MANAGEMENT DISCUSSION AND ANALYSIS

OVERVIEW

In 2022, the Group's solar material business carried forward the growing trend in 2021 and continued a strong growth during the year. Benefit from the "carbon emissions peaking and carbon neutrality" goals, price of polysilicon products remained at a relatively high level during the year. As such, the Group achieved a remarkable financial performance with impressive growth of revenue and significant increase in profits comparing with year ended 31 December 2021.

RESULTS OF THE GROUP

The operation of GCL New Energy Holdings Limited ("GNE") Group was presented as a discontinued GNE operation in the consolidated financial statements during the year and its comparative figures have been restated accordingly, For details information, please refer to "Discontinued Operation" section of this annual report.

For the year ended 31 December 2022, the revenue and gross profit of the Group from continuing operations were approximately RMB35,930 million and RMB17,496 million, respectively, representing an increase of 113.0% and 213.9% respectively as compared with approximately RMB16,868 million and RMB5,574 million for the year ended 31 December 2021.

The Group recorded a profit attributable to the owners of the Company from continuing operations of approximately RMB16,394 million in 2022 respectively, as compared to the profit attributable to owners of the Company of approximately RMB5,241 million in 2021 respectively.

BUSINESS REVIEW

The Group is principally engaged in manufacturing and the sales of polysilicon and wafers and developing, owning and operation of solar farm. The Group has identified the following continuing operation reportable segments:

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.

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

On 31 December 2022, the Group had an effective polysilicon production capacity of 185,000 MT: 1) The effective granular silicon production capacity was continuously released, from 30,000 MT at the beginning of the year to 140,000 MT at the end of the year. Among them, Xuzhou base added 30,000 MT of module production capacity, which was put into production in only 8 months of construction; Leshan base has achieved 60,000 MT of qualified production capacity despite of adverse factors such as the pandemic, delayed suppliers' delivery due to electricity restrictions, and delayed construction period, and its customer evaluation ranked among the best in polysilicon industry; Baotou base was put into production as scheduled and reached 20,000 MT of capacity under unfavorable objective factors. 2) Siemens rod silicon production capacity remained unchanged at 45,000 MT.

At the present, the Company is still releasing granular silicon production capacity, with effective granular silicon production capacity of 180,000 MT and the total effective polysilicon production capacity fulfilling 225,000 MT.

For the year ended 31 December 2022, the Group produced a total of 104,723 MT of polysilicon (excluding the output of 64,501 MT from associated companies), which increased by 120% compared with 47,610 MT in the same period in 2021, including 59,124 MT of rod silicon and 45,599 granular silicon, up 46.1% and 537.3% year on year. Each base output reached the level planned at the beginning of the year, except for the Leshan base, the infrastructure of which was delayed for about one quarter due to factors such as the epidemic and power cuts.

Wafer

On 31 December 2022, the Group continuously improved the slicing efficiency through technical improvement, and the silicon wafer production capacity increased from 50GW at the beginning of the year to 55 GW. In July 2022, Ningxia Zhongwei 5GW granular silicon N-type demonstration project started, was completed and put into production in November 2022, and the monosilicon crystal pulling capacity increased to 14 GW.

For the year ended 31 December 2022, the Group produced a total of 46,661 MW of silicon wafers (including 27,789 MW of OEM silicon wafers), with a year-on-year increase of 22.4%.

Sales Volume and Revenue

During the reporting period, the Group shipped 93,900[8] MT of polysilicon (including internal sales 12,238 MT), and sold 46,312MW of wafers (including OEM wafer of 27,704 MW), representing an increase of 96.4% and 21.7%, respectively, as compared with 47,804 MT of polysilicon and 38,049 MW of wafers for the corresponding year in 2021.

For the year ended 31 December 2022, the Company adopts the sales strategy of "same price for same quality" for rod silicon and granular silicon, and the average external selling price (excluding tax) of granular silicon was approximately RMB228.5 (equivalent to US$33.0) per kilogram.

Revenue from external customers of the solar materials business amounted to approximately RMB35,714 million for the year ended 31 December 2022, representing an increase of 114.5% from RMB16,653 million in 2021. It was mainly attributable to lower costs resulting from polysilicon technology innovations and increased shipments due to increased production capacity.

Steady increase in production capacity and quality boosted the industry's conversion efficiency

Among the new polysilicon production capacity in 2022, the granular silicon of GCL achieved the best cost, quality and output rate in the industry, with the effective production capacity from 30,000 tons at the beginning of the year to 140,000 tons at the end of the year, and the increase of 110,000 tons accounted for 22.7%[9] of the annual effective production capacity increased in the industry, ranking first in the industry. With the increase of the effective output of granular silicon, the product quality has also improved rapidly: the proportion of products with total metal content < 3ppbw of granular silicon has increased from 18.3% in the first quarter to 80.3% in the fourth quarter, and has increased to 96% currently, and the proportion of products with total metal content ≤ 1ppbw has exceeded 75%[10], fully meeting the needs of the N-type era.

Changes in total metal (5 elements) impurity content of granular silicon products in 2022

Total metal impurity content	<3ppbw	3-5ppbw	5-8ppbw	>8ppbw
2022Q 1	18.25%	9.96%	17.69%	54.10%
2022Q 2	21.07%	20.74%	22.60%	35.59%
2022Q 3	55.02%	12.45%	8.04%	24.49%
2022Q 4	80.29%	11.42%	6.07%	2.21%

Note: Currently, the total metal (18 elements) impurity content of the Company's granular silicon products is controlled < 3ppbw, which far exceeds the industry average.

8 Due to seasonal factors, the year-end inventories of the Company were improved, which completed all the sales as at the date of the announcement.

9 Data source: Silicon Industry Branch (硅業分會), GCL Industry Research.

10 According to customer feedback and the actual use of the Company, the total metal content <1ppbw can fully meet the production requirements of n-type silicon wafers.

Changes in total metal (5 elements) impurity content of granular silicon products in Xuzhou base in 2023

Total metal impurity content	<1ppbw	1-3ppbw	3-5ppbw	5-8ppbw
January	33%	51%	8%	4%
February	41%	44%	7%	3%
The first week of March	35%	38%	8%	6%
The second week of March	63%	29%	3%	3%
The third week of March	75%	21%	3%	1%

Based on the production data feedback from customers, we can see that with the increase of the dosing ratio of GCL granular silicon, the unit output and life of minority carriers have increased, and the user stickiness has also been significantly improved.

Top five customer purchase list for 901A in 2022

Customer	2022 Q1[11]	2022 Q2	2022 Q3	2022 Q4
Customer A	a	171%a	183%a	736%a
Customer B	b	510%b	784%b	1,748%b
Customer C	c	263%c	379%c	410%c
Customer D	d	229%d	272%d	405%d
Customer E	e	251%e	289%e	457%e

In 2022, with the gradual release of granular silicon production capacity, purchase volume of customers increased rapidly.

Cost and Segment Gross Profit

For polysilicon and wafer production, reducing energy and raw material costs is the core priority of cost control, therefor, the production capacity layout of polysilicon and wafer is mostly located in low electricity price areas. In recent years, the intermittent shortage of energy supply and the rise in electricity prices have become a clear trend, resulting in an upward trend in the cost of polysilicon and wafer industries. The FBR technology greatly reduces the energy consumption for production in the polysilicon industry, thereby continuing to promote the continuous reduction of industry costs and thickening industry profits.

During the year, the gross profit margin of our solar material business was 48.7%, of which the unit gross profit of FBR-based granular silicon was RMB183.1[12]/kg (Profit of the by-product of granular silicon included), which reached the top level in the industry. In February 2023, the cash cost of granular silicon production in the Company's Xuzhou base was RMB37.29[13]/kg and the manufacturing costs was RMB43.73/kg, and the leading advantage has continued to expand and the profitable edges is continuously highlighted.

11 The shipments of Q2, Q3 and Q4 of the top five customers in 2022 are shown with Q1 shipments as the base data.

12 Including gross profit of by-product silicon powder. Affected by regional production capacity, the Company's comprehensive electricity price of granular silicon production in 2022 was about RMB0.57 /kWh (including tax); As granular silicon production capacity has gradually landed in areas with low electricity prices, the comprehensive electricity price of granular silicon production will continue to decrease.

13 The comprehensive electricity price of granular silicon production in the Company's Xuzhou base is RMB0.65/kWh (including tax).

Solar farm business

Overseas Solar Farms

As at 31 December 2022, 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 2022, 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 2022, the electricity sales volume of the solar farm business overseas and in the PRC were 26,920 MWh and 196,918 MWh respectively (2021: 26,371 MWh and 191,209 MWh, respectively).

For the year ended 31 December 2022, revenue for the solar farm business was approximately RMB217 million (2021: RMB215 million).

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 annual report.

FINANCIAL REVIEW

Continuing operations

Revenue

Revenue for the year ended 31 December 2022 amounted to approximately RMB35,930 million, representing an increase of 113% as compared with approximately RMB16,868 million for the corresponding year in 2021. 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

Gross Profit Margin

The Group's overall gross profit margin for the year ended 31 December 2022 was 48.7%, as compared with 33% for the corresponding year in 2021.

Gross profit margin for the solar material business increased significantly from 32.9% for the year ended 31 December 2021 to 48.7% for the year ended 31 December 2022.

The gross profit margin for the solar farm business increased from 43.7% for the year ended 31 December 2021 to 52.7% for the year ended 31 December 2022.

Distribution and Selling Expenses

Distribution and selling expenses increased from approximately RMB98 million for the year ended 31 December 2021 to approximately RMB143 million for the year ended 31 December 2022.

Administrative Expenses

Administrative expenses amounted to approximately RMB1,706 million for the year ended 31 December 2022, representing an increase of 25.1% from approximately RMB1,364 million for the corresponding year in 2021. The increase was mainly due to the increase of salary and wage expenses and share based payment expenses in relation to share award scheme charged during the year.

Finance Costs

Finance costs amounted to approximately RMB240 million for the year ended 31 December 2022, representing a decrease of 26.2% from approximately RMB325 million for the corresponding year in 2021. The decrease was mainly due to the decrease of average bank and other borrowings balances during the year.

Reversal of impairment losses/(impairment losses) under expected credit loss model, net

The Group recognised approximately RMB236 million reversal gain under expected credit loss model, net of impairment losses, for the year ended 31 December 2022 (2021: impairment losses of RMB279 million).

The reversal of impairment losses under expected credit loss model, net for the year ended 31 December 2022 mainly comprised of reversal of impairment losses of trade related receivables of approximately RMB301 million (2021: impairment losses of approximately RMB16 million) and impairment loss on non-trade related receivables of approximately RMB65 million (2021: impairment losses of approximately RMB262 million).

Other Expenses, Gains and Losses, Net

For the year ended 31 December 2022, net losses of approximately RMB2,344 million in other expenses, gains and losses were recorded as compared to net losses of approximately RMB892 million for the year ended 31 December 2021. The increase of net losses was mainly due to increase of research and development cost, increase of impairment loss on property, plant and equipment. The net losses mainly comprises of:

(i) research and development costs of approximately RMB1,686 million (2021: RMB1,041 million)

(ii) impairment loss on property, plant and equipment approximately RMB804 million (2021: RMB61 million). For the details, please refer to note 16 to consolidated financial statements.

(iii) gain on disposal of subsidiaries of approximately RMB41 million (2021: RMB16 million)

(iv) gain on disposal of an associate and deemed disposal of a joint venture of approximately RMB202 million (2021: RMB398 million)

(v) gain on fair value change of derivative financial instruments and convertible bonds to a non-controlling shareholder of a subsidiary approximately RMB8.2 million (2021: loss on fair value change of approximately RMB56 million)

(vi) loss on fair value change of investments at FVTPL approximately RMB81 million (2021: loss on fair value change of approximately RMB52 million)

(vii) loss on disposal of property, plant and equipment of approximately RMB165 million (2021: RMB42 million)

Share of Profits of Associates

The Group's share of profits of associates for the year ended 31 December 2022 was approximately RMB4,117 million, mainly contributed by following associates:

- Share of profit of approximately RMB3.2 billion from Xinjiang GCL New Energy Materials Technology Co., Ltd.* (新疆協鑫新能源材料科技有限公司) ("**Xinjiang GCL**");

- Share of profit of approximately RMB0.85 billion from Xuzhou Zhongping GCL Industrial Upgrading Equity Investment Fund LLP* (徐州中平協鑫產業升級股權投資基金(有限合夥) ("**Zhongping GCL**"); and

- Share of profit of approximately RMB76 million from Inner Mongolia Zhonghuan — GCL Solar Material Co., Ltd.* (內蒙古中環協鑫光伏材料有限公司) ("**Mongolia Zhonghuan GCL**").

Income Tax Expense

Income tax expense for the year ended 31 December 2022 was approximately RMB1,880 million as compared with approximately RMB544 million of income tax expense for the year ended 31 December 2021. The increase in income tax expenses mainly due to increase in profit for the year during the year.

Profit attributable to Owners of the Company

As a result of the above factors, profit attributable to owners of the Company from continuing operations amounted to approximately RMB16,394 million for the year ended 31 December 2022 as compared with a profit of approximately RMB5,241 million for the corresponding period in 2021.

The loss attributable to owners of the Company for the year from discontinued operations amounted to approximately RMB 363 million for the year ended 31 December 2022 as compared with a loss of approximately RMB157 million for the year ended 31 December 2021.

The profit attributable to owners of the Company from both continuing operations and discontinued operations amounted to approximately RMB16,030 million for the year ended 31 December 2022 as compared with a profit of approximately RMB5,084 million for the year ended 31 December 2021.

NON-IFRS FINANCIAL MEASURES — ADJUSTED EBITDA

Adjusted EBITDA is earnings/(loss) before finance costs, income taxes, depreciation and amortization, adjusted by major non-cash items, non-operating or non-recurring items and other one-off expenses. Adjusted EBITDA is not a measure of performance under International Financial Reporting Standards (IFRS).

To supplement the consolidated results of the Group prepared in accordance with IFRS, certain additional non-IFRS financial measures such as adjusted EBITDA have been presented in this annual report. These unaudited non-IFRS financial measures should be considered in addition to, not as a substitute for, measures of the Group's financial performance prepared in accordance with IFRS. In addition, these non-IFRS financial measures may be defined differently from similar terms used by other companies. The Company believes that these non-IFRS measures provide useful information to help investors and others understand and evaluate the Company's consolidated results of operations in the same manner as management and in comparing financial results across accounting periods and to those of our peer companies by excluding certain non-cash, non-operating or non-recurring items and other one-off expenses.

The following table sets forth a quantitative reconciliation of adjusted EBITDA for the years ended 31 December 2022 and 2021 to its most directly comparable IFRS measurement and profit before tax:

Continuing operations:	2022 RMB'million	2021 *RMB'million*
For the year ended 31 December:		
Profit for the year	**16,423**	5,239
Adjust: non-operating or non-recurring items:		
— Impairment loss of property, plant and equipment (note a)	**804**	61
— Loss on fair value change of derivative financial instruments and held for trading investments, net (note b)	**3**	22
— Gain on disposal of subsidiaries, net (note c)	**(41)**	(16)
— (Gain)/loss on fair value of convertible bonds to a non-controlling shareholder of a subsidiary (note b)	**(12)**	35
— Gain on disposal of an associate and deemed disposal of a joint venture (note c)	**(202)**	(398)
— Loss on fair value change of investments at FVTPL (note b)	**81**	52
— Exchange (gains)/losses, net (note b)	**(140)**	60
— Impairment losses under expected credit loss model, net of reversal (non-trade related) (note b)	**65**	262
	16,981	5,317
Add:		
Finance costs	**240**	325
Income tax expense	**1,880**	544
Depreciation and amortisation	**1,956**	1,436
Adjusted EBITDA	**21,057**	7,622

Note a:

Impairment loss of property, plant and equipment recognized for the year ended 31 December 2022 was considered as non-cash items. We consistently presented the comparative amount for the year ended 31 December 2021.

Note b:

These items were considered as non-operating in nature. All fair value changes related to derivative financial instruments, held for trading investments, convertible bonds to a non- controlling shareholder of a subsidiary, investments at FVTPL and exchange (gains)/losses were considered as not related to principal business and core operation of the Group, therefore all these changes were considered as non-operating.

For impairment losses under expected credit loss model, net of reversal for non-trade related balances, as they are not related to normal business of the Company, we consider treating it as non-operating in nature.

Note c:

These items were considered as non-recurring in nature, therefore when assessing company financial performance, non-recurring items were excluded.

For disposal or deemed disposal of subsidiaries, associate or joint venture, are one-off transactions and we consider them as non-recurring items.

Property, Plant and Equipment

Property, plant and equipment increased from approximately RMB18,293 million as at 31 December 2021 to approximately RMB26,531 million as at 31 December 2022. Increase in property, plant and equipment was mainly attributable to capital investment in granular silicon production base partially offset by impairment loss made, depreciation charged and distribution in specie of GNE shares during the year.

Interests in Associates

Interests in associates increased from RMB9.6 billion as at 31 December 2021 to RMB15 billion as at 31 December 2022. The increase was mainly due to share of profits of associates during the year.

Interests in associates as at 31 December 2022 mainly consists of below:

- The Group has 38.5% equity interest in Xinjiang GCL of approximately of RMB8.0 billion;
- The Group has 40.27% equity interest in Zhongping GCL of approximately of RMB2.8 billion, Zhongping GCL directly holds 34.5% equity interest in Xinjiang GCL;
- The Group has 6.42% equity interest in Mongolia Zhonghuan GCL of approximately RMB0.8 billion;
- The Group equity interest in Leshan Zhongping Polysilicon Photovoltaic Information Industry Investment Fund Partnership (Limited Partnership)* (樂山市仲平多晶硅光電信息產業基金合夥企業 (有限合夥)) and Leshan Zhongping Nengxin Enterprise Management Consultancy Partnership (Limited Partnership)* 樂山市中平能鑫企業管理諮詢合夥企業 (有限合夥) of approximately RMB71 million and RMB0.3 billion respectively;
- The Group has 28.05% equity interest in Jiangsu Xinhua of approximately RMB0.4 billion; and
- The Group has 7.44% equity interests in GNE Group of approximately RMB2.3 billion which include perpetual note classified as financial assets at fair value through other comprehensive income.

* *English name for identification only*

Trade and Other Receivables

Trade and other receivables increased from approximately RMB17,527 million as at 31 December 2021 to approximately RMB23,621 million as at 31 December 2022. The increase was mainly due to increase of bill receivables in trade nature balances of solar material business.

Trade and Other Payables

Trade and other payables increased from approximately RMB13,853 million as at 31 December 2021 to approximately RMB19,581 million as at 31 December 2022. 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 shareholders of non-controlling interest of the Group and companies controlled by Mr. Zhu Gongshan and his family members which hold in aggregate approximately 23.62% (2021: 23.51%) of the Company's share capital as at 31 December 2022 and exercise significant influence over the Company.

Amounts due from related companies increased from approximately RMB600 million as at 31 December 2021 to approximately RMB789 million as at 31 December 2022. The increase was mainly due to increase in amount due from associates during the year.

Amounts due to related companies increased from approximately RMB2,744 million as at 31 December 2021 to approximately RMB3,496 million as at 31 December 2022. The increase was mainly due to increase in amount due to associates during the year.

Liquidity and Financial Resources

As at 31 December 2022, the total assets of the Group were about RMB85.6 billion, of which the aggregate restricted and unrestricted cash and bank balances and other deposits amounted to approximately RMB10.4 billion.

For the year ended 31 December 2022, the Group's main source of funding was cash generated from operating activities and financing activities.

Utilization of Proceeds from Placing

The Company completed three rounds of fund raising in 2021, including (i) 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 billion in January 2021 (the "**January 2021 Placing**"); (ii) a top-up placing and subscriptions of 2,000,000,000 new shares of GNE at a price of HK$0.455 per share with net proceeds of approximately HK$895 million (the "**February 2021 Top-up Placing**"); and (iii) 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 billion in the December 2021 (the "**December 2021 Placing**").

As at 31 December 2022, the utilization of net of proceeds above are as following:

For January 2021 Placing, the net proceeds was used for (i) reduction of existing borrowing levels and gearing level and adjustment of the debt structure of approximately HK$1.674 billion; (ii) development of FBR based granular silicon production business and production capacity of approximately HK$1.95 billion; and (iii) general corporate purposes of approximately HK$395 million. It is expected that the unutilized fund of amount HK$129 million to be fully utilized on or before 31 December 2023.

For February 2021 Top-up Placing, all of the net proceeds was used for repayment of borrowings.

For the December 2021 Placing, the net proceeds was used for capital expenditure and general working capital purposes approximately HK$4.418 billion and HK$61 million respectively. It is expected that the unutilized fund of amount HK$515 million to be fully utilized on or before 31 December 2024.

On 4 August 2022, the Company and GNE completed a top-up placing and subscriptions of 2,275,000,000 new shares of GNE at a price of HK$0.138 per share with net proceeds of approximately HK$310 million. GNE intends to apply 90% of the amount to support the cost relating to the investment, research and development of natural gas, LNG and integrated energy project management business and to develop the operation and maintenance ("O&M") services for other energy sectors, and the remaining 10% as the general working capital of GNE.

Indebtedness

Details of the Group's indebtedness are as follows:

	As at 31 December 2022 RMB million	As at 31 December 2021 RMB million
Current liabilities		
Bank and other borrowings — due within one year	**9,419**	5,023
Other financial liabilities	**294**	—
Lease liabilities — due within one year	**105**	317
Notes payables — due within one year	**—**	467
Loans from related parties — due within one year	**—**	32
	9,818	5,839
Non-current liabilities		
Bank and other borrowings — due after one year	**3,806**	3,560
Lease liabilities — due after one year	**46**	468
Notes payables — due after one year	**—**	2,648
	3,852	6,676
Indebtedness for solar power plants projects classified as held for sale		
Bank and other borrowings — due within one year	**—**	128
Bank and other borrowings — due after one year	**—**	327
Lease liabilities	**—**	10
	—	465
Total indebtedness	**13,670**	12,980
Less: Bank balances and cash and pledged and restricted bank and other deposits	**(10,430)**	(9,932)
Bank balances and cash and pledged bank deposits and other deposits classified as assets held for sale	**—**	(23)
Net debt	**3,240**	3,025

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

	2022 **RMB million**	2021 RMB million
Secured	**8,605**	7,828
Unsecured	**4,620**	755
	13,225	8,583
Maturity profile of bank and other borrowings		
On demand or within one year	**9,419**	5,023
After one year but within two years	**1,424**	1,496
After two years but within five years	**2,194**	1,345
After five years	**188**	719
Group's total bank and other borrowings	**13,225**	8,583

As at 31 December 2022, 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 2022	As at 31 December 2021
Current ratio	**1.09**	1.23
Quick ratio	**1.02**	1.19
Net debt to equity attributable to owners of the Company	**7.6%**	10.4%

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 Chinese 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 any material adverse adjustment of such measures may have an impact on the Group's operating condition and profitability. 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 reduce the adverse impact of policy changes on the Group.

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 due from the local grid companies in various provinces in PRC.

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

The Group's 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

The Group's 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 2022, 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 RMB3.2 billion (31 December 2021: RMB7.7 billion)

— Right-of-use assets of approximately RMB0.5 billion (31 December 2021: RMB0.7 billion)

— Investment properties of approximately RMB0.4 billion (31 December 2021: RMB0.06 billion)

— Trade receivables and contract assets of approximately RMB8.2 billion (31 December 2021: RMB3.2 billion)

— Pledged and restricted bank and other deposits of approximately RMB3.8 billion (31 December 2021: RMB3.2 billion)

In addition, lease liabilities of approximately RMB0.15 billion are recognised with related right-of-use assets of approximately RMB0.14 billion as at 31 December 2022 (31 December 2021: lease liabilities of approximately RMB0.8 billion are recognised with related right-of-use assets of approximately RMB1.4 billion).

Capital and other Commitments

As at 31 December 2022, the Group's capital commitments in respect of purchase of property, plant and equipment contracted for but not provided amounted to approximately RMB10,225 million respectively (2021: RMB8,847 million) and other commitments to contribute share capital to investments of approximately RMB226 million (2021: RMB960 million).

Contingencies

Financial guarantees contracts

As at 31 December 2022, the Group provided guarantees to its investments at fair value through profit or loss for certain of their bank and other borrowings in proportional to the Group's interest in those investments with amount of approximately RMB71 million. (31 December 2021: the Group guaranteed GNE's subsidiaries of amount approximately RMB 996 million).

As at 31 December 2022, the Group provided a total guarantee with maximum amount of approximately RMB2,500 million and nil (31 December 2021: RMB3,319 million and RMB900 million) to several banks and financial institutions in respect of banking and other facilities of Xinjiang GCL and Jiangsu Xinhua, associates of the Group respectively.

Contingent liability

Save as disclosed in above, the Group and the Company did not have other significant contingent liabilities as at 31 December 2022 and 2021.

Material acquisitions and disposals

1. On 28 July 2022, GNE and the placing agents entered into a placing agreement, pursuant to which 2,275,000,000 new shares of GNE are being issued and placed to placees at HK$0.138 per share with an aggregate value of approximately HK$314 million. The transaction has been completed in August 2022. As a result, the Group's equity interest in GNE was reduced from 49.24% to 44.44%.

   Further details of the above disposal is set out in the announcement of the Company dated 28 July 2022,

2. During the year, the Company completed a conditional special interim dividend by way of distribution in specie of shares of GNE. Upon completion of the Proposed Distribution in Specie, the Company was reduced its shareholding in GNE from approximately 44.44% to approximately 7.44%.

   Further details of the above disposal is set out in the Company's announcement dated 30 August 2022 and 11 October 2022, circular dated 6 September 2022.

Save as disclosed in above, there were no other significant acquisitions during the year ended 31 December 2022, or plans for material acquisitions as at the date of this report, nor were there other material acquisitions and disposals of subsidiaries during the year ended 31 December 2022.

SIGNIFICANT EVENTS AND BUSINESS DEVELOPMENT AFTER REPORTING PERIOD

During the year ended 31 December 2022, 31,625,000 ordinary shares of the Company were repurchased by the Group at an aggregate consideration of approximately RMB 57,971,000 which were recognised in equity as treasury shares. All of the treasury shares were subsequently cancelled in January 2023.

Apart from the above, there were no significant event after the year ended 31 December 2022 and up to the date of this annual report.

EMPLOYEES

We consider our employees to be our most important resource. As at 31 December 2022, the Group had approximately 11,527 employees (31 December 2021: 8,863 employees), excluding the employee of the GNE Group, 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.