Konca Solar Cell Co., Ltd.*[8]	PRC	RMB1,184,570,000	70.19	70.19	Manufacture and sale of ingot and wafer
常州協鑫光伏科技有限公司 Changzhou GCL Photovoltaic Technology Co., Ltd.*[8]	PRC	RMB717,978,270	100	100	Manufacture and sale of wafer
蘇州協鑫光伏科技有限公司 Suzhou GCL Photovoltaic Technology Co., Ltd.*[8]	PRC	RMB990,298,120	100	100	Manufacture and sale of wafer
GCL-Poly (Suzhou) New Energy Co., Ltd*[8] 保利協鑫(蘇州)新能源有限公司	PRC	RMB4,940,000,000	100	100	Investment holding and trading of wafer
河南協鑫光伏科技有限公司 Henan GCL Photo voltaic Technology Co., Ltd.*[8]	PRC	RMB373,500,000	100	100	Manufacture and sale of ingot
協鑫(南京)太陽能科技有限公司 GCL (Nanjing) Solar Energy Technology Co., Ltd.*[8]	PRC	RMB250,000,000	100	100	Manufacture and trading of solar cell and module

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
Solar material business: (Continued) *Established in the PRC: (Continued)*					
太倉協鑫光伏科技有限公司 Taicang GCL Photovoltaic Technology Co., Ltd.*8	PRC	RMB958,775,000	100	100	Manufacture and sale of wafer
阜寧協鑫光伏科技有限公司 Funing GCL Photovoltaic Technology Co., Ltd.*8	PRC	RMB312,621,612	100	100	Manufacture and sale of solar products
寧夏協鑫晶體科技發展有限公司 Ningxia GCL Monocrystalline Silicon Technology Development Co., Ltd.*8	PRC	RMB$301,000,000	87.91	69.77	Manufacture and sale of solar products
揚州協鑫光伏科技有限公司 Yangzhou GCL Photovoltaic Technology Company Limited*8	PRC	RMB$514,678,595	100	100	Manufacture and sale of wafer
蘇州協鑫科技發展有限公司 Suzhou GCL Technology Development Co., Ltd.*8	PRC	RMB900,000,000	100	100	Manufacture and sale of wafer
保利協鑫硅材料(太倉)有限公司 GCL-Poly Silicon Material (Taicang) Co., Ltd.*8	PRC	US$34,000,000	100	100	Trading of solar products
Kunshan GCL Optoelectronic Material Co., Ltd*8 昆山協鑫光電材料有限公司	PRC	RMB62,592,642.67	50.03	49.29	Research and development, manufacture and sale of perovskite solar cells technology
內蒙古鑫元硅材料科技有限公司 Inner Mongolia Xin Yuan Silicon Material Technology Co., Ltd.*8	PRC	RMB3,767,500,000	56.78	—	Manufacture and sale of polysilicon
樂山協鑫新能源科技有限公司 Leshan GCL New Energy Technology Co., Ltd.* ("Leshan GCL")8,9	PRC	RMB3,145,000,000	39.6	100	Manufacture and sale of polysilicon
Incorporated in Hong Kong					
GCL Solar Energy Technology Holdings Limited 協鑫光伏電力科技控股有限公司	Hong Kong	HK$1	100	100	Investment holding
Richmore International Development Limited 富多國際發展有限公司	Hong Kong	HK$1	100	100	Investment holding
Corner Star Limited 各星有限公司	Hong Kong	HK$1	100	100	Own a technical know-how

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group		Principal activities
			2021 %	2020 %	
Indirectly held: (Continued)					
Solar farm business *Established in the PRC*					
保利協鑫(桑日)光伏電力有限公司 GCL-Poly (Sangri) Solar Power Co., Ltd.*8	PRC	RMB62,000,000	100	100	Operation of solar farm
徐州協鑫光伏電力有限公司 Xuzhou GCL Solar Energy Co., Ltd.*8	PRC	RMB84,000,000	100	100	Operation of solar farm
江蘇國能新能源科技有限公司 Jiangsu Guoneng Solar Technology Co., Ltd.*8	PRC	RMB10,000,000	100	100	Operation of solar farm
蘇州保利協鑫光伏電力投資有限公司 Suzhou GCL-Poly Solar Energy Investment Ltd.*8	PRC	RMB422,000,000	100	100	Investment holding
大同縣協鑫光伏電力有限公司 Datong Xian GCL Solar Energy Co., Ltd.*8	PRC	RMB144,600,000	100	100	Operation of solar farm
大同縣鑫能光伏電力有限公司 Datong Xian Xinneng Solar Energy Co., Ltd.*8	PRC	RMB32,600,000	100	100	Operation of solar farm
Incorporated in Hong Kong					
GCL Solar Energy Limited	Hong Kong	HK$1	100	100	Investment holding
Incorporated in the USA					
GCL Solar Energy. Inc.	USA	US$200	100	100	Construction and sale of solar farm projects
Incorporated in Luxembourg					
Berimor Investments S.a.r.l.	Luxembourg	EUR12,500	100	100	Investment holding

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
New energy business *Incorporated in Bermuda*					
GNE	Bermuda/ Hong Kong	HK$87,794,000	49.24[4]	57.75[4]	Investment holding
Established in the PRC					
包頭市中利騰暉光伏發電有限公司 Baotou Zhonglitenghui Photovoltaic Power Company Limited* ("Baotou Zhonglitenghui")[3, 8]	PRC	RMB110,000,000	–	57.75	Operation of solar power plant
冊亨協鑫光伏電力有限公司 Ceheng Solar Power Co., Ltd.*[3, 8]	PRC	RMB130,000,000	–	57.75	Operation of solar power plant
德令哈協合光伏發電有限公司 Delingha Century Concord Photovoltaic Power Co., Ltd.*[3, 8]	PRC	RMB222,000,000	–	57.75	Operation of solar power plant
阜南協鑫光伏電力有限公司 Funan GCL Photovoltaic Power Co., Ltd.*[2, 3, 8]	PRC	RMB165,000,000	N/A	57.75	Operation of solar power plant
高唐縣協鑫晶輝光伏有限公司 Gaotang County GCL Jing Hui Photovoltaic Co., Ltd.*[1, 8]	PRC	RMB81,000,000	49,24	57.75	Operation of solar power plant
海豐縣協鑫光伏電力有限公司 Haifeng County GCL Solar Power Co., Ltd.*[3, 8]	PRC	RMB155,900,000	–	57.75	Operation of solar power plant
海南州世能光伏發電有限公司 Hainanzhou Shineng Photovoltaic Power Co., Ltd.*[3, 8]	PRC	RMB60,000,000	–	57.75	Operation of solar power plant
橫山晶合太陽能發電有限公司 Hengshan Jinghe Solar Energy Co., Ltd.*[2, 3, 8]	PRC	RMB222,000,000	N/A	55.64	Operation of solar power plant
湖北省麻城金伏太陽能電力有限公司 Hubei Macheng Photovoltaic Power Limited* ("Hubei Macheng")[3, 8]	PRC	RMB191,000,000	–	57.75	Operation of solar power plant
靖邊縣順風新能源有限公司 Jingbian County Shunfeng New Energy Limited*[3, 5, 8]	PRC	RMB68,550,000	N/A	54.86	Operation of solar power plant
靖邊協鑫光伏電力有限公司 Jingbian GCL Solar Power Co., Ltd.*[3, 5, 8]	PRC	RMB80,000,000	N/A	57.75	Operation of solar power plant
開封華鑫新能源開發有限公司 Kaifeng Huaxin New Energy Development Co., Ltd.*[3, 8]	PRC	RMB200,000,000	–	57.75	Operation of solar power plant

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
New energy business (Continued) *Established in the PRC (Continued)*					
蘭溪金瑞太陽能發電有限公司 Lanxi Jinrui Photovoltaic Power Co., Ltd.*[3, 8]	PRC	RMB60,320,000	–	57.75	Operation of solar power plant
猛海協鑫光伏農業電力有限公司 Menghai GCL Solar Agricultural Power Co., Ltd.*[1, 8]	PRC	RMB85,000,000	49.24	57.75	Operation of solar power plant
內蒙古香島新能源發展有限公司 Inner Mongolia Xiangdao New Energy Development Company Limited*[1, 8]	PRC	RMB273,600,000	44.37	52.03	Operation of solar power plant
寧夏中衛協鑫光伏電力有限公司 Ningxia Zhongwei Photovoltaic Power Company Limited* ("Ningxia Zhongwei")[3, 8]	PRC	RMB61,600,000	–	57.75	Operation of solar power plant
汝陽協鑫新能源有限公司 Ruyang GCL New Energy Limited* ("Ruyang GCL")[3, 8]	PRC	RMB146,000,000	–	57.75	Operation of solar power plant
三門峽協立光伏電力有限公司 Sanmenxia Xie Li Solar Power Co., Ltd.*[3, 8]	PRC	RMB65,000,000	–	57.75	Operation of solar power plant
神木市晶富電力有限公司 Shenmu Jingfu Solar Power Co., Ltd.*[3, 5, 8] ("Shenmu Jingfu")	PRC	RMB75,400,000	N/A	46.20	Operation of solar power plant
神木市平西電力有限公司 Shenmu Ping Xi Power Co., Ltd.*[3, 5, 8]	PRC	RMB82,000,000	N/A	57.75	Operation of solar power plant
神木市平元電力有限公司 Shenmu Ping Yuan Power Co., Ltd.*[3, 5, 8]	PRC	RMB78,700,000	N/A	57.75	Operation of solar power plant
神木市國泰農牧發展有限公司 Shenmu Guotai Development Limited*[1] ("Shenmu Guotai")	PRC	RMB20,000,000	–	46.20	Operation of solar power plant
神木市晶登電力有限公司 Shenmu County Jingdeng Power Co., Ltd*[1] ("Shenmu Jingdeng")[3, 5, 8]	PRC	RMB50,000,000	N/A	46.20	Operation of solar power plant

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
New energy business (Continued) *Established in the PRC (Continued)*					
石城協鑫光伏電力有限公司 Shicheng GCL Solar Power Co., Ltd.*[3, 8] ("Shicheng")	PRC	RMB112,838,100	–	29.45	Operation of solar power plant
天長市協鑫光伏電力有限公司 Tianchang GCL Solar Energy Limited*[2, 3, 8]	PRC	RMB63,960,000	N/A	57.75	Operation of solar power plant
烏拉特後旗源海新能源有限責任公司 Wulate Houqi Yuanhai New Energy Limited* ("Wulate Houqi Yuanhai")[3, 8]	PRC	RMB50,000,000	–	57.75	Operation of solar power plant
鹽邊鑫能光伏電力有限公司 Yanbian Xin Neng Solar Power Co., Ltd.*[3, 8]	PRC	RMB56,000,000	–	57.75	Operation of solar power plant
鹽源縣白烏新能源科技有限公司 Yanyuan County Bai Wu New Energy Technology Co., Ltd.*[3, 8]	PRC	RMB113,000,000	–	57.75	Operation of solar power plant
榆林隆源光伏電力有限公司 Yulin Longyuan Solar Energy Limited*[3, 8]	PRC	RMB465,000,000	–	57.75	Operation of solar power plant
榆林市榆神工業區東投能源有限公司 Yulin Yushen Industrial Area Energy Co., Ltd.*[3, 8]	PRC	RMB170,000,000	–	57.75	Operation of solar power plant
元謀綠電新能源開發有限公司 Yuanmou Green Power New Energy Development Limited*[3, 8]	PRC	RMB85,000,000	–	46.20	Operation of solar power plant
鄆城鑫華能源開發有限公司 Yuncheng Xinhua Energy Development Co,. Ltd.*[3, 8]	PRC	RMB58,597,800	–	29.45	Operation of solar power plant
正藍旗國電光伏發電有限公司 Zhenglanqi State Power Photovoltaic Company Limited* ("Zhenglanqi")[3, 8]	PRC	RMB125,000,000	–	57.29	Operation of solar power plant
中利騰暉海南電力有限公司 Zhongli Tenghui Hainan Solar Power Co., Ltd.*[3, 8]	PRC	RMB105,500,000	–	57.75	Operation of solar power plant

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
New energy business (Continued) *Established in the PRC (Continued)*					
東海縣協鑫光伏電力有限公司 Donghai GCL Solar Energy Co., Ltd.*[3, 8]	PRC	RMB54,470,000	–	57.75	Operation of solar power plant
阜寧縣鑫源光伏電力有限公司 Funing County Xin Yuan Solar Power Co., Ltd.*[3, 8]	PRC	RMB52,000,000	–	57.75	Operation of solar power plant
碭山協鑫光伏電力有限公司 Dangshan GCL Solar Power Co., Ltd.*[2, 3, 8]	PRC	RMB44,000,000	N/A	57.75	Operation of solar power plant
永城鑫能光伏電力有限公司 Yongcheng Xin Neng Photovoltaic Electric Power Co, Ltd.*[3, 8]	PRC	RMB101,600,000	–	57.75	Operation of solar power plant
商水協鑫光伏電力有限公司 Shangshui GCL Photovoltaic Electric Power Co, Ltd.*[3, 8]	PRC	RMB130,000,000	–	57.75	Operation of solar power plant
微山鑫能光伏電力有限公司 Weishan Xin Neng Solar Power Co., Ltd.*[1, 8]	PRC	RMB75,000,000	49.24	57.75	Operation of solar power plant
互助昊陽光伏發電有限公司 Huzhu Haoyang Photovoltaic Electric Power Co., Ltd.*[3, 6, 8]	PRC	RMB66,000,000	–	57.75	Operation of solar power plant
河南協鑫新能源投資有限公司 Henan GCL New Energy Investment Co., Ltd.*[1, 8]	PRC	RMB600,000,000	49.24	57.75	Operation of solar power plant
南召鑫力光伏電力有限公司 Nanzhao Xin Li Photovoltaic Electric Farms Co., Ltd.*[3, 8]	PRC	RMB100,000,000	–	28.88	Operation of solar power plant
江蘇協鑫新能源有限公司 Jiangsu GCL New Energy Co., Ltd.*[1, 8]	PRC	RMB500,000,000	49.24	57.75	Operation of solar power plant
西安協鑫新能源管理有限公司 Xi'an GCL New Energy Management Co., Ltd.*[1, 8]	PRC	RMB1,500,000,000	49.24	57.75	Operation of solar power plant

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	2020 %	Principal activities
Indirectly held: (Continued)					
New energy business (Continued) *Established in the PRC (Continued)*					
神木市晶普電力有限公司 Shenmu Jingpu Power Co., Ltd.* ("Shenmu Jingpu")[3, 5, 8]	PRC	RMB266,400,000	N/A	46.20	Operation of solar power plant
安徽協鑫新能源投資有限公司 Anhui GCL New Energy Investment Co., Ltd.*[1, 8]	PRC	RMB238,000,000	49.24	57.75	Operation of solar power plant
內蒙古協鑫光伏電力有限公司 Inner Mongolia GCL Photovoltaic Electric Power Co., Ltd.*[1, 8]	PRC	RMB200,000,000	49.24	57.75	Operation of solar power plant
山東萬海電力有限公司 Shandong Wanhai Solar Power Co., Ltd* ("Wanhai")[1, 8]	PRC	RMB60,000,000	49.24	57.75	Operation of solar power plant
寧夏協鑫新能源投資有限公司 Ningxia GCL New Energy Investment Co., Ltd.*[1, 8]	PRC	RMB200,000,000	49.24	57.75	Operation of solar power plant
江蘇協鑫新能源投資有限公司 Jiangsu GCL New Energy Investment Co., Ltd.*[1, 8]	PRC	RMB100,000,000	49.24	57.75`	Operation of solar power plant
海南意晟新能源有限公司 Hai Nan Yi Cheng New Energy Company Limited*[3, 8]	PRC	RMB43,000,000	–	57.75	Operation of solar power plant
寧夏盛景太陽能科技有限公司 Ningxia Shengjing Solar Power Technology Company Limited*[1, 8]	PRC	RMB75,000,000	49.24	57.75	Operation of solar power plant
高郵協鑫光伏電力有限公司 Gaoyou GCL Photovoltaic Power Company Limited*[1, 8]	PRC	RMB48,120,000	49.24	57.75	Operation of solar power plant
峨山永鑫光伏發電有限公司 Eshan GCL Solar Power Generation Company Limited*[3, 8]	PRC	RMB2,000,000	–	57.75	Operation of solar power plant
寧夏鑫墾簡泉光伏電力有限公司 Ningxia Xin Ken Jiangquan Photovoltaic Power Company Limited*[1, 8]	PRC	RMB7,000,000	49.24	57.75	Operation of solar power plant
鎮江鑫龍光伏電力有限公司 Zhenjiang Xinlong Photovoltaic Power Company Limited*[3, 8]	PRC	RMB48,550,000	–	57.75	Operation of solar power plant

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

Name of subsidiary	Place of establishment/ operations	Particulars of issued share capital/ registered capital	Attributable equity interest held by the Group 2021 %	Attributable equity interest held by the Group 2020 %	Principal activities
Indirectly held: (Continued)					
New energy business (Continued) *Established in the PRC (Continued)*					
德令哈時代新能源發電有限公司 Delingha Shida New Energy Power Generation Company Limited*[3, 8]	PRC	RMB39,000,000	–	57.75	Operation of solar power plant
確山追日新能源電力有限公司 Queshan Zhuiri New Energy Power Company Limited*[3, 8]	PRC	RMB42,000,000	–	57.75	Operation of solar power plant
張家港協鑫光伏電力有限公司 Zhang Jia Gang GCL Photovoltaic Power Company Limited*[3, 8]	PRC	RMB72,414,000	–	57.75	Operation of solar power plant
紅河縣瑞欣光伏發電有限公司 Hong He Xian Rui Xin Photovoltaic Power Generation Company Limited*[3, 8]	PRC	RMB48,000,000	–	57.75	Operation of solar power plant
昆明旭峰光伏發電有限公司 Kun Ming Xu Feng Photovoltaic Power Generation Company Limited*[3, 8]	PRC	RMB54,400,000	–	57.75	Operation of solar power plant
羅甸協鑫光伏電力有限公司 Luodian GCL Photovoltaic Power Company Limited*[3, 8]	PRC	RMB57,200,000	–	57.75	Operation of solar power plant
安龍縣茂安新能源發展有限公司 Anlong Maoan New Energy Development Company Limited*[3, 8]	PRC	RMB43,000,000	–	57.75	Operation of solar power plant
青海協鑫新能源有限公司 Qinghai GCL New Energy Company Limited*[1, 8]	PRC	RMB149,480,000	**49.24**	57.75	Investment holding
合肥建南電力有限公司 Hefei Jiannan Power Company Limited* ("Hefei Jiannan")[2, 3, 8]	PRC	RMB33,600,000	**N/A**	57.75	Operation of solar power plant
合肥久陽新能源有限公司 Hefei Jiuyang GCL New Energy Company Limited* ("Hefei Jiuyang")[2, 3, 8]	PRC	RMB34,000,000	**N/A**	57.75	Operation of solar power plant

* English name for identification only

[1] Despite the Group indirectly holds less than 50% of the effective equity interest of these companies, the Group is able to exercise control over these companies through GNE as GNE holds more than 50% of the equity interest.

[2] The controlling stake of the entity was disposed of by GNE Group during the year ended 31 December 2021 which then became an associate of GNE Group as well as an indirect associate of the Group.

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55a. General information of subsidiaries (Continued)

3 These subsidiaries were disposed of during the year ended 31 December 2021.

4 Elite Time's shareholding of GNE shares was reduced from 57.75% to 49.24%, details of which are disclosed in note 42(A) (i)(a) under the heading "Deemed disposal of partial interest in a subsidiary". In the opinion of the Directors of the Company, the Group is able to exercise control over GNE as at 31 December 2021 as the remaining shareholdings are widely dispersed.

5 The controlling stake of the entity was disposed of by GNE Group during the year ended 31 December 2021 which become other investment of the GNE Group.

6 The subsidiary was classified as held for sale as the GNE Group signed equity transfer agreements with acquirers during the year.

7 Foreign investment enterprises

8 Domestic PRC Companies

9 Despite the Group indirectly holds less than 50% of the effective equity interest of Leshan GCL, the Group is able to exercise control over the Leshan GCL by having entered into an acting in concert agreement with the non-controlling shareholders ("Acting in Concert Agreement"). Pursuant to the Acting in Concert Agreement, when dealing with affairs related to Leshan GCL requiring consideration and approval by shareholders at general meetings, the non-controlling shareholders shall vote in accordance with the instruction of the Group, except: (i) any connected transactions between the Group and Leshan GCL; or (ii) any matter that obviously harms the interest of Leshan GCL or the non-controlling shareholders.

The above table lists the subsidiaries of the Group which, in the opinion of the Directors, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

Other than GCL-Poly (Suzhou) and GNE Group which issued notes as disclosed in note 38, none of the subsidiaries had issued any debt securities at the end of the year.

55b. Details of non-wholly-owned subsidiaries that have material non-controlling interests

The table below shows details of non-wholly-owned subsidiaries of the Group that have material non-controlling interests:

Name of subsidiary	Place of incorporation and principal place of business	Proportion of ownership interests and voting rights held by non-controlling interests		(Loss) profit allocated to non-controlling interests		Accumulated non-controlling interests	
		2021	2020	**2021**	2020	**2021**	2020
				RMB'000	RMB'000	**RMB'000**	RMB'000
GNE	Bermuda and Hong Kong	**50.76%**	42.25%	**(401,144)**	(580,045)	**2,252,030**	2,222,708
Suzhou GCL New Energy	PRC	**—**	7.18%	**7,267**	(81,493)	**—**	873,540
Other non-wholly owned subsidiaries of GNE				**13,497**	65,146	**49,942**	297,540
Individually immaterial subsidiaries of the Group with non-controlling interests				**(2,565)**	(6,995)	**973,620**	408,298
				(382,945)	(603,387)	**3,275,592**	3,802,086

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55b. Details of non-wholly-owned subsidiaries that have material non-controlling interests (Continued)

Summarised financial information in respect of GNE is set out below. The summarised financial information below represents amounts before intragroup eliminations and fair value adjustments arising from the acquisition of GNE.

	2021 **RMB'000**	2020 RMB'000
Current assets	**8,202,227**	14,241,405
Non-current assets	**7,714,442**	30,795,063
Current liabilities	**(3,643,971)**	(23,471,539)
Non-current liabilities	**(5,318,825)**	(13,028,048)
Equity attributable to owners of the Company	**4,651,901**	5,143,093
Non-controlling interests of GNE	**2,252,030**	2,222,708
Non-controlling interests of Suzhou GCL New Energy	**—**	873,540
Non-controlling interests of other non-wholly owned subsidiaries	**49,942**	297,540
Revenue	**2,844,899**	5,023,754
Expenses, net	**(3,406,623)**	(6,241,633)
Loss for the year	**(561,724)**	(1,217,879)
Loss for the year attributable to owners of GNE	**(790,274)**	(1,368,354)
Profit (loss) for the year attributable to non-controlling interests		
— owners of perpetual notes*	**207,786**	166,822
— other non-controlling interests	**20,764**	(16,347)
Loss for the year	**(561,724)**	(1,217,879)
Loss attributable to owners of the Company	**(181,345)**	(623,402)
Loss attributable to non-controlling interests of GNE	**(401,143)**	(578,130)
Profit/(loss) attributable to non-controlling interests of Suzhou GCL New Energy	**7,267**	(81,493)
Profit attributable to other non-controlling interests of other non-wholly owned subsidiaries	**13,497**	65,146
Loss for the year	**(561,724)**	(1,217,879)

55. PARTICULARS OF PRINCIPAL SUBSIDIARIES (Continued)

55b. Details of non-wholly-owned subsidiaries that have material non-controlling interests (Continued)

	2021 RMB'000	2020 RMB'000
Other comprehensive income (expense) attributable to owners of the Company	**21,057**	(24,467)
Other comprehensive income (expense) attributable to non-controlling interests of GNE	**5,497**	(17,900)
Other comprehensive income (expense) for the year	**26,554**	(42,367)
Total comprehensive expense attributable to owners of the Company	**(160,288)**	(647,869)
Total comprehensive expense attributable to non-controlling interests of GNE	**(395,646)**	(596,030)
Total comprehensive income (expense) attributable to non-controlling interests of Suzhou GCL New Energy	**7,267**	(81,493)
Total comprehensive income attributable to non-controlling interests of Suzhou GCL New Energy's subsidiaries	**13,497**	65,146
Total comprehensive expense for the year	**(535,170)**	(1,260,246)
Dividends paid to non-controlling interests of GNE's subsidiaries	**(83,922)**	(52,643)
Net cash inflow from operating activities	**10,571,068**	4,238,649
Net cash inflow from investing activities	**455,804**	974,473
Net cash inflow (outflow) from financing activities	**11,586,147**	(5,071,099)
Net cash (outflow) inflow	**(559,275)**	142,023

* The perpetual notes were held by wholly owned subsidiaries of the Group and therefore is included in profit attributable to owners of the Company.

56. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

Statement of financial position

	2021	2020
	RMB'000	RMB'000
NON-CURRENT ASSETS		
Interest in subsidiaries	**6,854,593**	6,854,593
Amounts due from subsidiaries (Note)	**7,626,453**	7,626,453
	14,481,046	14,481,046
CURRENT ASSETS		
Prepayments and deposits	**4,103**	3,884
Amounts due from subsidiaries (Note)	**12,386,199**	9,126,755
Bank balances and cash (Note)	**2,957,115**	53,663
	15,347,417	9,184,302
CURRENT LIABILITIES		
Other payables	**62,661**	66,182
Bank borrowings — due within one year	**—**	1,304,980
	62,661	1,371,162
NET CURRENT ASSETS	**15,284,756**	7,813,140
TOTAL ASSETS LESS CURRENT LIABILITIES	**29,765,802**	22,294,186
NET ASSETS	**29,765,802**	22,294,186
CAPITAL AND RESERVES		
Share capital (note 40)	**2,359,030**	1,862,725
Reserves	**27,406,772**	20,431,461
TOTAL EQUITY	**29,765,802**	22,294,186

Note: ECL for amounts due from subsidiaries, pledged and restricted bank deposits, and bank balances are assessed on a 12m ECL basis as there had been no significant increase in credit risk since initial recognition and impairment allowance is considered to be insignificant.

56. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (Continued)

Movement in the Company's reserves

	Share premium RMB'000	Shares held for share award scheme RMB'000	Capital redemption reserve RMB'000	Investments revaluation reserve RMB'000	Capital reserve RMB'000	Share options reserve RMB'000	Accumulated losses RMB'000	Total RMB'000
At 1 January 2020	31,199,104	—	22,202	(61,230)	19,206	158,965	(6,884,788)	24,453,459
Fair value loss on investments in equity instruments at FVTOCI	—	—	—	(31,927)	—	—	—	(31,927)
Loss for the year	—	—	—	—	—	—	(3,875,711)	(3,875,711)
Loss and total comprehensive expense for the year	—	—	—	(31,927)	—	—	(3,875,711)	(3,907,638)
Reclassification	—	(236,629)	—	—	—	—	—	(236,629)
Exercise of share options	7,937	—	—	—	—	(4,888)	—	3,049
Forfeitures of share options	—	—	—	—	—	(8,396)	8,396	—
Issue of new shares (note 40)	123,174	—	—	—	—	—	—	123,174
Transactions costs attributable to the issue of new shares	(3,954)	—	—	—	—	—	—	(3,954)
At 31 December 2020	**31,326,261**	**(236,629)**	**22,202**	**(93,157)**	**19,206**	**145,681**	**(10,752,103)**	**20,431,461**
Loss for the year	**—**	**—**	**—**	**—**	**—**	**—**	**(123,766)**	**(123,766)**
Loss and total comprehensive expense for the year	**—**	**—**	**—**	**—**	**—**	**—**	**(123,766)**	**(123,766)**
Exercise of share options	**39,600**	**—**	**—**	**—**	**—**	**(21,452)**	**—**	**18,148**
Forfeitures of share options	**—**	**—**	**—**	**—**	**—**	**(51,895)**	**51,895**	**—**
Issue of new shares (note 40)	**7,197,679**	**—**	**—**	**—**	**—**	**—**	**—**	**7,197,679**
Transactions costs attributable to the issue of new shares	**(116,750)**	**—**	**—**	**—**	**—**	**—**	**—**	**(116,750)**
At 31 December 2021	**38,446,790**	**(236,629)**	**22,202**	**(93,157)**	**19,206**	**72,334**	**(10,823,974)**	**27,406,772**

Note: Differences between the reserves of the Company and of the Group, as disclosed in the consolidated statement of changes in equity, represented the consolidation adjustments arising from the reverse acquisition by GCL Solar in 2009. For more details, please refer to 2009 annual report of the Group.

57. COMPARATIVE FIGURES

Certain comparative figures have been reclassified to conform to the reporting period's presentation.

CORPORATE INFORMATION

Chairman

Zhu Gongshan

Executive Directors

Zhu Gongshan
Zhu Zhanjun *(Vice Chairman & Joint CEO)*
Lan Tainshi *(Joint CEO)*
Zhu Yufeng
Sun Wei
Yeung Man Chung, Charles *(CFO and Company Secretary)*
Zheng Xiongjiu

Independent Non-executive Directors

Ho Chung Tai, Raymond
Yip Tai Him
Shen Wenzhong
Wong Man Chung, Francis

Composition of Board Committees

Audit Committee

Yip Tai Him *(Chairman)*
Ho Chung Tai, Raymond
Shen Wenzhong
Wong Man Chung, Francis

Remuneration Committee

Ho Chung Tai, Raymond *(Chairman)*
Yip Tai Him
Zhu Yufeng

Nomination Committee

Yip Tai Him *(Chairman)*
Ho Chung Tai, Raymond
Yeung Man Chung, Charles

Corporate Governance Committee

Ho Chung Tai, Raymond *(Chairman)*
Yip Tai Him
Yeung Man Chung, Charles

Strategy & Investment Committee

Ho Chung Tai, Raymond *(Chairman)*
Zhu Gongshan
Yip Tai Him
Shen Wenzhong
Wong Man Chung, Francis
Zhu Zhanjun
Yeung Man Chung, Charles

Company Secretary

Yeung Man Chung, Charles

Authorized Representatives

Zhu Zhanjun
Yeung Man Chung, Charles

Auditor

Crowe (HK) CPA Limited
9/F Leighton Centre
77 Leighton Road
Causeway Bay
Hong Kong

Registered Office

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

Principal Place of Business in Hong Kong

Unit 1703–1706, Level 17
International Commerce Centre
1 Austin Road West
Kowloon, Hong Kong

Cayman Islands Principal Share Registrar and Transfer Office

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

Hong Kong Branch Share Registrar and Transfer Office

Tricor Investor Services Limited
Level 54, Hopewell Centre
183 Queen's Road East
Hong Kong

Legal Advisers to the Company

As to Hong Kong law

Freshfields Bruckhaus Deringer
55th Floor
One Island East
Taikoo Place, Quarry Bay
Hong Kong

King & Wood Mallesons
13/F Gloucester Tower, The Landmark
15 Queen's Road Central
Hong Kong

As to Cayman Islands law

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

Company's Website

www.gcltech.com

INFORMATION FOR INVESTORS

Listing Information

Listing: Main Board of the Hong Kong Stock Exchange Limited
Stock Code: 3800

Share Information

Board Lot Size: 1,000 shares
Issued Shares as at 31 December 2021: 27,099,010,448 shares

Enquiries Contact

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		1 Austin Road West
		Kowloon, Hong Kong

GLOSSARY OF TERMS

In this report, the following expressions have the meanings set out below unless defined in the context of this report:

"Board" or "Board of Directors"	board of Directors
"China" or "PRC"	the People's Republic of China, for the purposes of this report, excludes Hong Kong and Macau Special Administrative Region of the PRC
"Company" or "GCL Technology"	GCL Technology Holdings Limited (協鑫科技控股有限公司) (formerly known as GCL-Poly Energy Holdings Limited (保利協鑫能源控股有限公司)), a company incorporated in the Cayman Islands with limited liability, the shares of which are listed on the Main Board of the Stock Exchange (stock code: 3800)
"Director(s)"	director(s) of the Company or any one of them
"Dongsheng PV"	Dongsheng Photovoltaic Technology (Hong Kong) Limited* (東昇光伏科技(香港)有限公司), a limited liability company incorporated in Hong Kong and a subsidiary of GCL System Integration
"GCL Electric"	GCL Electric Power Design and Research Co., Ltd.* (協鑫電力設計研究有限公司), a limited liability company incorporated in the PRC and a subsidiary of the Company and GNE
"GCL Energy Engineering"	GCL Energy Engineering Co., Ltd.* (協鑫能源工程有限公司), a company incorporated in the PRC and a subsidiary of GCL System Integration
"GCL Intelligent Energy"	GCL Intelligent Energy Co., Ltd.* (協鑫智慧能源股份有限公司) (formerly known as GCL Intelligent Energy (Suzhou) Co., Ltd.* (協鑫智慧能源(蘇州)有限公司) and GCL-Poly Limited* (保利協鑫有限公司)), a company established in the PRC
"GCL-Poly Suzhou New Energy"	GCL-Poly (Suzhou) New Energy Co., Ltd.* (保利協鑫(蘇州)新能源有限公司), an indirect subsidiary of the Company which is incorporated in the PRC with limited liability
"GCL Solar Energy"	GCL Solar Energy Limited, a company incorporated in Hong Kong with limited liability, which is a subsidiary of the Company
"GCL System Integration"	GCL System Integration Technology Co., Ltd. (協鑫集成科技股份有限公司) (a company incorporated in the PRC with its shares listed on the SME Board of the Shenzhen Stock Exchange) (stock code: 002506)

"GCL System Integration (Suzhou)"	GCL System Integration Technology (Suzhou) Ltd.* (協鑫集成科技（蘇州）有限公司), a company established in the PRC and a subsidiary of GCL System Integration
"GNE"	GCL New Energy Holdings Limited (協鑫新能源控股有限公司), a company incorporated in Bermuda with limited liability, the shares of which are listed on the Main Board of the Stock Exchange (stock code: 451), which is a subsidiary of the Company. As at date of this report, GCL Technology is interested in approximately 49.24% of the issued shares of GNE.
"GNE Development"	GCL New Energy Development Limited 協鑫新能源發展有限公司, a company incorporated in Hong Kong with limited liability and a subsidiary of GNE
"GNE Directors"	The director of GNE
"GNE Group"	GNE and its subsidiaries
"GNE International"	GCL New Energy International Limited, a company incorporated in Hong Kong with limited liability, which is a subsidiary of the Company and GNE
"GNE Investment"	GCL New Energy Investment (China) Co., Ltd* (協鑫新能源投資（中國）有限公司), a company incorporated in the PRC with limited liability, which is a subsidiary of the Company and GNE
"Group"	GCL-Poly and its subsidiaries
"GW"	gigawatts
"Jiangsu Jiarun"	Jiangsu Jiarun Property Co., Ltd.* (江蘇嘉潤置業有限公司), a company established in the PRC
"Jiangsu Zhongneng"	Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.* (江蘇中能硅業科技發展有限公司), a company incorporated in the PRC and a subsidiary of the Company
"Kunming Xufeng"	Kunming Xufeng Photovoltaic Power Co., Ltd* (昆明旭峰光伏發電有限公司), a subsidiary of the Company and GNE which is incorporated in the PRC with limited liability
"Listing Rules"	The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
"Mr. Zhu"	Mr. Zhu Gongshan, the Chairman and an executive Director
"Mr. Zhu Yufeng"	son of Mr. Zhu and an executive Director

"MT"	metric tonnes
"MW"	megawatts
"MWh"	megawatt hour
"Nanjing GCL New Energy"	Nanjing GCL New Energy Development Co., Ltd.* (南京協鑫新能源發展有限公司), a subsidiary of the Company and GNE which is incorporated in the PRC with limited liability
"Pei County Xinri"	Pei County Xinri Photovoltaic Power Co., Ltd* (沛縣鑫日光伏電力有限公司), a subsidiary of the Company and GNE which is incorporated in the PRC with limited liability
"PRC"	the People's Republic of China
"PV"	photovoltaic
"Stock Exchange"	The Stock Exchange of Hong Kong Limited
"Suzhou GCL"	Suzhou GCL Energy Technology Co., Ltd.* (蘇州協鑫能源科技有限公司) a company established in the PRC
"Suzhou GCL New Energy"	Suzhou GCL New Energy Investment Co., Ltd.* (蘇州協鑫新能源投資有限公司), a subsidiary of the Company and GNE which is incorporated in the PRC with limited liability
"Suzhou GCL-Poly"	Suzhou GCL-Poly Solar Power Investment Ltd.* (蘇州保利協鑫光伏電力投資有限公司), a company incorporated in the PRC with limited liability, a subsidiary of the Company
"Suzhou GCL Research"	Suzhou GCL Industrial Applications Research Co., Ltd.* (蘇州協鑫工業應用研究院有限公司), a subsidiary of the Company and a company established in the PRC
"Suzhou GNE Operation"	Suzhou GCL New Energy Operation and Technology Co., Ltd.* (蘇州協鑫新能源運營科技有限公司), a company incorporated in the PRC with limited liability, a subsidiary of the Company and GNE
"Suzhou Xin Zhi Hai"	Suzhou Xin Zhi Hai Management Consulting Co., Ltd.* (蘇州鑫之海企業管理諮詢有限公司), a company incorporated in the PRC with limited liability
"Taicang GCL"	Taicang GCL Photovoltaic Technology Co., Ltd* (太倉協鑫光伏科技有限公司), a company incorporated in the PRC and a subsidiary of the Company

GLOSSARY OF TERMS (CONTINUED)

"Taicang Power"	Taicang GCL Power Generation Co., Ltd* (太倉港協鑫發電有限公司), a company incorporated in the PRC
"U.S."	United States of America
"W"	watts
"Wuxi Huaguang"	Wuxi Huaguang Boiler Co., Ltd.* (無錫華光鍋爐股份有限公司), a company incorporated in the PRC and the shares of which are listed on the Shanghai Stock Exchange with stock code 600475
"Xi'an Datang Electric"	Xi'an Datang Electric Power Design and Research Institute Co., Ltd.* (西安大唐電力設計研究院有限公司), a company incorporated in the PRC with limited liability
"Xinjiang GCL"	Xinjiang GCL New Energy Materials Technology Co., Limited* (新疆協鑫新能源材料科技有限公司), a company incorporated in the PRC and an associate of the Company
"Xinjiang Guoxin"	Xinjiang Guoxin Coal Energy Co., Limited* (新疆國信煤電能源有限公司), a company incorporated in the PRC
"Xinjiang Intelligent Energy"	Xinjiang GCL Intelligent Energy Services Co., Limited* (新疆協鑫智慧能源服務有限公司), a company incorporated in the PRC
"Yangzhou GCL"	Yangzhou GCL Photovoltaic Technology Co., Ltd* (揚州協鑫光伏科技有限公司), a company incorporated in the PRC and a subsidiary of the Company
"Yangzhou Power"	Yangzhou Harbour Sludge Power Co., Ltd* (揚州港口污泥發電有限公司), a company incorporated in the PRC
"Zhu Family Trust"	the discretionary trust known as "Asia Pacific Energy Fund", of which Mr. Zhu and his family (including Mr. Zhu Yufeng, an executive Director and son of Mr. Zhu) are beneficiaries

* English name for identification only

GCL

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