彩虹集團新能源股份有限公司

IRICO GROUP NEW ENERGY COMPANY LIMITED*

(A joint stock company incorporated in the People's Republic of China with limited liability)

(Stock Code: 0438)

2018

ANNUAL REPORT

* For identification purpose only

Contents

Financial Highlights

1. Financial performance

Unit:RMB0'000

Item	2018	2017
Operating revenue	233,192	247,147
Including: Revenue from principal business	229,074	236,340
Revenue from other businesses	4,118	10,806
Gross profit of principal business	22,474	26,001
Gross profit margin of principal business	9.81%	11.00%
Total profit (loss is represented by "-")	8,696	10,616
Income tax expenses	17	587
Net profit (net loss is represented by "-")	8,679	10,028
Including: Net profit attributable to the shareholders of the Company (net loss is represented by "-")	8,130	9,001
Minority interests (net loss is represented by "-")	549	1,027
Earnings per share	RMB0.0364	RMB0.0403

2. Financial position

Item	31 December 2018	31 December 2017
Current assets	183,095	195,404
Non-current assets	303,983	264,257
Current liabilities	396,658	384,507
Non-current liabilities	69,041	50,995
Equity attributable to the owners of the Company	9,324	12,654
Minority interests	12,054	11,505

3. Operating indicators

Indicator	31 December 2018	31 December 2017
Gearing ratio	95.61%	94.74%
Current ratio	0.46	0.51
Interest coverage ratio *(times)*	1.95	2.56
Trade receivable turnover *(days)*	98	78
Inventory turnover *(days)*	33	27

Chairman's Statement

Dear Shareholders,

In 2018, the Group optimized its business structure by focusing on its core business and pursued talent-driven development accompanied by consistent technological innovation. It strove for high-quality development of its new energy and new materials business and boosted the vertical integration of solar photovoltaic business chain and the vigorous growth of new electronic materials business, thereby laying a solid foundation for future development. I am pleased to present the results of IRICO Group New Energy Company Limited* ("**IRICO**" or the "**Company**") and its subsidiaries (collectively, the "**Group**") for the year ended 31 December 2018 (the "**reporting period**").

Si Yuncong, Chairman

Business Review

During the reporting period, the Group further strengthened strategic deployment to effectively drive the development of its solar photovoltaic business. In respect of solar photovoltaic glass production, the production line of the Group's Xianyang base ran in good condition and constantly rolled out new products; the production line of the Group's Hefei base phase I maintained good operation, and the production line of phase II successfully achieved production with production capacity steadily increasing; and the production line in Yan'an, which applies oxygen-fuel combustion technology and has a smelting capacity of 850 tons per day, being the largest of its kind in the world, was completed with furnace successfully ignited. In respect of photovoltaic modules and cells, the Zhangjiagang base is expanding its production capacity for photovoltaic modules, while the cells investment project is shovel-ready. Besides, distributed photovoltaic power stations have been built in Nanjing, Hefei, Wuhan and other places, indicating that the Group is developing its presence the field of photovoltaic power generation. Thus, the Group further enhanced its advantages arising from the vertical integration of photovoltaic business chain that covers quartz sands, photovoltaic glass, cells and modules and photovoltaic power stations, creating synergies between upstream and downstream operations and laying a sound foundation for the expansion of its solar photovoltaic business.

During the reporting period, the Group firmly seized the development opportunity of new electronic materials, a strategic emerging industry in China, and pursued transformation and upgrading towards high-end application materials for new flat-panel displays, integrated circuits, semiconductors and new energy. The positive photoresist project jointly developed by the Group and Germany-based Merck was put into production. In addition, by leveraging the strengths of its existing business in market, technology, brand and personnel, the Group focused on key new materials, carried out in-depth international cooperation, and proactively planned the construction of an industrial park for strategic advanced materials in western China.

During the reporting period, in respect of capital operation, the Group adjusted the maximum amount under the financing plan for issuance of new H shares to RMB2.3 billion, and sped up the construction of the projects to be funded by the proceeds to be raised from the issuance of new H shares; in respect of the optimization of corporate structure, the Group pursued the development strategy of focusing on its core business, and improved asset utilization rate through disposal of 51% equity interests in Zhuhai Caizhu; in respect of business operation, the Group continued to promote lean production, and optimized and integrated its existing business resources through multiple measures such as enhancing customer value and reducing procurement costs, thereby steadily improving operating efficiency.

Business Review (Continued)

By the end of the reporting period, the Group had applied for 126 patents. In particular, the Group's self-developed technology for large-scale oxygen-fuel combustion photovoltaic glass furnace is world-leading in terms of energy conservation, environmental protection, emission reduction and other key aspects, and has won the Second Prize for CEC Science and Technology Progress Award (Second Class)(中國電子科技進步二等獎) and the CIE Science and Technology Progress Award (Second Class)(中國電子學會科技進步二等獎). In addition, the group standards in the Limits on Per Unit Energy Consumption for Production of Ultra-white Embossed Glass Using Oxygen-Fuel Combustion Technology (全氧燃燒超白壓花玻璃單位產品能耗限額) compiled by the Group have reached the international advanced level, setting an example for the development of oxygen-fuel combustion technology in the photovoltaic industry.

During the reporting period, the Group implemented the talent-driven development strategy, and recruited management professionals and technological developers at various levels in an accurate and efficient way to provide adequate skilled manpower to bolster the development of the Group.

During the reporting period, the industrial layout of the Group took initial shape. With its new photovoltaic glass project in normal production condition, and new products with higher gross profit margin contributing an increasing portion of its total revenue, the Group has come to the critical juncture for the transition from strategic transformation to strategic development.

Future Prospects

As China has launched policies to promote and support grid parity for photovoltaic power generation, the solar photovoltaic power generation field is embracing significant new opportunities. The demand for installed photovoltaic capacity will change from being policy-oriented to being market-driven, while the global demand for photovoltaic power generation will also develop in a diversified way, and the market demand will rise steadily. The Group will seize the opportunities to speed up the development of new projects for photovoltaic glass, photovoltaic modules and photovoltaic power stations, consistently improve the vertical consolidation of solar photovoltaic power business, and strive to become one of the world's top three players in terms of photovoltaic glass production capacity by 2020, with the total production capacity of photovoltaic modules and cells exceeding 2GW and the total capacity of photovoltaic power stations exceeding 500MW.

Future Prospects (Continued)

In the meanwhile, the Group will, with a focus on the two trillion-worth industries of flat-panel displays and integrated circuits, continuously transform and upgrade its business towards the high end of the industry to build a nationwide platform for strategic electronic materials, and actively tap into the market of positive photoresist, lithium battery cathode materials and electronic silver paste products to create new areas of profit growth.

The Group will keep seeking key technology breakthroughs in new energy and new materials business by increasing research and development spending to further bolster its cutting edge.

The Group will make unremitting efforts to develop itself into a world-renowned provider of green new energy services and a world-class supplier of new materials.

Acknowledgement

On behalf of the board of directors of the Company (the "**Board**") and its members (the "**Directors**"), I would like to express our gratitude to the Company's shareholders (the "**Shareholders**"), business partners and the community for their care and support. I would also like to express my heartfelt thanks to the management team and all of the employees for their hard work.

IRICO Group New Energy Company Limited*
Si Yuncong
Chairman

Xianyang, the People's Republic of China
26 March 2019

Management Discussion and Analysis

(I) Industry analysis

1. Solar Photovoltaic Power Stations

During the reporting period, the newly installed solar photovoltaic capacity in China decreased for the first time under the impact of the "May 31 New Policy" but gradually recovered in the second half of the year due to the declining prices of solar modules. Further, driven by the expectation that the installed solar capacity under the national 13th five-year plan on solar power development would be significantly raised, the newly installed solar photovoltaic capacity in China for the whole year beat market expectations to reach 44GW, of which 23.30GW and 20.96GW were attributable concentrated solar power plants and distributed solar power plants, respectively. In 2018, the world's newly installed solar photovoltaic capacity, immune from the decline in the Chinese market, continued to grow and stood at about 103GW, up by 3% year on year, which was mainly due to increasingly diversified demand for photovoltaic power generation across the world. In 2018, six more countries saw their respective installed solar photovoltaic capacity exceeding 1GW, which helped reduce the reliance of the global solar photovoltaic industry on one country's incentive policies and thus ensure the stability of global market demand.

Looking into 2019, as China's central government and relevant ministries and commissions have set the tone to continue supporting the solar photovoltaic industry in China, favorable policies may be introduced in succession to further stimulate domestic solar photovoltaic demand. In respect of overseas markets, apart from vibrant markets in India, the Middle East and Southeast Asia, there will be new growth areas. Global solar photovoltaic demand in 2019 may exceed the optimistic expectations of various research institutions. It is estimated that in 2019 the installed capacity of solar photovoltaic power plants across the world and in China will reach approximately 112GW and 50GW, respectively. With the continuous improvement and innovation of solar power generation technology, the cost of power generation continues to decline, implying optimistic growth prospects for solar photovoltaic power generation.

2. Solar Photovoltaic Glass

During the reporting period, due to the slowdown in the growth of installed capacity, the rule of "survival of the fittest" came to play in the photovoltaic glass industry in China with industrial concentration further increased and scale effect further amplified. As such, technically-backward small-sized enterprises are facing increasing pressure. In addition, grid parity and prolonged declines in the solar photovoltaic industry chain prices suppressed the price of photovoltaic glass and called for photovoltaic glass manufacturers to lower their costs.

Looking into 2019, global demand for photovoltaic glass will continue to grow, and the industry will become increasingly concentrated. With solar module makers moving their production lines moving outside China, major photovoltaic glass manufacturers will gradually increase their investment in building production lines overseas, which will change the landscape of the global photovoltaic glass industry.

(I) Industry analysis (Continued)

3. New Materials

In respect of cathode materials for lithium batteries, with the continuous development of China's new energy vehicle sector, electric vehicles powered by lithium-ion batteries have become increasingly popular in China. The demand for cathode materials will increase from 260,000 tons in 2018 to 400,000 tons, and ternary lithium batteries will become the mainstream in the field of power batteries due to high energy density requirement.

In respect of positive photoresists, with the rapid development of the flat-panel display industry, mainland China has become the world's largest panel production base, and its TV panel shipments are expected to exceed 100 million pieces in 2018, with an average annual growth rate of 15.4%. Against such backdrop, photoresists, widely used in LCD panels, enjoy growing market demand, and the usage of positive photoresists is expected to exceed 10,000 tons per year.

In respect of electronic silver paste, electronic paste is the basic material for manufacturing of electronic components. By 2022, the annual average growth rate of new installed capacity in the world will stand at about 12.6%. As the annual installed capacity of solar energy continues to rise, it is expected that the demand for positive silver paste will increase from about 2,300 tons in 2018 to 3,089 tons in 2022.

(II) Business review

1. Operation Summary

In 2018, the Group recorded operating revenue of RMB2,331.92 million and total profit of RMB86.96 million, representing year-on-year decreases of RMB139.55 million or 5.65% and RMB19.20 million or 18.09%, respectively.

2. Review of Principal Business

During the reporting period, the Group strove to drive the development of solar photovoltaic and new electronic materials segments, Boasting broad prospects for the development of its main business, the Group continued to pursue business expansion.

(II) Business review (Continued)

2. Review of Principal Business (Continued)

(1) Solar photovoltaic business

- Solar photovoltaic glass

  During the reporting period, the solar photovoltaic glass production line of the Group's Hefei base phase I maintained good operation, and the photovoltaic glass production line of phase II successfully achieved production and saw comprehensive enhancement of production capacity. Hefei base successfully developed and put into industrial application the ultra-thin double-glazed all-steel technology (雙玻超薄全鋼技術) which has been accredited by customers, and was awarded the title of "National High-Tech Enterprise". The solar photovoltaic glass production line of Xianyang base ran in a good condition with its upgrading of production process and equipment vigorously promoted, it commenced the mass production of thin photovoltaic glass, completed the construction of the production line of white ceramic-coated back panel glass (背板白瓷玻璃), and improved the power of double-glazed modules which have been put into mass production. In addition, Yan'an base has completed the equipment installation for the photovoltaic glass production line, with furnace successfully ignited.

- Photovoltaic modules and cells

  During the reporting period, Jiangsu IRICO Yongneng New Energy Company Limited* (江蘇彩虹永能新能源有限公司) ("**IRICO Yongneng**") extended the Group's photovoltaic business chain with a primary focus on solar modules and prepared the construction of a high-efficiency polysilicon photovoltaic module project with an annual output of 2GW, thereby further enhancing the comprehensive strengths of the Group.

- Solar photovoltaic power stations

  During the reporting period, the phases I and II of solar photovoltaic power station in Nanjing and solar photovoltaic power stations in Hefei, Wuhan, Liquan were in stable operation. In addition, the Group conducted project surveys and approached potential partners in Yangzhou, Hefei, Nanjing, Changwu cities of China as well as Ukraine in an attempt to seek opportunities for the development of distributed solar power stations

- Quartz sand processing

  During the reporting period, Hanzhong Jiarunze, a subsidiary of the Group, proceeded smoothly with its quartz sand project, and guaranteed stable supply for the solar photovoltaic glass business of the Group, which in turn demonstrated the Group's strength in terms of industrial chain.

(II) Business review (Continued)

2. Review of Principal Business (Continued)

(2) New materials business

During the reporting period, the Group introduced advanced technology in positive photoresist from Merck KGaA in Germany, completed the construction of the project for applying such technology and the formation of an operation team (both of which were accredited by Merck Holding (China) Ltd. (默克投資(中國)有限公司) and other customers), and secured bulk orders, marking the Group's positive photoresist business becoming part of the industry chain of LCD panel of CEC. The project is a successful transnational cooperation between the Group and Merck Group for localised production, and marks the beginning of and serves as a typical example for jointly exploring domestic specialized market, paving the way for future technology introduction and project cooperation.

In respect of cathode materials for lithium batteries, the Group completed the construction of a NCM811 cathode production line with a designed production capacity among the front rank in China, and mastered the key technologies required for a ternary production line of nickel-rich material. The project has achieved full production capacity as designated which is also compatible with other production lines, laying a sound foundation for expanding the production and marketing scale.

(3) Trading and other business

During the reporting period, the Group's trading and other operations substantially decreased.

(III) FUTURE PROSPECTS

2019 is a critical year for the Group's strategic development. The Group will seize the opportunities to speed up the development of new projects for photovoltaic glass, photovoltaic modules and photovoltaic power stations, and consistently optimize the vertical consolidation of solar photovoltaic power business. In addition, it will explore diversified operations by seizing the development opportunity of new electronic materials, a strategic emerging industry in China, and vigorously developing positive photoresist, lithium battery cathode materials and electronic silver paste business.

(IV) Financial Review

1. Results

Profit and loss data for 2014–2018 *(RMB0'000)*

Items	2018	2017	2016	2015	2014
Operating revenue	**233,192**	247,147	187,105	163,084	232,983
Including: Revenue from principal business	**229,074**	236,340	179,026	157,265	224,116
Revenue from other businesses	**4,118**	10,806	8,079	5,819	8,867
Operating costs	**208,901**	219,380	162,189	159,312	234,315
Including: Costs of principal business	**206,600**	210,340	158,216	155,085	227,930
Costs of other businesses	**2,301**	9,041	3,973	4,227	6,385
Taxes and surcharges	**991**	1,212	1,045	256	458
Selling expenses	**6,235**	8,076	8,738	8,926	8,143
Administrative expenses	**12,097**	13,230	11,153	19,788	35,447
Research and development expenses	**4,368**	2,619	360	365	527
Finance costs	**9,127**	6,798	3,898	18,405	26,499
Impairment losses on assets	**506**	2,462	2,062	34,250	113,870
Credit impairment losses	**1,200**				
Other income	**4,416**	11,990	4,677	1,555	2,137
Investment income	**14,338**	1,215	6,058	129,823	16,482
Gains from changes in fair value (loss is represented by "-")	**-10**				
Gains from disposal of assets	**6**	3,356	418	1,138	1,839
Non-operating income	**223**	1,091	1,061	25	231
Non-operating expenses	**43**	407	53	1,853	6,091
Total profit (total loss is represented by "-")	**8,696**	10,616	9,818	52,470	-171,678
Income tax expenses	**17**	587	137	30	144
Net profit (net loss is represented by "-")	**8,679**	10,028	9,681	52,440	-171,823
Including: Net profit attributable to the shareholders of the Company (net loss is represented by "-")	**8,130**	9,001	9,831	68,299	-83,534
Minority interests (net loss is represented by "-")	**549**	1,027	-149	-15,859	-88,289

(IV) Financial Review (Continued)

1. Results (Continued)

Turnover by products *(RMB0'000)*

Name	2018	2017	Increase or decrease	Change *(%)*
Operating revenue	**233,192**	247,147	-13,955	-5.65%
Including: Solar photovoltaic business	**172,978**	168,244	4,734	2.81%
New materials business	**45,209**	31,901	13,308	41.71%
Trading business	**10,736**	36,195	-25,459	-70.34%
Other	**4,269**	10,806	-6,537	-60.50%

(1) Overall performance

- Revenue and profit from principal business

During the reporting period, the Group recorded the revenue from the principal business of RMB2,290.74 million, representing a year-on-year decrease of RMB72.67 million or 3.07%, which was mainly due to the following reasons:the revenue from solar photovoltaic business was RMB1,729.78 million, representing a year-on-year increase of RMB47.34 million;the revenue from new materials business was RMB452.09 million, representing a year-on-year increase of RMB133.08 million;the revenue from trading and other businesses was RMB108.87 million, representing a year-on-year decrease of RMB253.09 million.

The Group recorded a total profit of RMB86.96 million, representing a year-on-year decrease of RMB19.20 million or 18.09%, which was mainly due to new breakthroughs in the proportion of qualified products and product output, cost reduction resulting from lean production and energy saving and consumption reduction, increase in gross profit margin benefiting from optimized product portfolio in 2018;a significant decrease in the gross profit of photovoltaic glass in the second half of 2018 as a result of a decrease of approximately 30%in the prices of photovoltaic glass as compared with the beginning of the year following the introduction of the "531" new policy;and investment gains of RMB144.15 million from the transfer of 51%equity interests in Zhuhai Caizhu Industrial Co., Ltd.* (珠海彩珠實業有限公司) ("Zhuhai Caizhu") by the Group.

Management Discussion and Analysis (Continued)

(IV) Financial Review (Continued)

1. Results (Continued)

(1) Overall performance (Continued)

- Administrative expenses

  During the reporting period, the Group's administrative expenses was RMB120.97 million (2017：RMB132.30 million), representing a year-on-year decrease of RMB11.33 million or 8.57%, which was mainly due to the Group's enhanced control over expenses.

- Finance costs

  During the reporting period, the Group's finance costs included in profit and loss was RMB91.27 million (2017：67.98 million), representing a year-on-year increase of RMB23.30 million or 34.28%. The increase in finance costs was mainly attributable to the increase in interest rates and borrowings.

2. Current assets and financial resources

As at 31 December 2018,the Group's cash and bank balances amounted to RMB260.55 million (31 December 2017：RMB491.51 million), representing a year-on-year decrease of RMB230.96 million or 46.99%.

As at 31 December 2018,the liabilities (including bank borrowings and other borrowings)of the Group totaled RMB2,832.18 million (31 December 2017：RMB2,491.51 million).

During the reporting period, the turnover days for accounts receivable of the Group was 98 days, representing a year-on-year increase of 20 days, which was mainly attributable to an increase in accounts receivable as a result of an increase in the output and sales volume of Hefei Photovoltaic Glass Project (Phase II)following its transfer into fixed assets in the fourth quarter in 2018.

During the reporting period, the inventory turnover days of the Group was 33 days, representing a year-on-year increase of 6 days, which was mainly attributable to a year-on-year increase in the average balance of inventories in 2018 as a result of merger with IRICO Yongneng and the transfer of Hefei Photovoltaic Glass Project (Phase II)into fixed assets in the fourth quarter in 2018.

During the reporting period, the Group's net cash outflow from operating activities amounted to RMB232.75 million (31 December 2017：RMB97.71 million), while net cash inflow from financing activities and net cash outflow from investing activities were RMB236.37 million (31 December 2017：RMB411.48 million) and RMB109.29 million (31 December 2017：RMB456 million) respectively.The Group's capital expenditures amounted to RMB227.89 million in total (31 December 2017：RMB424.95 million).

(IV) Financial Review (Continued)

3. Capital structure

As at 31 December 2018,the Group intends to maintain a suitable ratio of share capital to liabilities to ensure an effective capital structure.

As at 31 December 2018,the total liabilities of the Group were RMB4,656.99 million (31 December 2017：RMB4,355.02 million), of which bank borrowings and other borrowings totaled RMB2,832.18 million (31 December 2017：RMB2,491.51 million).

As at 31 December 2018,the total owner's equity of the Group was RMB213.78 million (31 December 2017：RMB241.59 million).

As at 31 December 2018,the gearing ratio of the Group was 95.61% (31 December 2017：94.74%).

4. Foreign exchange risk

The Group's income and most of its expenses were denominated in Renminbi and US dollar. For the year ended 31 December 2018,the net foreign exchange gain of the Group was RMB1.94 million (31 December 2017：RMB3.24 million) as a result of exchange rate fluctuations. Exchange rate fluctuations had no material effect on the Group's working capital or liquidity.

5. Commitments

As at 31 December 2018,the capital expenditure commitments of the Group amounted to RMB471.60 million (31 December 2017：RMB1,152.58 million).

6. Contingent liabilities

As at 31 December 2018,the Group had no material contingent liability.

7. Pledged assets

As at 31 December 2018,bank borrowings and other borrowings of the Group of approximately RMB911.02 million were secured by certain properties, plants, equipment, land use rights, investments in other equity instruments and notes receivables of the Group with a net carrying amount of approximately RMB912.69 million.As at 31 December 2017, bank borrowings and other borrowings of the Group of approximately RMB278.30 million were secured by certain properties, plants, equipment, land use rights, investments in other equity instruments and notes receivables of the Group with a net carrying amount of approximately RMB409.40 million.

(V) Material Acquisition and Disposal

Disposal of 51% equity interest in Zhuhai Caizhu Industrial Co., Ltd.*

On 3 May 2018, the Company and Xianyang Zhongdian IRICO Group Holdings Ltd.* (咸陽中電彩虹集團控股有限公司) ("**Zhongdian IRICO**") entered into the Equity Transfer Agreement, pursuant to which the Company agreed to sell, and Zhongdian IRICO agreed to acquire 51% equity interest in Zhuhai Caizhu at a cash consideration of RMB131,882,093.71. Upon completion of the disposal, the Company would hold 49% equity interest in Zhuhai Caizhu, and Zhuhai Caizhu would cease to be a subsidiary of the Company and its financial results will not be consolidated into the financial statements of the Company. The disposal was approved by independent shareholders at the extraordinary general meeting held on 26 June 2018 and had been completed in the reporting period.

For details, please refer to the announcements of the Company dated 3 May 2018 and 26 June 2018, and the circular of the Company dated 1 June 2018.

During the reporting period, save as disclosed in this report, the Company has no other material acquisition or disposal of subsidiaries and associates.

(VI) Significant Investments

During the reporting period, save as disclosed in this report, the Company had not made any other significant investment.

(VII) Events after the Reporting Period

Proposed issue of new H shares under specific mandate; connected transaction relating to proposed subscription of new H shares by a connected person; and proposed subscription of new H shares by independent third parties

On 24 July 2017, the Board approved the proposed H share issue (including the proposed subscription by each of Zhongdian IRICO and Yan'an Dingyuan Investment Co., Ltd.* (延安市鼎源投資有限責任公司) ("**Yan'an Dingyuan**") under a specific mandate, pursuant to which the Company shall issue not more than 2 billion new H shares to not more than 10 target subscribers (including Zhongdian IRICO and Yan'an Dingyuan) and therefore the aggregate nominal value of the H shares to be issued shall not exceed RMB2 billion. The gross proceeds to be raised from the proposed H share issue shall not exceed RMB2 billion.

(VII) Events after the Reporting Period (Continued)

On 1 February 2018, the Board approved the resolution regarding the adjustments to the proposed H share issue. The number of new H shares to be issued by the Company under the proposed H share issue would be adjusted to not more than 2.3 billion new H shares as compared to the previous number of not more than 2 billion new H shares. The amount of gross proceeds to be raised from the proposed H share issue after adjustments was expected to be not more than RMB2.3 billion. Taking into account the fact that the reporting work in respect of the proposed H share issue has been affected by the original power station projects due to their complex examination and approval procedures, the proceeds to be raised from the proposed H share issue will no longer be used in Shenmu-Caijing 50MWp Grid-connected Photovoltaic Power Station Project and Yangjiang 50MWp Surface Power Station Project as disclosed in the announcement of the Company dated 24 July 2017, but will be used in IRICO Yongneng 2GW Photovoltaic Modules Project instead.

As part of the proposed H share issue, the Company entered into the subscription agreements with each of Zhongdian IRICO and Yan'an Dingyuan on 24 July 2017. Pursuant to these subscription agreements, each of Zhongdian IRICO and Yan'an Dingyuan conditionally agreed to subscribe in cash for, and the Company conditionally agreed to allot and issue, not more than 900 million and 300 million new H shares at a consideration of RMB900 million and RMB300 million, respectively. The proposed subscription by Zhongdian IRICO constituted a connected transaction of the Company and was subject to the reporting, announcement and independent shareholders' approval requirements under Chapter 14A of the Listing Rules. On 16 October 2017, the Company entered into the subscription agreement with Zhangjiagang Yuefeng Jinchuang Investment Co., Ltd.* (張家港市悦豐金創投資有限公司) ("**Zhangjiagang Investment**"). Pursuant to such agreement, Zhangjiagang Investment conditionally agreed to subscribe in cash for, and the Company conditionally agreed to allot and issue, not more than 500 million new H shares at a consideration of RMB500 million. On 18 April 2018, the Company entered into the subscription agreement with Hefei Xincheng State-owned Assets Management Co., Ltd.* (合肥鑫城國有資產經營有限公司) ("**Hefei Xincheng**"). Pursuant to such agreement, Hefei Xincheng conditionally agreed to subscribe in cash for, and the Company conditionally agreed to allot and issue, not more than 200 million new H shares at a consideration of RMB200 million.

On 23 January 2019, the resolution in relation to the proposed H share issue under a specific mandate was approved by the shareholders or the holders of H shares (as the case may be) at the extraordinary general meeting and the H share class meeting, respectively. The resolution in relation to the proposed subscription by Zhongdian IRICO was approved by the independent shareholders at the extraordinary general meeting.

For details, please refer to the announcements of the Company dated 24 July 2017, 16 October 2017, 1 February 2018, 18 April 2018, 6 December 2018, 10 December 2018 and 23 January 2019, as well as the circular of the Company dated 31 December 2018.

(VIII) Other Matters

Adoption of the PRC accounting standards for business enterprises; proposed amendments to the articles of association; and proposed change of overseas auditor and proposed appointment of auditor

According to the Consultation Conclusions on Acceptance of Mainland Accounting and Auditing Standards and Mainland Audit Firms for Mainland Incorporated Companies Listed in Hong Kong (《有關接受在香港上市的內地註冊成立公司採用內地的會計及審計準則以及聘用內地會計師事務所的諮詢總結》) published by The Stock Exchange in December 2010, mainland incorporated issuers listed in Hong Kong are allowed to prepare their financial statements using mainland accounting standards, and mainland audit firms approved by the Ministry of Finance (the "**MOF**") of the PRC and the China Securities Regulatory Commission (the "**CSRC**") are allowed to serve these issuers using mainland auditing standards. In order to improve efficiency and reduce disclosure costs and audit fees, on 6 November 2017, the Board considered and approved the adoption of the PRC Accounting Standards for Business Enterprises to replace the Hong Kong Financial Reporting Standards as the basis for preparation of the overseas financial report of the Company with effect from 1 January 2018.

In light of the change of basis for preparation of the overseas financial report of the Company and in accordance with the spirit of the work meeting on Party construction by state-owned enterprises in the PRC in relation to proactive fulfillment of the requirements of the organizing department of the Central Committee of the Communist Party of China and the State-owned Assets Supervision and Administration Commission of the State Council on incorporating the overall requirements of Party construction into the articles of association of companies, the Board proposed the amendments to the articles of association of the Company. The amendments to relevant articles involving change of accounting standards shall come into effect since 1 January 2018. The amendments were approved by shareholders at the extraordinary general meeting of the Company held on 22 December 2017.

In view of the above change of basis for preparation of overseas financial report of the Company, the Board proposed to cease the re-appointment of PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司) as the overseas auditor of the Company for the year 2018, and appoint WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) as the auditor of the Company to carry out audit on the financial statements of the Company prepared in accordance with the PRC Accounting Standards for Business Enterprises and discharge the duties as an overseas auditor under the Listing Rules. WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) is a firm of practicing accountants which has been approved by the MOF and the CSRC and eligible to provide auditing services by using the China Standards on Auditing to the mainland incorporated issuers listed in Hong Kong. Upon approval by the shareholders at the 2017 annual general meeting held on 25 May 2018, PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司) ceased to serve as the Company's 2018 overseas auditor, and WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) served as the sole auditor of the Company.

For details, please refer to the announcements of the Company dated 6 November 2017, 22 December 2017 and 25 May 2018, as well as the circular of the Company dated 1 December 2017.

Profiles of Directors, Supervisors and Senior Management

Directors

Executive Directors

Si Yuncong	54	Chairman
Zou Changfu	59	Resigned as an executive director on 13 February 2019
Chen Xiaoning	43	Appointed as a non-executive director on 26 October 2018 and re-designated as an executive director on 13 February 2019

Non-executive Directors

Huang Mingyan	53	Resigned as a non-executive director on 26 October 2018
Chen Changqing	45	Resigned as a non-executive director on 26 October 2018
Fan Laiying	47	

Independent Non-executive Directors

Feng Bing	52
Wang Jialu	57
Wang Zhicheng	44

Mr. Si Yuncong (司雲聰), aged 54, is the chairman and an executive Director of the Company, and joined the Group in May 2013. Mr. Si graduated from Hohai University majoring in economic management with a Ph.D. degree and is a senior engineer. Mr. Si currently serves as the chairman, the Party secretary and the legal representative of IRICO Group, and the chairman of Xianyang Zhongdian IRICO Group Holdings Ltd. Mr. Si successively served as head of the environment monitoring station, director assistant and vice director of the safe technology and environmental protection division, deputy chief and chief of the production safety department, deputy factory manager and manager of East China Electronic Tube Factory* (華東電子管廠), deputy general manager and general manager of Nanjing Huadong Electronics Group Co., Ltd.* (南京華東電子集團股份有限公司), executive director and general manager of Nanjing Huadong Electronics Group Company* (南京華東電子集團公司), the deputy general manager of IRICO Group from May 2013 to March 2016, and the general manager, a member of the Party Committee and the legal representative of IRICO Group from March 2016 to April 2018.

Mr. Zou Changfu (鄒昌福), aged 59, is an executive Director and the general manager of the Company. He joined the Group in August 1981. Mr. Zou holds a bachelor's degree in economic management from the Party school of Shaanxi Provincial Party Committee of the Chinese Communist Party (中共陝西省委黨校) and is a senior engineer and a CPC member. He is currently a member of the leading group and a member of the Party Committee of IRICO Group, and the general manager and the Party secretary of the Company, and concurrently serves as an executive director of Zhuhai Caizhu Industrial Co., Ltd.* (珠海彩珠實業有限公司) and the chairman of Xianyang IRICO Electronics Parts Co., Ltd. Mr. Zou served as the head of the workshop of IRICO Glass Factory, and the general manager of Shenzhen Hongyang Company* (深圳虹陽公司), Kunshan IRICO Industrial Company* (昆山彩虹實業公司), the purchase department of IRICO Group and the Company, Xi'an Cairui Company* (西安彩瑞公司), Hefei Photovoltaic Glass Company* (合肥光伏玻璃公司).

Profiles of Directors, Supervisors and Senior Management (Continued)

Directors (Continued)

Mr. Chen Xiaoning (陳曉寧), aged 43, is an executive Director and the general manager of the Company, and joined the Group in July 1996. Mr. Chen graduated from Northwest University (西北大學) with an MBA degree. Mr. Chen is a senior engineer, a senior economist and a member of the Chinese Communist Party. Mr. Chen currently serves as an executive director, the general manager and the legal representative of IRICO (Hefei) Photovoltaic Co., Ltd., an executive director, the general manager and the legal representative of IRICO (Yan'an) New Energy Company Limited* (彩虹(延安)新能源有限公司). He served as a technician, a group leader and a plant secretary of No. 1 IRICO Color Picture Tube Plant, the head of secretariat office, the head of administrative office and an administrative assistant to the general manager of IRICO Group, a deputy head and the head of the office of the Company, the deputy head and a secretary of discipline inspection commission of IRICO Photovoltaic Glass Factory, deputy head of the office of Board and office of general manager of the Company; the assistant to the general manager of the Company and the deputy general manager of IRICO (Hefei) Photovoltaic Co., Ltd. and Hefei IRICO New Energy Co., Ltd., and the deputy general manager and an executive deputy general manager of the Company and the general manager of IRICO (Hefei) Photovoltaic Co., Ltd. and Hefei IRICO New Energy Co., Ltd.

Mr. Huang Mingyan (黃明巖), aged 53, is a non-executive Director of the Company and joined the Group in May 2013. Mr. Huang graduated from Zhejiang University (浙江大學) with a bachelor's degree in architecture engineering and later from Chongqing Jianzhu University (重慶建築大學) with a master's degree in construction economics and management. Mr. Huang is a senior engineer. Mr. Huang used to work as the deputy general manager of IRICO Group Company Limited*, a director of Xianyang Zhongdian IRICO Group Holdings Ltd., a supervisor of Shanghai Epilight Technology Co., Ltd. (上海藍光科技有限公司), the general manager of China National Electronics Imp. & Exp. Caihong Company (中國電子進出口彩虹公司), the chairman of Xi'an Xinjiyuan Club (西安新紀元俱樂部), deputy head of the group work department of China National Real Estate Development Group Corporation (中國房地產開發集團公司), the general manager of the property department of China Electronics Corporation (中國電子信息產業集團公司), the general manager of China Electronics Technology Applications Corporation (中國電子技術應用公司) and the general manager and the Party secretary of China Electronics Industry Development Corporation (中國電子產業開發公司).

Mr. Chen Changqing (陳長青), aged 45, is a non-executive Director of the Company. Mr. Chen graduated from Xi'an University of Technology with a bachelor's degree in accounting. He is an accountant and a member of the Chinese Communist Party. He served as the head of the settlement centre of IRICO Group. He served as the deputy head of capital operation department of IRICO Group from December 2009 to December 2010. He served as the head of financial department of IRICO Color Picture Tube Plant from December 2010 to February 2012 and the chief financial officer of IRICO Display Devices Co., Ltd. from February 2012 to December 2015. Mr. Chen is currently the chief financial officer and the head of the audit department of Xianyang IRICO Optoelectronics Technology Co., Ltd.

Directors (Continued)

Mr. Fan Laiying (樊來盈), aged 47, is a non-executive Director of the Company. Mr. Fan graduated from Shaanxi University of Science & Technology with a bachelor's degree in accounting. Mr. Fan currently serves as the chief accountant of IRICO Group and Xianyang Zhongdian IRICO Group Holdings Ltd., and a director of IRICO Display Devices Co., Ltd. He served as the manager of the finance department of Kunshan IRICO Yingguang Electronics Company Limited, the chief accountant of the finance department of IRICO Group Sales Company* (彩虹集團銷售公司), the business manager of the finance department of IRICO Display Devices Co., Ltd., the head of finance department of Xianyang IRICO Thermoelectricity Co., Ltd. and Hefei IRICO Epilight Technology Co., Ltd, the financial controller of IRICO (Hefei) Photovoltaic Co., Ltd. and Hefei IRICO New Energy Co., Ltd.. Mr. Fan has served as the deputy chief economist and the deputy chief accountant of IRICO Group since May 2016 (concurrently served as the financial controller of IRICO Display Devices Co., Ltd. from September 2016 to February 2017).

Mr. Feng Bing (馮兵), aged 52, is an independent non-executive Director of the Company, and currently serves as the chief executive officer of HomeLegend, located in Georgia, USA. Mr. Feng has served as an executive member for China Mergers & Acquisition Association (中國併購公會) and the deputy director for its Jiangsu branch since 2002, and obtained his master's degree from Calculation Technology Research Institute of Chinese Academy of Sciences (中國科學院計算技術研究所) majoring in computer architecture and his master's degree in finance from the Faculty of Commerce at Syracuse University, respectively. He was an executive director and partner of China Financial and Consulting Company* (中華財務諮詢公司), a senior manager of Deloitte Consulting in New York, USA, and a part-time tutor of the Faculty of Commerce at Syracuse University.

Mr. Wang Jialu (王家路), aged 57, is an independent non-executive Director of the Company. He completed his course for master's degree in business administration from Guanghua Management College of Peking University and the course for juris doctor from Marburg University of Germany, and received his MBA degree from Peking University and his LLM degree from the Law School of Marburg University of Germany. He is currently a partner of Commerce & Finance Law Office (通商律師事務所), an arbitrator in China International Economic and Trade Arbitration Commission (中國國際經濟貿易仲裁委員會), an arbitrator in the Beijing Arbitration Commission (北京仲裁委員會) and an adjunct lecturer for juris master's degree course in the Law Faculty of Peking University.

Mr. Wang Zhicheng (王志成), aged 44, is an independent non-executive Director of the Company. He is a PhD in management (accounting), a PRC certified public accountant, an associate professor of Beijing National Accounting Institute (北京國家會計學院) and a tutor of postgraduates. Mr. Wang currently serves as an independent director of Beijing YJK Building Software Co., Ltd.* (北京盈建科軟件股份有限公司), an independent director of Duzhe Publishing & Media Corp.* (讀者傳媒股份有限公司), an independent director of Richinfo Technology Co., Ltd. and an external director of Xinxing Lingyun Pharmaceutical Chemicals Co., Ltd* (新興淩雲醫藥化工有限公司). He served as the manager of the enterprise risk management services department in one of the four largest international accounting firms and the director of the accounting teaching and research office of North China Electric Power University. Mr. Wang has engaged in the trainings in respect of enterprise risk management and internal control, budget management, and accounting standards for a long period at Beijing National Accounting Institute (北京國家會計學院) and Xiamen National Accounting Institute (廈門國家會計學院).

Profiles of Directors, Supervisors and Senior Management (Continued)

Supervisors

Ding Wenhui	57	Shareholder Supervisor, Chairman of the Supervisory Committee	
Zhao Lefei	49	Staff Supervisor	
Tang Haobo	58	Staff Supervisor	Resigned as a staff supervisor on 1 April 2019
Wu Mingli	56	Staff Supervisor	Appointed as a staff supervisor on 1 April 2019
Sun Haiying	75	Independent Supervisor	
Wu Xiaoguang	61	Independent Supervisor	

Mr. Ding Wenhui (丁文惠), aged 57, is the shareholder supervisor and chairman of the supervisory committee of the Company and holds a bachelor's degree and is a member of the Chinese Communist Party and a senior engineer. He currently serves as the deputy secretary of the Chinese Communist Party, the deputy secretary of discipline inspection commission and the chairman of the employee union of IRICO Group Corporation Limited * (彩虹集團有限公司). He had held various positions at No. 2 Colour Picture Tube Factory of IRICO Group including a technician, the head of the workshop, the deputy factory manager and then the factory manager. He served as the deputy general manager and then the general manager of IRICO Display Devices Co., Ltd. He served as the head of human resource department and the head of executive department of the Chinese Communist Party (discipline inspection and supervision department) of IRICO Group Corporation Limited.

Mr. Zhao Lefei (趙樂飛), aged 49, is a staff supervisor of the Company. Mr. Zhao obtained a bachelor's degree from Xianyang Normal University (咸陽師範學院). He currently serves as the deputy secretary of the Party Committee, the secretary of the disciplinary committee, the chairman of the labor union and the director of the office of the party and labor relations (黨群辦) of the Company. He served as the human resources manager of Haikou IRICO Hot Spring Hotel (海口彩虹溫泉大酒店), a director assistant of the disciplinary inspection and supervision division (紀檢監察處) of IRICO Group, the secretary of the disciplinary committee, the chairman of the labor union and the director of the office of the party and labor relations of IRICO Spare Parts Factory* (彩虹零件廠), the secretary of the disciplinary committee, the chairman of the labor union and the director of the integrated management department (綜合管理部) of Xi'an IRICO Zixun Co., Ltd (西安彩虹資訊有限公司) and the office director at Xi'an headquarters of IRICO Group.

Mr. Tang Haobo (唐浩波), aged 58, is a staff supervisor of the Company. Mr. Tang graduated from Xi'an School of Radio Industry (西安無線電工業學校) majoring in radio with the educational background of secondary technical school, and then obtained a tertiary diploma in corporate management from IRICO University for Staff and Workers. Mr. Tang is currently the general manager of the investment operation and management department of the Company and once held positions including vice head of the motor driving section and head of the equipment design office of the No. 2 Colour Picture Tube Factory, deputy general manager of Shenzhen IRICO Huangqi Company Limited (深圳彩虹皇旗公司), vice head of No. 1 Colour Picture Tube Factory, manager of IRICO Equipment Company Limited, vice head of IRICO Electron Gun Factory (彩虹電子槍廠), and vice general manager of operation and management department of the Company.

Supervisors (Continued)

Mr. Wu Mingli (武明利), aged 56, is the head of the technology and quality department and the investment operating department of the Company. Mr. Wu graduated from Northwest University with a bachelor's degree, majoring in organic chemistry and is a senior engineer. Mr. Wu had served as deputy director of the materials technology division of the product technology department of IRICO Group; director of quality assurance division and director of assembly workshop of No. 1 IRICO Color Picture Tube Plant; deputy head of technology and quality department and director of the technology centre of IRICO Group; director and general manager of Xi'an IRICO Information Co., Ltd.* (西安彩虹資訊有限公司); deputy factory manager of IRICO Electron Gun Factory* (電子槍廠); director and general manager of Xianyang Caiqin Electronics Device Co., Ltd.* (咸陽彩秦電子器件有限公司); director, deputy general manager and factory manager of the photovoltaic module factory of Photovoltaic Technology Company Limited* (光伏科技公司) and head of the technology and quality department of the Company.

Mr. Sun Haiying (孫海鷹), aged 75, is an independent supervisor of the Company. Mr. Sun graduated from the Northwest University (西北大學) in geography. He is currently the head and a professor of the Environmental Science and Engineering Centre of Xi'an Jiao Tong University (西安交通大學) and a deputy executive chairman of China Science, Technology and Finance Promotion Association (中國科技金融促進會). He was a director of the Shaanxi Province Meteorological Bureau (陝西省氣象局), the director of Shaanxi Province Science and Technology Department (陝西省科學技術廳). He was a group leader of the Regional Science and Technology Development Group under the State Mid-and Long term Science and Technology Development Planning Team (國家中長期科學和技術發展規劃區域科技發展專題組) in July 2003.

Ms. Wu Xiaoguang (吳曉光), aged 61, is an independent Supervisor of the Company. Ms. Wu was awarded a master's degree of business administration upon graduation from the Faculty of Business Administration of The Hong Kong Polytechnic University (香港理工大學). Ms. Wu acted as an associate professor of the School of Management at Xi'an Jiao Tong University, the head of the ACCA (Association of Chartered Certified Accountants) Project Centre and the director of Finance and Taxation Management Education Center, and has retired since September 2017. She was appointed as the professor of the Accounting School of Xi'an Eurasia University (西安歐亞學院) in June 2018, and serves as the head of ACCA Project Centre, an associate professor of the School of Management of Xi'an Jiaotong University and an independent director (the convenor of the audit committee) of Shaanxi Qinchuan Machinery Development Co., Ltd. (陝西秦川機床工具集團有限公司).

Other Senior Management

Hong Yuan	58	Deputy general manager	Resigned as a deputy general manager on 1 February 2018
Ma Zhibin	53	Deputy general manager	
Yuan Guanqing	48	Deputy general manager	Resigned as a deputy general manager on 27 February 2019
Wu Wenchao	53	Deputy general manager	
Gu Qiang	40	Chief financial officer	
Ni Huadong	43	Secretary of the Board	
Chu Xiaohang	49	Company secretary	

Other Senior Management (Continued)

Mr. Hong Yuan (洪淵), aged 58, is a deputy general manager of the Company, and joined the Group in August 1982. Mr. Hong obtained a bachelor's degree and is a senior engineer at a researcher level and the winner of the government subsidy from the State Council. Mr. Hong served as the vice head of the motor-driving section, head of workshop of melting and assembling, head of technical section, head of comprehensive management office of Glass Panel Technology Reform Project, assistant to the head and vice head of IRICO Glass Factory of IRICO Group, general manager of human resources department of the Company, manager of human resources department of IRICO Group, general manager of IRICO (Zhangjiagang) Flat Panel Display Co., Ltd. (彩虹(張家港)平板顯示有限公司), deputy general manager of IRICO Display Devices Co., Ltd., head of Photovoltaic Glass Factory (光伏玻璃廠) under the Company and assistant to the president of the Company and the general manager of IRICO Yan'an New Energy Co., Ltd.* (彩虹(延安)新能源公司)

Mr. Ma Zhibin (馬志斌), aged 53, is the deputy general manager of the Company and the chairman and the legal representative of Hanzhong IRICO Jiarunze Mining Development Co., Ltd. (漢中彩虹佳潤澤礦業開發有限公司, and joined the Group in July 1987. Mr. Ma graduated from Shanghai Construction Materials College (上海建材學院) majoring in glass with college education background. He is a senior engineer and a Chinese Communist Party member. Mr. Ma formerly served as the technician specializing in melting, engineer, assistant to the head of workshop, vice head of the workshop, head of the work shop and Party branch secretary of a glass factory and the vice head of a glass factory of the Company; the vice general manager and Party secretary of IRICO (Zhangjiagang) Flat Panel Display Co., Ltd. (彩虹(張家港)平板顯示有限公司), the vice head, the head and the Party secretary in Photovoltaic Glass Factory of the Company, the general manager of IRICO (Hefei) Photovoltaic Co., Ltd. and other positions.

Mr. Yuan Guanqing (袁官清), aged 48, a deputy general manager of the Company and the general manager of Xianyang IRICO Green Energy Co., Ltd., and a director and the general manager of Jiangsu IRICO Yongneng New Energy Company Limited. Mr. Yuan joined the Group in February 2016. He graduated from the School of Economics & Management of Southeast University with a master's degree in marketing and sales management. He is a member of the Chinese Communist Party and an economist. He served as an engineer of the tools and moulds factory, a sino-foreign joint venture manager of international cooperation department, an economist of investment and development department of Nanjing Huadong Electronic Group, the general manager of Nanjing Huadong Electronic Group Hong Kong Hua Jin Chen Technology Company Limited, an assistant to the head and deputy department head of the export and import department of Nanjing Huadong Electronics Group Co., Ltd., the vice general manager and general manager of Nanjing Huadong Electron Import & Export Limited Company, the head of import and export department of Nanjing Huadong Electronics Group Limited.

Other Senior Management (Continued)

Mr. Wu Wenchao (吳文超), aged 53, the deputy general manager of the Company and the head of Xianyang IRICO Photovoltaic Glass Factory (咸陽彩虹光伏玻璃廠). Mr. Wu joined the Group in July 1989. Mr. Wu graduated from Shaanxi Engineering College with a bachelor degree in machine manufacturing technology and equipment, and is a senior engineer and a member of the Chinese Communist Party. He served as a leader and an engineer of the grinding group of No. 2 drilling workshop, an engineer and an associate chief engineer of the processing technique office of the technical section, the deputy head and the head of the factory office, the head of the technical and quality section, an assistant to the factory director and the deputy factory director of IRICO Glass Factory, an assistant to the factory director and the head of the technical and quality department as well as the deputy factory director and factory director of IRICO Photovoltaic Glass Factory, and the assistant to the general manager of the Company.

Mr. Gu Qiang (谷強), aged 40, is the chief financial officer of the Company and a director of Shaanxi IRICO New Material Co., Ltd., a supervisor of Xianyang IRICO Green Energy Co., Ltd. and Jiangsu IRICO Yongneng New Energy Company Limited* (江蘇彩虹永能新能源有限公司). He joined the Group in November 2015. Mr. Gu graduated from Xi'an Jiao Tong University with a bachelor's degree in accounting, is a member of the Chinese Communist Party and an accountant. He served as the accountant of Northwestern Electric Power Design Institute and the financial supervisor of Xi'an National Civil Aeronautics Industrial Base Development Company Limited, the financial manager of Huawei Technology Limited, the chief financial officer of Xi'an Juguang Technology Company Limited and an assistant to the chief financial officer of the Company.

Mr. Ni Huadong (倪華東), aged 43, the secretary to the Board of the Company and a director of Shaanxi IRICO New Material Co., Ltd. and Jiangsu IRICO Yongneng New Energy Company Limited* (江蘇彩虹永能新能源有限公司). He graduated from Nanjing University of Finance & Economics with a bachelor's degree, and is a member of the Chinese Communist Party. Mr. Ni had served successively as investment specialist of the securities department, head of the corporate management center, assistant to the head and deputy head of the securities department of Huadong Electronics Group (華東電子集團); deputy director of the secretariat of the board of directors, representative of securities affairs of Huadong Technology; deputy general manager of Nanjing Tian Xi Investment Co., Ltd (南京天熙投資有限公司); general manager of Hong Kong Hua Jin Chen Technology Company Limited (香港華金晨科技有限公司); and representative of securities affairs, head of the securities department and head of office of the board of directors of Huadong Technology.

Mr. Chu Xiaohang (褚曉航), aged 49, the Company Secretary and general counsel of the Company. He is responsible for the securities management, legal matters and investor relations of the Company. Mr. Chu joined the Group in July 1991. Mr. Chu graduated from Northwest University (西北大學) with a bachelor's degree in computer science and is a senior engineer. He obtained a master's degree in project management from the Graduate School of Chinese Academy of Sciences. He served as a senior project management engineer in the strategic planning department of IRICO Group and head of the office of the Board of the Company. He acted as our Joint Company Secretary from November 2009 to November 2012. In November 2012, he was appointed as the sole Company Secretary.

Profiles of Directors, Supervisors and Senior Management (Continued)

Changes in Directors, Supervisors and Senior Management

Pursuant to Rule 13.51B(1) of the Listing Rules, the changes in particulars of Directors, supervisors and senior management during the reporting period are set out below:

Mr. Chen Xiaoning has served as an executive deputy general manager of the Company since 1 February 2018.

Mr. Wu Wenchao has served as a deputy general manager of the Company since 1 February 2018.

Mr. Hong Yuan has ceased to serve as a deputy general manager of the Company since 1 February 2018.

Mr. Fan Laiying has served as a non-executive Director of the Company since 26 October 2018.

Mr. Chen Xiaoning has served as a non-executive Director of the Company since 26 October 2018.

Mr. Huang Mingyan has ceased to serve as a non-executive Director of the Company since 26 October 2018.

Mr. Chen Changqing has ceased to serve as a non-executive Director of the Company since 26 October 2018.

Mr. Chen Xiaoning has served as an executive Director and the general manager of the Company since 13 February 2019.

Mr. Zou Changfu has ceased to serve as an executive Director and the general manager of the Company since 13 February 2019.

Mr. Yuan Guanqing has ceased to serve as the deputy general manager of the Company since 27 February 2019.

Mr. Wu Mingli has served as a staff supervisor of the Company since 1 April 2019.

Mr. Tang Haobo has ceased to serve as the staff supervisor of the Company since 1 April 2019.

The Board hereby presents the report of the Directors and the audited financial report of the Group for the year ended 31 December 2018 to the Shareholders.

Principal operations

The Group is principally engaged in the construction and operation of solar power station, the R&D, production and sales of solar photovoltaic glass, photovoltaic glass upstream quartz sand processing, solar cell modules and related products, lithium battery upstream materials and related materials of flat panel display.

Business review and future development

During the reporting period, the Group focused on the development of its two core businesses, namely, the new energy and new materials businesses, positively boosted the large scale development of solar photovoltaic glass, solar photovoltaic modules and power station projects, further promoted the integration advantage of solar photovoltaic industry chain; in respect of the new materials, positive photoresist and lithium battery cathode materials businesses experienced rapid development.

The Group has strengthened its strategic deployment to promote the technology-driven and talent-driven strategies in a continuous and simultaneous way, positively participated in the global competition with an aim to becoming a well-known green new energy service provider and top-notch new materials supplier in the world.

Major risks and uncertainties

In 2018, the demand shrank in the solar photovoltaic downstream market due to the temporary impact of domestic photovoltaic policy. Accordingly, certain risks existed in the Company's trade receivables for photovoltaic glass. In response to this, the Company has stepped up its analysis of the industry conditions and carried out continuous monitoring of debtors' production and operation while adopting various control measures against customers with higher receivable risk in order to control the overall receivable risk at a normal level.

Environmental protection policy

For the corporate survival and development, the Group seriously performs its corporate social responsibility and strictly comply with the Environmental Protection Law of the People's Republic of China and relevant laws and regulations. By making the best efforts in environmental protection technological improvement, monitoring and controlling over environmental protection indicators and regulating the management of operation and maintenance of environmental protection facilities, the Group ensures high efficiency operation and achievement of emission standards, thereby building a resources saving and environment friendly enterprise.

Compliance with relevant laws and regulations

During the reporting period, the Company strictly complied with laws and regulations which have material impacts on the Company.

The Group strictly complied with the requirements of the Rules Governing the Listing of Securities (the "**Listing Rules**") of the Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") and the articles of association of the Company (the "**Articles of Association**") to improve the Material Decision-making Management Measures while amending, supplementing and formulating the Administrative Measures which formed a governance system with standardized decision making, high efficiency operation and effective supervision. The Company will continue to push forward the improvement of corporate governance standard and the development of its business.

Results and dividend

During the reporting period, the Group recorded operating income of RMB2,331.92 million, representing a year-on-year decrease of 5.65%; and total profit of the Group amounted to RMB86.96 million, representing a year-on-year decrease of 18.09%.

For the analysis on the financial indicator of the results of the Company for the year 2018, please see the section headed "Management Discussion and Analysis" in this report.

The annual results of the Group for the year ended 31 December 2018 and its financial position as at the same date prepared in accordance with PRC Accounting Standards for Business Enterprises are set out from page 91 to 245 of this annual report.

The Company's dividend policy remains unchanged. In light of the absence of accumulated surplus in 2018, the Board has resolved not to distribute any final dividend for the year ended 31 December 2018, which is subject to the approval by the shareholders of the Company at the forthcoming annual general meeting.

Five year financial summary

A summary of the published results and assets, liabilities and minority interests of the Group for the last five years, as extracted from the audited and adjusted (if applicable) financial statements, is set out on page 246 of this annual report. This summary does not form part of the audited financial statements.

Share capital

Details of the Company's share capital in 2018 and as at 31 December 2018 are set out in note V. (XXX) to the financial statements.

Purchase, redemption and sale of shares of the Company

Neither has the Company nor any of its subsidiaries repurchased, redeemed or sold any shares of the Company during this reporting period.

Reserves

Details of the movements of reserves of the Company and of the Group during 2018 are set out in the Consolidated Statement of Changes in Equity.

Major customers and suppliers

The percentage of purchases from the major suppliers and sales to the major customers of the Group is set out as follows:

Purchase

– The largest supplier accounted for 8% of the total purchase amount

– The five largest suppliers accounted for 26% of the total purchase amount

Sales

– The largest customer accounted for 13% of the total sales amount

– The five largest customers accounted for 34% of the total sales amount

To the best knowledge of the Directors, none of the Directors, their respective associates or any Shareholder holding more than 5% of the issued share capital of the Company, had any interest in the above-mentioned major suppliers and customers.

Directors, Supervisors and Senior Management

Directors, supervisors and senior management of the Company for the year were as follows:

Name	Positions	Date of appointment/re-designation/resignation during the reporting period
Si Yuncong	Executive Director and Chairman	Appointed on 26 October 2018
Chen Xiaoning	Executive Director	Appointed as a non-executive director on 26 October 2018; re-designated as an executive director on 13 February 2019
Zou Changfu	Executive Director	Appointed on 26 October 2018; resigned on 13 February 2019
Huang Mingyan	Non-executive Director	Resigned on 26 October 2018
Chen Changqing	Non-executive Director	Resigned on 26 October 2018
Fan Laiying	Non-executive Director	Appointed on 26 October 2018
Feng Bing	Independent non-executive Director	Appointed on 26 October 2018
Wang Jialu	Independent non-executive Director	Appointed on 26 October 2018
Wang Zhicheng	Independent non-executive Director	Appointed on 26 October 2018
Ding Wenhui	Supervisor and Chairman of Supervisory Committee	Appointed on 26 October 2018
Zhao Lefei	Supervisor	Elected as an employee representative supervisor on 22 August 2018
Tang Haobo	Supervisor	Elected as an employee representative supervisor on 22 August 2018; resigned on 1 April 2019
Wu Mingli	Supervisor	Elected as an employee representative supervisor on 1 April 2019
Sun Haiying	Supervisor	Appointed on 26 October 2018
Wu Xiaoguang	Supervisor	Appointed on 26 October 2018
Hong Yuan	Deputy General Manager	Resigned on 1 February 2018
Ma Zhibin	Deputy General Manager	Appointed on 26 October 2018
Yuan Guanqing	Deputy General Manager	Appointed on 26 October 2018; Resigned on 27 February 2019
Wu Wenchao	Deputy General Manager	Appointed on 1 February 2018
Gu Qiang	Chief Financial Officer	Appointed on 26 October 2018
Ni Huadong	Secretary of the Board	Appointed on 26 October 2018
Chu Xiaohang	Company Secretary	

Biographical details of Directors, supervisors and senior management are set out on pages 19 to 26.

Directors, Supervisors and Senior Management (Continued)

Each of the independent non-executive Directors has issued a confirmation in respect of the requirement set out in Rule 3.13 of the Listing Rules concerning his independence. The Company considers all of the independent non-executive Directors to be independent.

Remuneration of Directors and the Five Highest Paid Individuals

Details of the remuneration of Directors and the highest paid individuals of the Group are set out in note XIV. (III) to the financial statements.

There were no arrangements under which a Director or supervisor of the Company had waived or agreed to waive any remuneration in respect of the year ended 31 December 2018.

Remuneration of senior management

According to Code B.1.5 of the Corporate Governance Code, the details of the annual remuneration of the senior management for the year 2018 which contained in note XIV. (III) to the financial statements in this annual report are as follow:

Name	Fees	Salary and allowance	Contribution to pension scheme	Performance-based bonus *(Note)*	Total
	RMB'000	*RMB'000*	*RMB'000*	*RMB'000*	*RMB'000*
Zou Changfu	–	476	72	–	548
Chen Xiaoning	–	319	75	–	394
Hong Yuan	–	14	6	–	20
Ma Zhibin	–	301	72	–	373
Yuan Guanqing	–	394	99	–	493
Gu Qiang	–	317	72	–	390
Ni Huadong	–	288	104	–	392
Wu Wenchao	–	314	72	–	386

Directors' and supervisors' interests in contracts

Save as disclosed in this report, no contract of significance in relation to the Company's business to which the Company or its subsidiaries were a party and in which a Director or a supervisor had a material interest, whether directly or indirectly, subsisted at the end of the year or anytime during 2018.

Directors' and supervisors' service contracts

Each of the Directors and supervisors has entered into a service contract with the Company. None of the Directors or supervisors proposed for re-election at the forthcoming general meeting has an unexpired service contract which is not terminable by the Company or its subsidiaries within a year without payment of any compensation (other than statutory compensation).

Permitted indemnity provision

During the reporting period and as at 31 December 2018, the Company has arranged for liability insurance policies for the Directors and supervisors and to provide adequate protection for the Directors and supervisors.

Interests of Directors, supervisors and chief executives in shares of the Company and its associated corporations

As at 31 December 2018, none of the Directors, supervisors or chief executives and their respective associates held an interest and short position in shares, underlying shares and/or debentures of the Company and/or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the "**SFO**")) which were (a) required to be notified to the Company and the Stock Exchange pursuant to the provisions of Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which such directors, supervisors, chief executives or senior management personnel were taken or deemed to have under such provisions of the SFO); or (b) required to be recorded in the register kept by the Company pursuant to section 352 of the SFO; (c) required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Companies (the "**Model Code**") as set out in Appendix 10 to the Listing Rules.

During the reporting period, no Directors, chief executives, supervisors, senior management or their spouses and minor children under 18 was vested by the Company any right to subscribe shares or bonds of the Company or any associated corporation (as defined in the SFO).

Interests and short positions of substantial Shareholders and other parties

So far as the Directors are aware, each of the following persons, not being a Director, supervisor, chief executive or member of the Company's senior management, had an interest or short position in the Company's shares or underlying shares (as the case may be) as at 31 December 2018 and as recorded in the register of members to be kept pursuant to section 336 of the SFO:

CEC, through IRICO Group Company Limited and its subsidiary, Rui Bou Electronics (HK) Limited, had interests in 1,601,468,000 domestic shares (representing 100% of the domestic share capital of the Company) and 31,546,000 H shares of the Company, whereas HKSCC Nominees Limited had interests in 628,884,289 H shares of the Company (representing 99.68% of the H share capital of the Company).

Notes:

As at 31 December 2018, based on the information available to Directors and so far as the Directors are aware, HKSCC Nominees Limited held 628,884,289 H shares, among which:

Baystar Capital II, L.P. had beneficial interests in 49,554,000 H shares of the Company (representing approximately 7.85% of the issued H shares of the Company). Each of Baystar Capital Management LLC, Mr. Derby Steven P., Mr. Goldfarb Lawrence and Mr. Lamar Steven M. was deemed to be interested in the same number of H shares of the Company by virtue of their direct or indirect control of Baystar Capital II, L.P.

J.P. Morgan Fleming Asset Management Holdings Inc. held 33,742,000 H shares of the Company (representing 5.35% of the issued H shares of the Company) in the capacity of investment manager and through its controlled corporations, of which 33,198,000 H shares of the Company were held by JF Asset Management Limited and the remaining 544,000 H shares of the Company were held by JF International Management Inc.

Pictet Asset Management Limited held direct interests in 27,488,000 H shares of the Company (representing approximately 4.36% of the share capital of H shares) on behalf of Pictet Funds Asian Equities (holding interests in 28,504,400 shares).

Competing Interests

None of the Directors, the controlling Shareholder or their respective close associates (as defined under the Listing Rules) had any interest in a business which competes or may compete with the businesses of the Group or has or may have any other conflicts of the interest with the Group.

Management contracts

No contracts concerning the management and administration of the whole or any substantial part of the business of the Company were entered into or existed during the reporting period.

Designated deposit and overdue time deposit

As at 31 December 2018, the Group had no designated deposits in any financial institutions in China. All of the Group's cash deposits are placed with commercial banks in China, and are in compliance with the relevant laws and regulations. There were also no instances where the Group had failed to collect any of the time deposits upon maturity.

Employees, retirement benefits and other benefits

As at 31 December 2018, the Group had 2,252 incumbent employees, of whom 10.8% were management and administrative personnel, 11.0% were technological personnel, 1.8% were accounting and audit personnel, 1.6% were sales and marketing personnel, and 74.8% were production employees.

The employment and remuneration policy of the Company remained the same as set out in the Company's prospectus dated 8 December 2004. With full enthusiasm in work, the Group's employees are committed to ensuring the high quality and reliability of products and services.

* : Excluding service dispatch workers.

Connected transactions

The connected transactions recorded during the year are as follows:

1. Continuing connected transactions during the year of 2018

1) For the year ended 31 December 2018, there were various continuing connected transactions (the "**Continuing Connected Transactions**") between the Group and the following connected persons of the Group (collectively, the "**Connected Persons**" and each a "**connected person**" under the Listing Rules).

(a) IRICO Group Corporation Limited ("**IRICO Group**"), a substantial Shareholder, the sole promoter of the Company and a connected person of the Company;

(b) Xianyang Zhongdian IRICO Group Holdings Ltd.* ("**Zhongdian IRICO**"), an associate of CEC and IRICO Group, both of which are in turn controlling Shareholders. Therefore Zhongdian IRICO is a connected person of the Company; and

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

1) (Continued)

(c) Nanjing Electronics Information Industrial Corporation ("**NEIIC**"), a subsidiary and thus an associate of CEC. Therefore NEIIC is also a connected person of the Company.

For the year ended 31 December 2018, the approved annual caps for each of the continuing connected transactions (the "**Annual Caps**") and the actual revenue or expenditure in respect of each of the continuing connected transactions are set out below:

No.	Item	Annual Caps for Connected Transaction of 2018 *RMB'000*	Amount incurred for Connected Transaction of 2018 *RMB'000*
(i)	IRICO Group Master Purchase Agreement Purchase of materials, utilities and other supporting services from IRICO Group	331,683	104,950
(ii)	Utility Purchase Agreement Purchase of utilities from Zhongdian IRICO	83,864	1,177
(iii)	Premises Leasing Framework Agreement Rentals paid and other payables to Zhongdian IRICO	28,168	10,177
(iv)	Zhongdian IRICO Premises Leasing Framework Agreement Rentals received from Zhongdian IRICO	4,628	–
(v)	Utility and Product Sales Agreement Sales of utilities and products to Zhongdian IRICO	154,016	–
(vi)	NEIIC Master Sales Agreement Sales of new energy materials and products to NEIIC	60,000	68,031
(vii)	NEIIC Master Purchase Agreement Purchase of materials from NEIIC	60,000	41,163

The consideration for each of the continuing connected transactions listed above during the reporting period is set out in the respective agreements with relevant connected persons, details of which were set out in the Company's circular dated 24 March 2016 and the announcements of the Company dated 18 February 2016, 22 August 2017, 27 April 2018 and 26 March 2019.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(i) IRICO Group Master Purchase Agreement

Date:	18 February 2016
Parties:	(i) the Company as the purchaser; and (ii) IRICO Group as the supplier
Term:	1 January 2016 to 31 December 2018, subject to early termination by either party by giving at least three months' prior written notice to the other party.
Nature of transactions:	The Company shall purchase products and utilities necessary for the production of solar photovoltaic glass, energy-saving lamp phosphor, upstream materials of lithium battery and ITO targets, including packaging materials and raw materials, water, electricity, gas and other utilities and ancillary services from IRICO Group.
Pricing policy:	(i) The prices for the products necessary for production, including packaging materials and raw materials, shall be determined in accordance with the Market Price (as defined below). "Market Price" shall be determined in accordance with the following orders: (i) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the selling or purchasing places or its nearby regions; or (ii) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the PRC.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(i) IRICO Group Master Purchase Agreement (Continued)

Pricing policy: (Continued) (ii) The prices for the utilities necessary for production, including water, electricity, gas and other utilities and ancillary services, shall be determined in accordance with the following policies:

(a) where there is Government-prescribed Price (as defined below), in respect of the utilities necessary for production, including water, gas and other utilities and ancillary services, the prices shall be determined based on arm's length negotiations between the relevant parties with reference to the Government-prescribed Price within a range of 5%, which will be lower than the Government-prescribed Price; or

(b) where there is Government-prescribed Price, in respect of electricity necessary for production, the prices shall be determined based on arm's length negotiations between the relevant parties with reference to the Government- prescribed Price for electricity within a range of 5% lower than the Government-prescribed Price plus the management fee on the electricity transformer substation in proportion to the usage of electricity by the Company payable to Xianyang Electric Power Supply Bureau by IRICO Group; or

(c) where there is no Government-prescribed Price, the prices shall be determined based on arm's length negotiations between the relevant parties with reference to reasonable costs incurred plus reasonable profit. The reasonable costs primarily include raw materials, labor, taxation, management fee, etc., and the profit margin will generally be no more than 5%.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(i) IRICO Group Master Purchase Agreement (Continued)

Pricing policy: (Continued) (ii) (Continued)

The Directors are of the view that such pricing policies, including the negotiation range, the charging of the management fee of the electricity transformer substation by IRICO Group to the Company and the profit margin are fair and reasonable, on normal commercial terms and not prejudicial to the interest of the Company's minority Shareholders.

"Government-prescribed Price" means the guidelines for prices of utilities, which are applicable to water, electricity and natural gas under the IRICO Group Master Purchase Agreement as prescribed in the notifications published by Shaanxi Provincial Price Bureau, Shaanxi Provincial Development and Reform Commission and other relevant regulatory authorities from time to time, for instance, the Notice on Adjustments to the Prices of Power Grid in Shaanxi Province published by Shaanxi Provincial Price Bureau from time to time, and the Notice on Reducing the City-gate Price for Non-residential Use of Natural Gas and Further Promotion of Price Marketization Reform published by National Development and Reform Commission from time to time.

The pricing policies of cost plus reasonable profit are applicable to other utilities and ancillary services under the IRICO Group Master Purchase Agreement where there is no Government-prescribed Price, including softened water, chilled water, high pressure air, nitrogen, purified air, etc.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(ii) Utility Purchase Agreement

Date:	18 February 2016
Parties:	(i) The Company as the purchaser; and (ii) Zhongdian IRICO as the supplier
Term:	1 January 2016 to 31 December 2018. The Utility Purchase Agreement can be terminated by the Company by giving at least three months' prior written notice to Zhongdian IRICO. Without the written consent of the Company, Zhongdian IRICO shall not unilaterally terminate the Utility Purchase Agreement.
Nature of transactions:	The Company shall purchase electricity from Zhongdian IRICO.
Pricing policy:	The prices for the electricity shall be determined based on arm's length negotiations between the relevant parties with reference to (i) the Government-prescribed Price (as defined below) and (ii) reduction from the government incentives offered by Anhui Provincial Government to Zhongdian IRICO. After taking into account of the incentive offered by Anhui Provincial Government to Zhongdian IRICO for the building and operation of the electrical transformer station for the development of the new industrial area in Hefei City, Anhui Province, the overall unit price of electricity supplied by Zhongdian IRICO to the Company will be lower than the Government-prescribed Price. The Directors are of the view that such pricing policy is fair and reasonable, on normal commercial terms and not prejudicial to the interest of the Company's minority Shareholders. "Government-prescribed Price" means the prices of electricity in Anhui Province as prescribed on the website of State Grid Corporation of China as updated and amended from time to time.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(iii) Premises Leasing Framework Agreement

Date:	18 February 2016
Parties:	(i) Zhongdian IRICO as the lessor; and (ii) the Company as the lessee
Term:	1 January 2016 to 31 December 2018
Nature of transactions:	Zhongdian IRICO shall lease factories and office premise owned by it to the Company with a maximum area of 206,192.86 square meters.
Pricing:	Monthly rental is RMB11.5 per square meter. The rental payable under the Premises Leasing Framework Agreement was determined with reference to the prevailing market conditions and the rental levels of similar premises and properties in the vicinity of the leased premises and properties.

(iv) Zhongdian IRICO Premises Leasing Framework Agreement

Date:	18 February 2016
Parties:	(i) the Company as the lessor; and (ii) Zhongdian IRICO as the lessee
Term:	1 January 2016 to 31 December 2018
Nature of transactions:	The Company shall lease factories and office premises owned by it to Zhongdian IRICO with a maximum area of 38,186 square meters.
Pricing:	Monthly rental is RMB10.1 per square meter. The rental payable under the Zhongdian IRICO Premises Leasing Framework Agreement was determined with reference to the prevailing market conditions and the rental levels of similar premises and properties in the vicinity of the leased premises and properties.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

   (v) Utility and Product Sales Agreement

Date:	18 February 2016
Parties:	(i) The Company as the supplier; and (ii) Zhongdian IRICO as the purchaser
Term:	1 January 2016 to 31 December 2018, subject to early termination by either party by giving at least three months' prior written notice to the other party.
Nature of transactions:	The Company shall provide oxygen and ITO targets to Zhongdian IRICO.
Pricing policy:	(i) The price for the oxygen shall be determined based on arm's length negotiations between the relevant parties with reference to the actual costs, which primarily include the actual average cost per cubic metre the Company pays for the procurement of oxygen from the independent supplier and a monthly fixed fee charged by such independent supplier. After taking into account of the reasons set out in the following paragraphs, the Company will not charge a mark-up rate for the sales of oxygen to Zhongdian IRICO. The Directors are of the view that such actual costs basis of pricing policies are fair and reasonable, on normal commercial terms and not prejudicial to the interest of the Company's minority Shareholders.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(v) Utility and Product Sales Agreement (Continued)

Pricing policy: (Continued) (i) (Continued)

The oxygen to be sold under the Utility and Product Sales Agreement will be procured from an independent supplier by the Company with a minimum volume for the operation of the furnace for Hefei solar photovoltaic glass projects ("**Hefei Factory**") and there will be excess volume of oxygen according to the Company's consumption level of oxygen at such furnace. The Directors are of the view that the sale of the oxygen to Zhongdian IRICO is economically beneficial to the Company because (i) this can avoid any wastage of the procured oxygen and (ii) the factory of Zhongdian IRICO is located nearby the Hefei Factory in the same industrial area in Hefei City, Anhui Province. In addition, the independent supplier is required to install certain equipment, operating system and pipelines at the Hefei Factory in order to supply the oxygen to the Hefei Factory in the form of a continuous flow. Therefore, any excess oxygen supplied can only be transmitted to nearby factory to the Hefei Factory. Further, as the Hefei Factory is located in a new industrial area in Hefei City, Anhui Province, factories run by independent third parties are limited and it is not practicable for the Company to build up pipelines to factories at long distance. Therefore, it is a more viable solution for the Company to sell the excess oxygen to Zhongdian IRICO which is located nearby the Hefei Factory and pipelines can be built without substantial costs between the two factories in order to avoid any wastage of the oxygen.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(v) Utility and Product Sales Agreement (Continued)

Pricing policy: (Continued) (i) (Continued)

Therefore, although the unit price of oxygen is set at the purchase costs without any mark-up, it is more economically beneficial to the Company as it can recover the procurement costs of oxygen by selling it to Zhongdian IRICO which is located nearby and it does not need to incur any substantial costs of locating other suitable buyers in the new industrial area and building pipelines to reach their factories.

(ii) The prices for the ITO targets shall be determined in accordance with the Market Price.

"Market Price" shall be determined in accordance with the following order: (i) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of ITO targets in the selling or purchasing places or its nearby regions; or (ii) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of ITO targets in the PRC.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(vi) NEIIC Master Sales Agreement

Date:	18 February 2016
Parties:	(i) The Company as the supplier; and (ii) NEIIC as the purchaser
Term:	1 January 2016 to 31 December 2018, subject to early termination by either party by giving at least one month's prior written notice to the other party.
Nature of transactions:	The Company shall sell new energy materials and products to NEIIC.
Pricing policy:	The prices for the new energy materials and products shall be determined in accordance with the Market Price (as defined below). "Market Price" shall be determined in accordance with the following order: (i) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the selling or purchasing places or its nearby regions; or (ii) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the PRC.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(vi) NEIIC Master Sales Agreement (Continued)

Revised Annual Caps and Basis for the Revised Annual Caps

The existing annual caps for the two year ending 31 December 2018 in respect of the transactions under the NEIIC Master Sales Agreement are RMB13,323,750 and RMB13,989,940, respectively. Based on internal estimation, the Board is of the view that such existing annual caps will not be sufficient for the Company's current requirements. On 22 August 2017, the Board approves to revise the existing annual caps for the two years ending 31 December 2018 in respect of the transactions under the NEIIC Master Sales Agreement as set out in the table below:

	Revised annual caps	
	2017	2018
	(RMB'000)	*(RMB'000)*
Maximum fees payable to the Company by NEIIC under the NEIIC Master Sales Agreement	60,000	60,000

The revised annual caps for the two years ending 31 December 2018 in respect of the transactions under the NEIIC Master Sales Agreement have been determined primarily based on the following factors: (i) the estimated significant increase in the demand for new energy materials and products, such as photoresists, from NEIIC for its production of liquid crystal materials for the two years ending 31 December 2018; (ii) the Company's current estimation of the stable market prices of the relevant new energy materials and products for the two years ending 31 December 2018; and (iii) the historical amounts of the transactions under the NEIIC Master Sales Agreement for the year ended 31 December 2016.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(vi) NEIIC Master Sales Agreement (Continued)

For the year ended 31 December 2018, the actual transaction amount under NEIIC Master Sales Agreement of the Company was RMB68,031,000, exceeding the existing annual caps of RMB60,000,000.

(RMB'000)

	Actual transaction amount for the year ended 31 December 2018 *(RMB'000)*	Annual caps of for the year ended 31 December 2018 *(RMB'000)*
Fees payable to the Company by NEIIC under NEIIC Master Sales Agreement	68,031	60,000

For the year ended 31 December 2018, the actual transaction amount under NEIIC Master Sales Agreement exceeded the existing annual caps. This can be ascribed to the increase in the Company's sales of new energy materials and products to NEIIC due to surging demand for positive photoresist from Nanjing CEC Panda LCD Technology Co., Ltd. (南京中電熊猫液晶顯示科技有限公司) and Nanjing CEC Panda Flat Panel Display Technology Co., Ltd. (南京中電熊猫平板顯示科技有限公司), subsidiaries of NEIIC.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(vii) NEIIC Master Purchase Agreement

Date:	18 February 2016
Parties:	(i) The Company as the purchaser; and (ii) NEIIC as the supplier
Term:	1 January 2016 to 31 December 2018, subject to early termination by either party by giving at least three months' prior written notice to the other party.
Nature of transactions:	The Company shall purchase products (including quartz sand) necessary for the production of solar photovoltaic glass from NEIIC.
Pricing policy:	The prices for the products necessary for production shall be determined in accordance with the Market Price (as defined below). "Market Price" shall be determined in accordance with the following order: (i) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the selling or purchasing places or its nearby regions; or (ii) the prevailing prices being offered or charged by independent third parties in the ordinary and usual course of business for the sales or purchases of the same or similar type of products in the PRC.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

(vii) NEIIC Master Purchase Agreement (Continues)

Revised Annual Cap and Basis for the Revised Annual Cap

The existing annual cap for the year ending 31 December 2018 in respect of the transactions under the NEIIC Master Purchase Agreement is RMB33,290,400. Based on internal estimation, the Board is of the view that such existing annual cap will not be sufficient for the Company's current requirements. On 27 April 2018, the Board approved to revise the annual cap for the year ending 31 December 2018 in respect of the transactions under the NEIIC Master Purchase Agreement to RMB60,000,000.

	(RMB'000) Revised annual cap for the year ending 31 December 2018
Maximum fees payable by the Company to NEIIC under the NEIIC Master Purchase Agreement	60,000

The revised annual cap for the year ending 31 December 2018 in respect of the transactions under the NEIIC Master Purchase Agreement have been determined primarily based on the following factors: (i) the estimated significant increase in the demand for the products, such as the NixCoyMnz(OH)2 for the production of new materials for the year ending 31 December 2018 in line with the business development plan of the Company; (ii) the Company's current estimation of the stable prices of the relevant products for the year ending 31 December 2018; and (iii) the historical amounts of the transactions under the NEIIC Master Purchase Agreement for the two years ended 31 December 2017.

Connected transactions (Continued)

1. Continuing connected transactions during the year of 2018 (Continued)

The independent non-executive Directors had reviewed these continuing connected transactions and confirmed to the Board that these transactions have been entered into:

(1) in the ordinary and usual course of business of the Group;

(2) either on normal commercial terms or, if there are not sufficient comparable transactions to judge whether they are on normal commercial terms, on terms no less favourable to the Company than terms available to or from (as appropriate) independent third parties; and

(3) in accordance with the terms of respective agreements governing such transactions which are fair and reasonable and in the interests of the Shareholders of the Company as a whole.

The auditor of the Company had given a letter to the Directors of the Company, confirming that the above continuing connected transactions:

(1) were approved by the Board of the Company;

(2) were carried out in accordance with the pricing policies of the Company;

(3) were carried out in accordance with respective agreements governing such transactions; and

(4) save for the transactions under NEIIC Master Sales Agreement, the actual transaction amount of which was RMB68,031,000 for the year ended 31 December 2018 and exceeded the existing annual cap of RMB60,000,000, there is no other continuing connected transaction whose transaction amounts exceeded its existing annual cap.

Connected transactions (Continued)

2. One-off connected transactions

(1) On 3 May 2018, the Company entered into the equity transfer agreement with Xianyang Zhongdian IRICO Group Holdings Ltd.*("Zhongdian IRICO"), pursuant to which the Company agreed to sell, and Zhongdian IRICO agreed to acquire 51% equity interest in Zhuhai Caizhu at a cash consideration of RMB131,882,093.71. Such disposal was completed during the reporting period. The Company holds 49% equity interest in Zhuhai Caizhu and Zhuhai Caizhu ceases to be a subsidiary of the Company.

Zhongdian IRICO, which is directly held as to 72.08% by CEC and as to 27.92% by IRICO Group, is an associate of CEC and IRICO Group, and thus, Zhongdian IRICO is a connected person of the Company under Chapter 14A of the Listing Rules. As such, the aforesaid disposal constitutes a connected transaction of the Company under Chapter 14A of the Listing Rules. As disclosed in the announcement dated 28 December 2017 and the circular dated 3 April 2017 of the Company, the Company transferred the assets in relation to the power supply and distribution equipment to Shaanxi IRICO Energy Services Limited* (陝西彩虹能源服務有限公司), a wholly-owned subsidiary of Zhongdian IRICO, at a consideration of RMB60,764,443 in cash and disposed 90% equity interest in Kunshan IRICO to Zhongdian IRICO at a consideration of approximately RMB71,439,750 in cash. Pursuant to Rule 14A.81 of the Listing Rules, the transactions mentioned above have been aggregated with the disposal of Zhuhai Caizhu. As the highest applicable percentage ratio of the disposal of Zhuhai Caizhu (aggregated as aforesaid) exceeds 5% but is less than 25%, the aforesaid disposal constitutes a discloseable and connected transaction of the Company and is subject to the reporting, announcement and independent Shareholders' approval requirements under the Listing Rules.

For details, please refer to the announcement of the Company dated 3 May 2018 and 26 June 2018 and the circular of the Company dated 1 June 2018.

Connected transactions (Continued)

2. One-off connected transactions (Continued)

(2) On 24 July 2017, the Board approved new H share issue under a specific mandate, pursuant to which the Company shall issue not more than 2 billion new H shares to not more than 10 target subscribers (including Zhongdian IRICO and Yan'an Dingyuan) and therefore the aggregate nominal value of the H shares to be issued shall not exceed RMB2 billion. The gross proceeds to be raised from the proposed H share issue shall not exceed RMB2 billion. As part of the new H share issue, the Company entered into the subscription agreements with each of Zhongdian IRICO and Yan'an Dingyuan on 24 July 2017. Pursuant to these subscription agreements, each of Zhongdian IRICO and Yan'an Dingyuan has conditionally agreed to subscribe in cash for, and the Company has conditionally agreed to allot and issue, not more than 900 million and 300 million new H shares at a consideration of RMB900 million and RMB300 million, respectively. On 16 October 2017, the Company entered into the subscription agreement with Zhangjiagang Investment. Pursuant to the subscription agreement, Zhangjiagang Investment has conditionally agreed to subscribe in cash for and the Company has conditionally agreed to allot and issue not more than 500 million new H shares at a consideration of RMB500 million. In addition, in order to successfully implement the new H share issue and make effective use of the resource allocation function of the capital market to accelerate the Company's business transformation and asset structure adjustments and to further boost the growth of solar photovoltaic and other new businesses as well as to promote the Company's sustained and rapid development, on 1 February 2018, the number of new H shares to be issued by the Company was adjusted to not more than 2.3 billion new H shares as compared to the previous number of not more than 2 billion new H shares as announced on 24 July 2017. On 18 April 2018, the Company entered into a subscription agreement with Hefei Xincheng. Pursuant to such agreement, Hefei Xincheng has conditionally agreed to subscribe in cash for, and the Company has conditionally agreed to allot and issue, not more than 200 million new H shares at a consideration of RMB200 million. On 23 January 2019, the resolution in relation to the proposed H share issue under a specific mandate was approved by the shareholders or the holders of H shares (as the case may be) at the extraordinary general meeting and the H share class meeting, respectively. The resolution in relation to the proposed subscription by Zhongdian IRICO was approved by the independent shareholders at the extraordinary general meeting.

Specifically, Zhongdian IRICO, which is directly held as to 72.08% by CEC and as to 27.92% by IRICO Group, is an associate of CEC and IRICO Group, and thus, Zhongdian IRICO is a connected person of the Company under Chapter 14A of the Listing Rules. As such, the subscription of new H shares by Zhongdian IRICO constitutes a connected transaction of the Company and is subject to the reporting, announcement and independent Shareholders' approval requirements under Chapter 14A of the Listing Rules.

For details, please refer to the announcements of the Company dated 24 July 2017, 16 October 2017, 1 February 2018, 18 April 2018, 6 December 2018, 10 December 2018 and 23 January 2019 and the circular dated on 31 December 2018.

Plan of the Group for material investment and acquisition of capital assets

During the reporting period, the Group had no plan for material investment and acquisition of capital assets.

Bank loans

As at 31 December 2018, details of bank loans of the Group are set out in note V. (XVIII), (XXIV) and (XXV) to the financial statements.

Pre-emptive rights

There are no provisions for pre-emptive rights under the Articles of Association or relevant laws and regulations which could oblige the Company to offer new shares on a pro rata basis to existing Shareholders.

Subsidiaries

Details of the subsidiaries of the Company are set out in note VII to the financial statements.

External guarantee

The Group did not have any external guarantee during the year.

Material litigation

During the reporting period, the Company had no material litigation.

Contingent liabilities

As at 31 December 2018, the Group had no significant contingent liabilities.

Corporate Governance Code

The Company's corporate governance practices are based on the principles and code provisions (the "**Code Provisions**") set out in the Corporate Governance Code (the "**CG Code**") contained in Appendix 14 of the Listing Rules. During the year ended 31 December 2018, the Company has complied with the Code Provisions of the CG Code.

Model Code

As to securities transactions by Directors, the Company has adopted the Model Code as the code for securities transactions by Directors. Having made specific enquiries of all Directors, the Company has confirmed that all Directors have fully complied with all the requirements set out in the Model Code.

Public float

Based on the information that is publicly available to the Company and within the knowledge of the Directors, as at the date of this report, the Directors believe that the relevant minimum percentage applicable to listed securities was maintained at any time throughout the reporting period.

Audit committee

The audit committee of the Company has reviewed the Company's consolidated financial statements for the year ended 31 December 2018, including the accounting principles adopted by the Group.

Auditor

On 2 December 2016, the Board proposed to dismiss the Company's current domestic auditor ShineWing Certified Public Accountants (信永中和會計師事務所(特殊普通合夥)) and overseas auditor ShineWing (HK) CPA Limited (信永中和(香港)會計師事務所有限公司), and proposed to appoint WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) and PKF Hong Kong (大信梁學濂(香港)會計師事務所) as the domestic auditor and overseas auditor of the Company respectively for a term commencing on the date of approval by the Shareholders at the extraordinary general meeting up to the date of the 2016 annual general meeting of the Company. The related resolution was approved by the Shareholders at the extraordinary general meeting held on 18 January 2017. For details, please refer to the announcements of the Company dated 2 December 2016 and 18 January 2017.

On 10 May 2017, due to the reorganization of PKF Hong Kong to PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司),PKF Hong Kong would retire as the overseas auditor of the Company after the conclusion of the forthcoming annual general meeting of the Company and would not seek re-appointment. The Board proposes to appoint PKF Hong Kong Limited as the new overseas auditor of the Company following the retirement of PKF Hong Kong, for a term commencing on the date of approval by the shareholders at the annual general meeting up to the date of the 2017 annual general meeting of the Company.The resolution in relation to the re-appointment of WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) as the domestic auditor of the Company for Year 2017 and appointment of PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司) as the overseas auditor of the Company for Year 2017 was approved by the shareholders at the annual general meeting held on 30 June 2017. For details, please refer to the announcements of the Company dated 10 May 2017 and 30 June 2017.

On 6 November 2017,in view of the above change of basis for preparation of overseas financial report of the Company, the Board proposed to cease the re-appointment of PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司) as the overseas auditor of the Company for the year 2018, and appoint WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) as the auditor of the Company to carry out audit on the financial statements of the Company prepared in accordance with the PRC Accounting Standards for Business Enterprises and discharge the duties as an overseas auditor under the Listing Rules. The resolution in relation to the appointment of WUYIGE Certified Public Accountants LLP as the auditor of the Company for Year 2018 was approved by the shareholders at the annual general meeting held on 25 May 2018. For details, please refer to the announcements of the Company dated 6 November 2017 and 25 May 2018.

The financial statements of the Company for the year 2018 have been audited by WUYIGE Certified Public Accountants LLP. For further information of the auditors of the Company, please refer to "External auditor and their remunerations" under Corporate Governance Report of this annual report.

By order of the Board
Si Yuncong
Chairman

Xianyang, the People's Republic of China
26 March 2019

Report of the Supervisory Committee

In 2018, all members of the supervisory committee of the Company (the "**Supervisory Committee**") complied with the principle of integrity, were responsible to all Shareholders and sincerely performed the duties of supervision to practically safeguard the interests of the Shareholders in strict compliance with relevant provisions under relevant laws and regulations of China and the Articles of Association. They supervised and examined significant operating activities, the financial status of the Company, performance of duties by the Directors and senior management and the compliance with relevant laws and regulations in 2018. I hereby present the work report of 2018 as follows:

During this year, pursuant to the requirement of the Articles of Association, the Supervisory Committee has reviewed financial reports regularly. In 2018, the Supervisory Committee held two meetings and passed two written resolutions, and reviewed the following proposals: the 2017 work report of the Supervisory Committee, the audited financial report of 2017, the reviewed interim financial report for the first half of 2018, the election of new members of the Supervisory Committee; and the election of the chairman of the fourth session of Supervisory Committee of the Company. The convening of meetings was in compliance with the relevant requirements of the PRC Company Law and the Articles of Association.

In 2018, the supervisors of the Company attended Board meetings and general meetings in 2018.

Pursuant to the PRC Company Law and other applicable laws and regulations and the Articles of Association, the Supervisory Committee performed serious supervision and examination on the procedures of Board meetings, resolutions, the execution by the Board of the resolutions passed in general meetings, the performance of duties by senior management and the establishment, fulfillment and thorough execution of the Company's internal management systems.

The Supervisory Committee is of the opinion that the Directors and senior management of the Company operated strictly in compliance with the PRC Company Law and Securities Law, the Articles of Association and other relevant regulations and rules of Hong Kong, performed their duties with integrity and diligence, and executed various resolutions and authorization passed in general meetings, to ensure that the operation of various businesses comply with the requirements of applicable laws and regulations. Through the establishment of a series of systems, the Company further improved the corporate governance structure and the internal management system and established and improved the internal control system. In the process of the examination of the financial status of the Company and the supervision of the performance of the duties of the Directors and senior management of the Company, the Supervisory Committee did not identify any behaviour prejudicial to the interest of the Company and the Shareholders, or any behaviour in contravention to laws and regulations, the Articles of Association and various rules and systems.

The Supervisory Committee is confident in the prospect of the Company and will proceed to carry out effective supervision on the operation of the Company to safeguard the interests of the Shareholders and the Company as a whole.

By order of the Supervisory Committee
Ding Wenhui
Chairman of the Supervisory Committee

Xianyang, the People's Republic of China
26 March 2019

Environmental, Social and Governance Report

This environmental, social and governance ("**ESG**") report (the "**Report**") was prepared to present the performance of environmental and social responsibility of IRICO Group New Energy Company Limited* (the "**Company**") and its subsidiaries (collectively, the "**Group**") for the year from 1 January 2018 to 31 December 2018 (the "**Reporting Period**"). This Report was prepared with reference to the Environmental, Social and Governance Reporting Guide set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

The board of directors (the "**Board**") of the Company is responsible for evaluating and determining the Company's ESG-related risks, and ensuring that long-term effective ESG supervision and management mechanisms are in place. The management of the Company has confirmed to the Board that these mechanisms are effective. For further details, please refer to the section headed "Corporate Governance Report – Control mechanism" in the 2018 annual report of the Company.

Part I Environmental

Environmental Protection

The Group always highly values sustainable development, strives to boost effective utilization of resources and energy and pays close attention to climate and ecological issues. During the Reporting Period, the Group walked the green talk by promoting the application of oxygen-fuel combustion furnace technology in production of photovoltaic glass, adopting effective control measures in production and operation activities in accordance with Chinese laws and regulation, and building a long-term mechanism for environmental protection and energy conservation under the guidance of scientific development philosophy, endeavoring to build itself into a resource-saving and environment-friendly harmonious corporation.

Environmental Management

The Group attaches great importance to environmental protection and abides by laws, regulations and technical requirements on environmental protection in China. Environmental laws and regulations in China related to the operation of the Group include the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on Environmental Impact Assessment and the Law of the People's Republic of China on the Prevention and Control of Water Pollution.

In order to enhance management, the Company established the Investment and Operation Department at the headquarters with supervisors on safety and environmental protection responsible for establishing the management system on "environmental, health and safety" and supervising the management on environmental protection and safety of the Group. All subsidiaries of the Group have established environmental protection and safety management offices and supervisors on environmental protection and safety responsible for their management on environmental protection and safety.

There are no emissions of any greenhouse gas or discharge of hazardous waste materials during the production process of the Group.

Part I Environmental (Continued)

Emissions

The Group strictly applies relevant national and local environmental laws and regulations, controls the emission of four types of pollutants (wastewater, exhaust gas, waste and noise) required by the state, and constantly introduces and develops new technologies and processes to reduce the emission of pollutants.

Ever since the commencement of production, the Group has been focusing on environmental protection and strictly followed the following relevant applicable environmental rules and standards:

Type	Standards/Rules
Exhaust gas	Air Pollutant Release Standard on Sheet Glass (《平板玻璃大氣污染物排放標準》) (GB26453–2011)
Wastewater	Integrated Wastewater Discharge Standard (《污水綜合排放標準》) (GB8978–1996) and Level II standard under the Integrated Wastewater Discharge Standard for the Yellow River Basin (Shaanxi Section) (《黃河流域(陝西段)污水綜合排放標準》) (DB 61/224–2011)
Noise	Emission Standard for Industrial Enterprises Noise at Boundary (《工業企業廠界環境噪聲排放標準》) (GB12348–2008)

During the Reporting Period, the Group strictly complied with the relevant laws and regulations that have a significant impact on the Group in terms of air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous pollutants.

Emissions from the production of the Group mainly include exhaust gas (dust, oxynitride and sulfur dioxide), wastewater and solid waste (grinding sludge and cullet). In 2018, emissions from its enterprises in Xianyang and Hefei after meeting relevant standards include: dust in exhaust gas from photovoltaic furnaces of 21.17 tonnes, sulfur dioxide of 221.68 tonnes, oxynitride of 282.38 tonnes, industrial wastewater of 1,210,000 tonnes and domestic wastewater of 130,000 tonnes. The emission of chemical oxygen demand (COD) reached 14.91 tonnes and 3,600 tonnes of grinding sludge were disposed based on relevant standards. All photovoltaic cullet was recycled.

Part I Environmental (Continued)

Online monitoring, supervisory monitoring and independent monitoring

In order to gain effective and accurate understanding of the real-time emission of pollutants from the Group in the long term, the Group has developed an annual monitoring plan to monitor the emission of key pollutants. Online exhaust gas monitoring systems connected with local environmental authorities have been installed for photovoltaic furnaces in Xianyang and Hefei to effectuate real-time monitoring by the governmental authorities on the emission of exhaust gas.

During the Reporting Period, the Group also appointed a third-party monitoring agency to monitor the emission or discharge of exhaust gas, wastewater and noise by the Group. Monitoring results show that exhaust gas, wastewater and noise of the Group have been emitted or discharged after meeting relevant standards and the requirements of relevant laws and regulations of China.

During the Reporting Period, all environmental facilities of the Group maintained stable operation and received regular maintenance. The Group established an operation account to manage and control the emission of pollutants after meeting relevant standards.

Promoting Environmental Management System

The Group has obtained the ISO14001:2015 environmental management system certification on the production of photovoltaic glass to improve the environmental management. The implementation of the environmental management system has effectively reduced the cost of the Group on waste management and the consumption of energy and materials.

Environmental protection target and completion

The Group strictly implemented the “three synchronizations” system (i.e. environmental facilities should be designed, constructed and operated in tandem with design, construction and operation of principal engineering projects) in environmental impact assessment and protection. It also invested capital into environmental protection, monitored the normal and stable operation of environmental facilities, developed circular economy, improved the water recycling rate, fully recycled waste heat, and advanced measures on energy saving and emission reduction, thereby ensuring the emission and discharge of the “Three Wastes” (i.e. exhaust gas, wastewater and solid waste) met relevant standards.

In 2018, the Group earnestly followed the laws and regulations on environmental protection. Major pollutants were discharged after meeting relevant standards and the disposal of solid waste was legal. There were no environmental incidents during the Reporting Period.

Part I Environmental (Continued)

Training on environmental protection

While closely monitoring the environmental impacts of its production and operation activities and striving to meet the target of environmental protection, the Group vigorously promote environmental responsibility and awareness amongst all staff among its employees and provides them with training on environmental protection. The Group makes detailed training plans at the beginning of every year and regularly updates its employees on the latest laws and regulations on environmental protection. Meanwhile, the Group actively participates in various trainings and symposiums on environmental protection organised by provincial and municipal environmental authorities and industry associations, which further enhanced the professional skills of the environmental protection managers of the Company.

Use of Resources

The Group strictly abides by the requirements of the Energy Conservation Law of the People's Republic of China, the Water Law of the People's Republic of China and other laws and regulations, and conducts comprehensive utilization or recycling of waste, wastewater and waste heat generated during production process, with the aim of fulfilling corporate environmental responsibility, pursing green sustainability, reducing energy consumption, enhancing competitiveness, saving energy for the country and saving costs for enterprises.

Improving utilization rate of natural gas with oxygen-fuel combustion furnaces

With the self-developed "photovoltaic glass oxygen-fuel combustion furnace technology with 750 tonnes/day and its industrialization", the Group conducted denitrification, desulfurization, de-dusting and other integrated technologies on smoke with the photovoltaic glass oxygen-fuel combustion technology at the production bases in Xianyang and Hefei, and reduced natural gas consumption by over 20%. Therefore, the Group, while ensuring safe and stable operation of its production system, achieved satisfactory results in clean production, energy saving and emission reduction, maintaining a leading position in the industry.

Power consumption in 2017	*Unit: kWh*
Headquarters	79,350,600
IRICO Hefei Photovoltaic	107,111,040

Power consumption in 2018	*Unit: kWh*
Headquarters	51,871,600
IRICO Hefei Photovoltaic	182,874,480

Part I Environmental (Continued)

Improving utilization rate of natural gas with oxygen-fuel combustion furnaces (Continued)

In 2018, the Group effectively improved its production efficiency through improvement of production process and adoption of new technologies and equipment. In 2018, the total power consumption of all factories of the Group increased by 20.56% from 186,461,640kWh in 2017 to 234,746,080 kWh, while total production output increased by 23.64% year on year. Per unit power consumption for photovoltaic glass production in 2018 was 4.64 kWh/square, decreasing by 3.73% from 4.82 kWh/square in 2017.

Natural gas consumption in 2017	*Unit: cubic meters*
Headquarters	34,761,600
IRICO Hefei Photovoltaic	46,639,643

Natural gas consumption in 2018	*Unit: cubic meters*
Headquarters	18,149,100
IRICO Hefei Photovoltaic	82,239,386

The Group reduced natural gas consumption through enhanced internal management, strict evaluation and adoption of technical improvement measures. In 2018, the total natural gas consumption of all factories of the Group increased by 18.91% from 81,401,243 cubic meters in 2017 to 100,388,486 cubic meters, while total production output increased by 23.64% year on year. Per unit natural gas consumption in 2018 was 1.98 cubic meters/square meter, decreasing by 5.71% from 2.10 cubic meters/square meter in 2017.

Part I Environmental (Continued)

Wastewater utilization and treatment

The Group has made multiple efforts on water saving and emission reduction. All photovoltaic glass plants in Hefei and Xianyang are equipped with wastewater treatment systems with an annual treatment of 5.25 million tonnes of industrial wastewater and a recycling of 4.46 million tonnes. The recycling rate of water resources was over 85%.

The recycling-oriented treatment process of industrial wastewater of the Group is as follows:

Wastewater collection pool→Raw wastewater pool→Preliminary sedimentation pool→Coagulation pool→Condensation pool→Sedimentation pool→Intermediate pool→Multi-media filter→Recycling pool→Grinding process

In addition, the Group enhanced routine management on facilities to ensure facilities operate in good condition and reduce the discharge of wastewater to avoid its impacts on the environment. Through the water recycling system, it also reduces water consumption and better manages the use of water resources by the Group.

Water consumption in 2017	*Unit: tonnes*
Headquarters	239,535
IRICO Hefei Photovoltaic	1,334,113

Water consumption in 2018	*Unit: tonnes*
Headquarters	112,470
IRICO Hefei Photovoltaic	1,346,756

In 2018, total water consumption of all factories of the Group decreased by 7.84% from 1,573,648 tonnes in 2017 to 1,459,226 tonnes, while total production output increased by 23.64% year on year. Per unit water consumption in 2018 was 288.46 tonnes/10,000 square meters, decreasing by 29.18% from 407.36 tonnes/10,000 square meters in 2017.The Group did not encountered any difficulties in ensuring sufficient water supply for production.

Part I Environmental (Continued)

Waste heat utilization

The Group vigorously promotes heating with waste heat at the production bases in Xianyang and Hefei to reduce energy consumption and production cost. Based on the layout of furnaces and the conditions of the heating system, Xianyang Photovoltaic Glass Factory* (咸陽光伏玻璃廠) transformed and added two sets of heat exchanging systems and achieved self-supply of heating in the winter with waste heat from No. 2 and 4 glass furnaces. It has reduced a heating fee of over RMB2 million every year since 2014 and achieved the targets of energy saving, emission reduction, cost cutting and efficiency improvement.

Photovoltaic power generation

The Group actively practiced the national "13th Five-Year Plan for Energy Development" and promoted distributed photovoltaic power programs in Xianyang, Liquan, Hefei, Nanjing and Wuhan, which transformed solar energy into power, achieved the utilization of recyclable energy and contributed green and clean energy to the society.

The Group initiated the rooftop photovoltaic power generation program in 2012 whereby distributed photovoltaic power stations were set up on the roofs of existing factories. This program beautified the appearance of buildings, leveraged existing resources to generate power for self-use, realized the sustainable development of clean power in certain regions, obtained certain economic benefits and achieved mutual benefits between enterprises and the state.

Packaging materials (wood) consumption in 2017	*Unit: tonnes*
Headquarters	2,353.37
IRICO Hefei Photovoltaic	4,163.01

Packaging materials (wood) consumption in 2018	*Unit: tonnes*
Headquarters	1,684
IRICO Hefei Photovoltaic	5,940

The Group effectively reduces the use of packaging materials and avoids waste by reducing the backlog of inventory, avoiding excessive requisition of materials, enhancing recycling management and appraisal and promoting innovative management and recycling of packaging materials. In 2018, all factories of the Group consumed 7,624 tonnes of wooden packaging materials in total, up by14.52% from 6,516.38 tonnes comsumed in 2017, while total production output increased by 23.64% year on year. Per unit consumption of wooden materials in 2018 was 1.50 tonnes/10,000 square meters, decreasing by 10.71% from 1.68 tonnes/10,000 square meters in 2017.

Part I Environmental (Continued)

The Environment and Natural Resources

In response to the government's call for environmental protection and energy conservation, the Group continues to implement green office practices, enhance staff environmental awareness through trainings in an effort to reduce the impacts of the Group's management and daily operation activities on the environment. The measures adopted by the Group include: using energy-saving lightings and recycled paper, minimizing use of paper, reducing energy consumption by switching off idle lightings, computers and electrical appliances, use of teleconferencing as an alternative to business travel; setting a specific temperature for use of air conditioners and ensuring effective use of cars; monitoring production and office power consumption on a monthly basis with statistics properly kept for monthly appraisal; and making a maintenance plan for major electrical equipment to avoid over-consumption of electricity due to the aging of equipment.

Environmental protection and sustainable development

The Group promote the use of green energy and minimizes the harms of global climate changes caused by greenhouse effect. The Company achieved carbon neutrality through the business of photovoltaic power stations.

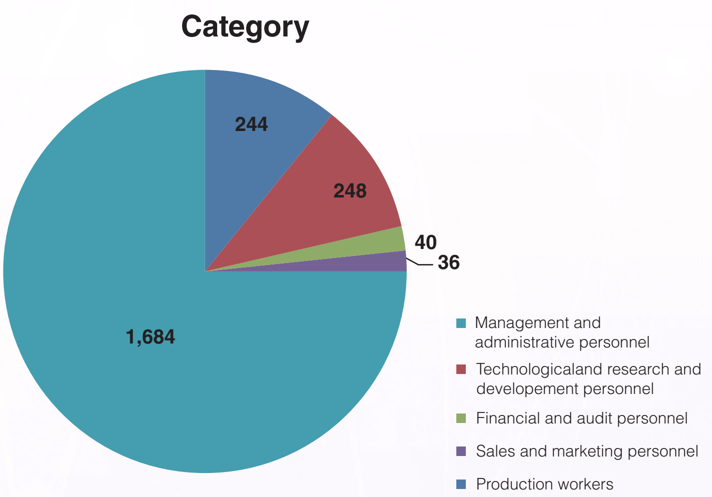
Part II Social

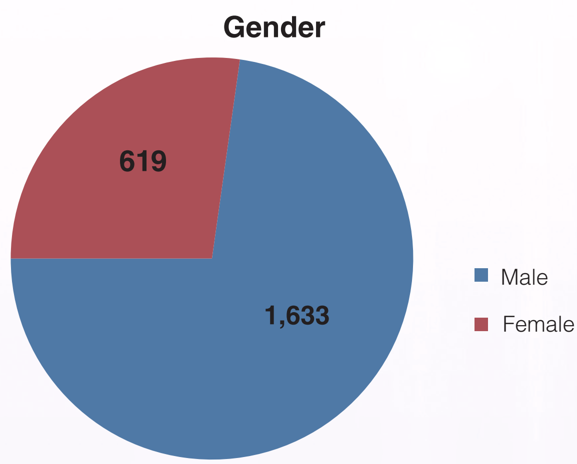
Employment and Labour Practices

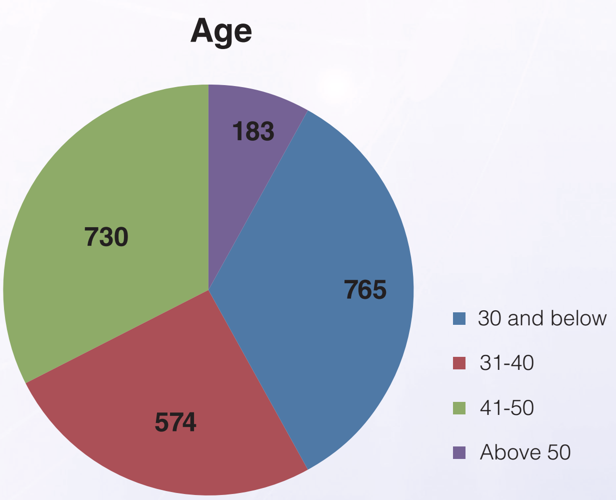
Employment

As at 31 December 2018, the Group had 2,252 incumbent employees, of whom approximately 10.8% were management and administrative personnel, 11.0% were technological and research and development personnel, 1.8% were accounting and audit personnel, 1.6% were sales and marketing personnel, and 74.8% were production workers.

The total number and composition of employees of the Group are as follows:







Part II Social (Continued)

Employment and Labour Practices (Continued)

Employment (Continued)

The Group has established a comprehensive welfare system suitable for corporate development and employee promotion, and developed a remuneration management system and a scheme on continued improvement of remuneration to provide employees with attractive remuneration and benefits. Employee remuneration is composed of basic salary, performance-linked salary and individual rewards and penalties, which is subject to adjustment in line with the Company's performance, employee job value, personal ability and performance, and social development level. In addition, in accordance with national regulations, the Group makes contributions to social insurance and housing provident fund for its employees and provides them with various benefits including paid leave and holidays, home leave, high temperature subsidy and heating subsidy, thereby arousing their enthusiasm for work and ensuring high quality and reliability of the Group's products and services.

Throughout 2018, the Group has complied with relevant laws and regulations in terms of recruitment and promotion, working hour, holiday, equal opportunity, anti-discrimination and other benefits.

* *Excluding dispatched employees*

Part II Social (Continued)

Staff development and training

In line with the aim of "cultivating talent to serve enterprises", the Group adheres to the employee development philosophy that focuses on talent development, and provides comprehensive and diversified training programs to its employees. From the purpose of enhancing employees' skills, business competence, professional qualities, the Group proactively explores various education and training methods suitable for its employees, emphasizes safety awareness education of all staff, and further enhances skills training for management and technical personnel. The Group continues to strengthen the construction of a training system for all employees, update their professional knowledge and skills and improve their management skills, thereby laying a foundation for better discharging their duties and better serving the operation and development of the Company.

Training subjects	Training contents
Workplace safety	Special training on occupational disease prevention and emergency response
Quality management	Training on GB/T19001–2016 Quality Management System, On-the-job Training for Professional and Technical Personnel of Quality Inspection. etc.
New regulations on individual income tax law	Key Points of 2018 Income Tax Settlement and Key Areas of Self-Examination on Enterprise Income Tax Risks, Procedures for Application of New Individual Income Tax Policy, etc.
How to develop personal professional skills and knowledge	Training on Human Resource Regulation Interpretation and Risk Prevention, Common Legal Risks Associated with Purchasing and Solutions Thereof, etc.
Teamwork	Excellent Leadership: Excellent Leadership, Excellent Team and Excellent Achievements, Speed of Trust – Promote Teamwork and Reduce Management Costs, etc.
Management skills	Special Workshop on Speech and Eloquence, Business Integration from the Perspective of Non-financial Personnel, etc.
Orientation training for new employees	Safety Education for New Employees, and others

Part II Social (Continued)

Occupational Health and Safety

The Group has set up a safety management and enforcement organisation, which is equipped with fulltime safety personnel, and formulated the Safety Production Management Rules, Detailed Rules on Implementation of Occupational Safety and Health Supervision, and Emergency Preparedness Plan for Production Safety Accident and other rules; and established the occupational health and safety management system. Each year, a qualified third party will be engaged to conduct external audit to ensure the continued and effective operation of the system.

The Group equips its employees with labour protection facilities and supplies including gloves, safety shoes, etc. Meanwhile, the Group also posts safety warning signs at workplaces to remind employees to prevent occurrence of safety incidents. Each year, employees are placed on medical checkups to ensure their physical health. The Group organises a number of training courses on occupational health and safety every year to enhance the health and safety skills of employees. At ordinary times, the Group performs safety inspections and emergency drills to eliminate safety hazards and enhance employees' safety awareness.

Summary of certain campaigns:

In March 2018, the Company held the "3.15 Fire Safety Week" campaign in which safety publicity was conducted by hanging fire safety banners, making fire safety signboards, organising fire drills for relevant employees, replacing firefighting equipment, and completing lightning protection and grounding tests at factory areas.

Part II Social (Continued)

Occupational Health and Safety (Continued)

In June 2018, the Group's annual "safety production month", the Group organised 16 special emergency drills including firefighting emergency and evacuation for key areas and positions including photovoltaic furnace, calendaring, tempering and hydrogen reduction furnaces, ammonia decomposition devices, and hazardous chemicals leakage, involving more than 281 employees, to test the operability and practicability of the emergency plans. In addition, the Group comprehensively evaluated the drill results with a view to constantly optimizing the emergency plans and improving staff's emergency handling capacity to ensure safe production at factories.

In November 2018, as a response to the national initiative, the Group arranged "11.9 Fire Control Publicity Week". A variety of fire warning education activities were carried out and special inspections were conducted for fire-fighting equipment, electrical appliances and utility pipelines to identify and rectify safety hazards, creating a strong atmosphere for fire control publicity.

Part II Social (Continued)

Occupational Health and Safety (Continued)

Health and safety performance	Performance
Number of work-related casualties	0
Number of loss days due to work injury	0
Number of accidents	0

In 2018, the occurrence rate of various safety accidents of the Group was zero. The Group strictly abided by the relevant laws and regulations that had a significant impact on the Group in respect of providing safe working environment and safeguarding employees from occupational hazards.

Labour Standards

In formulating the Recruitment Management Process, the Group strictly abided by the Labour Law of the People's Republic of China, the Regulations on Prohibition of Child Labour and other laws to prevent child labour. Further, in order to guarantee the health and safety of employees, the Group strictly prohibits forced labour. All employees are required to undergo relevant trainings before they start work. The union organisation of the Group also plays an active role in guaranteeing employees' interests.

Since its listing, the Group has never used any child labour or forced any employees to work. The Group has complied with the relevant laws and regulations.

Part III Production and Operation

Supply Chain Management

The Group manages its procurement and supply chain based on purchasing of products. Through a standardized pricing process, the Group was able to standardize procurement process, optimize supplier base, share procurement information, supervise procurement process, reduce procurement costs, enhance the informatization of procurement, and establish and optimize business relationships between subordinate enterprises with appropriate suppliers, thereby eventually developing a high-quality supplier base. Further, by purchasing through bidding process, the Group successfully reduced the purchasing price of products, improved the quality of purchased products and increased the service quality of suppliers.

Part III Production and Operation (Continued)

Supply Chain Management (Continued)

The Group has formulated the Purchase Management Rules, the Management Measures for Contract Review and Bidding Process and the Digitalization of Bidding and Contract Approval Procedures for Strict Regulation over Purchasing Activities, to ensure the normal operation of production systems. Details are as set out as follows:

1. Sourced product information base and supplier information base are established; a pricing process is set up whereby the price of a product to be purchased is determined through electronic bidding; a product ordering process is in place whereby it specifies how to place orders with suppliers. Further, the Group supervises the actual prices of products, and effectuates the connection between centralized procurement bidding and OA approval systems and ERP system.

2. Supplier management archives and the corresponding goods purchasing catalogue are established and special personnel are designated to be in charge of the management in relation thereto. Results of supplier evaluation will be gathered and included into the supplier archives, which serve as important basis for updating and optimizing the suppliers.

3. Suppliers who have long been falling short of the quality requirements of our plants and failed to make improvements or those who have deeply flawed quality management systems will be suspended or recused in relation to their supplier qualifications as recorded in the Catalogue of Qualified Suppliers and their Products.

4. Supplier incentive mechanisms are established, whereby suppliers who are assessed as excellent will gain priority in respect of distribution of products to be supplied, long-term cooperation, etc.

5. Undue reliance on specific major suppliers has been reduced so as to divert procurement risks.

6. Supplier incentive mechanisms are implemented and performance of suppliers will be evaluated, thereby procuring the suppliers to improve constantly. Sound and reasonable appraisal methods are employed to evaluate the effects of cooperation with individual suppliers and evaluation results will be fed back to the suppliers. The Group will discuss the causes of problems together with the suppliers and take improvement measures accordingly.

7. Casual reciprocal visits to and from the suppliers' will be scheduled so as to create a sound cooperation atmosphere.

Part III Production and Operation (Continued)

Supply Chain Management (Continued)

The Group will monitor quality on a long-term basis and carry out regular review on all suppliers and random checks on different suppliers to secure sustainable supply of quality materials and services. We support and encourage suppliers to provide environmental products and services, benefits and guarantees for employees and call on them to abide by relevant laws and regulations and perform contractual obligations. For example, for the selection of suppliers, the Group will give priority to those with the Certification of the ISO9001 Quality Management System, the Certification of the ISO14001 Environmental Management System, the Certification of the OHSAS18001 Occupational Health and Safety Management System and other certifications under same conditions. We pay more attention to the environmental protection efforts of suppliers in the annual review on certain suppliers, and investigate and prevent briberies, frauds and other improper behaviors in the procurement process through the effective anti-corruption supervision and management system of the Group. Through extending the sustainable development concept to the supply chain, the Group advocates green procurement and production and strives to make suppliers keep the same pace with us in performing corporate social responsibility and improve the overall performance of the industry. If suppliers are found to fail to meet environmental or social policies or contractual requirements of the Group, we will terminate subsequent cooperation until they have made improvements.

Geographical distribution	Number of suppliers
PRC	174
Netherlands	1

Product Liability

Committed to producing prime photovoltaic glass, the Group highly values product quality and corporate reputation. Owing to its testing of all products in strict accordance with the established Quality Management System, the Group has succeeded in obtaining various domestic and overseas certificates, mainly including: GB/T 19001–2016/ISO19001: 2015 Quality Management System Certificate; China Compulsory Certification (3C) Certificate; and SPF Switzerland Certification.

In 2018, the Group complied with relevant laws and regulations that have a material impact on the Group in respect of the health and safety, advertising, labelling and privacy matters of products and services provided as well as methods of redress.

Part III Production and Operation (Continued)

Prevention of Corruption

In stringent compliance with relevant laws and regulations of the PRC, the Group has formulated governing documents in respect of uncorrupt practice, warning conversations, accountability, etc. It has carried out adequate instructive work in respect of duty-related crimes including anti-corruption, exerts strict supervision and inspection over the implementation of relevant systems and shows zero tolerance for duty-related malefactions. Meanwhile, the Group has undertaken a variety of warning education activities to advocate the establishment of incorruptible culture within the Group and create a clean and upright working environment.

The Group has proper arrangements in place whereby whistleblowers may present problems and provide clues to the discipline inspection and supervision department of the Company by letter, mail, telephone as well as other methods. The discipline inspection and supervision department will sort out the problems and clues and handle the same in accordance with the Clues Handling Measures. Where there is concrete evidence of graft and bribery after the case is filed, such case will be referred to the competent supervisory authorities according to laws in a timely manner.

The business operations of the Group are in line with the standards of business conduct as prescribed in relevant local regulations. During the Reporting Period, the Group was not involved in any material legal proceedings in relation to bribery and graft.

Community Involvement

Targeted poverty alleviation

The Company, while vigorously developing photovoltaic power projects, actively responded to the government's call for poverty alleviation through photovoltaic projects and participated in photovoltaic poverty alleviation efforts to bring clean energy into poor households. So far, photovoltaic poverty alleviation programs have been successively launched in Changwu, Hainan and other regions. It plans to invest about RMB50 million to support industries in poverty-stricken areas, and to develop local photovoltaic industry and appropriate special funds to increase the income and subsidies of certain village-level poverty-stricken farmers.

In strict accordance with the decision-making authority of the shareholders' meetings, the board of directors and the general manager's office as well as the donation management measures stipulated in the articles of association of the Company, the Group further standardized donation activities and enhanced donation management so as to better fulfill its corporate social responsibility, give back to the society and participate in social public welfare programs.

Corporate Governance Report

The Company strives to uphold the corporate governance standard in accordance with statutory and regulatory requirements. Through the establishment of a competent Board, a comprehensive internal control system and a stable corporate structure, the Company strives to ensure completeness and transparency in its information disclosure, enhance stable operation and consolidate and increase Shareholders' value and benefit.

1. Corporate Governance Practices

Improvement of the internal control system was made by the Company by reviewing the Company's corporate governance practices against the CG Code to cater for the constant development and evolvement of corporate governance.

The Board has reviewed the Company's corporate governance practices. During the reporting period, the Company had applied and complied with the principles and code provisions set out in the CG Code. The code on corporate governance practices adopted by the Company includes but is not limited to the following documents: the Articles of Association, Working Rules for the Board, Terms of Reference and Organisation Rules for the Audit Committee, Terms of Reference and Organisation Rules for the Nomination Committee, Terms of Reference and Organisation Rules for the Strategy Committee and Terms of Reference and Organisation Rules for the Remuneration Committee. The Board also formulated the Management Methods for Information Disclosure, Management Mechanism for Investor Relations, Management Mechanism for Implementation of Resolutions of the Board, Management Mechanism for Connected Transactions and Mechanism for Nomination of Candidates for Directors by Shareholders as relevant working rules of the Company. In addition, the Company has established the Strategy Committee.

2. The Board

Duties of the Board

The Board is responsible for leading and monitoring the Company's affairs. All Directors are liable to act in the best interests of the Company and collectively assume the responsibility for overseeing and monitoring the Company's affairs. The Board makes regular assessment on the management's business objectives and performance as well as exercises a variety of powers in accordance with the Articles of Association, which mainly include:

- overseeing the implementation of resolutions passed at general meetings;
- approving the Company's business plans and investment schemes;
- formulating the Company's annual financial budget schemes;

2. The Board (Continued)

Duties of the Board (Continued)

- formulating the Company's profit distribution plan;
- formulating the Company's basic management system;
- approving the Company's accounting policies and adjustment thereof;
- approving various announcements including financial reports.

In respect of corporate governance, the Board performed the following duties in the reporting period:

- developing and reviewing the corporate governance policies and practices of the Company;
- reviewing and monitoring the training and continuous professional development of Directors and senior management;
- developing, reviewing and monitoring the code of conduct and compliance manual applicable to employees and Directors;
- reviewing and monitoring the Company's policies and practices on compliance with legal and regulatory requirements of the Company;
- reviewing the compliance of the CG Code by the Company and corresponding disclosure in the corporate governance report of the annual report.

Composition

The Board comprises 7 Directors, including 2 executive Directors, 2 non-executive Directors and 3 independent non-executive Directors, whose biographies are set out from page 19 to 21 in this annual report.

Directors (including non-executive Directors and independent non-executive Directors) are elected in general meetings with a term of three years from the effective date of their elections until the date of election of the next session of the Board.

2. The Board (Continued)

Composition (Continued)

All Directors shall, upon their initial appointment, report to the Board in respect of the number and nature of any office assumed by them in other companies or institutions and the term of office, as well as disclose to the Company names of such companies or institutions. If the Board considers a Director has a conflicting interest in any proposal under consideration, such Director shall report his/her interests and abstain from voting and may, when necessary, apply for absence. The Board requires Directors to confirm whether there is any connected transaction between the Directors or their respective associates and the Company or its subsidiaries at each financial reporting period. Any material transactions relating to connected persons, which have been confirmed, will be disclosed in notes to the financial statements of an annual report.

There are three independent non-executive Directors, representing over one-third of the Board. The independent non-executive Directors possess extensive professional expertise and experience, and can fully perform their important functions of supervision and balance to protect the interests of the Shareholders and the Company as a whole. In determining the independence of a non-executive Director, the Director is considered independent only after the Board has confirmed that there is no direct or indirect material relationship between the Director and the Company. The Board considers that the independent non-executive Directors are able to make independent judgment effectively and satisfy the guideline on assessing independence as set out in Rule 3.13 of the Listing Rules.

The Company has complied with the requirement concerning the appointment of sufficient independent non-executive Directors, that at least one of them should possess appropriate professional qualification or accounting or relevant financial expertise and that independent non-executive Directors should represent one third or above of the Board as set out in Rules 3.10(1), 3.10(2) and 3.10A of the Listing Rules.

During the reporting period, the Company organized trainings in relation to the business of the Company for Directors. During the reporting period, the Directors also attended trainings in strategic development, corporate governance and those organized by regulatory authorities.

The Company provides trainings to Directors in due course in accordance with the requirements under Rule A.6.5 of Appendix 14 to the Listing Rules. The Company has made appropriate arrangement to insure against the possible legal actions that the Directors, supervisors and senior management may be involved. The Board reviews annually the insurance arrangement.

2. The Board (Continued)

Duties of the Management

The management is responsible for the management of production and operations, organising and implementing resolutions of the Board, organising the implementation of the Company's annual business plans and investment schemes, formulating plans for the establishment of the Company's internal management structure, formulating the basic management system of the Company, formulating the basic rules of the Company, and exercising other powers conferred under the Articles of Association of the Company and by the Board. Meanwhile, the management reports to Directors on the Company's operations and businesses each month so as to enable the Directors to fully understand the operations and businesses of the Company.

The Chairman and the general manager

The Chairman is responsible for the operation and management of the Board while the general manager takes charge of the day-to-day management of the Company's business. To ensure a balanced distribution of powers and authorisations, the offices and roles of the Chairman and the general manager are assumed by Mr. Si Yuncong (an executive Director) and Mr. Chen Xiaoning respectively. The offices and roles of the Chairman and the general manager are assumed by two individuals separately and explicitly differentiated.

Under the assistance of the deputy general manager, the general manager, as the chief manager of the Company's day-to-day affairs, is responsible for managing the day-to-day affairs of the Company, organising the implementation of resolutions of the Board, organising the implementation of the Company's annual business plans and investment schemes, assuming a direct responsibility for the operation performance of the Company and responsible for the overall operation of the Company to the Board.

The general manager and the deputy general manager make concerted efforts to collaborate with administrative departments of the Company to ensure the Board and the Board committees can access to complete, reliable and proper information so that the Directors can make decisions with adequate data and to ensure proper implementation of the Board's resolutions. The general manager closely monitors the operation and financial results of the Company based on plans and budgets and makes suggestions to the Board in respect of material events.

2. The Board (Continued)

Company Secretary

The Company Secretary reports to the Board. All Directors are entitled to the Company Secretary's services. He updates the Board on governance and regulation on a regular basis, assists the chairman in preparation of the agenda of the Board meetings, and prepares and dispatches meeting documents on a timely and comprehensive basis so as to ensure the efficiency and compliance of the Board meetings. With the assistance of the Company's legal counsels, the Company Secretary is in charge of arranging the annual and interim reports and disclosure of information and data in accordance with the Listing Rules and relevant rules of the Company. He makes regular enquiries to the Company's financial department for information on connected transactions to secure compliance with the Listing Rules in respect of such transactions. The selection, appointment or dismissal of the Company Secretary is in the charge of the Board.

The Company Secretary is also responsible for preparing and keeping minutes of meetings of the Board and the Board committees together with any relevant documents, which can be provided and open to all Directors and are available to all Directors for their inspection at any reasonable time. All matters under consideration including any enquiry and objection by Directors shall be recorded in details. Within a reasonable timeframe after a meeting, a draft minutes shall be circulated to all Directors for their comments.

The Company Secretary is in charge of arranging induction training and professional development for Directors.

In 2018, the Company Secretary participated in 16 hours of training in respect of corporate governance, etc.

Board meetings

The Chairman is responsible for convening and presiding over the Board meetings. Assisted by the Company Secretary, the Chairman seeks to ensure all Directors' proper access to accurate, timely and sufficient data in connection with the proposals to be considered by the Board to enable their wise decisions. While a 14 days' prior notice of a regular Board meeting is given, the agenda of meeting and the meeting documents attached are circulated at least 3 days prior to the holding of a Board meeting or a meeting of any special committee.

2. The Board (Continued)

Board meetings (Continued)

The Chairman encourages the Directors to be fully engaged in the Board's affairs and make contributions to the functions of the Board. The Board also adopts sound corporate governance practices and procedures and takes appropriate steps to encourage the Directors' open and candid communications so as to ensure non-executive Directors may raise queries with and maintain effective communications with each executive Director.

It is expressly provided in the Terms of Reference and Working Rules for the Board that, in the event that a substantial Shareholder or Director has a conflict of interest in the matter to be considered at the Board meeting, such matter shall not be dealt with by Board committees or by way of circulation. Any Director who has a conflict of interest in the matters to be considered shall abstain from voting.

The Company held four on-site Board meetings, passed twelve written resolutions of Board meetings, and held three extraordinary general meetings and one annual general meeting during the reporting period. Details of attendance of the Directors are as follows:

Number of meetings attended/Number of meetings held

Directors	Board Meetings	Audit Committee	Remuneration Committee	Nomination Committee	Extraordinary General Meeting	Annual General Meeting
Si Yuncong	4/4	2/2	1/1	1/1	3/3	1/1
Zou Changfu	4/4	2/2	1/1	1/1	3/3	1/1
Chen Xiaoning	2/4				2/2	
Fan Laiying	2/4				2/2	
Huang Mingyan	2/4	2/2	1/1	1/1	1/1	1/1
Chen Changqing	2/4	2/2	1/1	1/1	1/1	1/1
Feng Bing	4/4	2/2	1/1	1/1	3/3	1/1
Wang Jialu	4/4	2/2	1/1	1/1	3/3	1/1
Wang Zhicheng	4/4	2/2	1/1	1/1	3/3	1/1

In accordance with the Articles of Association, Directors, when necessary, may propose to convene an extraordinary Board meeting. They may also, when they consider necessary, obtain the Company's information and independent expert opinion, where expenses incurred are borne by the Company.

2. The Board (Continued)

Board committees

Four special committees are established under the Board, namely the Strategy Committee, the Audit Committee, the Nomination Committee and the Remuneration Committee, the terms of reference of which are determined in accordance with the principles set out in the CG Code. The Board committees report to the Board. In order to perform their duties, the Board committees have the authority to engage lawyers, accountants or other professionals for professional advice when necessary, the expenses of which are borne by the Company.

Nomination Committee

The Nomination Committee comprises two executive Directors and three independent non-executive Directors, including Mr. Si Yuncong (executive Director), Mr. Zou Changfu (executive Director), Mr. Feng Bing (independent non-executive Director), Mr. Wang Jialu (independent non-executive Director) and Mr. Wang Zhicheng (independent non-executive Director), and is chaired by Mr. Si Yuncong. The Nomination Committee shall provide the Board with its advice on appointment of Directors, assessment of the Board's composition and change of Directors in accordance with certain agreed standards. The relevant standards include a Director's proper professional knowledge and work experience, personal integrity and commitment of adequate time. The Nomination Committee is responsible for the selection and recommendation of Director candidates, including consideration of candidates recommended by others and, when necessary, acquired by using public recruitment.

The Nomination Committee gives full consideration to the principle of Board diversity in selecting and recommending Director candidates, mainly including but not limited to gender, age, culture and educational background or professional experience, as well as the Board members' recommendations on the development of the Company in various aspects based on their professional competence in different fields.

With reference to the requirements in paragraph A.5 of the CG Code under Appendix 14 to the Listing Rules, the Board formulated the Terms of Reference and Organisation Rules for the Nomination Committee. The terms of reference of the Nomination Committee are as follows:

- to review the structure, size and composition of the Board at least once annually;
- to identify individuals suitably qualified to become Board members, and to nominate relevant people as Directors or provide advice thereabout to the Board;

2. The Board (Continued)

Nomination Committee (Continued)

- to assess the independence of the independent non-executive Directors;
- to make recommendations to the Board on the appointment or re-appointment as well as the succession plan of Directors.

During the reporting period, the Nomination Committee conducted work focusing on the aforesaid terms of reference and discussed on the formulation of policy on the nomination of Directors, nomination procedures adopted for candidates for Directors and the selection and recommendation rules. In 2018, the Nomination Committee convened one meeting.

Audit Committee

The Audit Committee comprises one non-executive Director and three independent non-executive Directors, including Mr. Wang Zhicheng (independent non-executive Director), Mr. Fan Laiying (non-executive director), Mr. Feng Bing (independent non-executive Director) and Mr. Wang Jialu (independent non-executive Director), and is chaired by Mr. Wang Zhicheng, who has proper professional qualifications and financial experiences. The main role of the Audit Committee is to review the financial reports of the Company, review risk management, internal control and corporate governance and provide advices in respect thereof to the Board.

By reference to the recommendations in A Guide for Effective Audit Committees issued by Hong Kong Institute of Certified Public Accountants and the requirements of code C.3 of the CG Code, the Board has formulated the Terms of Reference and Organisation Rules for the Audit Committee. The major terms of reference of the Audit Committee are as follows:

- to be primarily responsible for making recommendation to the Board about the appointment, re-appointment and removal of external auditors, and assess the external auditors' work and supervise the independence, work procedures, quality and results of the external auditors;
- to review and supervise the Company's financial statements and the integrity of the annual reports and accounts, interim reports and the quarterly reports (if prepared for publication), and review major opinions related with the financial reporting on the statements and reports;
- to review the Company's financial reporting system and internal control system.

2. The Board (Continued)

Audit Committee (Continued)

During the reporting period, the major work of the Audit Committee included:

I. Considering the audited financial reports of the Company for 2017 and the reviewed financial reports for the first half of 2018;

II. Considering the report in relation to the execution of continuing connected transactions of the Company for 2017;

III. Considering the report in relation to the audit fees of the Company for 2017;

IV. Considering the proposal for appointment of the Company's domestic and overseas auditors for 2018;

V. Reviewing the internal control system.

During the reporting period, the Audit Committee convened two meetings with an average attendance rate of 100%. The senior management and external auditor were invited to all meetings.

Remuneration Committee

The Remuneration Committee comprises one executive Director and two independent non-executive Directors, including Mr. Wang Jialu (independent non-executive Director), Mr. Zou Changfu (executive Director) and Mr. Wang Zhicheng (independent non-executive Director), and is chaired by Mr. Wang Jialu.

The Board has formulated the Terms of Reference and Organisation Rules for the Remuneration Committee. The terms of reference of the Remuneration Committee are as follows:

- to make proposals to the Board about the remuneration policy and structure for all Directors and senior management personnel of the Company and the establishment of a formal and transparent procedure for formulating remuneration policy;

- to review and approve the proposed remuneration of the management in accordance with the corporate policies and objectives made by the Board;

2. The Board (Continued)

Remuneration Committee (Continued)

- to take responsibility to determine the specific remuneration packages for all executive Directors and senior management personnel, and make salary recommendations of non-executive Directors to the Board.

During the reporting period, the Remuneration Committee conducted work focusing on the aforesaid terms of reference, and assessed the performance of executive Directors and approved the terms of service contracts for executive Directors. In 2018, the Remuneration Committee convened one meeting to consider the proposal in relation to the remuneration status of Directors and supervisors of the Company for 2017, and the proposed authorization by the general meetings to the Board to determine the remuneration of Directors and supervisors of the Company for 2018.

Remuneration policy for executive Directors: The remuneration portfolio policy for executive Directors is designed to link executive Directors' remuneration and their performance with corporate goals so as to inspire their better performance and retainment. In accordance with the Articles of Association, the Directors shall not approve their own remunerations.

The Remuneration Committee approves the grant of stock appreciation rights to the executive Directors based on their individual performance and the business status of the Company pursuant to the stock appreciation rights plan approved by the Shareholders.

Remuneration policy for non-executive Directors: Remunerations of non-executive Directors are subject to the approval by general meetings and determined with reference to the complexity of the matters to be handled by them and their duties. Pursuant to the service contracts entered into between the Company and the non-executive Directors, the Company reimburses non-executive Directors for the out-of-pocket expenses incurred in performance of their duties (including attendance at the Company's meetings).

Remuneration policy for employees of the Group: Remunerations of employees of the Group are always based on their work performance so as to stimulate their work motives, reward outstanding performance and fully exert the incentive role of remunerations. To ensure fairness, justice and reasonableness, the Company assesses and distributes remunerations in strict accordance with the assessment management authority, assessment contents and standards for all categories of employees to encourage them to create more value to the enterprise by using their greatest potential. Meanwhile, the remuneration policy for employees of the Group is always in favor of the research and development personnel and marketing personnel in order to attract talents with competitive remunerations and enhance the Company's competitiveness in the market.

2. The Board (Continued)

Remuneration Committee (Continued)

A Director's remuneration includes the amount paid by the Company and its subsidiaries to Directors for their management of affairs of the Company and its subsidiaries. Remunerations paid to each Director of the Company in 2018 are as follows:

(Unit: RMB'000)

Name	Position	Salary and allowance	Remuneration (Director's fee)	Contribution to retirement benefits	Remarks
Si Yuncong	Executive Director and Chairman	–	–	–	Not receiving remuneration from the Company
Zou Changfu	Executive Director (resigned on 13 February 2019)	–	–	–	Concurrently serving as the general manager of the Company in 2018 whose remuneration is determined with the same standards as those of the management
Chen Xiaoning	Executive Director (appointed as a non-executive director on 26 October 2018; re-designated as an executive director on 13 February 2019)	–	–	–	Concurrently serving as an executive deputy general manager of the Company in 2018 whose remuneration is determined with the same standards as those of the management
Huang Mingyan	Non-executive Director (resigned on 26 October 2018)	–	–	–	Not receiving remuneration from the Company
Chen Changqing	Non-executive Director (resigned on 26 October 2018)	–	–	–	Not receiving remuneration from the Company
Fan Laiying	Non-executive Director	–	–	–	Not receiving remuneration from the Company
Feng Bing	Independent non-executive Director	–	100	–	–
Wang Jialu	Independent non-executive Director	–	100	–	–
Wang Zhicheng	Independent non-executive Director	–	100	–	–
Total		–	300	–	–

2. The Board (Continued)

Remuneration Committee (Continued)

Pursuant to applicable laws and regulations of China, the Company currently participates in a series of pension schemes organized by provincial and municipal governments, pursuant to which all production plants of the Company must contribute to such pension schemes according to certain proportions of the salaries, bonus and various allowance of the employees. As the production plants are located in different regions, the proportions of contributions to the remuneration of employees are also different.

3. Statement of financial responsibility of the Board

The Board is responsible for the preparation of the Company's financial reports and takes the responsibility for the completeness and legitimacy of the financial data as well as the effectiveness of the Company's internal control system and risk management process. The general manager of the Company is responsible for the daily management of the operation of the Company. The Board makes periodic review on the functions of and the power delegated to the general manager.

The Directors acknowledge their responsibilities to prepare financial statements of the Company for each financial year, to report truly and fairly on the financial status of the Group, to comply with applicable accounting standards and adopt appropriate accounting policies in the preparation of the financial statements and to disclose the financial status of the Company accurately.

For auditor's reporting responsibilities, please refer to the auditor's report.

4. Securities transactions by Directors

The Board has adopted the Model Code as the code of conduct regarding securities transactions by Directors of the Company. The Model Code is also applicable to selected employees who may possess certain inside information of the Company that has been not disclosed, including such employees in the Company's subsidiaries and parent company. Upon appointment, each Director would receive a copy of the Model Code. After that, the Model Code is delivered twice a year, namely, 30 days prior to the Board meeting to approve the Company's interim results and 60 days prior to the Board meeting to approve the Company's annual results, together with an indicative notice to remind the Directors that they may not deal in the Company's shares until the publication of the results announcement.

All Directors confirm that during the reporting period, all Directors and the selected employees who may possess certain inside information of the Company that has not been disclosed complied with the Model Code and none of the said persons had interests or short positions which are required to be notified to the Company and the Stock Exchange, or incurred any violation of regulations.

5. Control mechanism

Internal control and internal audit

Internal control system

The Board is fully in charge of the Company's internal control system, including its overall financial and operational status, hence avoiding material financial omission or loss and any omission or risk in relation to operation controls. Through its Audit Committee, the Board makes periodic review on the effectiveness of the internal control system of the Group, which includes controls over finance, operations, regulation compliance and risk management. Relevant results of 2018 have been reported to the Board through the Audit Committee.

The Board confirms that the Company has set up procedures and systems for efficient recognition, assessment and management of material operating risks. The Company has complied with the Code Provisions relating to internal controls as set out in the CG Code for the year ended 31 December 2018.

Internal audit

The Company has set up internal audit, which oversees the internal controls, ensures the achievement of the corporate goals and conducts independent reviews.

The internal audit department gives its prudent opinion as to whether the Company's operations have a comprehensive and efficient risk management system and reports to the Audit Committee of the Company accordingly. In 2018, all internal audit reports and opinions were submitted to the general manager and other executive Directors as well as the senior management of the audit department. The audit department also follows up on issues identified during the audit process and conducts follow-up audit to ensure that such issues have been satisfactorily resolved. In addition, a regular dialogue is maintained between the internal audit and the external auditor so that both are aware of the significant factors that may affect their respective scope of work.

Risk management

The Board properly implements operation risk management procedures across the Company and formulates policies and procedures which provide a framework for identification and management of risks. The internal audit department reports to the Audit Committee monthly on significant risks and explains clearly the measures to be taken by the Group and the subsequent progress on improvements. According to different natures of the identified risk management, corresponding improvement measures are taken. The relevant procedures are reviewed to ensure their compliance and effectiveness. In accordance with the requirements of the Listing Rules, the Group constantly optimises its risk management and internal control system, so as to ensure the Group is controlled effectively and adequately in terms of finance, operations, compliance and risk management, with the ultimate goal of protecting the Shareholders' interests.

5. Control mechanism (Continued)

Internal control and internal audit (Continued)

Risk management (Continued)

The Board fulfils its oversight role over the Company and its subsidiaries in the following areas:

- establishment of the risk management system of the Company and identification of the risk portfolio of the Company;
- identification, assessment and management of the material risks faced by various units of the Company;
- review and assessment of the appropriateness of the Company's risk management process, system and internal control;
- review and monitoring the execution of the Company's risk management process, system and internal control, including compliance with requirements of prudence and legality while conducting businesses.

The Board is fully in charge of overseeing the operations of the Company's business units. Personnel with proper experience and skills are appointed to the board of directors of the Company's subsidiaries and associated companies to attend their board meetings and to oversee the operations of those companies. Monitoring activities include review and approval of business strategies, budgets and plans as well as setting up key business performance indicators. The identification, evaluation and report on the likelihood and potential financial impact of material business risks are issues left to the management personnel of such companies.

During the year 2018, the Board continued to supervise the Group's risk management and internal control, and has reviewed the effectiveness of the risk management and internal control and confirmed that the Group has adequate resources for the Group's accounting, internal audit and financial reporting functions, and that the employees' qualifications and experience, the training courses for the employees and the related budgets are adequate. In the areas of financial management, risk management, compliance and financial operating risk management, the effective implementation, timely review and corresponding results are reported in the monthly operation meetings. The Board is responsible for the risk management and internal control systems, and the review of such systems as to their effectiveness. The objectives of such systems are to manage rather than eliminate the risks of failure in achieving business objectives, and to provide only a reasonable, but not absolute, assurance against material misstatements or losses.

5. Control mechanism (Continued)

Internal control and internal audit (Continued)

Risk management (Continued)

In the aspect of information disclosure, the Company's information disclosures are regulated in accordance with the requirements and procedures to ensure compliance with the relevant laws and regulations of the mainland China and Hong Kong, and the rules and requirements of the Listing Rules, so as to correctly fulfill the obligation of information disclosure. This is to be incorporated into the daily assessment to ensure information disclosures are in sound compliance. In addition, the Company has adopted procedures for and internal control over the handling and publication of inside information, involving scope, compliant disclosure and reporting procedures thereof. All reasonable measures are taken to make sure that external regulation and internal management are fully implemented.

The Chairman is the first responsible person of the Company's information disclosure. The secretary of the Board is responsible for the coordination and organising of the specific matters of information disclosure. The office of the Board is the department responsible for the daily management of information disclosure.

The Company has established an information disclosure system with corresponding risk management and internal control related documentation. The relevant process is as follows:

(1) The person-in-charge of the department that provides the information conscientiously checks the relevant information manuscript to ensure its truthfulness, accuracy and completeness, and upon confirmation that there are no misinterpretations, misleading statements or material omissions, affixes the signature or seal thereon;

(2) The secretary of the Board conducts a compliance review, and informs the Directors and the senior management of the Company of the information through appropriate channels in a timely manner, and if necessary, submits to the Board for approval;

(3) The chairman or the authorised representatives of the Board signs and approves the issuance of the information.

During the year 2018, the Company has complied with the above internal systems in relation to information disclosure obligations and made timely announcements of important matters that are to be disclosed. The Company has ensured the truthfulness, accuracy, completeness and timeliness of the disclosed information, and made sure that the investors were able to obtain publicly disclosed information in an open, fair and equitable manner.

5. Control mechanism (Continued)

Internal control and internal audit (Continued)

External auditor and their remunerations

In view of the change of basis for preparation of overseas financial report of the Company, It was considered and approved at the 2017 annual general meeting held by the Company on 25 May 2018 that PKF Hong Kong Limited (大信梁學濂(香港)會計師事務所有限公司) would not be reappointed as the Company's 2018 overseas auditor and would resign from office, while WUYIGE Certified Public Accountants LLP (大信會計師事務所(特殊普通合夥)) would be reappointed to serve as the sole auditor of the Company for 2018. The Audit Committee reviewed the letter from WUYIGE Certified Public Accountants LLP to confirm its independence and objectiveness, held meetings with the said auditor to discuss its audit scope and fees, and approved scope and fees for any non-audit service to be provided by the firm as required.

As of 31 December 2018, the remuneration of the external auditor amounted to RMB2,820,000, all of which was audit service fees. There were no non-audit service fees during the year. The audit fee has been approved by the Audit Committee and the Board.

6. Interests of shareholders and investor relations

General meetings

The Company encourages Shareholders' attendance at annual general meetings and gives at least a 45-day prior notice of such meetings. The Chairman shall attend the annual general meetings and invite the chairman of each committee (if he is unable to attend, a member of such committee will be invited) of the Board to attend the annual general meeting, and answer inquiries from the Shareholders. All Directors (especially independent non-executive Directors and non-executive Directors) shall attend the general meetings on a regular basis, including annual general meeting and extraordinary general meeting.

All Shareholders have rights to request the convening of an extraordinary general meeting and put forward proposals for Shareholders' consideration in accordance with the Articles of Association. At the annual general meeting, each matter is put forward in the form of a separate proposal and voted by way of poll. Voting results of the general meeting are released in the form of announcements and relevant details of the meeting are published on the respective websites of the Stock Exchange and the Company.

On 25 May 2018, the 2017 annual general meeting of the Company was held at the conference room of the office building of the Company in Xianyang, Shaanxi Province.

On 26 June 2018, an extraordinary general meeting of the Company was held at the conference room of the office building of the Company in Xianyang, Shaanxi Province.

On 26 October 2018, an extraordinary general meeting of the Company was held at the conference room of the office building of the Company in Xianyang, Shaanxi Province.

6. Interests of shareholders and investor relations (Continued)

General meetings (Continued)

On 18 December 2018, an extraordinary general meeting of the Company was held at the conference room of the office building of the Company in Xianyang, Shaanxi Province.

Details of the above general meetings are set out on the respective websites of the Stock Exchange and the Company.

The Company Secretary is responsible for day-to-day communications between the Board and substantial Shareholders. Investors and the public may also access the Company's website for detailed data of the Company's businesses. The Company's interim and annual results announcements can also be downloaded from the websites of the Stock Exchange and the Company.

According to the information available to the Company and as far as the Directors are aware, over 25% of the Company's total issued share capital has been held by public Shareholders.

Rights of Shareholders

Convening general meetings by Shareholders

In accordance with the provisions under the Articles of Association, when Shareholders request to convene an extraordinary general meeting or any class meeting, the following procedures shall be followed:

(1) Two or more Shareholders who collectively hold more than 10 percent (including 10 percent) of the voting shares at the proposed meeting, can sign one or a few copies of written requests with the same format and content, with the agenda of the meeting clearly stated, to be submitted to the Board to convene an extraordinary general meeting or any class meetings. The Board shall, after receipt of the aforementioned written request, convene an extraordinary general meeting or class meeting as soon as possible. The aforementioned number of shares held by Shareholders shall be calculated based on the date of the written request.

(2) If the Board, within thirty days after receipt of the aforementioned written request, fails to issue a notice to convene meetings, the Shareholders who have made the said request shall have the right to convene the meeting by themselves within four months after the Board receives the request, using the same procedure as the Board shall convene the meeting as possible.

6. Interests of shareholders and investor relations (Continued)

Enquiry by Shareholders

Shareholders demanding inspection of the relevant information or requesting copies of the materials shall provide the Company with written documents evidencing the class and number of shares of the Company they hold. Shareholders may contact the Company Secretary through the hotline at (8629) 3333 3850 or by email at chxny@ch.com.cn. Upon verification of the Shareholder's identity, the Company shall provide such information or handle the enquiries in an appropriate way at the Shareholder's request.

Procedures for Shareholders to put forward proposals and contact information

In accordance with the provisions under the Articles of Association, at the annual general meetings of the Company, Shareholders either solely or collectively holding more than three percent (including three percent) of the Company's total voting shares, shall have the right to put forward a new proposal in writing to the Company, and the Company should put the proposed matters that are within the purview of the general meeting in the agenda of the meeting. Shareholders can contact the Company Secretary through the hotline at (8629) 3333 3850 or by email at chxny@ch.com.cn.

Information disclosure and investor relations

The Company is committed to increasing transparency and improving investor relations and has attached great importance to Shareholders' responses in this regard. The Company undertakes that it shall make impartial disclosure and provide full and transparent report. The ultimate duty of the Chairman is to ensure efficient communications with investors and to ensure the Board's understanding of the opinions of substantial Shareholders. After the Company's announcements of its interim and annual results, the Board is committed to providing Shareholders with clear and comprehensive results of the Group by publishing interim and annual reports. The Company endeavours to maintain a continuous candid communication with institutional investors and analysts, so as to deepen their understanding of the Group's management, financial condition, operation, strategies and plans. In addition, the Company arranges reverse road shows for analysts and investors from time to time, to foster intercommunication and understanding between investors and the management of the Company. Field visits to inspect plants and business premises of the Company by analysts and investors are welcomed.

7. Change in accounting standards and the Articles of Association

Change in accounting standards

In order to improve efficiency and reduce disclosure costs and audit fees, on 6 November 2017, the Board has considered and approved the adoption of the PRC Accounting Standards for Business Enterprises to replace the Hong Kong Financial Reporting Standards as the basis for preparation of the overseas financial report of the Company with effect from 1 January 2018. For details, please refer to the announcement of the Company dated 6 November 2017.

Change in the Articles of Association

In light of the change of basis for preparation of the overseas financial report of the Company and in accordance with the spirit of the work meeting on Party construction by state-owned enterprises in the PRC in relation to proactive fulfillment of the requirements of the organizing department of the Central Committee of the Communist Party of China and the State-owned Assets Supervision and Administration Commission of the State Council on incorporating the overall requirements of Party construction into the articles of association of companies, the Board proposed to amend the Articles of Association, and the resolution on the amendments to the Articles of Association was approved at the extraordinary general meeting held by the Company on 22 December 2017 and an announcement on the amendments to the Articles of Association was published on 5 January 2018. For details, please refer to the announcements of the Company dated 6 November 2017 and 5 January 2018 and the circular dated 1 December 2017. The updated version of the Articles of Association is available on the websites of the Company and the Stock Exchange.

Independent Auditor's Report

Daxin Shen Zi [2019] No. 1–00305

TO THE SHAREHOLDERS OF IRICO GROUP NEW ENERGY COMPANY LIMITED,

I. Audit Opinion

We have reviewed the financial statements of IRICO Group New Energy Company Limited and its subsidiaries (together "the Group"), which comprise the consolidated balance sheet and the balance sheet of the Company as at 31 December 2018, the consolidated income statement and the income statement of the Company for 2018, the consolidated statement of cash flows and the statement of cash flows of the Company, and the consolidated statement of changes in equity and the statement of changes in equity of the Company for 2018 as well as the notes to the financial statements.

In our opinion, the accompanying financial statements have been prepared in accordance with the Accounting Standards for Business Enterprises in all material aspects, and they fairly present the consolidated and the Company's financial position as of 31 December 2018, and the consolidated and the Company's operating results and cash flows for 2018.

II. Basis for Audit Opinion

We conducted our audit in accordance with the Auditing Standards for PRC Certified Public Accountants. Our responsibilities under those standards are further described in the Certified Public Accountants' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the Code of Ethics for Chinese Certified Public Accountants (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

III. Material Uncertainty Related to Going Concern

We draw your attention to Note II to the financial statements. The Company recorded net current liabilities of RMB2,135.64 million as at 31 December 2018. As stated in Note XII to the financial statements, such matters or conditions and other matters indicated in Note XIV to the financial statements indicate that there are significant uncertainties over the ability of the Group to continue as a going concern. Such matters will not affect the audit opinions issued.

IV. Key Audit Matters

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

(I) Recognition of income from equity transfer

1. Description of the matter

As stated in Note VI (I), in May 2018, the Group transferred its 51% equity interest in Zhuhai Caizhu Industrial Co., Ltd.* (珠海彩珠實業有限公司) ("Zhuhai Caizhu") to Xianyang Zhongdian IRICO Group Holdings Ltd.* ("Zhongdian IRICO") at a consideration of RMB131,882,100 and recognized an investment income of RMB144,153,900, among which, investment income of 73,518,500 was recognized for the disposed 51% equity interest while investment income of RMB70,635,400 was recognized for the remaining 49% equity interest through remeasurement using fair value. The matter has significant effects on the operating results of the Group in 2018 and involves complicated accounting treatment. As a result, we recognizes the matter as a key audit matter.

2. Response to the audits

Our audit procedures mainly include:

(1) We tested the internal control related to the disposal of equity investment;

(2) We verified the relationship between Zhongdian IRICO and the Company and inspected whether the determination of the transaction consideration is fair;

(3) We considered the date when the directors appointed by Zhongdian IRICO joined Zhuhai Caizhu and other factors to determine the point of time when the Group loses the control over Zhuhai Caizhu;

(4) We inspected relevant agreements, contracts and documents on the transaction and verified the specific conditions of the transaction; and tested the consideration received by the Group from the losing the control over Zhuhai Caizhu through verifying relevant bank deposits records;

(5) We re-calculated the investment gains from the transfer of the equity interest in Zhuhai Caizhu and checked the calculation results with the management.

(II) Goodwill impairment test

1. *Description of the matter*

As stated in Note V (XIV), as at 31 December 2018, the original carrying value of the Group's goodwill totaled RMB41,533,000 while the corresponding balance of impairment provision was RMB2,988,700.

In accordance with the Accounting Standards for Business Enterprises, the management shall conduct impairment test on goodwill every year.

When the Group conducts the above impairment test, the third party appraisal institute appointed appraised the goodwill and determined whether it is impaired with reference to the appraisal results. As the impairment test involves the determination of the discount rate and other parameters and the assumptions on the operation and financial conditions in the following years, including the sales growth and the gross profit margin in the following years and the estimation on the present value of the future cash flows. As a result of the inherent uncertainties in the estimation and discounting on the future cash flow, it has significant effects on the recognition of goodwill impairment. As a result, we recognize the matter as a key audit matter.

2. *Response to the audits*

Our audit procedures mainly include:

(1) We tested the internal control related to the impairment of goodwill;

(2) We appraised the appropriateness of the impairment test method;

(3) We appraised the key assumptions adopted in the appraisal on the impairment; and assessed the competence, professional quality and objectiveness of the independent auditor;

(4) We analyzed the discount rate, the assumption on operation and finance and other parameters and the reasonableness of the assumptions adopted in the appraisal on the impairment and fully considered the potential effects of the reasonable changes of such parameters and assumptions on the results of the impairment test;

(5) We verified the accuracy of the calculation of the impairment test on the goodwill.

V. Other Information

The management of the Group (the management) is responsible for other information. Other information includes the information included in the Group's 2018 annual report, but excludes the financial statements and our audit report.

Our audit opinion on the 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 financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit process 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.

VI. Responsibilities of Management and Governance Layer for the Financial Statements

The management is responsible for preparing financial statements in accordance with Accounting Standards for Business Enterprises, and fairly presenting them; designing, implementing and maintaining necessary internal control to enable that the financial statements are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Management is responsible for assessing the Company's ability to continue as a going concern, disclosing matters in relation to going concern (if applicable) and applying the going-concern assumption unless the management intends to liquidate the Company, cease operations, or have no realistic alternative but to do so.

The governance layer is responsible for overseeing the financial reporting process of the Company.

VII. Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether these 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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards 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 financial statements.

As part of an audit work in accordance with auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

(I) Identify and assess the risks of material misstatement of the 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.

(II) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but the purpose is not to issue opinions on the effectiveness of the internal control.

(III) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

(IV) Conclude on the appropriateness of management's 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 these 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.

(V) Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

(VI) Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit, and remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, 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 those charged with governance with a statement that we comply with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and related safeguards (if applicable).

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the 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 tiny minority 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.

WUYIGE Certified Public Accountants LLP

Chinese Certified Public Accountant:
(Engagement Partner)

Chinese Certified Public Accountant:

Beijing • the PRC
26 March 2019

Balance Sheet

Item	31 December 2018	1 January 2018	31 December 2017
Current Assets:			
Cash at bank and on hand	260,546,684.16	491,507,931.96	491,507,931.96
Held-for-trading financial assets	679,095.34		
Financial assets at fair value through current profit or loss			
Derivative financial assets			
Bills and accounts receivable	1,005,344,193.48	942,966,856.48	942,966,856.48
Including: bills receivable	339,322,789.73	438,566,911.32	438,566,911.32
accounts receivable	666,021,403.75	504,399,945.16	504,399,945.16
Prepayments	63,045,789.85	198,778,715.79	198,778,715.79
Other receivables	249,397,827.25	53,949,968.87	53,949,968.87
Including: interests receivable			
dividends receivable			
Inventories	166,308,583.08	191,165,827.81	191,165,827.81
Contract assets			
Held-for-sale assets			
Non-current assets due within one year			
Other current assets	85,627,181.99	75,671,306.26	75,671,306.26
Total current assets	1,830,949,355.15	1,954,040,607.17	1,954,040,607.17

Consolidated Balance Sheet (Continued)

As at 31 December 2018

Item	31 December 2018	1 January 2018	31 December 2017
Non-current assets:			
Debt investment			
Available-for-sale financial assets			364,442,481.28
Other debt investment			
Held-to-maturity investments			
Long-term receivables			
Long-term equity investments	179,326,419.17	54,160,965.99	54,160,965.99
Other investments in equity instruments	250,009,608.42	364,442,481.28	
Other non-current financial assets			
Investment properties		10,961,164.31	10,961,164.31
Fixed assets	1,502,164,833.71	819,662,248.83	819,662,248.83
Construction in progress	772,497,652.24	941,639,097.86	941,639,097.86
Productive biological assets			
Oil and gas assets			
Intangible assets	264,864,756.84	232,365,319.19	232,365,319.19
Development expenditures			
Goodwill	38,544,327.69	41,533,010.55	41,533,010.55
Long-term deferred expenses	19,689,300.10	6,722,661.07	6,722,661.07
Deferred tax assets	861,194.97	588,775.47	588,775.47
Other non-current assets	11,869,754.47	170,490,405.25	170,490,405.25
Total non-current assets	3,039,827,847.61	2,642,566,129.80	2,642,566,129.80
Total assets	4,870,777,202.76	4,596,606,736.97	4,596,606,736.97

Item	31 December 2018	1 January 2018	31 December 2017
Current liabilities:			
Short-term borrowings	**434,252,466.63**	557,298,613.98	557,298,613.98
Held-for-trading financial liabilities			
Financial liabilities at fair value through current profit or loss			
Derivative financial liabilities			
Bills and accounts payables	**1,380,073,787.73**	1,314,986,109.96	1,314,986,109.96
Receipts in advance			164,982,905.40
Contract liabilities	**50,535,500.53**	164,982,905.40	
Employee benefits payable	**42,518,480.81**	54,704,487.22	54,704,487.22
Taxes payable	**22,195,570.97**	16,413,033.69	16,413,033.69
Other payables	**1,539,489,454.26**	1,513,954,011.83	1,513,954,011.83
Including: interests payable	**24,484,848.54**	1,653,041.38	1,653,041.38
dividends payable	**21,689,811.54**	21,689,811.54	21,689,811.54
Held-for-sale liabilities			
Non-current liabilities due within one year	**497,519,566.90**	222,729,511.26	222,729,511.26
Other current liabilities			
Total current liabilities	**3,966,584,827.83**	3,845,068,673.34	3,845,068,673.34
Non-current liabilities:			
Long-term borrowings	**595,375,744.44**	395,398,700.00	395,398,700.00
Bonds payable			
Including: Preference shares			
Perpetual bonds			
Long-term payables	**7,000,000.00**	7,000,000.00	7,000,000.00
Long-term employee benefits payable	**10,856,171.40**	21,706,869.67	21,706,869.67
Estimated liabilities		3,809,262.97	3,809,262.97
Deferred income	**76,512,512.01**	81,475,121.13	81,475,121.13
Deferred tax liabilities	**664,907.28**	559,280.19	559,280.19
Other non-current liabilities			
Total non-current liabilities	**690,409,335.13**	509,949,233.96	509,949,233.96
Total Liabilities	**4,656,994,162.96**	4,355,017,907.30	4,355,017,907.30

Consolidated Balance Sheet (Continued)

As at 31 December 2018

Item	31 December 2018	1 January 2018	31 December 2017
Shareholders' equity:			
Share capital	**2,232,349,400.00**	2,232,349,400.00	2,232,349,400.00
Other equity instruments			
Including: Preference shares			
Perpetual bonds			
Capital reserve	**943,531,444.10**	943,531,444.10	943,531,444.10
Less: Treasury shares			
Other comprehensive income	**-233,080,783.78**	-118,488,713.46	-118,488,713.46
Special reserve			
Surplus reserve	**22,477,267.06**	22,477,267.06	22,477,267.06
Undistributed profit	**-2,872,034,688.32**	-2,953,332,667.89	-2,953,332,667.89
Total equity attributable to equity shareholders of the Company	**93,242,639.06**	126,536,729.81	126,536,729.81
Minority interests	**120,540,400.74**	115,052,099.86	115,052,099.86
Total equity	**213,783,039.80**	241,588,829.67	241,588,829.67
Total liabilities and shareholders' equity	**4,870,777,202.76**	4,596,606,736.97	4,596,606,736.97

Consolidated Income Statement

For the year 2018

Item	January–December 2018	January–December 2017
I. Operating revenue	2,331,919,056.79	2,471,465,913.33
Less: Operating costs	2,089,013,201.40	2,193,802,278.00
Taxes and surcharges	9,908,805.07	12,118,364.26
Selling expenses	62,350,299.28	80,758,048.46
Administrative expenses	120,967,328.51	132,299,961.55
Research and development expenses	43,681,819.82	26,187,091.03
Finance costs	91,274,845.31	67,975,297.26
Including: Interest expense	89,800,923.01	70,875,500.93
Interest income	4,307,646.28	1,855,454.36
Impairment losses on assets	5,061,614.57	24,616,304.55
Credit impairment losses	12,004,452.48	
Add: Other income	44,164,887.91	119,897,667.54
Investment income (loss is represented by "-")	143,381,973.88	12,145,078.92
Including: Gains from investment in associates and joint ventures	-1,544,793.72	-13,582,527.28
Gains from net exposure hedges (loss is represented by "-")		
Gains from changes in fair value (loss is represented by "-")	-102,782.68	
Gains from disposal of assets (loss is represented by "-")	55,533.98	33,558,954.82
II. Operating profit (loss is represented by "-")	85,156,303.44	99,310,269.50
Add: Non-operating income	2,230,423.35	10,914,972.74
Less: Non-operating expenses	428,952.38	4,068,372.82
III. Total profit (total loss is represented by "-")	86,957,774.41	106,156,869.42
Less: Income tax expenses	171,493.96	5,874,431.25
IV. Net profit (net loss is represented by "-")	86,786,280.45	100,282,438.17
(I) Classified by continuity of operations:		
1. Net profit from continuing operations (net loss is represented by "-")	-56,415,763.13	70,362,902.36
2. Net profit from discontinued operations (net loss is represented by "-")	143,202,043.58	29,919,535.81
(II) Classified by ownership of equity:		
1. Net profit attributable to the shareholders of the Company (net loss is represented by "-")	81,297,979.57	90,008,181.53
2. Minority interests (net loss is represented by "-")	5,488,300.88	10,274,256.64

Consolidated Income Statement (Continued)

For the year 2018

Item	January–December 2018	January–December 2017
V. Other comprehensive income, net of tax	**-114,592,070.32**	-56,794,381.54
Other comprehensive income (net of tax) attributable to the shareholders of the Company	**-114,592,070.32**	-56,794,381.54
(I) Other comprehensive income that cannot be reclassified to profit or loss	**-114,432,872.86**	
1. Changes from the re-measurement of defined benefit scheme		
2. Other comprehensive income that cannot be reclassified into profit or loss under equity method		
3. Changes in fair value of investments in other equity instruments	**-114,432,872.86**	
4. Changes in fair value of credit risks of the Company		
(II) Other comprehensive income that will be reclassified to profit or loss	**-159,197.46**	-56,794,381.54
1. Other comprehensive income that may be reclassified to profit or loss under equity method		
2. Changes in fair value of other debt investments		
3. Gain or loss from change in fair value of available-for-sale financial assets		-56,601,076.80
4. Financial assets reclassified as other comprehensive income		
5. Gain or loss from reclassification of held-to maturity investments as available-for-sale financial assets		
6. Provision for credit impairment of other debt investments		
7. Cash flows hedging reserve (effective gains or losses from cash flow hedging)		
8. Exchange differences from translation of foreign currency financial statements	**-159,197.46**	-193,304.74
9. Others		
Other comprehensive income (net of tax) attributable to minority shareholders		
VI. Total comprehensive income	**-27,805,789.87**	43,488,056.63
Total comprehensive income attributable to the shareholders of the Company	**-33,294,090.75**	33,213,799.99
Total comprehensive income attributable to minority shareholders	**5,488,300.88**	10,274,256.64
VII. Earnings per share		
(I) Basic earnings per share	**0.04**	0.04
(II) Diluted earnings per share		

Consolidated Statement Of Cash Flows

For the year 2018

Item	January–December 2018	January–December 2017
I. Cash flows from operating activities:		
Cash received from sale of goods or rendering of services	**1,504,861,230.34**	1,754,710,694.31
Receipts of tax refunds	**55,125,083.71**	21,704,424.81
Cash received relating to other operating activities	**526,231,089.53**	439,159,856.71
Sub-total of cash inflows from operating activities	**2,086,217,403.58**	2,215,574,975.83
Cash paid for purchasing goods and receiving services	**1,320,012,393.87**	1,578,941,008.76
Cash paid to and for employees	**207,294,360.22**	198,326,308.67
Cash paid for taxes and surcharges	**37,068,685.69**	44,884,152.19
Cash paid relating to other operating activities	**754,593,933.64**	491,129,494.69
Sub-total of cash outflows from operating activities	**2,318,969,373.42**	2,313,280,964.31
Net cash flows from operating activities	**-232,751,969.84**	-97,705,988.48
II. Cash flows from investing activities:		
Cash received from disposal of investments	**1,396,007.90**	1,289,391.09
Cash received from returns on investments		2,344.66
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	**120,174.00**	3,640,033.20
Net cash received from disposal of subsidiaries and other business entities	**118,492,763.77**	
Cash received from other investing activities		
Sub-total of cash inflows from investing activities	**120,008,945.67**	4,931,768.95
Cash paid for acquisition of fixed assets, intangible assets and other long-term assets	**227,893,377.99**	424,953,155.35
Cash paid for investment	**1,407,107.85**	4,707,410.00
Net cash paid for acquisition of subsidiaries and other business entities		19,652,550.44
Cash paid relating to other investing activities		11,616,713.09
Sub-total of cash outflows from investing activities	**229,300,485.84**	460,929,828.88
Net cash flows from investing activities	**-109,291,540.17**	-455,998,059.93

Consolidated Statement Of Cash Flows (Continued)

For the year 2018

Item	January–December 2018	January–December 2017
III. Cash flows from financing activities:		
Cash received from absorbing investments		2,043,997.35
Including: Cash received by subsidiaries from minority shareholders' investment		
Cash received from borrowings	1,691,054,243.76	1,051,939,731.94
Cash received from issuance of bonds		
Cash received relating to other financing activities		
Sub-total of cash inflows from financing activities	1,691,054,243.76	1,053,983,729.29
Cash paid for repayment of borrowings	1,330,024,146.67	560,058,213.60
Cash paid for distribution of dividends and profits or for interest expenses	86,263,155.03	82,448,848.20
Including: Dividends or profits paid to minority shareholders by subsidiaries		
Cash paid relating to other financing activities	38,399,400.00	
Sub-total of cash outflows from financing activities	1,454,686,701.70	642,507,061.80
Net cash flows from financing activities	236,367,542.06	411,476,667.49
IV. Effect of changes in exchange rate on cash and cash equivalents	882,581.14	-1,837,731.76
V. Net increase in cash and cash equivalents	-104,793,386.81	-144,065,112.68
Add: Cash and cash equivalents at the beginning of the period	233,413,663.85	377,478,776.53
VI. Cash and cash equivalents at the end of the period	128,620,277.04	233,413,663.85

Consolidated Statement of Changes in Equity

For the year 2018

Item	For the current period												
	Equity attributable to the shareholders of the Company												
		Other equity instruments											
	Share capital	Preference shares	Perpetual bonds	Others	Capital reserve	Less: Treasury shares	Other comprehensive income	Special reserve	Surplus reserve	Undistributed profit	Sub-total	Minority interests	Total shareholders' equity
I. Closing balance of the previous period	2,232,349,400.00				943,531,444.10		-118,488,713.46		22,477,267.06	-2,953,332,667.89	126,536,729.81	115,052,099.86	241,588,829.67
Add: Changes in accounting policies													
Correction for error in previous period													
Business combination under common control													
Others													
II. Opening balance for the period	2,232,349,400.00				943,531,444.10		-118,488,713.46		22,477,267.06	-2,953,332,667.89	126,536,729.81	115,052,099.86	241,588,829.67
III. Movements in the period (decrease is represented by "-")							-114,592,070.32			81,297,979.57	-33,294,090.75	5,488,300.88	-27,805,789.87
(I) Total comprehensive income							-114,592,070.32			81,297,979.57	-33,294,090.75	5,488,300.88	-27,805,789.87
(II) Capital contribution and reduction from shareholders													
1. Ordinary shares contribution from shareholders													
2. Capital contribution from owners of other equity instruments													
3. Amount of share-based payment included in shareholders' equity													
4. Others													
(III) Profit distribution													
1. Appropriations of surplus reserve													
2. Distribution to shareholders													
3. Others													
(IV) Transfer of shareholders' equity													
1. Transfer to share capital from capital reserve													
2. Transfer to share capital from surplus reserve													
3. Surplus reserves for making up losses													
4. Changes in defined benefit plans transferred to retained earnings													
5. Other comprehensive income transferred to retained earnings													
6. Others													
(V) Special reserve													
1. Appropriations in the period													
2. Utilization in the period													
(VI) Others													
IV. Closing balance for the period	2,232,349,400.00				943,531,444.10		-233,080,783.78		22,477,267.06	-2,872,034,688.32	93,242,639.06	120,540,400.74	213,783,039.80

Consolidated Statement of Changes in Equity (Continued)

For the year 2018

	For the previous period												
	Equity attributable to the shareholders of the Company												
		Other equity instruments											
Item	Share capital	Preference shares	Perpetual bonds	Others	Capital reserve	Less: Treasury shares	Other comprehensive income	Special reserve	Surplus reserve	Undistributed profit	Sub-total	Minority interests	Total shareholders' equity
I. Closing balance of the previous period	2,232,349,400.00				917,900,296.88		-61,694,331.92		22,477,267.06	-3,043,340,849.42	67,691,782.60	69,577,524.52	137,269,307.12
Add: Changes in accounting policies													
Correction for error in previous period													
Business combination under common control													
Others													
II. Opening balance for the period	2,232,349,400.00				917,900,296.88		-61,694,331.92		22,477,267.06	-3,043,340,849.42	67,691,782.60	69,577,524.52	137,269,307.12
III. Movements in the period (decrease is represented by "-")					25,631,147.22		-56,794,381.54			90,008,181.53	58,844,947.21	45,474,575.34	104,319,522.55
(I) Total comprehensive income							-56,794,381.54			90,008,181.53	33,213,799.99	10,274,256.64	43,488,056.63
(II) Capital contribution and reduction from shareholders					25,631,147.22						25,631,147.22	35,200,318.70	60,831,465.92
1. Ordinary shares contribution from shareholders													
2. Capital contribution from owners of other equity instruments													
3. Amount of share-based payment included in shareholders' equity													
4. Others					25,631,147.22						25,631,147.22	35,200,318.70	60,831,465.92
(III) Profit distribution													
1. Appropriations of surplus reserve													
2. Distribution to shareholders													
3. Others													
(IV) Transfer of shareholders' equity													
1. Transfer to share capital from capital reserve													
2. Transfer to share capital from surplus reserve													
3. Surplus reserves for making up losses													
4. Changes in defined benefit plans transferred to retained earnings													
5. Other comprehensive income transferred to retained earnings													
6. Others													
(V) Special reserve													
1. Appropriations in the period													
2. Utilization in the period													
(VI) Others													
IV. Closing balance for the period	2,232,349,400.00				943,531,444.10		-118,488,713.46		22,477,267.06	-2,953,332,667.89	126,536,729.81	115,052,099.86	241,588,829.67

Notes to the Consolidated Financial Statements

I. COMPANY PROFILE

(I) Place of registration, type of organization and address of headquarter.

IRICO Group New Energy Company Limited* (the "Company", together with its subsidiaries, the "Group"), the former IRICO Group Electronics Company Limited, was established upon approval as a joint stock company (listed) and obtained the business license from the Administration for Industry and Commerce on 10 September 2004. The place of registration was the courtyard at No. 1 Caihong Road, Qingdu District, Xianyang, Shaanxi Province; the registered capital was RMB2,232,349,400; its legal representative was Zou Changfu; its address of headquarters was the courtyard at No. 1 Caihong Road, Qingdu District, Xianyang, Shaanxi Province.

(II) The business nature of the Company and its main business activities.

Business scope of the Company mainly comprises: the construction and operation of solar power plants; research, development, production and sales of solar photovoltaic glass, tempered glass, coated glass, conductive film glass, flat glass, and vaccum glass; research, development, production and sales of solar cell chip, solar cell module and their auxiliary products as well as silicon materials; solar photovoltaic power generation related business and research, development, production and sales of energy storage battery, inverter, smart grids for home appliances, and other auxiliary products; processing and further processing of quartz sand, an upstream material for solar photovoltaic glass; research, development, production and sales of power battery, cathode and anode materials of lithium battery, and upstream materials of lithium battery materials; research, development, manufacturing and sales of flat panel displays and auxiliary products and materials, electronic products; self-operated and commissioned import business for various commodities and technologies; operation of processing imported goods and "Three-plus-one" business (i.e. processing and compensation trade); foreign trade and entrepot trade; research, development, manufacturing and sales of computer software and hardware, chemical products, information technology, industrial control systems and its complete devices; processing and repairing machinery; development of, training and consultation on electronic information technology; acquisition, processing and utilization of waste materials, sales of accumulated materials; development, research, production and sales of new materials and high-tech products; medical and rehabilitation services, elderly care and healthcare services.

The Group is mainly engaged in solar photovoltaic business and new materials business.

(III) The financial statements have been reported after approval by all Directors of the Company (the Board) on 26 March 2019.

I. COMPANY PROFILE (Continued)

(IV) Scope of the consolidated financial statements for the year.

The consolidation scope of consolidated financial statements of the Group is determined on the basis of control and covers the financial statements of the Company and all of its subsidiaries.

During the Reporting Period, subsidiaries included in the scope of consolidation are set out as below:

No.	Name	Short name	Level
1	Shaanxi IRICO New Material Co., Ltd*	IRICO New Material	2
2	Hanzhong IRICO Jiarunze Mining Co., Ltd* (漢中彩虹佳潤澤礦業有限公司)	Hanzhong Jiarunze	2
3	IRICO (Hefei) Photovoltaic Co., Ltd.*	Hefei Photovoltaic	2
4	IRICO Group Electronics (Hong Kong) Company Limited	IRICO (Hong Kong) Company	2
5	Xianyang IRICO Green Energy Co., Ltd.* (咸陽彩虹綠色能源有限公司)	IRICO Green Energy	2
6	Nanjing IRICO New Energy Co., Ltd.* (南京彩虹新能源有限公司)	Nanjing New Energy	3
7	IRICO Yan'an New Energy Co., Ltd.* (彩虹(延安)新能源有限公司)	Yan'an New Energy	2
8	Jiangsu IRICO Yongneng New Energy Company Limited* (江蘇彩虹永能新能源有限公司)	IRICO Yongneng	2
9	Shaanxi IRICO Xinneng Glass Co., Ltd.* (陝西彩虹新能玻璃有限公司)	Shaanxi New Energy	2

II. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

(I) Basis of preparation: The financial statements of the Company have been prepared on a going concern basis in respect of actual transactions and matters, in accordance with the Accounting Standards for Business Enterprises-Basic Standards and specific accounting standards (together referred to as the "**Accounting Standards for Business Enterprises**") promulgated by the Ministry of Finance, and based on the following significant accounting policies and estimates.

(II) Going concern: In 2018, the Company achieved consistent increase in production capacity of the production lines, continued growth in respect of the proportion of qualified products, significant reduction of production cost and steady progress of project construction, technological innovation and enhancement of quality and efficiency. Meanwhile, the Company obtained gains on investment of RMB144,150,000 from the transfer of 51% equity interests in Zhuhai Caizhu Industrial Co., Ltd.* (珠海彩珠實業有限公司) ("Zhuhai Caizhu"). In 2018, the Group recorded total profit of RMB86.96 million in aggregate. As at 31 December 2018, the Company recorded net current liabilities of RMB2,135.64 million, indicating that the Company would be under heavy debt repayment pressure in the short term. However, the Company will take the following measures to ensure the safety of its funds and improve its business results:

(1) The Company has obtained a financial support commitment letter from IRICO Group, the controlling shareholder of the Company;

(2) The Company will actively push forward its additional issuance of shares and has obtained approval from the SASAC. Upon completion of the additional issuance, the Company will speed up the construction of projects financed by the proceeds and put them into production, thus creating new profit growth points for the Company. Meanwhile, the Group's asset-liability ratio and finance costs will be significantly reduced;

II. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS (Continued)

(3) As Phase II of Hefei Photovoltaic Glass and Yan'an Photovoltaic Glass project commenced operation at the end of 2018 and in 2019, respectively, the Group's future production, sales volume, revenue and the market share of its products are expected to increase significantly;

(4) The Company will continue to promote lean production management, and further reduce product costs through technological innovations, improving rate of qualified products, implementing centralized purchase of bulk materials, carrying out comprehensive benchmarking and other measures.

In view of the foregoing, the Board has no intention to wind up or close the Company and it is confident that the Company will not be forced to enter winding-up or dissolution proceedings in the next accounting period. Therefore, the Company believes that the financial statements for this year shall still be prepared on a going concern basis in respect of actual transactions and matters in accordance with the Accounting Standards for Business Enterprises and relevant requirements promulgated by the Ministry of Finance, and based on the significant accounting policies and estimates set out in Note III headed "Significant Accounting Policies and Accounting Estimates".

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

(I) Statement on compliance with the Accounting Standards for Business Enterprises

The financial statements of the Company have been prepared in compliance with the requirements of the Accounting Standards for Business Enterprises, reflecting the Company's financial position as at 31 December 2018, and operating results, cash flows and other relevant information for the year 2018 on a true and complete basis.

(II) Accounting period

Accounting year of the Company is the calendar year from 1 January to 31 December.

(III) Operating cycle

The Company takes one year or 12 months as its normal operating cycle which serves as the division standard for the liquidity of assets and liabilities.

(IV) Functional currency

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

(V) Business combinations

1. *Business combinations under common control*

In case the consideration for the long-term equity investments resulted from the business combination under common control is paid by way of cash, transfer of non-cash assets or assumption of debts, the Group will, on the date of combination, recognise the acquiree's share in the carrying amount of net assets in the ultimate controlling party's consolidated financial statements being absorbed as initial investment cost of long-term equity investments. In case the acquirer pays the combination consideration by issuing equity instruments, the aggregate nominal value of shares issued will be recognised as share capital. The difference between the initial investment cost of long-term equity investments and the carrying amount of combination consideration (or aggregate nominal value of shares issued) shall be adjusted under capital reserve. If the capital reserve is not sufficient to absorb the difference, any excess shall be adjusted against retained earnings.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(V) Business combinations (Continued)

2. *Business combinations not under common control*

For a business combination not under common control, the combination cost is the aggregate fair value of assets paid, liabilities incurred or assumed and equity securities issued by the acquirer in exchange for the control of the acquiree on the acquisition date. Where identifiable assets, liabilities and contingent liabilities of the acquiree resulting from the business combination not under common control satisfy the conditions for recognition, they shall be measured at fair values on the acquisition date. Any excess of combination cost over the share of fair value of identifiable net assets in the acquiree as a result of the combination will be recognised as goodwill. Where the combination cost is less than the share of fair value of identifiable net assets of the acquiree as a result of the combination, the difference shall be recognised as non-operating income for the current period after reassessment.

(VI) Preparation method of consolidated financial statements

1. *Scope of consolidated financial statements*

The Company incorporated all of its subsidiaries (including the separate entities controlled by the Group) into the scope of consolidated financial statements, including enterprises under control of the Group, separable parts in the investees and structured entities.

2. *Adoption of uniform accounting policies, date of balance sheets and accounting period for parent company and subsidiaries*

When preparing consolidated financial statements, in case the accounting policies or accounting periods of the subsidiaries differ from those of the Company, necessary adjustments will be made to the financial statements of the subsidiaries based on the accounting policies or accounting periods of the Company.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(VI) Preparation method of consolidated financial statements (Continued)

3. *Offsetting in consolidated financial statements*

The consolidated financial statements shall be prepared on the basis of the balance sheets of the Company and subsidiaries, which offset the internal transactions incurred between the Company and subsidiaries and between subsidiaries. The owners' equity of the subsidiaries not attributable to the Company shall be presented as "minority interests" under the owners' equity item in the consolidated balance sheet. The long-term equity investment in the Company held by the subsidiaries is deemed as treasury stock of the Company and a reduction of owners' equity, which shall be presented as "Less: treasury shares" under the owners' equity in the consolidated balance sheet.

4. *Accounting treatment of subsidiaries acquired from combination*

For subsidiaries acquired from business combination under common control, the business combination is deemed to have occurred at the commencement of control by the ultimate controlling party. The assets, liabilities, operating results and cash flows of the subsidiaries are included in the consolidated financial statements from the beginning of the period in which the combination takes place. For subsidiaries acquired from business combination not under common control, when preparing the consolidated financial statements, adjustments are made to individual financial statements of the subsidiaries based on the fair value of identifiable net assets as at the acquisition date.

5. *Accounting treatment for disposal of subsidiaries*

For partial disposal of the long-term equity investments in a subsidiary without losing control, in the consolidated financial statements, the difference between the disposal consideration and the corresponding share of the subsidiary's net assets entitled from the disposal of the long-term equity investments, which is continuously calculated since the acquisition date or the consolidation date, shall be adjusted under capital reserve or share premium. If the capital reserve is not sufficient to absorb the difference, any excess shall be adjusted against retained earnings.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(VI) Preparation method of consolidated financial statements (Continued)

5. Accounting treatment for disposal of subsidiaries (Continued)

For the loss of control over an investee due to disposal of a portion of the equity investment or other reasons, when preparing the consolidated financial statements, the remaining equity is re-measured at fair value on the date when the control is lost. The difference arising from the sum of consideration received for disposal of equity interest and the fair value of remaining equity interest over the share of net assets of the former subsidiary calculated continuously since the acquisition date or consolidation date based on the shareholding percentage before disposal is recognised as investment income in the period when the control is lost, with goodwill offset simultaneously. Other comprehensive incomes relating to the equity investment of the original subsidiaries shall be transferred to the investment income for the period when control is lost.

(VII) Classification of joint arrangements and accounting treatment for joint operations

1. Classification of joint arrangements

Joint arrangements are divided into joint operations and joint ventures. Joint arrangements established not through separate entities are classified as joint operations. Separate entities refer to the entities with separate and distinguishable financial structure, including separate legal entities and legally recognised entities without the qualification of legal entity. Joint arrangements established through separate entities are generally classified as joint ventures. In case of changes in rights entitled to and obligations undertaken by the parties under a joint arrangement due to changes in relevant facts and circumstances, the parties will reassess the classification of joint arrangements.

2. Accounting treatment for joint operations

The Group as a party of joint operation should recognise the following items in relation to its share of interests in the joint operation, and proceed with accounting treatment in accordance with the relevant requirements under the Accounting Standards for Business Enterprises: the assets or liabilities separately held, and assets or liabilities jointly held according to its share; the income from the disposal of its share of output under the joint operation; the income from the disposal of output under joint operation according to its share; the expenses incurred separately and the expenses incurred under the joint operation according to its share.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(VII) Classification of joint arrangements and accounting treatment for joint operations (Continued)

2. Accounting treatment for joint operations (Continued)

In case the Group is a party of a joint operation not sharing common control, if it is entitled to relevant assets and undertakes relevant liabilities of the joint operation, accounting treatment will be carried out with reference to the provisions applicable to the parties of joint operation; otherwise, it should be subject to relevant requirements under the Accounting Standards for Business Enterprises.

3. Accounting treatment for joint ventures

The Company as a party to a joint venture should perform accounting for its investment in the joint venture in accordance with the requirements under the Accounting Standards for Business Enterprises No. 2–Long-term Equity Investments. If the Group is not a party to a joint venture, it should carry out accounting for its investment in the joint venture with reference to its influence on the joint venture.

(VIII) Recognition standard for cash and cash equivalents

Cash determined in the preparation of statement of cash flows by the Group represents the cash on hand and deposits readily available for payment of the Group. Cash equivalents determined in the preparation of statement of cash flows refer to short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of price volatility.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(IX) Translation of foreign currency transactions and financial statements denominated in foreign currency

1. *Translation of foreign currency transactions*

Foreign currency transactions of the Group are translated into and recorded in the functional currency at spot rate on the transaction date. At the balance sheet date, monetary items denominated in foreign currency are translated using the spot exchange rate on that date. Exchange differences arising from the difference between the spot exchange rate on the balance sheet date and the spot exchange rate used at initial recognition or on the last balance sheet date shall be recorded into profit or loss for the current period, except for those arising from specific borrowings denominated in foreign currency and qualified for capitalisation, which are capitalised as cost of the related assets during the capitalisation period. Translation of non-monetary items denominated in foreign currency and measured at historical cost shall continue to be based on the spot exchange rate on the date of transaction, without changing the amount in its functional currency. Non-monetary items denominated in foreign currency and measured at fair value shall be translated at the spot exchange rate on the date when the fair value is determined. Upon translation, the difference between the amounts in functional currency upon translation and in original functional currency shall be treated as change in fair value (including the change in the exchange rate), and included in profit or loss for the current period or recognised as other comprehensive income.

2. *Translation of financial statements denominated in foreign currency*

If the functional currency of the subsidiaries, joint ventures and associates of the Company are different from that of the Company, their financial statements denominated in foreign currency shall be translated before performing accounting and preparing the consolidated financial statements. The assets and liabilities in the balance sheets are translated at the spot exchange rates on the balance sheet date. Except for "Retained earnings", all items under owner's equity are translated at the spot exchange rates when incurred. The income and expenses items in the income statement are translated at exchange rates approximate to the spot exchange rates on the transaction dates. The exchange differences arising from the translation of financial statements denominated in foreign currencies are recognised as other comprehensive income under the owners' equity in the balance sheet. The cash flow denominated in foreign currency shall be translated at exchange rate approximate to the spot exchange rate on the date on which the cash flow is incurred. The effect of exchange rate movement on cash shall be presented separately in the statement of cash flows. On disposal of foreign operations, exchange differences in financial statements denominated in foreign currencies related to the foreign operation shall be transferred to profit or loss from disposal for the current period in whole or in a proportionate share.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments

1. *Classification and reclassification of financial instruments*

A financial instrument is the contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

(I) Financial assets

The Group classifies financial assets which satisfy the following conditions as financial assets measured at amortised cost: ① When the objective of the business model of the financial assets under the management of the Group is to collect contractual cash flows; ② according to the terms of the contract of the financial assets, the cash flows generated on a particular date is solely for the payment of interest based on the principal and interest on the principal outstanding.

The Group classifies financial assets which satisfy the following conditions as financial assets at fair value through other comprehensive income: ① When the objective of the business model of the financial assets under the management of the Group is to collect contractual cash flows and sell the financial assets; ② according to the terms of the contract of the financial assets, the cash flows generated on a particular date is solely for the payment of interest based on the principal and interest on the principal outstanding.

For an investment in equity instruments not held for trading purposes, on initial recognition the Group can irrevocably designate the investment as financial assets at fair value through other comprehensive income. Such designations are made on an instrument-by-instrument basis, but may only be made if the investment meets the definition of equity from the issuer's perspective.

For other financial assets other than financial assets at amortised cost and financial assets at fair value through other comprehensive income, the Group classifies them as financial assets at fair value through current profit or loss. At initial recognition, if accounting mismatch can be eliminated or reduced, the Group can irrevocably designate financial assets as those at fair value through current profit or loss.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

1. *Classification and reclassification of financial instruments (Continued)*

(I) Financial assets (Continued)

When the Group changes its business model for the management of financial assets, all relevant financial assets affected are reclassified on the first day of the first reporting period following the change in business model and prospective application approach will be adopted for relevant accounting treatment from the first day of reclassification. No retroactive adjustment will be made to the previously recognised gains, losses (including impairment losses or gains) or interests.

(II) Financial liabilities

Upon initial recognition, financial liabilities are classified into: financial liabilities at fair value through current profit or loss; financial liabilities from the transfer of financial assets disqualified for the derecognition of financial assets or continuing involvement in the transferred financial assets and financial liabilities at amortised cost. None of the financial liabilities may be reclassified.

2. *Measurement of financial instruments*

Financial instruments of the Group are measured at fair value upon initial recognition. For financial assets and financial liabilities at fair value through current profit or loss, the relevant transaction expenses are directly recognised as current profit and loss; for other types of financial assets or financial liabilities, the relevant transaction expenses are included in the initial recognition amount. Accounts receivable or bills receivable arising from sales of goods or rendering services, without significant financing component, are initially recognised based on the transaction price expected to be entitled by the Group. Subsequent measurement of financial instruments depends on their classification.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

2. Measurement of financial instruments (Continued)

(1) Financial assets

① Financial assets measured at amortised costs

Upon initial recognition, such financial assets are measured at amortized cost using the effective interest method. Gains or losses arising from financial assets that are measured at amortised cost and that are not any swap arrangements, when derecognized, reclassified, amortised at effective rates or impaired, are recognised in the profit or loss for the current period.

② Financial assets at fair value through current profit or loss

Upon initial recognition, such financial assets are measured at fair value. Except for those held for hedging purposes, gains or losses (including interests and dividend income) arising from such financial assets are recognised in the profit or loss for the current period.

③ Debt instrument investments at fair value through other comprehensive income

Upon initial recognition, such financial assets are measured subsequently at fair value. The interests, impairment losses or gains and exchange losses or gains calculated using the effective interest rate method shall be recognized in the profit and loss for the current period, and other gains or losses shall be recognized in other comprehensive income. Upon termination of recognition, the accumulated gains or losses previously recorded in other comprehensive income shall be transferred to the profit and loss for the current period.

④ Investment in equity instrument not held for trading purposes designated at fair value through other comprehensive income

Upon initial recognition, such financial assets are measured subsequently at fair value. Apart from dividends (other than the part of investment costs recovered) which are included in the current profit or loss, other relevant gains and losses are included in other comprehensive income and will not subsequently be transferred to the current profit or loss.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

2. Measurement of financial instruments (Continued)

(2) Financial liabilities

① Financial liabilities at fair value through current profit or loss

Such financial liabilities consist of held-for-trading financial liabilities (including derivative financial liabilities) and financial liabilities designated as at fair value through current profit or loss. Upon initial recognition, such financial liabilities are measured at fair value. Except for those held for hedging purposes, gains or losses (including interests) arising from changes in the fair value of financial liabilities held for trading purposes are recognised in the profit or loss for the current period.

For the financial liabilities designated at fair value through current profit or loss, the amount of changes in the fair value of the financial liabilities arising from the changes in enterprise's own credit risk is included in other comprehensive income, and other changes in fair value are recognised in profit or loss. If the inclusion of the effects of the changes in the credit risk of the financial liabilities in other comprehensive income will cause or expand the accounting mismatch in profit or loss, the Group will include all the gains or losses of the financial liabilities in the current profit and loss.

② Financial liabilities measured at amortised costs

Upon initial recognition, such financial liabilities are measured at amortized cost using the effective interest method.

3. Recognition of fair values of financial instruments by the Group

For financial instruments with an active market, their fair values shall be determined based on their quotations in the active market. Where there is no active market for a financial instrument, the fair value shall be determined using valuation techniques, which mainly include the market approach, income approach and cost approach.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

4. Basis of recognition and methods of measurement for transfer of financial assets and financial liabilities

(1) Financial assets

If one of the following conditions is met, the financial assets of the Group are derecognised: ① the right of the contract to receive the cash flows of financial assets terminates; ② the financial asset has been transferred and the Group has transferred almost all of the risks and rewards related to the ownership of the financial asset; ③ the financial asset has been transferred and, although the Group has neither transferred nor retained nearly almost all of the rewards related to the ownership of the financial asset, the Group has not retained the control over the financial asset.

If the Group has neither transferred nor retained nearly almost all of the rewards related to the ownership of the financial asset and has not retained the control over the financial asset, the relevant financial asset will be recognized according to its proportion of participation in the transferred financial asset, and the relevant liabilities will be recognized.

When the overall transfer of a financial asset meets the criteria for derecognition, the balance between the following two amounts will be included in the current profit or loss: ① the carrying amount of the financial asset transferred on the derecognition date; ② the sum of the consideration received from the transfer of the financial asset and the amount of the corresponding derecognized part in the accumulated changes in fair value previously recorded directly in other comprehensive income (the financial asset involved in the transfer is classified as financial asset at fair value through other comprehensive income).

If part of the transfer of a financial asset meets the criteria for derecognition, the entire carrying amount of the financial asset transferred shall be first proportionally amortised between the derecognised portion and the retained portion according to their respective relative fair value on the transfer date. Then, the balance between the following two amounts will be included in the current profit or loss: ① the carrying amount of the derecognized part on the derecognition date; ② the sum of the consideration received for the derecognized part and the amount of the corresponding derecognised part in the accumulated amount of the changes in fair value originally included in other comprehensive income (the financial asset involved in the transfer is classified as financial asset at fair value through other comprehensive income).

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

4. Basis of recognition and methods of measurement for transfer of financial assets and financial liabilities (Continued)

(1) Financial assets (Continued)

On derecognition of investment in equity instrument not held for trading purposes designated at fair value through other comprehensive income, accumulated gains or losses previously included in other comprehensive income are transferred to retained earnings.

(2) Financial liabilities

Once the present obligation of financial liabilities (or parts of them) has been lifted, financial liabilities (or parts of them) of the Group has been derecognized.

The difference between the carrying amount of financial liabilities (or parts of them) and consideration paid (including transferred non-cash assets or liabilities) is recognized in profit or loss, when financial liabilities (or parts of them) are derecognized.

5. Determination method and accounting treatment method for expected credit losses

Based on expected credit losses, the Group conducts impairment accounting treatment for and recognizes impairment losses of financial assets at amortised cost (including bills receivable and accounts receivable, other receivables), debt investments classified at fair value through other comprehensive income, lease receivables and contract assets.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

5. Determination method and accounting treatment method for expected credit losses (Continued)

On each balance sheet date, the Group assesses whether the credit risk of relevant financial instruments has increased significantly since the initial recognition. The process of credit impairment of a financial instrument is divided into three stages, and there are different accounting treatment methods for impairment of financial instruments at different stages: (1) In the first stage, if the credit risk of a financial instrument has not increased significantly since the initial recognition, the Group measures the loss provisions at an amount equal to 12-month expected credit losses of the financial instrument; (2) In the second stage, if the credit risk of the financial instrument has increased significantly since the initial recognition but no credit impairment has occurred, the Group measures the loss provisions according to the lifetime expected credit loss of the financial instrument; (3) In the third stage, if credit impairment occurs after the initial recognition, the Group will measure loss provisions according to the lifetime expected credit loss of the financial instrument.

1. Method for measuring loss provisions for financial instruments with lower credit risk

   For a financial instrument with lower credit risk on the balance sheet date, the Group assumes that its credit risk has not increased significantly since the initial recognition, and uses a simplified method, i.e. measurement of loss provisions at an amount equal to 12-month expected credit losses.

2. Method for measurement of loss provisions for accounts receivable and contract assets

   For the accounts receivable or contract assets arising from transactions under Accounting Standards for Business Enterprises No. 14 – Revenue (whether or not containing significant financing components), the Group applies a simplified method, i.e. measurement of loss provisions always at the lifetime expected credit loss.

3. Method for measurement of loss provisions for other financial assets

   For financial assets other than those mentioned above, e.g. debt investment, other debt investment, other receivables, long-term receivables, etc., the Group measures loss provisions with the general method, i.e. the “three-stage” model.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

5. Determination method and accounting treatment method for expected credit losses (Continued)

3. Method for measurement of loss provisions for other financial assets (Continued)

In case of credit impairment at measurement of financial instruments, the following information is taken into account when assessing whether credit risk has increased significantly: (1) Whether internal price indicator resulted from change in credit risk has changed significantly; (2) If the existing financial instruments are derived into or issued as new financial instruments at the reporting date, whether interest rates or other terms of the above financial instruments have changed significantly; (3) Whether external market indicators of credit risk for the same financial instrument or financial instruments with shared expected life have changed significantly; (4) Whether external credit rating of the financial instrument has actually changed significantly or is expected to change significantly; (5) Whether the borrower's internal credit rating is actually lowered or is expected to be lowered; (6) Whether expected detrimental changes in business, financial and economic conditions of the borrower which will affect borrower's ability to perform repayment obligation have changed significantly; (7) Whether the actual or expected financial performance of the borrower has changed significantly; (8) Whether credit risk of other financial instruments issued by the same borrower has increased significantly; (9) Whether supervisory, economic or technical environment for the borrower has significant detrimental changes; (10) Whether the value of the collateral supporting the obligation or the quality of third-party guarantees or credit enhancements has changed significantly; (11) Whether the economic motive that will lower the borrower's repayment based on contractual stipulation has changed significantly; (12) Expected changes in the loan contract including an expected breach of contract that may lead to covenant waivers or amendments, interest payment holidays, interest rate step-ups, requiring additional collateral or guarantees, or other changes to the contractual framework of the financial instrument; (13) Whether the borrower's expected performance and repayment activities have changed significantly; (14)Whether the Group's financial instrument management measures have changed.

Based on the nature of financial instruments, the Group assesses whether credit risk has increased significantly on the basis of a single financial asset or combination of financial assets. According to the credit risk characteristics, the Group divides the bills receivable and accounts receivable and contract assets into several combinations, and calculates the expected credit losses on a combined basis. The basis for determining the combination is as follows:

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(X) Financial instruments (Continued)

5. Determination method and accounting treatment method for expected credit losses (Continued)

3. Method for measurement of loss provisions for other financial assets (Continued)

Accounts receivable combination 1:	Accounts receivable for which provision for bad debts is made based on individual assessment
Accounts receivable combination 2:	Accounts receivable for which provision for bad debts is made by combination
	(1) Accounts receivable for which provision for bad debts is made by aging
	(2) Accounts receivable for which provision for bad debts is made by related party combination

For accounts receivable designated to a combination, the Group makes the comparison of trade receivables overdue days and full lifetime expected credit losses rate to calculate the expected credit losses by taking into account the historical credit losses experience, and the existing and forecast of future economic conditions. For bills receivable and contract assets designated to a combination, the Group applies exposure at default and lifetime expected credit losses rate to calculate the expected credit losses by taking into account the historical credit losses experience and the existing and forecast of future economic conditions.

In order to reflect the changes in the credit risk of financial instruments since the initial recognition, the Group re-measures the expected credit losses on each balance sheet date, and the resulting increase or reversal in loss provision shall be included in the profit or loss for the current period as impairment losses or gains, and shall be deducted from the carrying amounts of the financial assets on the balance sheet or included in the accrued liabilities (loan commitments or financial guarantee contract) or other comprehensive income (debt investment at fair value through other comprehensive income) according to the type of financial instruments.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XI) Inventories

1. *Classification*

Inventories mean finished goods or merchandise held for sale in the ordinary course of business of the Group, unfinished products in the process of production, materials or supplies used in the process of production or rendering of services. Inventories mainly include raw materials, revolving materials, packing materials, low-value consumables, unfinished products, finished goods (goods in stock), contract performance cost, and others.

2. *Measurement for inventories delivered*

Upon delivery of inventories, the actual cost of such inventories will be determined using the weighted average method.

3. *Provision for impairment*

On the balance sheet date, inventories are measured at the lower of cost and net realisable value. The provision for impairment of inventories is made on an item-by-item basis. The provision of impairment for inventories with large quantity and of low unit cost is made according to their inventory classification.

4. *Inventory system*

The Group adopts perpetual inventory system.

5. *Amortisation of low-value consumables and packaging materials*

Low-value consumables and packaging materials are amortised using one-off write-off method.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XII) Long-term equity investments

1. *Determination of initial investment cost*

For a long-term equity investment obtained from business combination under common control, the acquiree's share of the carrying amount of the net assets as shown on the combined financial statements of the ultimate controlling party on the date of the combination is recognized as the initial investment cost of the long-term equity investment; for a long-term equity investment obtained from business combination not under common control, the combination cost on the acquisition date is recognised as the initial investment cost of the long-term equity investment; for a long-term equity investment acquired by payment of cash, the initial investment cost shall be the actual purchase price paid; for a long-term equity investment acquired by the issue of equity securities, the initial investment cost shall be the fair value of the equity securities issued; for a long-term equity investment acquired from debt restructuring, the initial investment cost is recognised according to relevant requirements under the Accounting Standards for Business Enterprises No. 12– Debt Restructuring; for a long-term equity investment acquired from exchange of non-monetary assets, the initial investment cost is recognized according to the relevant requirements under the Accounting Standards for Business Enterprises No. 7 – Exchange of Non-monetary Assets.

2. *Subsequent measurement and recognition of profit and loss*

Where the Group has a control over an investee, the long-term equity investment in such investee is measured using cost approach. Long-term equity investments in associates and joint ventures are measured using equity approach. Where part of the equity investments of the Group in its associates are held indirectly through venture investment institutions, common funds, trust companies or other similar entities including investment linked insurance funds, according to the relevant requirements of the Accounting Standards for Business Enterprises No.22 – Recognition and Measurement of Financial Instruments, regardless whether the above entities have significant influence on such part of equity investments, and the remaining shall be measured using equity approach.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XII) Long-term equity investments (Continued)

3. *Basis of conclusion for common control and significant influence over the investee*

Joint control over an investee refers to the situation where activities that have significant influence on the return of certain arrangement can only be decided by unanimous consent of the parties sharing the control, which include sale and purchase of goods or services, management of financial assets, acquisition and disposal of assets, research and development activities and financing activities; significant influence on the investee refers to the situation where significant influence exists when holding more than 20% but less than 50% of voting capital, or even if holding less than 20%, significant influence still exists when any of the following conditions is satisfied: having representative at the board of directors or similar governing body of the investee; participating in the policy making of the investee; assigning key management officers to the investee; the investee relying on the technology or technical information of the investing company; conducting major transactions with the investee.

(XIII) Investment properties

Investment properties of the Group include leased land-use rights, leased buildings and land-use rights held for resale after appreciation in value. Investment properties are initially measured at cost and subsequently measured using the cost approach.

Among investment properties of the Group, the depreciation for leased buildings is provided using the straight-line method and the specific measurement policy applied is the same as that applied to fixed assets; land use rights leased out and land use rights held for resale after appreciation are amortized using the straight-line method, and the specific measurement policy applied is the same as that applied to intangible assets.

(XIV) Fixed assets

1. *Conditions for recognition of fixed assets*

Fixed assets are tangible assets that are held for use more than a useful life of one accounting year in the production or supply of goods or services, for rental to others, or for operation purpose. A fixed asset is recognised when it meets the following conditions: it is probable that the economic benefits associated with the fixed asset will flow into the Company; and its cost can be reliably measured.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XIV) Fixed assets (Continued)

2. *Methods for classification and depreciation of fixed assets*

The fixed assets of the Group mainly comprise: buildings and structures, machinery and equipment, electronic equipment, transportation tools, etc. The fixed assets are depreciated using the straight-line method. The useful life and estimated residual value of a fixed asset are determined according to the nature and use pattern of the fixed asset. At the end of each year, the useful life, estimated residual value and the method of depreciation of the fixed asset will be reviewed, and shall be adjusted accordingly if they differ from previous estimates. The Group makes provision for depreciation for all of its fixed assets other than fully depreciated fixed assets that are still in use and lands accounted for on an individual basis.

Category	Estimated useful life *(years)*	Estimated net residual value rate *(%)*	Annual depreciation rate *(%)*
Buildings and structures	10–45	3	2.20–9.70
Machinery and equipment	18	3	5.40
Electronic equipment	15	3	6.50
Office equipment	5	3	19.40
Transportation tools	5	3	19.40
Specialized glass equipment	6	3	16.20

3. *Recognition and measurement of fixed assets under finance lease*

As for a fixed asset under finance lease, it is a lease that actually involves the transfer of all risks and rewards related to the ownership of the asset. A fixed asset under finance lease is initially measured at the lower of the fair value of the leased asset on the inception date and present value of the minimum lease payment. Subsequent measurement of fixed assets under finance lease shall adopt such depreciation policy as applied to self-owned fixed assets for making provisions for depreciation and impairment.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XV) Construction in progress

There are two types of construction in progress for the Group: self-construction and sub-contracting construction. Construction in progress is transferred to fixed assets when the project is completed and ready for its intended use. A fixed asset is ready for intended use if any of the following criteria is met: the construction of the fixed assets (including installation) has been completed or substantially completed; the fixed asset has been put into trial production or trial operation and it is evidenced that the asset can operate ordinarily or produce steadily qualified products; or the result of trial operation proves that it can run or operate normally; little or no expenditure will be incurred for construction of the fixed asset; or the fixed asset constructed has achieved or almost achieved, or is complied with the requirement of design or contract.

(XVI) Borrowing costs

1. *Principle for recognition of capitalization of borrowing costs*

The Group's borrowing costs that are directly attributable to the acquisition or production of a qualifying asset are capitalized into the cost of relevant assets. Other borrowing costs are recognized as expenses in profit or loss for the current period when incurred. Qualifying assets include fixed assets, investment property and inventories that necessarily take a substantial period of time for acquisition, construction or production to get ready for their intended use or sale.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

2. Calculation of amount to be capitalized

The capitalization period refers to the period beginning from the commencement of capitalizing borrowing costs to the date of ceasing capitalization, excluding the period of suspension of capitalization. Where the acquisition and construction or production of a qualified asset is interrupted abnormally and the interruption period lasts for more than 3 months, the capitalization of the borrowing costs shall be suspended.

For designated borrowings, the capitalized amount shall be the actual interest expense incurred for the designated borrowings, less the interest income from the unused funds of the designated borrowings or investment income from the temporary investments; and for general borrowings, the weighted average of general borrowings occupied, based on the accumulated expenditure exceeding the capital expenditure from designated borrowings times the capitalization rate of the general borrowings so occupied. The capitalization rate is the weighted average rate of the general borrowings; and for borrowings with discount or premium, the discount or premium was amortized to adjust the interest in every accounting period using effective interest rate method.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XVI) Borrowing costs (Continued)

The effective interest rate method is based on the effective interest rate of the borrowings to calculate the amortization of discount or premium or interest expense. The effective interest rate is the rate in discounting the estimated future cash flows to the current carrying amount of the borrowings over the term of the borrowings.

(XVII) Intangible assets

1. *Measurement of intangible assets*

Intangible assets of the Group are initially measured at cost. The actual cost of a purchased intangible asset includes the considerations and relevant expenses paid. The actual cost of an intangible asset contributed by investors is the price contained in the investment agreement or mutually agreed. If the price contained in the investment agreement or mutually agreed is not a fair value, the fair value of the intangible asset is regarded as the actual cost. The cost of a self- developed intangible asset is the total expenditures incurred in bringing the asset to its intended use.

Subsequent measurement of the Group's intangible assets: Intangible assets with finite useful lives are amortized on a straight-line basis over the useful lives of the intangible assets; at the end of each year, the useful lives and amortization policy are reviewed, and adjusted if there are variance with original estimates; Intangible assets with indefinite useful lives are not amortized and the useful lives are reviewed at the end of each year. If there is objective evidence that the useful life of an intangible asset is finite, the intangible asset is amortized using the straight line method according to the estimated useful life.

2. *Determination basis of indefinite useful life*

An intangible asset is regarded as having an indefinite useful life when there is no foreseeable limit to the period over which the asset is expected to generate economic benefits for the Group or it has no definite useful life. The judgment basis of intangible assets with indefinite useful life: derived from the contractual rights or other legal rights but the contract or the law does not specify certain useful life; in light of the conditions of the competitors and the opinions of relevant experts, the specific period that intangible asset can generate economic benefits to the Company still cannot be determined.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XVII) Intangible assets (Continued)

2. *Determination basis of indefinite useful life (Continued)*

At the end of each year, the useful life shall be reviewed for those intangible assets with indefinite useful life by mainly using the bottom up method. The relevant department that uses intangible asset will perform the basic review and evaluate whether there are changes in the basis for judgments of the indefinite useful life, etc.

3. *Basis for research and development phases for internal research and development project and basis for capitalization of expenditure incurred in development stage*

As for an internal research and development project, expenditure incurred in the research phase is recognized in profit or loss in the period as incurred. Expenses incurred in the development stage are transferred to intangible assets if the conditions for recognition of intangible assets are met.

(XVIII) Impairment of long-term assets

Long-term assets such as long-term equity investments, investment properties measured under the cost model, fixed assets, construction in progress, productive biological assets measured under the cost model, oil and gas assets, intangible assets and goodwill are tested for impairment if there is any indication that such assets may be impaired at the balance sheet date. If the result of the impairment test indicates that the recoverable amount of the asset is less than its carrying amount, a provision for impairment and an impairment loss are recognized for the amount by which the asset's carrying amount exceeds its recoverable amount.

The recoverable amount is the higher of an asset's fair value less costs to sell and the present value of the future cash flows expected to be derived from the asset. Provision for asset impairment is determined and recognized on the individual asset basis. If it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount of a group of assets to which the asset belongs is determined. A group of assets is the smallest group of assets that is able to generate independent cash inflows.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XVIII) Impairment of long-term assets (Continued)

Goodwill separately presented on the financial statements is tested for impairment at least every year, irrespective of whether there is any indication that the asset may be impaired. For the purpose of impairment testing, the carrying amount of goodwill is allocated to asset groups or sets of asset groups expected to benefit from the synergy of business combination. Where the carrying amount of the asset group or the set of asset groups allocated with goodwill is higher than the recoverable amount, impairment loss is recognised accordingly. The amount of impairment loss is first reduced against the carrying amount of the goodwill allocated to the asset group or set of asset groups, and then reduced against the carrying amounts of other assets (other than the goodwill) within the asset group or set of asset groups on pro rata basis.

Once the impairment loss of such assets is recognized, it will not be reversed in subsequent periods.

(XIX) Long-term deferred expenses

Long-term prepayments of the Group are expenses which have been paid but benefit a period of over one year (not including one year). Long- term prepayments are amortized over the benefit period. If a long-term prepayment cannot bring benefit in future accounting periods, its residue value not yet amortized shall be transferred in full to profit or loss for the current period.

(XX) Employee benefits

Employee benefits are all forms of rewards or compensation provided by the Group in exchange for services rendered by employees or for the termination of employment. Employee benefits mainly include short-term benefits, post-employment benefits, termination benefits and other long-term employee benefits.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XX) Employee benefits (Continued)

1. *Short-term benefits*

In the accounting period in which employees provide service for the Group, short-term benefits actually incurred are recognized as liabilities and charged to profit or loss for the current period, or if otherwise required or permitted by other accounting standards, to the related costs of assets for the current period. At the time of actual occurrence, the Group's employee benefits are recorded in the profit or loss for the current period or related asset costs as incurred. The non-monetary employee welfare expenses are measured at fair value. With regard to the medical insurance, work-related injury insurance, maternity insurance and other social insurance and housing provident fund contributed and labour union expenses and employee education expenses paid as required by regulations, the Group should calculate and recognize the corresponding employees benefits payables according to the appropriation basis and proportion as stipulated by relevant requirements, recognize the corresponding liabilities in the accounting period in which employees provide service, and record the same in profit or loss for the current period or costs of related assets.

2. *Post-employment benefits*

During the accounting period in which an employee provides service, the amount payable calculated under defined contribution scheme shall be recognized as a liability and recorded in profit or loss for the current period or in costs of related asset. In respect of the defined benefit scheme, the Group shall attribute the welfare obligations under the defined benefit scheme in accordance with the estimated accrued benefit method to the service period of relevant employee, and record the obligation in profit loss for the current period or costs of related assets.

3. *Termination benefits*

When providing termination benefits, the Group recognizes the liability in staff wages arising from termination benefits and recorded in profit or loss for the current period at the earlier of the following dates: when the Group cannot unilaterally withdraw the offer of termination benefits resulting from the employment termination plan or the proposed layoff; and when the Group recognizes costs or expenses for restructuring involving the payment of termination costs.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XX) Employee benefits (Continued)

4. *Other long-term employee benefits*

The Group provides other long-term employee benefits to its employees. Those falling within the scope of the defined contribution scheme are accounted for according to relevant requirements of the defined contribution scheme. In addition, the Group recognizes and measures the net liabilities or net assets of other long-term employee benefits according to relevant requirements of the defined benefit scheme.

(XXI) Estimated liability

If an obligation in relation to contingency is the present obligation of the Group, the performance of such obligation is likely to lead to an outflow of economic benefits and its amount can be reliably measured, such obligation shall be recognized as estimated liability. The initial measurement is based on the best estimate of the expenditure required for the performance of current obligation. When the necessary expenditures fall within a range and the probability of each result in the range is identical, the best estimate which is the median of the range shall be recognized; if there are several items involved, every possible result and its relevant probability are taken into account for the best estimate to be recognized.

At the balance sheet date, the carrying amount of estimated liabilities shall be reviewed. If there is solid evidence that the carrying amount cannot reflect truly the current best estimate, the carrying amount shall be adjusted according to the current best estimate.

(XXII) Share-based payment

The Group's share-based payments consist of equity-settled share-based payments and cash-settled share-based payments. The equity-settled share-based payment in return for employee services is measured at the fair value of the equity instruments granted to the employees. The fair value shall be determined based on a quotation available from an active market or by application of valuation techniques in the absence of active market, which include reference to the prices reached in the recent market transactions entered into by both willing parties with an informed view, and reference to present fair values of other substantially identified financial instruments, cash flow discounting method and option pricing models.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXII) Share-based payment (Continued)

The Group will update the estimated number of share options exercisable on each balance sheet date based on subsequent information such as the latest available number of participants who are entitled to exercise and the completion of performance indicators. The expenses to be allocated to each period will then be determined based on the updated estimate. For share options expenses spanning over multiple accounting periods, it is generally allocated according to the proportion of the length of the option's vesting period in a given accounting period to the length of the entire vesting period.

(XXIII) Revenue

When the Group has implemented the performance obligation in the contract, namely, when the customer obtains the right to control relevant goods or services, revenues will be recognized as per transaction prices allocated to such performance obligation. Obtaining the right to control relevant goods means that it is able to dominate the use of the goods and derive almost all economic benefits therefrom. Performance obligation represents the Group's commitment to transfer distinct goods or services to the customer in the contract. The transaction price is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties and amounts expected to be refunded to a customer.

1. *Sale of goods*

Sales are recognized when the goods have been shipped to specific locations agreed in sales contracts and both parties confirm the delivery by signing delivery sheets or proof of delivery (or delivery of bill of lading in case of delivery by the customer according to the contracts) upon the execution of sales contracts (including purchasing orders with the same effect as the contracts).

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIII) Revenue (Continued)

2. *Rendering of services*

The revenue from rendering of service to external customers by the Group is recognised within a certain period based on the completion stage of the service, which is determined by the proportion of costs incurred in estimated total costs. The Group re-estimates the completion stage of the service at the balance sheet date, so that it can reflect changes in the condition of performance. When the Group recognises revenue according to the completion stage of the service, the part with unconditional collection right obtained is recognised as accounts receivable, while the remaining part is recognised as contract assets, and loss provision for accounts receivable and contract asset shall be recognised on the basis of expected credit losses; if the contract price received or receivable exceeds the completed service, the excess will be recognised as the contract liability. Contract assets and contract liabilities under the same contract are presented on a net basis.

(XXIV) Contract cost

Contract cost includes the incremental cost happened for obtaining the contract and the contract performance cost. The incremental cost happened for obtaining the contract (the "contract obtaining cost") refers to the cost which will not occur of the contract is not obtained. Where the cost is expected to be recovered, the Group considers it as the contract obtaining cost and recognises it as an asset.

Where the cost happened for obtaining the contract does not fall into the scope of inventories and other accounting standards for business enterprises and meets the following conditions at the same time, the Group considers it as the contract performance cost and recognises it as an asset:

1. The cost is directly related to a current contract or a contract expected to be obtained, including direct labor, direct materials, manufacturing fees (or similar fees), the cost set to be assumed by users and other cost arising merely from the contract;

2. The cost increased the resources of the Group to be used for performing the performance obligations in the future;

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIV)Contract cost (Continued)

3. The cost is expected to be recovered.

The assets with the contract obtaining cost recognised and the assets with the contract performance cost recognised (hereafter referred to as the "**contract cost-related assets**") are amortized on the same basis as the recognition of revenue on commodities related to the asset and are included in the current profit or loss. The amortization period for the assets from the incremental cost on obtaining the contract shall be no more than one year and shall be included in the current profit or loss after happened.

When the carrying value of the contract cost-related assets is higher than the difference between the following two items, the impairment provisions for the excess shall be made and shall be recognised as losses on assets impairment:

1. The remaining consideration expected to be obtained from transfer of commodities related to the asset; and

2. The cost estimated to be happened for the transfer of such commodities.

(XXV) Government grants

1. Types of government grants and accounting treatment therefore

Government grants are monetary assets or non-monetary assets (excluding the capital invested by the government as the owner) obtained by the Group from the government for free. When government grants are received in the form of monetary assets, they are measured at the amount received or receivable. When the grant is in the form of non-monetary assets, it is measured at fair value. When fair value cannot be measured reliably, it is measured at a nominal amount.

Government grants related to the daily activities of an enterprise shall be included in other income based on the nature of business; and government grants unrelated to the daily activities shall be included in non-operating income.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXV) Government grants (Continued)

1. *Types of government grants and accounting treatment therefore (Continued)*

The government grants which are clearly defined in the government documents to be used for acquisition, construction or other project that forms a long-term asset are recognized as asset-related government grants. Regarding the government grant not clearly defined in the official documents and can form long-term assets, the part of government grant which can be referred to the value of the assets is classified as government grant related to assets and the remaining part is government grant related to income. For the government grant that is difficult to distinguish, the entire government grant is classified as government grant related to income. Any government grants related to assets are recognized as deferred income, the amount of which shall be recorded in the current profit or loss in installments with a reasonable and systematic method over the useful lives of relevant assets.

The government grants other than those related to assets are recognized as government grants related to income. The income-related government grants used to compensate relevant expenses or losses to be incurred by the enterprise in subsequent periods are recognized as deferred income and recorded in profit and loss for the current period when such expenses are recognized while those used to compensate relevant expenses or losses that have been incurred by the enterprise are recorded directly in profit or loss for the current period.

Where the Group obtains an interest subsidy for policy-related preferential loans, the government either appropriates an interest subsidy to the lending bank, allowing the latter to provide loans at a preferential interest rate to the Group who shall recognize the loan amount received as the book-entry value of such loans, and calculate the relevant loan expenses according to the loan principal and the preferential interest rate; or the government directly appropriates an interest subsidy to the Group who shall use the interest subsidy to offset relevant loan expenses.

2. *Timing for recognition of governmental grants*

The governmental grants would be recognized upon satisfaction of the conditions attached and such amount of grants is sure to be received. Specifically, the governmental grants measured at the amount receivable will be recognized when there is unambiguous evidence suggesting the conformance to related conditions as provided in financial support policies and financial support fund is expected to be received. Other government grants other than those measured at the amount receivable will be recognized at the actual time of receiving such grants.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXVI)Deferred tax assets/deferred tax liabilities

1. Deferred income tax assets or deferred income tax liabilities are recognized based on the difference between the carrying amounts of the assets or liabilities and their tax bases (or, for items not recognized as assets or liabilities but whose tax base can be determined under tax laws, such tax base can be determined as their difference), and are calculated at the tax rates expected to apply to the period in which the assets are recovered or the liabilities are settled.

2. Deferred income tax assets are recognized to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilized. At the balance sheet date, deferred income tax assets unrecognized in prior periods are recognized to the extent that there is obvious evidence that it has become probable that sufficient taxable profit will be available in subsequent periods against which the deductible temporary differences can be utilized. The carrying amount of a deferred tax asset is reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow the benefit of the deferred tax asset to be utilized.

3. As for taxable temporary difference related to the investments of subsidiaries and associated enterprises, the deferred income tax liabilities are recognized unless the Group can control the time for the reversal of temporary differences and such differences are very unlikely to be reversed in the foreseeable future. As for the deductible temporary difference related to investments of subsidiaries and associated enterprises, the deferred income tax assets shall be recognized when such temporary differences are much likely to be reversed in the foreseeable future and the taxable profit are available against which the deductible temporary difference can be utilized.

(XXVII) Lease

1. Accounting treatment for operating leases: Rental expenses for operating leases shall be charged to the cost of the relevant assets or the current profit or loss on a straight-line basis over the lease term.

2. Accounting treatment for financing leases: A leased asset shall be measured at the lower of its fair value and the present value of relevant minimum lease payment. The difference between the carrying amount of the leased asset and the minimum lease payment shall be treated as unrecognized financing expenses and amortized using effective interest rate method over the lease term. The balance derived from deducting the unrecognized financing expenses from the minimum lease payment shall be presented as long-term payables.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXVIII) Held-for-sale assets and discontinued operations

The Group classifies non-current assets or disposal group that meet the following criteria as held for sale: (1) can immediately be disposed of under the current conditions based on cases of disposals of such assets or disposal groups in similar transactions; (2) the disposal is highly probable that a decision has been made on a plan for the disposal and an undertaking to purchase has been obtained, and the disposal is expected to be completed within a year. Relevant approval is required for disposals subject to approval from the relevant authorities or regulators as stipulated by the relevant regulations.

On initial measurement or remeasurement on the balance sheet date of a non-current asset or a disposal group held for sale, where the book value is higher than the fair value less cost of disposal, the book value is written down to the fair value less cost of disposal. The amount of write-down is recognised as an impairment loss of the asset and charged to profit and loss of the period. At the same time, provision is made for impairment of assets held for sale.

Non-current asset held for sale in balance sheet or asset within disposal group held for sale is presented as asset held for sale, liabilities within disposal group held for sale are presented as liabilities held for sale.

Discontinued operation refers to a component that meet one of the following condition and can be distinguished separately and has been disposed of or classified by the Group as held for sale:

1. represents an separate major line of business or geographical area of operation:

2. is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or

3. is a subsidiary acquired exclusively with a view to resale.

(XXIX) Explanation on changes in significant accounting policies and accounting estimates

The following revised accounting standards, including CAS No.14 – Revenue (the "new revenue standard"), CAS No.22 – Financial Instruments: Recognition and Measurement, CAS No. 23 – Transfer of Financial Assets, CAS No.24 – Hedge Accounting and CAS No.37 – Presentation and Disclosures of Financial Instruments (the above five standards, collectively, the "new financial instruments standards") were issued by MOF in 2017.

The Notice on Revision of the 2018 Illustrative Financial Statements (Caikuai [2018] No.15) (the "format of financial statements") was issued by MOF in June 2018.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIX) Explanation on changes in significant accounting policies and accounting estimates (Continued)

The Group has applied the new revenue standard, new financial instruments standards and the notice since 1 January 2018 and adjusted the related accounting policies.

1. *New revenue standard*

The new revenue standard replaces CAS No.14 – Revenue and CAS No.15 – Construction Contracts issued by the MOF in 2006 (collectively, the "old revenue standard"). Under the old revenue standard, the Group recognised revenue when the risks and rewards had passed to the customers. The new revenue standard introduced a "five-step method" for recognition and measurement of revenue and provided further guidance in respect of specific transactions and events. Under the new revenue standards, the Group recognises revenue when control has been passed to customers. For details of the accounting policies relating to recognition and measurement of revenue, please refer to note III (XX).

The Group adjusted relevant accounting policies pursuant to the requirements regarding special events or transactions as specified under the new revenue standard. In accordance with the requirements of the new revenue standard, the Group presents contract assets or contract liabilities in the balance sheet based on the relationship between the performance of obligations and the payment by customers. Meanwhile, in accordance with the new revenue standards, the Group made further disclosure in respect of income-related information, for instance, the information on material contracts or business in terms of their respective connection with performance obligation and transaction prices apportioned to remaining performance obligation, which included timing of performance, material payment terms, nature of goods a company undertook to transfer (including description on whether a company acts as an agent), payment expected to be returned to customers born by a company, and other similar obligations, type of quality assurance and relevant obligations.

The Group assessed the impact of the new revenue standard on its financial statements based on a review of its revenue sources and performance process of contracts with customers. Since the Group derives its revenue mainly from sales of products with more than 95% of which generated from sales contract of products entered into with customers at fixed prices, such revenue shall be recognized at the point of delivery to customers. The adoption of the new revenue standard has no material impact on the Group other than the presentation of the financial statements.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIX) Explanation on changes in significant accounting policies and accounting estimates (Continued)

1. *New revenue standard (Continued)*

In accordance with the accumulated amounts of impact from initial application of the new revenue standard, the Group adjusted the retained earnings and the amount of pertinent project in the financial statements as at 1 January 2018 and no adjustment is made to the information for the comparable period. The Group made adjustment only based on the accumulated amount of impact from the contracts yet to be completed on the date of initial application.

2. *New financial instruments standards*

The new financial instruments standards contain three principal categories of financial assets: (1) financial assets measured at amortised cost; (2) financial assets measured at fair value through other comprehensive income; and (3) financial assets measured at fair value through profit and loss. The classification of financial assets under the new financial instruments standards is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. The new financial instruments standards cancel the previous categories of held to maturity investments, loans and receivables and available for sale financial assets under the old financial instruments standards. The new financial instruments standards replace the "incurred loss" model in the old financial instruments standards with the ECL model. For details of the accounting policies of the Group upon adoption of the new financial instruments standards, please refer to note III (X).

The adoption of the new financial instruments standards has no material impact on the financial statements of the Group for the period and at the beginning of the period.

The Group retrospectively adjusted, with certain specific exceptions, its classification and measurement (including impairment) for financial instruments in accordance with the new financial instruments standards, and the differences between the original carrying amounts of the financial instruments and their corresponding new carrying amounts on the date the new financial instruments standards were adopted (i.e. 1 January 2018) were included in the retained earnings and other comprehensive income at the beginning of 2018. No retrospective adjustment was required to be made to the classification and measurement (including impairment) for financial instruments in accordance with the new financial instruments standards.

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIX) Explanation on changes in significant accounting policies and accounting estimates (Continued)

3. *The combined impacts of adoption of the new revenue standard and new financial instruments standards on the adjustment to financial statements*

The impacts of the adoption of the new revenue standard and new financial instruments standards on the items in the consolidated balance sheet and the balance sheet of the parent company as at 1 January 2018 are summarized as follows:

Unit: RMB

Item in the consolidated balance sheet	Balance as at 31 December 2017 before the adoption of the new accounting standards	Impact of the new revenue standard	Impact of the new financial instruments standards	Balance as at 1 January 2018 after the adoption of the new accounting standards
Assets：				
Available for sale financial assets	364,442,481.28		-364,442,481.28	
Other investment in equity instruments			364,442,481.28	364,442,481.28
Liabilities:				
Receipts in advance	164,982,905.40	-164,982,905.40		
Contract liabilities		164,982,905.40		164,982,905.40

Item in the consolidated balance sheet of parent company	Balance as at 31 December 2017 before the adoption of the new accounting standards	Impact of the new revenue standard	Impact of the new financial instruments standards	Balance as at 1 January 2018 after the adoption of the new accounting standards
Assets：				
Available for sale financial assets	364,442,481.28		-364,442,481.28	
Other investment in equity instruments			364,442,481.28	364,442,481.28
Liabilities:				
Receipts in advance	651,959.87	-651,959.87		
Contract liabilities		651,959.87		651,959.87

III. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

(XXIX) Explanation on changes in significant accounting policies and accounting estimates (Continued)

4. *Impact of adoption of format for financial statements*

In accordance with the requirements for format of financial statements, other than the changes in presentation arising from the adoption of the aforesaid new revenue standard and new financial instruments standards, "bills receivable and "accounts receivable" are classified under the new "bills receivable and accounts receivable" item; "dividends receivable" and "interests receivable' are classified under the "other receivables" item; "disposal of fixed assets" are classified under the "fixed assets" item; "materials used in construction" are classified under the "construction in progress" item; "bills payable" and "accounts payable" are classified under the new "bills payable and accounts payable" item; "special payables" are classified under the "long-term payables" item; the "research and development expenses" item is separated from the "administrative expenses" in the income statement; the "interest expenses" and "interest income" items are separated from the finance costs item; the new item of "changes in defined benefit plans transferred to retained earnings" has been added under the statement of changes in equity; and the Group has restated the financial statements for the comparative period on a retrospective basis. The changes in accounting policies has no impact on consolidated and company's net profit and shareholders' equity.

IV. TAXATION

(I) Major tax categories and tax rates

Tax categories	Tax basis	Rate
Value-added tax ("VAT")	VAT payable	17%, 16%, 6%, 5%
Urban maintenance and construction tax	Turnover taxes paid	7%, 5%
Enterprise income tax	Taxable profits	25%, 15%
Hong Kong Profits Tax	Taxable profits	8.25%–16.5%

Note 1: According to provisions in the Notice on Adjusting the Value added Tax Rates (Cai Shui [2018] No. 32) (《關於調整增值稅稅率的通知》) (財稅[2018] 32號) issued by Ministry of Finance and the SAT, where taxpayers make VAT taxable sales or import goods, the applicable tax rates shall be adjusted from 17% to 16%and from 11% to 10%, respectively, from 1 May 2018.

Note 2: IRICO (Hong Kong) Company, a subsidiary, is subject to a two-tiered profits tax rates regime from 1 April 2018 based on the taxation policy of Hong Kong, the place of registration. The applicable tax rate for the profits of not more than RMB2 million is 8.25%, and subsequent profits will be taxed at 16.5%.

IV. TAXATION (Continued)

(II) Major preferential tax treatment and approvals

1. Pursuant to the "Notice on Tax Policies in relation to Further Implementation of the Western Development Strategy" ([2011] No. 58) (《關於深入實施西部大開發戰略有關稅收政策問題的通知》([2011]58號)), as the Company and its subsidiary IRICO New Materials pertains to enterprises engaged in the industries encouraged by the government in the western region, they are entitled to relevant western development preferential policies upon filing with the tax branch directly under the Xianyang Municipal Office, SAT, and therefore enjoys the preferential EIT rate of 15% for the year.

2. As the income from power generation of Nanjing New Energy and Hefei Photovoltaic, the subsidiaries of the Company, applies to preferential policy of three years' exemption from EIT followed by three years of 50% tax reduction. As stipulated under Clause 88 of the "Implementation Rules of the Enterprise Income Tax Law of the People's Republic of China (No.512 Decree of the State Council of the People's Republic of China)" (《中華人民共和國企業所得稅法實施條例》(中華人民共和國國務院令第512號)), qualified environmental protection, energy and water saving projects mentioned in Article 27(3) of the Enterprise Income Tax Law include public sewage treatment, public refuse disposal, comprehensive development and utilization of biogas, technological upgrade of energy saving and emission reduction, seawater desalination, etc. Enterprises engaged in the abovementioned qualified environmental protection, energy and water conservation projects, shall be exempted from entire EIT on income derived therefrom for the first to third years, and entitled to a 50% tax reduction from the fourth to sixth years, commencing from the assessable year during which relevant projects start to generate manufacturing or operating revenue.

   According to the requirements under the policy, Nanjing New Energy, a subsidiary of the Company, shall complete the filing for EIT preferential matters from 1 January to 31 May of the assessable year during which its project starts to generate manufacturing or operating revenue and be entitled to such preferential policy automatically during the tax prepayment period; Hefei Photovoltaic, a subsidiary of the Company, completed the filing for EIT preferential matters in July 2016 and enjoyed a preferential period commencing on 1 January 2016 and ending on 31 December 2018.

3. IRICO Yongneng, a subsidiary of the Company was accredited as a High and New Technology Enterprise (Certificate No. GF201532001341) as approved by the Science and Technology Department of Jiangsu Province, the Department of Finance of Jiangsu Finance Bureau, Jiangsu Tax Service, SAT and Jiangsu Local Tax Bureau on 3 November 2015, and has been entitled to a 15% preferential tax treatment for EIT. IRICO Yongneng also applied for High and New Technology Enterprise in 2018 and entered the list of the 2018 third batch proposed recognised High and New Technology Enterprise of Jiangsu Province, and relevant certificates application has not been completed.

IV. TAXATION (Continued)

(II) Major preferential tax treatment and approvals (Continued)

4. Hefei Photovoltaic, a subsidiary of the Company was accredited as a High and New Technology Enterprise (Certificate No. CR201834000268) as approved by the Science and Technology Department of Anhui Province, Anhui Provincial Department of Finance and Anhui Provincial Tax Service, State Taxation Administration on 24 July 2018, and has been entitled to a 15% preferential tax treatment for EIT. It did not enjoy preferential tax treatment in the first half.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS

(I) Monetary funds

Item	Closing balance	Opening balance
Cash	**96,441.84**	8,158.15
Bank deposit	**86,106,507.12**	269,391,337.80
Other monetary funds	**174,343,735.20**	222,108,436.01
Total	**260,546,684.16**	491,507,931.96
Of which: Total deposits in overseas banks	**18,120.69**	17,287.45

Restricted Monetary funds

Item	Closing balance	Opening balance
Time deposits		50,000,000.00
Security deposit for acceptance bills	**173,834,538.55**	214,912,392.18
Security deposit for letter of credit	**500,000.00**	7,196,043.83
Frozen bank deposits	**3,643,523.89**	
Total	**177,978,062.44**	272,108,436.01

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(II) Financial assets held for trading

Item	Closing balance	Opening balance
1. Classified as financial assets measured at fair value through profit and loss	679,095.34	
Including: investment in equity instruments	679,095.34	
Total	679,095.34	

(III) Bills receivable and accounts receivable

Item	Closing balance	Opening balance
Bills receivable	339,322,789.73	438,566,911.32
Accounts receivable	666,021,403.75	504,399,945.16
Total	1,005,344,193.48	942,966,856.48

1. *Bills receivable*

Item	Closing balance	Opening balance
Bank acceptance bills	283,052,731.03	434,232,607.69
Commercial acceptance bills	56,270,058.70	4,334,303.63
Less: allowance for bad debts		
Total	339,322,789.73	438,566,911.32

Note 1: Among the closing balance of the bills receivable, the total pledged bills were RMB172,494,519.82.

Note 2: At the end of the period, the bank acceptance bills (without right of recourse) endorsed but not yet due on the balance sheet date amounted to RMB518,190,907.42.

Note 3: Among the closing balance of the bills receivable, bills receivable aged 0 to 6 months amounted to RMB298,305,989.73, and bills receivable aged 7 months to one year amounted to RMB41,016,800.00.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable*

(1) Accounts receivable stated according to aging analysis

Aging	Closing balance Book balance	Expected credit loss rate *(%)*	Allowance for bad debts	Opening balance Book balance	Expected credit loss rate *(%)*	Allowance for bad debts
Within 6 months	565,433,028.78	0.06	352,000.00	406,498,222.74		
7 months to 1 year	80,411,320.42	0.94	757,528.80	67,321,443.62	0.28	191,426.07
1 year to 2 years	15,503,186.07	30.26	4,690,604.29	34,628,240.47	30.05	10,405,797.14
2 years to 3 years	20,972,753.16	50.06	10,498,751.59	22,792,683.27	71.27	16,243,421.73
Over 3 years	26,144,065.25	100.00	26,144,065.25	15,654,247.08	100.00	15,654,247.08
Total	708,464,353.68	5.99	42,442,949.93	546,894,837.18	7.77	42,494,892.02

(2) Accounts receivable stated according to credit risk group

Item	Closing balance Book balance Amount	Percentage *(%)*	Allowance for bad debts Amount	Expected credit loss rate *(%)*
Accounts receivable for which allowance for bad debts is made based on individual assessment	13,815,737.69	1.95	13,815,737.69	100.00
Accounts receivable for which allowance for bad debts is made on group basis	694,648,615.99	98.05	28,627,212.24	4.12
Including: Group 1: By aging	663,258,361.58	93.62	28,627,212.24	4.32
Group 2: By related parties	31,390,254.41	4.43		
Total	708,464,353.68	100.00	42,442,949.93	5.99

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable (Continued)*

(2) Accounts receivable stated according to credit risk group (Continued)

	Opening balance			
	Book balance		Allowance for bad debts	
Item	Amount	Percentage *(%)*	Amount	Expected credit loss rate *(%)*
Accounts receivable for which allowance for bad debts is made based on individual assessment	18,399,735.83	3.36	18,399,735.83	100.00
Accounts receivable for which allowance for bad debts is made on group basis	528,495,101.35	96.64	24,095,156.19	4.56
Including: Group 1: By aging	467,076,194.17	85.41	24,095,156.19	5.16
Group 2: By related parties	61,418,907.18	11.23		
Total	546,894,837.18	100.00	42,494,892.02	7.77

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable (Continued)*

(2) Accounts receivable stated according to credit risk group (Continued)

① Accounts receivable for which allowance for bad debts is made based on individual assessment as at the end of the period

Name of debtors	Book balance	Allowance for bad debts	Allowance as a proportion of accounts receivable *(%)*	Reasons for making allowance
Shenzhen Mascon Technology Co., Ltd (深圳市瑪斯科特科技有限公司)	5,919,990.18	5,919,990.18	100.00	Court judgment. Not yet recovered and expected to be unrecoverable
Xianyang Weilike Energy Co., Ltd. (咸陽威力克能源有限公司)	3,033,032.65	3,033,032.65	100.00	Court judgment. Not yet recovered and expected to be unrecoverable
Shenzhen Dikte Battery Science & Technology Co., Ltd. (深圳市迪凱特電池科技有限公司)	2,739,320.00	2,739,320.00	100.00	Court judgment. Not yet recovered and expected to be unrecoverable
Shenzhen Zhongtao Battery Co. Ltd (深圳市中韜電池有限公司)	1,771,394.86	1,771,394.86	100.00	Court judgment. Not yet recovered and expected to be unrecoverable
Shenzhen Dongfang Hualian Technology Co., Ltd (深圳東方華聯科技有限公司)	352,000.00	352,000.00	100.00	Court judgment. Not yet recovered and expected to be unrecoverable
Total	13,815,737.69	13,815,737.69	100.00	–

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable (Continued)*

(2) Accounts receivable stated according to credit risk group (Continued)

② Accounts receivable for which allowance for bad debts is made on group basis (by aging)

	Closing balance			Opening balance		
Aging	Book balance	Expected credit loss rate *(%)*	Allowance for bad debts	Book balance	Expected credit loss rate *(%)*	Allowance for bad debts
Within 6 months	565,081,028.78			406,498,222.74		
7 months to 1 year	80,411,320.42	0.94	757,528.80	67,321,443.62	0.28	191,426.07
1 year to 2 years	15,503,186.07	30.26	4,690,604.29	34,603,490.47	30.00	10,381,047.14
2 years to 3 years	20,948,003.16	50.00	10,474,001.59	13,098,523.09	50.00	6,549,261.55
Over 3 years	12,705,077.56	100.00	12,705,077.56	6,973,421.43	100.00	6,973,421.43
Total	694,648,615.99	4.12	28,627,212.24	528,495,101.35	4.56	24,095,156.19

(3) Allowances for bad debts made, recovered or reversed for the period

The allowances for bad debts for the period amounted to RMB9,741,088.51; accounts receivable of RMB4,882,393.00 and allowances for bad debts of RMB4,882,393.00 were written off by IRICO New Materials, a subsidiary of the Company; the total allowances for bad debts decreased by RMB4,910,637.60 due to disposal of Zhuhai Caizhu, a subsidiary of the Company.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable (Continued)*

(4) Material accounts receivable written off during the reporting period

Name of entity	Nature of receivables	Amounts written off	Reasons for write-off	Procedures performed for write-off	Whether incurred due to connected transactions or not
Shenzhen Dongfang Hualian Technology Co., Ltd (深圳市東方華聯科技有限公司)	Loan	4,882,393.00	Bankruptcy liquidation	Consideration and approval by the board of directors of creditor	No
Total	–	4,882,393.00	–	–	–

(5) Top five accounts receivable according to closing balance of debtors

Name of entity	Closing balance	Allowance as a percentage of total accounts receivable *(%)*	Balance of allowances for bad debts
Jinko Solar Co., Ltd (晶科能源有限公司)	82,126,536.69	11.59	51,684.85
GCL System Integration Technology Co., Ltd. (協鑫集成科技股份有限公司)	49,344,853.49	6.97	125,802.11
SZYDLEWSKI BETEILIGUNGSGESELLSCHAFT UG(HAFTUNGSB)	42,978,748.14	6.07	434,820.34
UGLPTYLIMITED	42,203,994.06	5.96	
Zhejiang Meidu Hitrans Lithium Battery Technology Co. Ltd (浙江美都海創鋰電科技有限公司)	23,578,769.60	3.33	
Total	240,232,901.98	33.92	612,307.30

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(III) Bills receivable and accounts receivable (Continued)

2. *Accounts receivable (Continued)*

(6) Accounts receivable derecognized due to transfer of financial assets

Item	Method of transfer of financial assets	Amounts derecognized	Gain or loss related to the derecognition of receivables
Receivables of IRICO New Materials	Buyout and disposal	27,283,442.64	-1,028,787.40
Total	–	27,283,442.64	-1,028,787.40

Note: On 6 November 2018, the board of directors of IRICO New Materials(a subsidiary) passed the resolution in relation to the entering into of a transfer contract of accounts receivable with China Electronics Corporation ("CEC"), pursuant to which, IRICO New Materials intended to transfer part of its accounts receivable to CEC for a consideration of not exceeding RMB27,577,700. IRICO New Materials entered into a contract with CEC on 10 December 2018 to transfer accounts receivable with carrying amount of RMB272,834,426,400 at a consideration of RMB262,546,552,400. After that, by leveraging the purchased accounts receivable as the underlying assets, CEC promoted and established CSC-CEC first tranche of special support programme for accounts receivable.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(IV) Prepayments

1. *Prepayments stated according to aging analysis*

Aging	Closing balance Amount	Closing balance Percentage (%)	Opening balance Amount	Opening balance Percentage (%)
Within 1 year	31,845,969.01	50.52	138,160,424.86	69.51
1–2 years	9,324,389.90	14.79	58,183,101.39	29.27
2–3 years	20,309,274.71	32.21	742,506.00	0.37
Over 3 years	1,566,156.23	2.48	1,692,683.54	0.85
Total	63,045,789.85	100.00	198,778,715.79	100.00

Particulars on substantial prepayments aged more than one year

Creditor	Debtor	Closing balance	Aging	Reason for being unsettled
Green Energy	Risen Energy Co., Ltd. (東方日升新能源股份有限公司)	23,000,000.00	1–3 years	Contract not yet fulfilled
IRICO New Materials	Dongtai Hengde Recycling Co., Ltd. (東台市恒德再生資源回收有限公司)	2,619,000.00	2–3 years	Prepayment for materials, not yet billed
IRICO New Materials	Suzhou Huike Equipment Co., Ltd. (蘇州匯科機電設備有限公司)	1,758,735.34	2–3 years	Prepayment for equipment, not yet finished
The Company	Air Liquide Shanggai International Trading Co.,Ltd.	1,099,630.02	1–2 years	Contract not yet fulfilled
IRICO New Materials	Changzhou Xinhan Intelligent Technology Co., Ltd (常州新韓智慧科技有限公司)	560,000.00	2–3 years	Contract not yet fulfilled
Total		29,037,365.36		

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(IV) Prepayments (Continued)

2. *Top five entities in terms of amount of prepayments*

Name of entity	Closing balance	As a percentage of total prepayments *(%)*
Risen Energy Co., Ltd. (東方日升新能源股份有限公司)	23,000,000.00	36.48
Jiangyin Hengyue Energy Technology Co., Ltd (江陰恒悦能源科技有限公司)	16,181,182.78	25.67
Dongtai Hengde Recycling Co., Ltd. (東台市恒德再生資源回收有限公司)	2,619,000.00	4.15
CNSG Anhui Hong Sifang Co., Ltd (中鹽安徽紅四方股份有限公司)	2,568,561.10	4.07
Jiangyin Guangye Photoelectric Technology Co., Ltd (江陰市廣業光電科技有限公司)	1,888,097.66	2.99
Total	46,256,841.54	73.36

(V) Other receivables

Item	Closing balance	Opening balance
Interests receivable		
Dividends receivable		
Other receivables	252,819,928.78	55,558,706.43
Less: allowances for bad debts	3,422,101.53	1,608,737.56
Total	249,397,827.25	53,949,968.87

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(V) Other receivables (Continued)

1. *Other receivables*

(1) Other receivables stated by aging

Aging	Closing balance Book balance	Expected credit loss rate (%)	Allowance for bad debts	Opening balance Book balance	Expected credit loss rate (%)	Allowance for bad debts
Within 6 months	202,133,932.26			13,453,971.76	2.56	344,726.00
7 months to 1 year	15,118,928.24	0.02	2,620.31	15,674,512.17	0.48	75,538.97
1 year to 2 years	10,547,281.91	21.57	2,275,176.78	25,303,249.91	0.31	77,400.00
2 years to 3 years	24,342,813.78	1.92	467,331.85	31,800.00	50.00	15,900.00
Over 3 years	676,972.59	100.00	676,972.59	1,095,172.59	100.00	1,095,172.59
Total	252,819,928.78	1.35	3,422,101.53	55,558,706.43	2.90	1,608,737.56

(2) Other receivables stated according to credit risk group

Item	Closing balance Book balance Amount	Book balance Percentage (%)	Allowance for bad debts Amount	Allowance for bad debts Expected credit loss rate (%)
Other receivables for which allowance for bad debts is made based on individual assessment	261,217.37	0.10	261,217.37	100.00
Other receivables for which allowance for bad debts is made on group basis	252,558,711.41	99.90	3,160,884.16	1.25
Including: Group 1: By aging	18,666,024.65	7.39	2,815,513.16	15.55
Group 2: By related parties	208,334,695.63	82.49		
Group 2: By deposit and reserve fund	25,557,991.13	10.12	345,371.00	1.38
Total	252,819,928.78	100.00	3,422,101.53	1.35

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(V) Other receivables (Continued)

1. Other receivables (Continued)

(2) Other receivables stated according to credit risk group (Continued)

Item	Opening balance			
	Book balance		Allowance for bad debts	
	Amount	Percentage *(%)*	Amount	Expected credit loss rate *(%)*
Other receivables for which allowance for bad debts is made based on individual assessment	711,217.37	1.28	711,217.37	100.00
Other receivables for which allowance for bad debts is made on group basis	54,847,489.06	98.72	897,520.19	1.64
Including: Group 1: By aging	8,090,873.11	14.75	552,149.19	6.08
Group 2: By related parties	36,536,811.20	66.62		
Group 2: By deposit and reserve fund	10,219,804.75	18.63	345,371.00	3.38
Total	55,558,706.43	100.00	1,608,737.56	2.90

① Other receivables for which allowance for bad debts is made on group basis (by aging)

Aging	Closing balance			Opening balance		
	Book balance	Expected credit loss rate *(%)*	Allowance for bad debts	Book balance	Expected credit loss rate *(%)*	Allowance for bad debts
Within 6 months	202,133,932.26			13,453,971.76	2.56	344,726.00
7 months to 1 year	15,118,928.24	0.02	2,620.31	15,674,512.17	0.48	75,538.97
1 year to 2 years	10,547,281.91	21.57	2,275,176.78	25,303,249.91	0.31	77,400.00
2 years to 3 years	24,342,813.78	1.92	467,331.85	31,800.00	50.00	15,900.00
Over 3 years	415,755.22	100.00	415,755.22	383,955.22	100.00	383,955.22
Total	252,558,711.41	1.25	3,160,884.16	54,847,489.06	1.64	897,520.19

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(V) Other receivables (Continued)

1. Other receivables (Continued)

(3) Allowances for bad debts made, recovered or reversed for the period

The allowances for bad debts for the period amounted to RMB2,263,363.97; the allowances for bad debts decreased by RMB450,000.00 due to disposal of Zhuhai Caizhu, a subsidiary.

(4) Other receivables by nature

Nature	Closing balance	Opening balance
Deposits	**23,670,108.19**	9,310,270.24
Deposit reserve	**1,887,882.94**	909,534.51
Receivables from related parties	**208,334,695.63**	36,536,811.20
Social insurance contributions made for employees	**272,024.05**	89,448.28
Receivables in relation to government grants	**5,195,400.00**	
Others	**13,459,817.97**	8,712,642.20
Total	**252,819,928.78**	55,558,706.43

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(V) Other receivables (Continued)

1. *Other receivables (Continued)*

(5) Top five other receivables according to closing balance of debtors

Name of debtor	Nature of other receivables	Closing balance	Aging	Percentage of closing balance of total other receivables *(%)*	Balance of bad debt allowance
Zhongdian IRICO	Open credit	93,133,691.14	0–1 year	36.84	
IRICO Group	Related party open credit	87,795,221.49	Within 1 year, 2–3 years	34.73	
China Electronics Commercial Financial Leasing Co., Ltd. (中電通商融資租賃有限公司) ("China Electronics Commercial")	Related party deposits	18,000,000.00	2–3 years	7.12	
Ping An International Financial Leasing Company Limited (平安國際融資租賃有限公司)	Deposits	10,500,000.00	7–9 months	4.15	
CGNPC International Financial Leasing Co., Ltd. (中廣核國際融資租賃有限公司)	Deposits	9,000,000.00	0–3 months	3.56	
Total		218,428,912.63		86.40	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(V) Other receivables (Continued)

1. Other receivables (Continued)

(6) Receivables in relation to government grants

Name of entity	Name of government grants project	Closing balance	Aging	Estimated time, amount and basis of government grants
Hefei Xinzhan Hi-tech Industrial Development Zone Economic and Trade Development Bureau	Special Subsidy for Projects Encouraged by Industrial Development Policy for the Second Half of 2018	5,195,400.00	Within 6 months	Note
Total	–	5,195,400.00	–	–

Note: Hefei Photovoltaic, a subsidiary, received the Notice on Special Subsidy for Projects Encouraged by Industrial Development Policy for the Second Half of 2018《關於下達2018年下半年工業化發展政策專案獎補資金的通知》issued by Hefei Xinzhan Hi-tech Industrial Development Zone Economic and Trade Development Bureau on 24 December 2018, and was granted a subsidy of RMB5,195,400 for technical transformation, production capacity and yield improvement and technology research and development in production and operation. And Hefei Photovoltaic has received the above subsidy in March 2019.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(VI) Inventories

1. *Categories of inventories*

	Closing balance			Opening balance		
Item	Book balance	Impairment provision	Carrying amount	Book balance	Impairment provision	Carrying amount
Raw materials	44,693,288.08	968,907.38	43,724,380.70	67,118,596.33	888,330.16	66,230,266.17
Goods in stock (finished goods)	75,409,383.88	1,262,752.74	74,146,631.14	84,273,413.62	2,566,817.15	81,706,596.47
Goods in transit	11,820,575.35		11,820,575.35	11,355,065.99	693,919.03	10,661,146.96
Semi-finished goods and work-in-process	9,690,919.83		9,690,919.83	12,729,192.19		12,729,192.19
Revolving materials and others	32,129,163.26	5,203,087.20	26,926,076.06	23,965,973.06	4,127,347.04	19,838,626.02
Total	173,743,330.40	7,434,747.32	166,308,583.08	199,442,241.19	8,276,413.38	191,165,827.81

2. *Movements in the provision for impairment of inventories*

	Opening	Provided for	Decrease in the	Closing balance	
Item	balance	the period	period	Reversal	Write-off
Raw materials	888,330.16	80,577.22			968,907.38
Goods in stock (finished goods)	2,566,817.15	916,614.33		2,220,678.74	1,262,752.74
Goods in transit	693,919.03			693,919.03	
Revolving materials and others	4,127,347.04	1,075,740.16			5,203,087.20
Total	8,276,413.38	2,072,931.71		2,914,597.77	7,434,747.32

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(VII) Other current assets

Item	Closing balance	Opening balance
Input VAT deductible	85,627,181.99	75,198,899.74
Other taxes prepaid		472,406.52
Total	85,627,181.99	75,671,306.26

(VIII) Long-term equity investments

		Increase/decrease in the period									
Name of investee company	Opening balance	Increase in investment	Decrease in investment	Investment gain or loss recognized under equity method	Adjustment to other comprehensive income	Other equity change	Distribution of cash dividend or profit	Provision for impairment	Subsequent measurement using equity approach due to loss of control	Closing balance	Closing balance of impairment provision
1. Joint Venture											
Shenmu Caijing Photovoltaics Power Generation Co., Ltd. (神木彩景光伏發電有限公司)	35,520,647.44			-40,670.94						35,479,976.50	
Sub-total	35,520,647.44			-40,670.94						35,479,976.50	
2. Associate											
Yangjiang IRICO Shenggao Green Energy Co., Ltd. (陽江彩虹勝高綠色能源有限公司)	858,106.12			-238,411.33						619,694.79	
IRICO New Energy (Liquan) Co., Ltd. (禮泉彩虹新能源有限公司)	3,469,067.28			-62,292.99						3,406,774.29	
IRICO New Energy (Changwu) Co., Ltd (長武彩虹新能源有限公司)	2,939,076.65			-5,858.71						2,933,217.94	
IRICO New Energy (Wuhan) Co., Ltd. (武漢彩虹綠色能源有限公司)	11,374,068.50			477,414.84						11,851,483.34	
Zhuhai Caizhu				-1,674,974.59					126,710,246.90	125,035,272.31	
Sub-total	18,640,318.55			-1,504,122.78					126,710,246.90	143,846,442.67	
Total	54,160,965.99			-1,544,793.72					126,710,246.90	179,326,419.17	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(VIII) Long-term equity investments (Continued)

Note 1: In May 2018, the Company transferred its 51% equity interest in Zhuhai Caizhu to Zhongdian IRICO at a consideration of RMB131,882,100 and recognized an investment income of RMB144,153,900, among which, investment income of RMB73,518,500 was recognized for the disposed 51% equity interest while investment income of RMB70,635,400 was recognized for the remaining 49% equity interest through remeasurement using fair value. The basis of the transaction consideration was the appraised value arrived at by Beijing Pan-China Assets Appraisal Co., Ltd.* (北京天健興業資產評估有限公司) with 31 December 2017 as the valuation base date. The Company lost its control over Zhuhai Caizhu on 31 May 2018 and the remaining equity interest was accounted for using equity approach.

(IX) Other investment in equity instruments

Item	Opening balance	Closing balance	Dividend income recognized in the period	Amount of accumulated gains and losses transferred to retained earnings from other comprehensive income in the period	Reason for transfer
Shaanxi Caihong Electronics Glass Co., Ltd. (陝西彩虹電子玻璃有限公司)	103,016,257.81	**103,908,078.93**			Designated classification
IRICO Display Devices Co., Ltd.* (彩虹顯示器件股份有限公司)	261,426,223.47	**146,101,529.49**			Designated classification
Total	364,442,481.28	**250,009,608.42**			

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(X) Investment properties

1. *Investment properties measured at cost*

Item	Buildings	Total
I. Original carrying amount		
1. Opening balance	32,019,700.51	32,019,700.51
2. Increase in the period		
3. Decrease in the period	32,019,700.51	32,019,700.51
(1) Decrease in business disposal	32,019,700.51	32,019,700.51
4. Closing balance		
II. Accumulated depreciation and amortisation		
1. Opening balance	21,058,536.20	21,058,536.20
2. Increase in the period	647,677.80	647,677.80
(1) Provision or amortisation	647,677.80	647,677.80
3. Decrease in the period	21,706,214.00	21,706,214.00
(1) Decrease in business disposal	21,706,214.00	21,706,214.00
4. Closing balance		
III. Provision for impairment		
1. Opening balance		
2. Increase in the period		
3. Decrease in the period		
4. Closing balance		
IV. Carrying amount		
1. Closing balance of carrying amount		
2. Opening balance of carrying amount	10,961,164.31	10,961,164.31

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XI) Fixed assets

Item	Closing balance	Opening balance
Fixed assets	**2,201,358,283.79**	1,532,352,496.07
Disposal of fixed assets	**192,890.99**	179,895.77
Less: Provision for impairment	**699,386,341.07**	712,870,143.01
Total	**1,502,164,833.71**	819,662,248.83

1. *Fixed assets*

(1) Details of fixed assets

Item	Buildings	Machinery and equipment	Transportation equipment	Electronic equipment	Office and other equipment	Glass-related special equipment	Total
I. Original carrying amount							
1. Opening balance	460,788,185.23	707,801,794.00	16,872,143.18	471,939,393.10	14,881,076.74	282,146,974.09	1,954,429,566.34
2. Increase in the period	175,137,922.01	421,894,400.20	3,230,859.20	32,228,031.44	4,441,372.81	128,026,632.58	764,959,218.24
(1) Purchase	229,026.61	2,910,829.40	210,679.60	230,183.51	317,237.88		3,897,957.00
(2) Transferred from construction in progress	174,901,325.40	418,983,570.80	3,020,179.60	31,997,847.93	4,124,134.93	128,026,632.58	761,053,691.24
3. Decrease in the period	7,601,716.28	30,808,653.68	1,982,569.29	13,247.86	723,783.66		41,129,970.77
(1) Transfer to other asset items		5,245,295.24		13,247.86			5,258,543.10
(2) Decrease in business disposal	7,601,716.28	24,018,487.11	1,982,569.29		723,783.66		34,326,556.34
(3) Other decreases		1,544,871.33					1,544,871.33
4. Closing balance	628,316,820.96	1,098,887,540.52	18,120,433.09	504,146,606.68	18,598,665.89	410,173,606.67	2,678,251,243.81

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XI) Fixed assets (Continued)

1. Fixed assets (Continued)

(1) Details of fixed assets (Continued)

Item	Buildings	Machinery and equipment	Transportation equipment	Electronic equipment	Office and other equipment	Glass-related special equipment	Total
II. Accumulated depreciation							
1. Opening balance	99,265,655.45	172,247,832.11	10,599,001.54	74,276,315.39	9,882,970.89	55,805,294.89	422,077,070.27
2. Increase in the period	15,751,439.91	29,675,738.80	714,319.11	9,192,309.62	378,980.64	20,465,867.27	76,178,655.35
(1) Provision	15,751,439.91	29,675,738.80	714,319.11	9,192,309.62	378,980.64	20,465,867.27	76,178,655.35
3. Decrease in the period	6,471,032.27	12,657,530.81	1,519,762.75	12,039.38	702,400.39		21,362,765.60
(1) Transfer to other asset items		313,925.04		12,039.38			325,964.42
(2) Decrease in business disposal	6,471,032.27	12,343,605.77	1,519,762.75	-	702,400.39		21,036,801.18
(3) Other decreases							
4. Closing balance	108,546,063.09	189,266,040.10	9,793,557.90	83,451,198.87	9,559,551.14	76,271,162.16	476,892,960.02
III. Provision for impairment							
1. Opening balance	-	302,662,886.68	3,154,148.48	233,876,874.69	1,175,360.31	172,000,872.85	712,870,143.01
2. Increase in the period							
(1) Provision							
3. Decrease in the period		13,483,801.94					13,483,801.94
(1) Transfer to other asset items		3,126,964.80					3,126,964.80
(2) Decrease in business disposal		10,356,837.14					10,356,837.14
4. Closing balance		289,179,084.74	3,154,148.48	233,876,874.69	1,175,360.31	172,000,872.85	699,386,341.07
IV. Carrying amount							
1. Closing balance of carrying amount	519,770,757.87	620,442,415.68	5,172,726.71	186,820,716.36	7,863,754.44	161,901,571.66	1,501,971,942.72
2. Opening balance of carrying amount	361,522,529.78	232,891,075.21	3,118,993.16	163,786,203.02	3,822,745.54	54,340,806.35	819,482,353.06

Note 1: As at 31 December 2018, title certificates for buildings of Hefei Photovoltaic and Hanzhong Jiarunze, both being subsidiaries of the Company, with original carrying amount of RMB483,118,183.87 were still to be obtained. As the final accounting procedures for completion of the related projects had not been completed, the two subsidiaries had not obtained the title certificates.

Note 2: As at 31 December 2018, the original carrying amount of fixed assets fully depreciated but still in use amounted to RMB158,669,106.55.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XI) Fixed assets (Continued)

1. *Fixed assets (Continued)*

(2) Temporarily idle fixed assets as at 31 December 2018

Category	Original carrying amount	Accumulated depreciation	Provision for impairment	Carrying amount	Notes
Machinery and equipment	83,224,193.06	12,517,526.18	68,024,720.46	2,681,946.42	
Motor vehicles	2,524,802.66	1,535,666.38	913,392.20	75,744.08	
Electronic devices	173,854,541.25	36,578,438.04	107,969,044.85	29,307,058.36	
Office equipment and others	4,419,267.94	3,111,329.25	1,175,360.31	132,578.38	
Glass-related special equipment	50,684,052.04	13,417,420.24	35,427,653.97	1,838,977.83	
Total	314,706,856.95	67,160,380.09	213,510,171.79	34,036,305.07	

(XII) Construction in progress

Item	Closing balance	Opening balance
Construction in progress	**860,050,621.24**	1,026,065,102.06
Construction items		
Less: provision for impairment	**87,552,969.00**	84,426,004.20
Total	**772,497,652.24**	941,639,097.86

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress*

(1) Construction in progress

Item	Closing balance Book balance	Closing balance Provision for impairment	Closing balance Carrying amount	Opening balance Book balance	Opening balance Provision for impairment	Opening balance Carrying amount
Yan'an solar photovoltaic glass furnace(延安太陽能光伏玻璃窯爐)	419,863,373.93		419,863,373.93	136,237,016.00		136,237,016.00
Hefei photovoltaic glass construction project (合肥光伏玻璃建設項目)	234,723,053.68	3,126,964.80	231,596,088.88	668,437,054.78		668,437,054.78
Xianyang photovoltaic glass project (phase III) (咸陽光伏玻璃三期項目)	146,068,610.32	84,426,004.20	61,642,606.12	143,450,959.56	84,426,004.20	59,024,955.36
Xianyang photoresist production line construction project (咸陽光阻生產線建設項目)	14,664,398.99		14,664,398.99	103,569.94		103,569.94
IRICO Yongneng roof power station project (彩虹永能屋頂電站工程項目)	12,303,419.55		12,303,419.55			
Quartz sand mines integration and quartz sand plant construction project of Hanzhong Jiarunze (漢中佳潤澤整合石英砂礦及石英砂建廠項目)	14,174,125.05		14,174,125.05	12,688,189.42		12,688,189.42
Distributed photovoltaic power generation project of Nanjing Orientleader Technology Co., Ltd. (南京利德東方分佈式光伏發電項目)	8,444,629.22		8,444,629.22			

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress (Continued)*

(1) Construction in progress (Continued)

Item	Closing balance Book balance	Closing balance Provision for impairment	Closing balance Carrying amount	Opening balance Book balance	Opening balance Provision for impairment	Opening balance Carrying amount
Xianyang photovoltaic glass production line construction project (咸陽光伏玻璃生產線建設項目)	2,573,004.40		2,573,004.40	2,265,677.94		2,265,677.94
2GW solar photovoltaic modules production line project of IRICO Yongneng (彩虹永能2GW太陽能組件生產線項目)	2,405,813.37		2,405,813.37	588,679.25		588,679.25
Xianyang ancillary technical reconstruction project for cathode materials production line (咸陽正極材料生產線配套技改項目)	1,961,353.24		1,961,353.24			
Distributed photovoltaic power generation project of CEC Panda Flat Panel Display Technology Co., Ltd. (南京熊猫平板分佈式光伏發電項目)				54,081,298.08		54,081,298.08
Others in total	2,868,839.49		2,868,839.49	8,212,657.09		8,212,657.09
Total	860,050,621.24	87,552,969.00	772,497,652.24	1,026,065,102.06	84,426,004.20	941,639,097.86

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress (Continued)*

(2) Movements of significant construction in progress

Name of project	Budgeted amount	Opening balance	Increase for the period	Transfer to fixed assets	Decrease in business disposal	Closing balance
Yan'an solar photovoltaic glass furnace(延安太陽能光伏玻璃窯爐)	750,170,800.00	136,237,016.00	283,626,357.93			419,863,373.93
Hefei photovoltaic glass construction project (合肥光伏玻璃建設項目)	1,850,000,000.00	668,437,054.78	249,824,797.60	683,538,798.70		234,723,053.68
Xianyang photovoltaic glass project (phase III) (咸陽光伏玻璃三期項目)	305,000,000.00	143,450,959.56	2,617,650.76			146,068,610.32
Xianyang photoresist production line construction project (咸陽光阻生產線建設項目)	58,000,000.00	103,569.94	14,560,829.05			14,664,398.99
IRICO Yongneng roof power station project (彩虹永能屋頂電站工程項目)	31,190,000.00		16,265,656.81	3,962,237.26		12,303,419.55
Quartz sand mines integration and quartz sand plant construction project of Hanzhong Jiarunze (漢中佳潤澤整合石英砂礦及石英砂建廠項目)	28,040,000.00	12,688,189.42	1,485,935.63			14,174,125.05
Distributed photovoltaic power generation project of Nanjing Orientleader Technology Co., Ltd. (南京利德東方分佈式光伏發電項目)	14,390,000.00		8,444,629.22			8,444,629.22

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress (Continued)*

(2) Movements of significant construction in progress (Continued)

Name of project	Budgeted amount	Opening balance	Increase for the period	Transfer to fixed assets	Decrease in business disposal	Closing balance
Xianyang photovoltaic glass production line construction project (咸陽光伏玻璃生產線建設項目)	831,000,000.00	2,265,677.94	307,326.46			2,573,004.40
2GW solar photovoltaic modules production line project of IRICO Yongneng (彩虹永能2GW太陽能組件生產線項目)	836,360,000.00	588,679.25	1,817,134.12			2,405,813.37
Xianyang ancillary technical reconstruction project for cathode materials production line (咸陽正極材料生產線配套技改項目)			1,961,353.24			1,961,353.24
Distributed photovoltaic power generation project of CEC Panda Flat Panel Display Technology Co., Ltd. (南京熊猫平板分佈式光伏發電項目)	131,364,100.64	54,081,298.08	19,471,357.20	73,552,655.28		
Others in total	9,800,000.00	8,212,657.09	836,349.05		6,180,166.65	2,868,839.49
Total	–	1,026,065,102.06	601,219,377.07	761,053,691.24	6,180,166.65	860,050,621.24

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress (Continued)*

(2) Movements of significant construction in progress (Continued)

Name of project	Cost incurred as a percentage of budgeted amount *(%)*	Construction progress *(%)*	Accumulated capitalization of interest	Including: Capitalization of interest for the period	Interest capitalization rate for the period *(%)*	Sources of fund
Yan'an solar photovoltaic glass furnace(延安太陽能光伏玻璃窯爐)	55.97	55.97	5,263,541.72	4,779,819.02	4.29	Self-raised funds
Hefei photovoltaic glass construction project (合肥光伏玻璃建設項目)	12.69	12.69	185,738,791.64	20,086,786.32	4.75	Self-raised funds
Xianyang photovoltaic glass project (phase III) (咸陽光伏玻璃三期項目)	47.89	47.89	20,221,417.52			Self-raised funds
Xianyang photoresist production line construction project (咸陽光阻生產線建設項目)	25.28	25.28				Self-raised funds
IRICO Yongneng roof power station project (彩虹永能屋頂電站工程項目)	39.45	39.45				Self-raised funds
Quartz sand mines integration and quartz sand plant construction project of Hanzhong Jiarunze (漢中佳潤澤整合石英砂礦及石英砂建廠項目)	50.55	50.55				Self-raised funds
Distributed photovoltaic power generation project of Nanjing Orientleader Technology Co., Ltd. (南京利德東方分佈式光伏發電項目)	58.68	58.68				Self-raised funds

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. Construction in progress (Continued)

(2) Movements of significant construction in progress (Continued)

Name of project	Cost incurred as a percentage of budgeted amount *(%)*	Construction progress *(%)*	Accumulated capitalization of interest	Including: Capitalization of interest for the period	Interest capitalization rate for the period *(%)*	Sources of fund
Xianyang photovoltaic glass production line construction project (咸陽光伏玻璃生產線建設項目)	0.31	0.31				Self-raised funds
2GW solar photovoltaic modules production line project of IRICO Yongneng (彩虹永能2GW太陽能組件生產線項目)	0.29	0.29				Self-raised funds
Xianyang ancillary technical reconstruction project for cathode materials production line (咸陽正極材料生產線配套技改項目)						Self-raised funds
Distributed photovoltaic power generation project of CEC Panda Flat Panel Display Technology Co., Ltd. (南京熊貓平板分佈式光伏發電項目)						
Others in total						
Total	–	–	211,223,750.88	24,866,605.34		

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XII) Construction in progress (Continued)

1. *Construction in progress (Continued)*

(3) Impairment provision for construction in progress

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance	Reason for provision
Xianyang photovoltaic glass project (phase III) (咸陽光伏玻璃三期項目)	84,426,004.20			84,426,004.20	
Hefei photovoltaic glass construction project (合肥光伏玻璃建設項目)		3,126,964.80		3,126,964.80	Transferred from fixed assets
Total	84,426,004.20	3,126,964.80		87,552,969.00	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XIII) Intangible assets

Item	Land use rights	Patents	Trademarks	Computer software	Non-patent technologies	Mining rights	Total
I. Original carrying amount							
1. Opening balance	235,561,572.48	1,376,000.00	45,850.00	2,302,662.41	19,582,500.00	26,600,362.50	285,468,947.39
2. Increase for the period	40,940,461.94			74,339.62			41,014,801.56
(1) Addition	40,940,461.94			74,339.62			41,014,801.56
3. Decrease for the period							
4. Closing balance	276,502,034.42	1,376,000.00	45,850.00	2,377,002.03	19,582,500.00	26,600,362.50	326,483,748.95
II. Accumulated amortisation							
1. Opening balance	22,994,686.90	1,376,000.00	28,656.00	2,301,086.13	19,232,666.67	7,170,532.50	53,103,628.20
2. Increase for the period	5,564,111.76		4,584.96	12,727.19	158,250.00	2,775,690.00	8,515,363.91
(1) Provision	5,564,111.76		4,584.96	12,727.19	158,250.00	2,775,690.00	8,515,363.91
3. Decrease for the period							
4. Closing balance	28,558,798.66	1,376,000.00	33,240.96	2,313,813.32	19,390,916.67	9,946,222.50	61,618,992.11
III. Provision for impairment							
1. Opening balance							
2. Increase for the period							
3. Decrease for the period							
4. Closing balance							
IV. Carrying amount							
1. Carrying amount as at the end of the period	247,943,235.76		12,609.04	63,188.71	191,583.33	16,654,140.00	264,864,756.84
2. Carrying amount as at the beginning of the period	212,566,885.58		17,194.00	1,576.28	349,833.33	19,429,830.00	232,365,319.19

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XIV) Goodwill

1. *Original carrying amount of goodwill*

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
IRICO Yongneng	41,533,010.55			41,533,010.55
Total	41,533,010.55			41,533,010.55

2. *Provision for goodwill impairment*

Item	Opening balance	Increase for the period (Provision)	Decrease for the period	Closing balance
IRICO Yongneng		2,988,682.86		2,988,682.86
Total		2,988,682.86		2,988,682.86

Note: The Company acquired 30.00% equity interest in IRICO Yongneng at a cash consideration of RMB68,000,000 in March 2017. Together with the equity interest previously held by the Company, IRICO Yongneng was held as to 51.00% by the Company, which constitues the business combination not under common control. RMB41,533,010.55 was recognized as goodwill.

As at 31 December 2018, the carrying amount of the asset group of IRICO Yongneng excluding goodwill was RMB99,422,886.89, and the carrying amount of the asset group including overall goodwill was RMB180,860,162.48.The present value of estimated future cash flows of the asset group including goodwill was RMB175,000,000.00, which was recognized by the Company in accordance with the Valuation Report of the Goodwill Impairment Test Project for Jiangsu IRICO Yongneng New Energy Company Limited (Tian Xing Ping Bao Zi (2019) No. 0222)《江蘇彩虹永能新能源有限公司商譽減值測試專案評估報告》(天興評報字【2019】第0222號) issued by Beijing Pan-China Assets Appraisal Co., Ltd.* (北京天健興業資產評估有限公司), and the provision for goodwill impairment of RMB2,988,682.86 was made correspondingly.

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XIV) Goodwill (Continued)

2. *Provision for goodwill impairment (Continued)*

Main parameters involving in the goodwill impairment are shown as follows:

The forecast period: 2019–2023 (The subsequent period is the steady period)

The growth rate for the forecast period: the estimated growth rates in sales revenue from 2019 to 2023 are -29.45%, 9.02%, -2.7%, 0.00% and 0.00%, respectively. It levels off during the perpetual period

The profit margin is calculated on the basis of estimated revenue, costs, expenses, etc.

The discount rate (pre-tax Weighted Average Cost of Capital (WACC)): 9.32%

(XV) Long-term prepayments

Category	Opening balance	Increase for the period	Amortisation for the period	Other decreases	Closing balance
Financial leasing service fees	5,196,348.37	18,444,150.97	5,118,379.54		18,522,119.80
Expansion of production capacity of battery materials	1,526,312.70		359,132.40		1,167,180.30
Total	6,722,661.07	18,444,150.97	5,477,511.94		19,689,300.10

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XVI) Deferred tax assets/deferred tax liabilities

1. *Deferred tax assets and deferred tax liabilities not stated on a net amount basis*

Item	Closing balance		Opening balance	
	Deferred tax assets/liabilities	Deductible/ taxable temporary differences	Deferred tax assets/ liabilities	Deductible/ taxable temporary differences
Deferred tax assets:				
Provision for asset impairment	**861,194.97**	**5,741,299.75**	588,775.47	3,925,169.78
Subtotal	**861,194.97**	**5,741,299.75**	588,775.47	3,925,169.78
Deferred tax liabilities:				
Assets revaluation increment from business combination not under common control	**664,907.28**	**4,432,715.20**	559,280.19	3,728,534.60
Subtotal	**664,907.28**	**4,432,715.20**	559,280.19	3,728,534.60

2. *Breakdown of unrecognised deferred tax assets*

Item	Closing balance	Opening balance
Deductible temporary differences	**1,104,160,596.76**	1,112,425,125.19
Deductible tax losses	**967,432,818.95**	781,637,443.96
Total	**2,071,593,415.71**	1,894,062,569.15

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XVI) Deferred tax assets/deferred tax liabilities (Continued)

3. *Deductible tax losses that are not recognised as deferred tax assets will expire in the following years*

Year	Closing balance	Opening balance	Notes
2018		195,260,828.67	
2019	399,386,533.99	415,137,191.22	
2020	43,788,203.01	36,580,353.17	
2021	384,122,955.80	39,905,817.50	
2022	125,017,691.51	94,753,253.40	
2023	15,117,434.64		
Total	967,432,818.95	781,637,443.96	

(XVII) Other non-current assets

Item	Closing balance	Opening balance
Prepaid taxes	11,869,754.47	3,140,102.54
Prepayments for construction projects		167,350,302.71
Total	11,869,754.47	170,490,405.25

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XVIII) Short-term borrowings

1. *Categories of short-term borrowings*

Borrowing conditions	Closing balance	Opening balance
Pledged loans	130,252,466.63	298,298,613.98
Mortgaged loans	18,000,000.00	33,000,000.00
Guaranteed loans	236,000,000.00	226,000,000.00
Guaranteed and mortgaged loans	50,000,000.00	
Total	434,252,466.63	557,298,613.98

2. *Pledged loans*

Lender name (bank or financial institution)	Borrowing balance	Pledge
Industrial and Commercial Bank of China Xianyang Rainbow Sub-branch (中國工商銀行咸陽市彩虹支行)	10,000,000.00	Bills held by the Company
China Electronics Financial Co., Ltd. (中國電子財務有限責任公司)	100,000,000.00	Equity interests in IRICO Display held by the Company
Zheshang Bank Xianyang Branch (浙商銀行咸陽分行)	19,900,000.00	Bills held by the Company
Industrial and Commercial Bank of China Yan'an Yaodian Sub-branch (中國工商銀行延安姚店支行)	352,466.63	Bills held by Yan'an New Energy
Total	130,252,466.63	–

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XVIII) Short-term borrowings (Continued)

3. *Mortgaged loans*

Lender name (bank or financial institution)	Borrowing balance	Guarantee
Suzhou Bank Zhangjiagang Sub-branch (蘇州銀行張家港支行)	18,000,000.00	Buildings and land use right owned by IRICO Yongneng
Total	18,000,000.00	–

4. *Guaranteed loans*

Lender name (bank or financial institution)	Borrowing balance	Guarantor
Bank of China Xianyang Branch (中國銀行咸陽分行)	30,000,000.00	IRICO Group
China Everbright Bank Xi'an Youyi Road Sub-branch (中國光大銀行西安友誼路支行)	70,000,000.00	IRICO Group
China Zheshang Bank Xianyang Branch (浙商銀行咸陽分行)	20,000,000.00	IRICO Group/Zhongdian IRICO
China Construction Bank Hefei Chengdong Sub-branch (中國建設銀行合肥城東支行)	40,000,000.00	Zhongdian IRICO
Huishang Bank Hefei Technology Subbranch (徽商銀行合肥科技支行)	50,000,000.00	Zhongdian IRICO
Hefei Science & Technology Rural Commercial Bank Xinzhan Sub-branch (合肥科技農村商業銀行新站支行)	26,000,000.00	Zhongdian IRICO
Total	236,000,000.00	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XVIII) Short-term borrowings (Continued)

5. Mortgaged and Guaranteed loans

Lender name (bank or financial institution)	Borrowing balance	Guarantee/Guarantor
Industrial and Commercial Bank of China Xianyang Rainbow Sub-branch (中國工商銀行咸陽市彩虹支行)	10,000,000.00	Buildings of IRICO New Material/the Company
Zhangjiagang Rural Commercial Bank (張家港農村商業銀行)	40,000,000.00	Fixed assets/IRICO Group
Total	50,000,000.00	–

(XIX) Notes and accounts payables

Item	Closing balance	Opening balance
Notes payable	490,689,505.29	566,500,363.01
Accounts payable	889,384,282.44	748,485,746.95
Total	1,380,073,787.73	1,314,986,109.96

1. Notes payable

Item	Closing balance	Opening balance
Bank acceptance bills	490,689,505.29	566,500,363.01
Tota	490,689,505.29	566,500,363.01

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XIX) Notes and accounts payables (Continued)

2. *Accounts payable*

(1) By aging

Item	Closing balance	Opening balance
Within 1 year (including 1 year)	758,391,661.66	626,792,197.77
Over 1 year	130,992,620.78	121,693,549.18
Total	889,384,282.44	748,485,746.95

(2) Significant accounts payable aged over one year

Name of creditor	Closing balance	Reason for non-payment
Shaanxi Jiarunze Industrial Co., Ltd. (陝西佳潤澤實業有限公司)	6,091,500.00	Unsettled
Xilanqing Environmental Technology Co., Ltd. (西藍清環境科技有限公司)	4,900,148.47	Unsettled
Xianyang Caiqin Electronic Device Co., Ltd. (咸陽彩秦電子器件有限責任公司)	4,740,348.60	Unsettled
Qingdao Yuanding Special Machinery Manufacturing Co., Ltd (青島元鼎特種機械製造有限公司)	4,279,560.75	Unsettled
Zhongdian IRICO	3,756,118.92	Unsettled
Total	23,767,676.74	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XX) Contract liabilities

Item	Closing balance	Opening balance
Within 1 year (including 1 year)	**13,487,966.88**	128,409,399.39
Over 1 year	**37,047,533.65**	36,573,506.01
Total	**50,535,500.53**	164,982,905.40

(XXI) Employee benefits payable

1. *Employee benefits payable (by category)*

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Short-term benefits	48,420,189.64	177,080,249.52	186,464,028.24	**39,036,410.92**
Post-employment benefits – defined contribution scheme	61,489.19	20,958,463.50	20,830,331.98	**189,620.71**
Termination benefits	6,222,808.39	6,316,802.66	9,247,161.87	**3,292,449.18**
Total	54,704,487.22	204,355,515.68	216,541,522.09	**42,518,480.81**

2. *Short-term benefits*

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Salaries, bonuses, allowance and subsidies	10,105,564.05	143,313,574.00	144,736,876.20	**8,682,261.85**
Staff welfare	23,177,836.66	13,764,992.11	22,042,483.35	**14,900,345.42**
Social insurance	485.04	9,707,814.31	9,655,980.21	**52,319.14**
Including: Medical insurance	485.04	8,390,693.34	8,351,232.51	**39,945.87**
Work-related injury insurance		951,297.17	941,931.57	**9,365.60**
Maternity insurance		365,823.80	362,816.13	**3,007.67**
Housing provident fund	969.89	7,621,376.02	7,519,840.66	**102,505.25**
Labour union expenses and employee education expenses	6,972,671.39	2,576,822.18	2,413,176.92	**7,136,316.65**
Other short-term benefits	8,162,662.61	95,670.90	95,670.90	**8,162,662.61**
Total	48,420,189.64	177,080,249.52	186,464,028.24	**39,036,410.92**

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXI) Employee benefits payable (Continued)

3. *Defined contribution scheme*

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Basic pension insurance	35,518.89	20,339,687.75	20,217,443.44	**157,763.20**
Unemployment insurance	25,970.30	618,775.75	612,888.54	**31,857.51**
Total	61,489.19	20,958,463.50	20,830,331.98	**189,620.71**

(XXII) Taxes payable

Tax categories	Closing balance	Opening balance
Value-added tax	**10,318,676.57**	1,010,993.75
Enterprise income tax	**5,462,270.27**	7,056,181.48
Urban maintenance and construction tax	**1,825,696.96**	2,041,978.15
Real estate tax	**1,862,708.35**	2,210,291.19
Land use tax	**912,950.53**	1,847,812.22
Individual income tax	**1,023,029.71**	1,318,805.83
Education surcharge	**86,514.36**	273,473.74
Stamp duty	**253,278.52**	454,683.00
Others	**450,445.70**	198,814.33
Total	**22,195,570.97**	16,413,033.69

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIII) Other payables

Category	Closing balance	Opening balance
Interests payable	**24,484,848.54**	1,653,041.38
Dividends payable	**21,689,811.54**	21,689,811.54
Other payables	**1,493,314,794.18**	1,490,611,158.91
Total	**1,539,489,454.26**	1,513,954,011.83

1. *Interests payable*

Category	Closing balance	Opening balance
Interest of long-term borrowings with interest paid in installments and principal repaid on maturity	**7,827,581.46**	304,486.30
Interest payables of short-term borrowings	**867,805.90**	585,527.41
Interest of borrowings from non-financial institutions	**15,789,461.18**	763,027.67
Total	**24,484,848.54**	1,653,041.38

2. *Dividends payable*

Name of entity	Closing balance	Opening balance	Reason for unsettlement over 1 year
Dividends of ordinary shares payable by subsidiaries	**21,689,811.54**	21,689,811.54	Haven't been collected by the counterparties yet
Total	**21,689,811.54**	21,689,811.54	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIII) Other payables (Continued)

3. *Other payables*

(1) By nature

Nature of amount	Closing balance	Opening balance
Retention money and deposits	9,913,360.65	11,607,262.51
Amounts due to related parties	1,012,668,566.67	974,988,218.71
Amounts due to employees	4,126,527.51	2,419,839.60
Payments for acquisition of equity interests		9,241,500.00
Loans from non-financial institutions and interest thereon	431,092,733.24	437,619,907.14
Other current account	35,513,606.11	54,734,430.95
Total	1,493,314,794.18	1,490,611,158.91

(2) Explanations on significant other payables aged over 1 year

Name of entity	Closing balance	Reason for unsettlement
IRICO Group	671,993,191.55	The contract has not yet expired
Zhongdian IRICO	329,734,954.06	The contract has not yet expired
Yan'an Dingyuan Investment Co., Ltd.* (延安市鼎源投資有限責任公司)	300,000,000.00	The contract has not yet expired
Hefei Xincheng State-owned Assets Management Co., Ltd.* (合肥鑫城國有資產管理有限公司)	100,000,000.00	The contract has not yet expired
Shaanxi Leideman Industry Group Company Limited (陝西蕾得曼實業集團有限公司)	2,375,744.05	The contract has not yet expired
Total	1,404,103,889.66	–

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIV)Non-current liabilities due within one year

1. *Non-current liabilities due within one year (by category)*

Item	Closing balance	Opening balance
Long-term loans due within one year	495,437,200.00	220,400,000.00
Other long-term liabilities due within one year	2,082,366.90	2,329,511.26
Total	497,519,566.90	222,729,511.26

2. *Long-term loans due within one year*

Borrowing conditions	Closing balance	Opening balance
Pledged loans		47,000,000.00
Mortgaged loans		60,200,000.00
Guaranteed loans	171,459,400.00	113,200,000.00
Credit loans	2,400,000.00	
Mortgaged and Guaranteed loans	321,577,800.00	
Total	495,437,200.00	220,400,000.00

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIV)Non-current liabilities due within one year (Continued)

2. *Long-term loans due within one year (Continued)*

(1) Guaranteed loans

Lender name (bank or financial institution)	Borrowing balance	Guarantor
Bank of Xi'an Xianyang Branch (西安銀行咸陽分行)	2,000,000.00	IRICO Group
Huaxia Bank Xixian Branch (華夏銀行西咸分行)	49,700,000.00	The Company
Hefei Science & Technology Rural Commercial Bank (合肥科技農村商業銀行)	3,000,000.00	Zhongdian IRICO
Hefei Science & Technology Rural Commercial Bank (合肥科技農村商業銀行)	15,000,000.00	Zhongdian IRICO
Hefei Science & Technology Rural Commercial Bank (合肥科技農村商業銀行)	43,613,500.00	Zhongdian IRICO
Anhui She County Rural Commercial Bank (安徽歙縣農村商業銀行)	34,566,900.00	Zhongdian IRICO
Anhui Xiuning Rural Commercial Bank (安徽休寧農村商業銀行)	13,579,000.00	Zhongdian IRICO
China Bohai Bank Nanjing Branch (渤海銀行南京分行)	10,000,000.00	The Company, IRICO Group
Total	171,459,400.00	–

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIV)Non-current liabilities due within one year (Continued)

2. *Long-term loans due within one year (Continued)*

(2) Mortgaged and Guaranteed loans

Lender name (bank or financial institution)	Borrowing balance	Guarantee/Guarantor
China Electronics Commercial(中電通商)	250,000.00	Fixed assets/IRICO Group
China Electronics Commercial(中電通商)	75,000,000.00	Fixed assets/IRICO Group
China Electronics Commercial(中電通商)	50,000,000.00	Fixed assets/IRICO Group
International Far Eastern Leasing Co., Ltd* (遠東國際租賃有限公司)	26,000,000.00	Fixed assets/the Company + Hefei Photovoltaic
CGNPC International Financial Leasing Co., Ltd. (中廣核國際融資租賃有限公司)	83,333,300.00	Fixed assets/Zhongdian IRICO + IRICO Group
Ping An International Financial Leasing Co., Ltd. (平安國際融資租賃有限公司)	86,994,500.00	Fixed assets/Zhongdian IRICO + IRICO Group
Total	321,577,800.00	

(XXV) Long-term borrowings

1. *Classification of Long-term borrowings*

Borrowing conditions	Closing balance	Opening balance	Interest rate range
Mortgaged borrowings		210,700,000.00	4.655%–7.47%
Guaranteed borrowings	199,485,600.00	180,298,700.00	4.655%–5.23%
Credit borrowings	4,700,000.00	4,400,000.00	5.795%
Mortaged + guaranteed borrowings	391,190,144.44		4.655%–7.47%
Total	595,375,744.44	395,398,700.00	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXV) Long-term borrowings (Continued)

2. *Maturity profile of long-term borrowings with terms due over one year*

Term	Closing balance	Opening balance
1 to 2 years	**92,450,000.00**	321,592,487.50
2 to 5 years	**502,925,744.44**	73,806,212.50
Total	**595,375,744.44**	395,398,700.00

3. *Guarantee borrowings*

Lender (bank or financial institution)	Balance of borrowings	Guarantor
Xianyang Branch of Xi'an Bank	48,000,000.00	IRICO Group
Heifei New Railway Station Branch of Hefei Science & Technology Rural Commercial Bank	52,799,500.00	Zhongdian IRICO
Anhui Xi County Rural Commercial Bank	29,618,900.00	Zhongdian IRICO
Anhui Xiuning Rural Commercial Bank	14,067,200.00	Zhongdian IRICO
Heifei New Railway Station Branch of Hefei Science & Technology Rural Commercial Bank	19,000,000.00	Zhongdian IRICO
Nanjing Branch of Bohai Bank	36,000,000.00	The Company, IRICO Group
Total	199,485,600.00	–

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXV) Long-term borrowings (Continued)

4. *Mortaged + guaranteed borrowings*

Lender (bank or financial institution)	Balance of borrowings	Collateral/Guarantor
China Electronics Commercial	450,000.00	Fixed assets/IRICO Group
China Electronics Commercial	135,000,000.00	Fixed assets/IRICO Group
China Electronics Commercial	25,000,000.00	Fixed assets/IRICO Group
International Far Eastern Leasing Co., Ltd* (遠東國際租賃有限公司)	24,000,000.00	Fixed assets/the Company +Hefei Photovoltaic
CGN International Financial Leasing Company Limited (中廣核國際融資租賃有限公司)	116,666,700.00	Fixed assets/Zhongdian IRICO+ IRICO Group
Ping An International Financial Leasing Company Limited (平安國際融資租賃有限公司)	90,073,444.44	Fixed assets/Zhongdian IRICO+ IRICO Group
Total	391,190,144.44	

(XXVI) Long-term payables

Nature of payment	Closing balance	Opening balance
Special payables (for projects)	**7,000,000.00**	7,000,000.00
Total	**7,000,000.00**	7,000,000.00

(XXVII) Long-term employee benefits payable

1. *Long-term employee benefits payable*

Category	Closing balance	Opening balance
Termination benefits	**10,856,171.40**	21,706,869.67
Total	**10,856,171.40**	21,706,869.67

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXVIII) Estimated liabilities

Item	Opening balance	Increase	Decrease	Closing balance	Source
Pending lawsuits	3,809,262.97		3,809,262.97		
Total	3,809,262.97		3,809,262.97		

Note: A lawsuit was filed against Hefei Photovoltaic, a subsidiary for the non-payment of project bills and quality guarantee deposit to Zhejiang Construction Engineering Group Co., Ltd (浙江省建工集團有限公司) in 2016, demanding Hefei Photovoltaic to pay the projects bills, quality guarantee deposit and accrued interests. Hefei Photovoltaic has made a provision of RMB3,809,262.97 for the contingent liabilities in this regard. On 2 May 2018, the Intermediate People's Court of Heifei, Anhui Province issued a civil judgement (2016 [Wan] 01 Min Chu No. 434) (2016<皖>民初434號), which finally ruled the Group to make the above payment. Hefei Photovoltaic has made the payment in this year.

(XXIX) Deferred income

1. *Deferred income by category*

Item	Opening balance	Increase	Decrease	Closing balance	Source
Government grants	81,475,121.13	2,700,000.00	7,662,609.12	**76,512,512.01**	Appropriation
Total	81,475,121.13	2,700,000.00	7,662,609.12	**76,512,512.01**	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXIX) Deferred income (Continued)

2. *Government grants*

Item	Opening balance	New grants during the period	Amount included in profit or loss during the period	Amount transferred to non-current liabilities due within one year	Closing balance	Related to assets/ related to income
Local incentives	65,568,410.40			1,550,697.84	64,017,712.56	Related to assets
Special subsidies	14,861,433.31		5,481,666.70	349,563.68	9,030,202.93	Related to assets
Subtotal of other petty grants	1,045,277.42	2,700,000.00	98,575.52	182,105.38	3,464,596.52	Related to assets
Total	81,475,121.13	2,700,000.00	5,580,242.22	2,082,366.90	76,512,512.01	

(XXX) Share capital

Item	Opening balance	Increase/(decrease) (+, -) for the period: Issue of new shares	Bonus issue	Shares transferred from reserve	Others	Subtotal	Closing balance
Domestic shares	1,601,468,000						1,601,468,000
H shares (Overseas listed foreign shares)	630,881,400						630,881,400
Total	2,232,349,400						2,232,349,400

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXI) Capital reserve

Category	Opening balance	Increase	Decrease	Closing balance
I. Share premium	559,458,789.57			559,458,789.57
II. Other capital reserve	384,072,654.53			384,072,654.53
Total	943,531,444.10			943,531,444.10

(XXXII) Other comprehensive income

Item	Opening balance	Amount for the period: Amount before tax for the period	Amount for the period: Less: Amount transferred to profit or loss for the period for those previously included in other comprehensive income	Amount for the period: Less: Amount transferred to retained earnings for the period for those previously included in other comprehensive income	Amount for the period: Less: Income tax	Amount for the period: Attributable to the Company after tax	Amount for the period: Attributable to minority interests after tax	Closing balance
I. Other comprehensive income that will not be reclassified to profit or loss	-118,935,262.85	-114,432,872.86				-114,432,872.86		-233,368,135.71
Changes in fair value of investments in other equity instruments	-118,935,262.85	-114,432,872.86				-114,432,872.86		-233,368,135.71
II. Other comprehensive income that will be reclassified to profit or loss	446,549.39	-159,197.46				-159,197.46		287,351.93
Exchange differences from translation of foreign currency financial statements	446,549.39	-159,197.46				-159,197.46		287,351.93
Total other comprehensive income	-118,488,713.46	-114,592,070.32				-114,592,070.32		-233,080,783.78

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXIII) Surplus reserve

Category	Opening balance	Increase	Decrease	Closing balance
Statutory surplus reserve	22,477,267.06			22,477,267.06
Total	22,477,267.06			22,477,267.06

(XXXIV) Undistributed profits

Item	Closing balance Amount	Percentage of appropriation or distribution
Undistributed profits at end of last period before adjustment	-2,953,332,667.89	
Adjustment for undistributed profits at beginning of period ("+" for plus; "-" for less)		
Undistributed profits at beginning of period after adjustment	-2,953,332,667.89	
Add: Net profit attributable to owners of the Company during the period	81,297,979.57	
Less: Withdrawal of statutory surplus reserves		
Withdrawal of discretionary surplus reserve		
Dividend payable on ordinary shares		
Ordinary shares dividends transferred to share capital		
Undistributed profits at end of period	-2,872,034,688.32	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXV) Operating revenue and operating costs

1. *Operating revenue and operating costs by main categories*

Item	Amount for the period		Amount for the same period of the previous year	
	Revenue	Costs	Revenue	Costs
I. Sub-total of principal businesses	2,290,735,883.61	2,066,000,737.81	2,363,401,698.47	2,103,396,013.83
New materials	452,088,053.33	417,802,394.33	319,014,136.55	301,114,958.59
Photovoltaic glass	844,775,053.66	696,254,755.83	919,390,198.96	735,762,793.33
Solar cells and components	870,790,810.56	845,378,978.30	758,105,240.45	709,703,692.26
Revenue from power stations	14,218,567.32	4,197,303.92	4,944,687.56	1,261,133.96
Trading and others	108,863,398.74	102,367,305.43	361,947,434.95	355,553,435.69
II. Sub-total of other businesses	41,183,173.18	23,012,463.59	108,064,214.86	90,406,264.17
Revenue from sales of materials	11,544,612.28	9,685,523.62	77,249,754.66	74,382,168.13
Revenue from sales of scraps	7,303,467.41		5,356,796.92	761,760.69
Premises leasing	5,764,439.18	1,969,155.77	7,846,023.03	2,701,238.80
Others	16,570,654.31	11,357,784.20	17,611,640.25	12,561,096.55
Total	2,331,919,056.79	2,089,013,201.40	2,471,465,913.33	2,193,802,278.00

2. *Operating revenue by timing of revenue recognition*

Timing of revenue recognition	Photovoltaic glass	New materials	Other operating revenue
Recognised at a time-point	844,775,053.66	452,088,053.33	1,023,286,886.09
Recognised during a period of time			11,769,063.71
Total	844,775,053.66	452,088,053.33	1,035,055,949.80

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXV) Operating revenue and operating costs (Continued)

3. Operating revenue by reporting segments

Revenue category	Solar photovoltaic business	New materials business	Trading business	Others	Total
Principal operating revenue	1,729,784,431.54	452,088,053.33	107,363,398.77	1,499,999.97	2,290,735,883.61
Other operating revenue				41,183,173.18	41,183,173.18
Total	1,729,784,431.54	452,088,053.33	107,363,398.77	42,683,173.15	2,331,919,056.79

(XXXVI) Taxes and surcharges

Item	Amount for the period	Amount for the same period of the previous year
Real estate tax	**4,437,118.48**	4,077,146.09
Municipal maintenance tax	**1,492,250.02**	1,545,700.40
Water conservancy construction funds	**941,982.01**	1,374,148.74
Education surcharge	**934,671.74**	776,015.50
Land use tax	**361,966.56**	3,912,484.05
Stamp duty and others	**1,740,816.26**	432,869.48
Total	**9,908,805.07**	12,118,364.26

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXVII) Selling expenses

Item	Amount for the period	Amount for the same period of the previous year
Logistics costs for loading and unloading	44,740,979.66	65,167,123.17
Payroll	5,243,901.76	4,885,906.07
Commission	3,446,478.37	2,469,068.14
Traveling expenses	1,929,999.32	1,787,425.94
Consultancy expenses	1,691,350.74	807,576.85
Advertisement fees	1,052,801.27	435,230.14
Others	4,244,788.16	5,205,718.15
Total	62,350,299.28	80,758,048.46

(XXXVIII) Administrative expenses

Item	Amount for the period	Amount for the same period of the previous year
Payroll	41,094,309.57	33,808,984.21
Repair maintenance expenses	25,425,514.61	24,166,434.42
Loss on shutdown	12,773,150.65	16,983,377.00
Depreciation	9,264,175.96	12,556,645.23
Amortisation of intangible assets	8,499,198.00	6,232,380.14
Agency expenses	4,412,151.94	5,285,596.57
Traveling expenses	2,390,462.54	2,257,303.57
Insurance	2,196,000.19	113,403.78
Consultancy expenses	2,072,664.66	6,646,887.67
Office expenses	1,231,304.24	489,992.48
Others	11,608,396.15	23,758,956.48
Total	120,967,328.51	132,299,961.55

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XXXIX) Research and development expenses

Item	Amount for the period	Amount for the previous period
Materials costs	28,191,211.01	17,072,747.91
Employee benefits	13,275,816.20	8,049,361.45
Certification fees	1,364,733.27	465,669.85
Others	850,059.34	599,311.82
Total	43,681,819.82	26,187,091.03

(XL) Finance costs

Item	Amount for the period	Amount for the previous period
Interest expenses	89,800,923.01	70,875,500.93
Less: Interest income	4,307,646.28	1,855,454.36
Exchange losses	42,144.19	1,959,887.55
Less: Exchange gains	1,985,531.92	5,195,709.07
Procedures expenses	1,087,060.27	894,121.34
Other expenses	6,637,896.04	1,296,950.87
Total	91,274,845.31	67,975,297.26

(XLI) Asset impairment losses

Item	Amount for the period	Amount for the previous period
Losses on bad debts		16,971,439.01
Losses on decline in the value of inventory	2,072,931.71	621,143.52
Losses on impairment of fixed assets		7,023,722.02
Goodwill impairment losses	2,988,682.86	
Total	5,061,614.57	24,616,304.55

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XLII) Credit impairment losses

Item	Amount for the period	Amount for the previous period
Losses on bad debts	12,004,452.48	
Total	12,004,452.48	

(XLIII) Other incomes

Item	Amount for the period	Amount for the previous period	Related to assets/ related to income
Special subsidies	33,516,346.76	31,960,889.81	Related to assets/related to income
Subsidies for projects supporting industrial development	5,195,400.00	16,725,329.79	Related to income
Local incentives	3,335,597.84	1,550,697.84	Related to assets/related to income
Loan interest		4,000,000.00	Related to income
Industry supporting funds		53,152,000.00	Related to income
Other minor amount	2,117,543.31	12,508,750.10	Related to income
Total	44,164,887.91	119,897,667.54	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XLIV) Investment gains

Category	Amount for the period	Amount for the previous period
Long-term equity investment gains measured under equity method	-1,544,793.72	-13,582,527.28
Investment gains from disposal of long-term equity investment	73,518,487.64	24,017,873.33
Investment income from disposal of financial assets at fair value through profit and loss of the period	772,870.27	
Gains from remeasurement of the remaining equity at fair value after the loss of control	70,635,409.69	926,569.28
Others		783,163.59
Total	143,381,973.88	12,145,078.92

(XLV) Gains from changes in fair value

The source of gains from changes in fair value	Amount for the period	Amount for the previous period
Held-for-trading financial assets		
Including: Gains from changes in fair value of derivative financial instruments		
Financial assets at fair value through profit and loss of the period	-102,782.68	
Including: Gains from changes in fair value of derivative financial instruments		
Total	-102,782.68	

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XLVI) Gains from disposal of assets

Item	Amount for the period	Amount for the previous period
Gains from disposal of fixed assets not classified as held for sale	**55,533.98**	33,558,954.82
Total	**55,533.98**	33,558,954.82

(XLVII) Non-operating income

Item	Amount for the period	Amount for the previous period	Amount included in non-recurring profit or loss for the period
Gains on debt restructuring		499,433.5	
Insurance compensation	**2,200,000.00**		2,200,000.00
Liquidated damages		3,223,534.48	
Others	**30,423.35**	7,192,004.76	30,423.35
Total	**2,230,423.35**	10,914,972.74	2,230,423.35

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XLVIII) Non-operating expenses

Item	Amount for the period	Amount for the previous period	Amount included in non-recurring profit or loss for the period
External donation		30,000.00	
Loss from scrapped fixed assets		286,356.83	
Loss from exchange of non-monetary assets			
Others	**428,952.38**	3,752,015.99	428,952.38
Total	**428,952.38**	4,068,372.82	428,952.38

(XLIX) Income tax expenses

1. *Details of income tax expenses*

Item	Amount for the period	Amount for the previous period
Income tax expenses for the current period calculated by the tax laws and relevant laws	**338,286.37**	4,410,339.62
Deferred income tax expenses	**-166,792.41**	1,464,091.63
Total	**171,493.96**	5,874,431.25

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(XLIX) Income tax expenses (Continued)

2. *Adjustment of accounting profit and income tax expenses*

Item	Amount
Total profit	86,957,774.41
Income tax expenses calculated based on the statutory/ applicable tax rate	13,043,666.16
Impact of different applicable tax rates to subsidiaries	-5,239,165.16
Impact of income tax for the period before adjustment	-638,494.32
Impact of non-taxable income	
Impact of cost, expenses and losses not deductible for tax	163,439.83
Impact of deductible items under the tax laws	-8,255,890.24
Impact of deductible temporary differences or deductible loss of deferred income tax assets not recognized at the beginning of the period	-2,307,797.84
Impact of deductible temporary differences and deductible loss of deferred income tax assets not recognized for the period	3,405,735.53
Income tax expenses	171,493.96

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(L) Statement of cash flows

1. *Cash received or paid relating to other operating activities*

Item	Amount for the period	Amount for the previous period
Cash received relating to other operating activities	526,231,089.53	439,159,856.71
Including: Interest income	4,307,646.28	1,855,454.36
Income-related government subsidies received	35,437,845.49	83,163,825.01
Recovery of accounts receivable, deposits and others	486,485,597.76	354,140,577.34
Cash paid relating to other operating activities	754,593,933.64	491,129,494.69
Including: Transportation costs	42,914,006.27	65,856,063.49
Traveling expenses	4,474,837.09	4,153,961.89
Agency fees	4,411,085.14	5,285,596.57
Office expenses	1,289,380.29	394,805.62
Insurance	2,799,646.02	155,770.14
Rental and property management fee	1,934,849.91	200,461.47
Commission and sales service fees	3,565,008.67	657,720.11
Advertisement fees	1,052,801.27	435,230.14
Other cash payment	23,972,228.38	24,486,318.40
Payment of accounts payable, deposits and others	668,180,090.60	389,503,566.86

2. *Cash received or paid relating to other financing activities*

Item	Amount for the period	Amount for the previous period
Cash paid relating to other financing activities	38,399,400.00	11,616,713.09
Including: Handling charges for borrowing and deposits	38,399,400.00	
Net cash outflow for disposal of subsidiaries		11,616,713.09

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(LI) Supplementary information on statement of cash flows

1. *Supplementary information on statement of cash flows*

Item	Amount for the period	Amount for the previous period
1. Reconciliation of net profit as cash flows from operating activities:		
Net profit	**86,786,280.45**	100,282,438.17
Add: Provision for impairment of assets	**5,061,614.57**	24,616,304.55
Credit impairment losses	**12,004,452.48**	
Depreciation of fixed assets, consumption of oil and gas assets, depreciation of bearer biological assets	**76,826,333.15**	69,325,011.76
Amortisation of intangible assets	**8,515,363.91**	6,235,818.86
Amortisation of long-term prepaid expenses	**5,477,511.94**	1,996,077.62
Loss on disposal of fixed assets, intangible assets and other long-term assets ("-" denotes gain)	**-55,533.98**	-33,558,954.82
Loss on retirement of fixed assets ("-" denotes gain)		286,356.83
Loss on changes in fair value ("-" denotes gain)	**102,782.68**	
Finance expenses ("-" denotes gain)	**89,800,923.01**	70,875,500.93
Investment loss ("-" denotes gain)	**-143,381,973.88**	-12,145,078.92
Decrease in deferred income tax assets ("-" denotes increase)	**-272,419.50**	1,384,871.30
Increase in deferred income tax liabilities ("-" denotes decrease)	**105,627.09**	79,220.33
Decrease in inventories ("-" denotes increase)	**25,698,910.79**	48,769,635.39
Decrease in operating receivables ("-" denotes increase)	**-124,321,838.11**	773,660,910.95
Increase in operating payables ("-" denotes decrease)	**-275,100,004.44**	-1,149,514,101.43
Others		
Net cash flows from operating activities	**-232,751,969.84**	-97,705,988.48

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(LI) Supplementary information on statement of cash flows (Continued)

1. *Supplementary information on statement of cash flows (Continued)*

Item	Amount for the period	Amount for the previous period
2. Major investing and financing activities not involving cash settlements		
Conversion of debts to capital		
Convertible corporate bonds mature within one year		
Fixed assets acquired under finance lease		
3. Net changes in cash and cash equivalents		
Closing balance of cash	**128,620,277.04**	233,413,663.85
Less: Opening balance of cash	**233,413,663.85**	377,478,776.53
Add: Closing balance of cash equivalents		
Less: Opening balance of cash equivalents		
Net increase in cash and cash equivalents	**-104,793,386.81**	-144,065,112.68

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(LI) Supplementary information on statement of cash flows (Continued)

2. *Net cash received from disposal of subsidiaries in the period*

Item	Amount
Cash and cash equivalents received from disposal of subsidiaries in the period	131,882,093.71
Including: Zhuhai Caizhu	131,882,093.71
Less: Cash and cash equivalents held by subsidiaries on the date of loss of control	36,489,783.49
Including: Zhuhai Caizhu	36,489,783.49
Add: Cash and cash equivalents received in the period from disposal of subsidiaries in the previous period	23,100,453.55
Including: Kunshan IRICO Industry Co., Ltd.	23,100,453.55
Net cash received from disposal of subsidiaries	118,492,763.77

3. *Cash and cash equivalents*

Item	Closing balance	Opening balance
I. Cash	**128,620,277.04**	233,413,663.85
Including: Cash on hand	**96,441.84**	8,158.15
Bank deposits readily available for payment	**82,462,983.23**	219,391,337.80
Other monetary funds readily available for payment	**46,060,851.97**	14,014,167.90

V. NOTES TO ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(LII) Assets with restricted ownerships or right to use

Item	Closing carrying amount	Reason for such restrictions
Monetary funds	177,978,062.44	Bills and L/C deposits
Bills receivable	172,494,519.82	Pledge of bills
Other investment in equity instruments	146,101,529.49	Equity pledged borrowings
Fixed assets	559,627,797.06	Mortgage loan
Intangible assets	131,125,810.33	Mortgage loan
Total	1,187,327,719.14	

(LIII) Foreign currency items

1. *Foreign currency items*

Item	Closing foreign currency balance	Exchange rate	Closing balance in RMB
Monetary funds			
Including: USD	788,301.20	6.8632	5,410,268.80
EUR	719,471.20	7.8473	5,645,906.35
HKD	107,532.03	0.8762	94,219.56
Accounts receivable			
Including: USD	3,644,750.30	6.8632	25,014,650.25
EUR	13,137,141.07	7.8473	103,091,087.12
Accounts payable			
Including: USD	105,590.30	6.8632	724,687.35

VI. CHANGE IN SCOPE OF CONSOLIDATION

(I) Disposal of equity interests in subsidiaries in the period

1. *Loss of control over investment in subsidiaries in a single disposal*

Name of subsidiary	Consideration for disposal of equity interest	Percentage of disposal of equity interests *(%)*	Method for disposal of equity interests	Timing of losing control	Basis for determination of timing of losing control	Difference between consideration for disposal and net assets of the subsidiary attributable to the Company under consolidated financial statements
Zhuhai Caizhu	131,882,093.71	51%	Disposal	2018.5.31	Handover of management right and right to earnings	73,518,487.64

(Continued)

Name of subsidiary	Proportion of remaining equity interest at the date of loss of control	Book value of remaining equity interest at the date of loss of control	Fair value of remaining equity interest at the date of loss of control	Gain or loss arising from the remaining equity interest re-measured at fair value	Recognition and assumption for fair value of remaining equity interest at the date of loss of control	Profit or loss arising from transformation of other comprehensive income which is related to equity investment of former subsidiary
Zhuhai Caizhu	49%	56,074,837.21	126,710,246.90	70,635,409.69	Valuation report based on assetbased approach	

VII. INTERESTS IN OTHER ENTITIES

(I) Interests in subsidiaries

1. *Composition of enterprise group*

Name of subsidiary	Place of registration	Principal place of business	Nature of business	Shareholding ratio *(%)* Direct	Indirect	Method for acquisition
IRICO New Material	Xianyang, Shaanxi	Xianyang, Shaanxi	Production of various display devices and luminous materials for lighting devices; electronic paste	47.89	28.42	Investment in establishment
Hanzhong Jiarunze	Hanzhong, Shaanxi	Hanzhong, Shaanxi	Mining exploration	51.00		Business combination not involving enterprises under common control
Hefei Photovoltaic	Hefei, Anhui	Hefei, Anhui	Production and sales of PV glass	100.00		Investment in establishment
IRICO (Hong Kong) Company	Hong Kong	Xianyang, Shaanxi	Investment holding	100.00		Investment in establishment
IRICO Green Energy	Xianyang, Shaanxi	Xianyang, Shaanxi	Operation of solar photovoltaic power stations	100.00		Investment in establishment
Nanjing New Energy	Nanjing, Jiangsu	Nanjing, Jiangsu	Operation of solar photovoltaic power stations		100.00	Investment in establishment
Yan'an New Energy	Yan'an, Shaanxi	Yan'an, Shaanxi	Production and sales of PV glass, Operation of solar photovoltaic power stations	100.00		Investment in establishment
IRICO Yongneng	Zhangjiagang, Jiangsu	Zhangjiagang, Jiangsu	Solar cells, solar cell modules	51.00		Business combination not involving enterprises under common control
Shannxi New Energy	Xianyang, Shaanxi	Xianyang, Shaanxi	Production and sales of inorganic nonmetallic materials and products	100.00		Investment in establishment

VII. INTERESTS IN OTHER ENTITIES (Continued)

(I) Interests in subsidiaries (Continued)

2. Significant non-wholly owned subsidiaries

No.	Name of subsidiary	Minority shareholder's shareholding ratio	Profit or loss attributable to minority interests in the current period	Dividends distributed to minority shareholder in the current period	Accumulated closing balance of minority interests
1	IRICO Yongneng	49.00%	2,340,591.98		55,092,043.75
2	IRICO New Material	23.69%	6,202,897.28		61,029,849.98

3. Financial information of significant non-wholly owned subsidiaries (other than those classified as held for sale)

	Closing balance					
Name of subsidiary	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities
IRICO Yongneng	417,126,974.32	161,493,533.66	578,620,507.98	469,955,573.57	664,907.28	470,620,480.85
IRICO New Material	395,625,618.35	33,672,159.60	429,297,777.95	158,094,363.13	13,584,799.45	171,679,162.58

	Opening balance					
Name of subsidiary	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities
IRICO Yongneng	451,649,618.72	119,625,723.94	571,275,342.66	466,788,573.03		466,788,573.03
IRICO New Material	375,250,167.60	18,152,029.69	393,402,197.29	96,202,148.20	65,765,044.03	161,967,192.23

VII. INTERESTS IN OTHER ENTITIES (Continued)

(I) Interests in subsidiaries (Continued)

3. Financial information of significant non-wholly owned subsidiaries (other than those classified as held for sale) (Continued)

	Amount for the period			
Name of subsidiary	Operating income	Net profit	Total comprehensive income	Cash flow from operating activities
IRICO Yongneng	882,463,434.66	4,776,718.33	4,776,718.33	104,244,441.05
IRICO New Material	512,853,491.71	26,183,610.31	26,183,610.31	-17,147,465.74

	Amount for the previous period			
Name of subsidiary	Operating income	Net profit	Total comprehensive income	Cash flow from operating activities
IRICO Yongneng	829,778,998.83	19,432,725.83	19,432,725.83	29,135,949.05
IRICO New Material	350,197,917.36	9,352,552.22	9,352,552.22	-15,125,885.62

VII. INTERESTS IN OTHER ENTITIES (Continued)

(II) Interests in joint ventures or associates

1. Basic information on significant joint ventures or associates

Name of company	Short name	Principal place of business	Place of registration	Nature of business	Shareholding percentage (%) Direct	Indirect	Accounting method for investment
Shenmu Caijing Photovoltaics Power Generation Co., Ltd. (神木彩景光伏發電有限公司)	Shenmu Caijing	Shenmu, Shaanxi	Shenmu, Shaanxi	Construction and operation of new energy power stations		50.00	Equity method
Yangjiang IRICO Shenggao Green Energy Co., Ltd.(陽江彩虹勝高綠色能源有限公司)	Yangjiang IRICO	Yangjiang, Guangdong	Yangjiang, Guangdong	Construction and operation of new energy power stations		49.00	Equity method
IRICO New Energy (Liquan) Co., Ltd.(禮泉彩虹新能源有限公司)	Liquan IRICO	Liquan, Shaanxi	Liquan, Shaanxi	Construction and operation of new energy power stations		49.00	Equity method
IRICO New Energy (Changwu) Co., Ltd(長武彩虹新能源有限公司)	Changwu IRICO	Changwu, Shaanxi	Changwu, Shaanxi	Construction and operation of new energy power stations		49.00	Equity method
IRICO New Energy (Wuhan) Co., Ltd.(武漢彩虹綠色能源有限公司)	Wuhan IRICO	Wuhan, Hubei	Wuhan, Hubei	Construction and operation of new energy power stations		49.19	Equity method
Zhuhai Caizhu Industrial Co., Ltd.*(珠海彩珠實業有限公司)	Zhuhai Caizhu	Zhuhai, Guangdong	Zhuhai, Guangdong	Production of electronic devices and spare parts	49.00		Equity method

VII. INTERESTS IN OTHER ENTITIES (Continued)

(II) Interests in joint ventures or associates (Continued)

2. Aggregated financial information of insignificant joint ventures and associates

Item	Closing balance/ Amount for the period	Opening balance/ Amount for the previous period
I. Joint ventures		
Total carrying amount of investments	**70,959,953.01**	71,041,294.88
Amounts in aggregate in proportion to the shareholdings:		
Net profit	**-40,670.94**	-257,790.35
Total comprehensive income	**-40,670.94**	-257,790.35
II. Associates		
Total carrying amount of investments	**149,317,491.35**	151,607,129.31
Amounts in aggregate in proportion to the shareholdings:		
Net profit	**-1,149,790.66**	7,637.74
Total comprehensive income	**-1,149,790.66**	7,637.74

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS

1. Classification of financial instruments

(1) The book value of various financial assets as at the balance sheet date is as follows:

	Closing balance			
Financial assets	Financial assets at fair value through profit or loss	Loans and receivables	Financial assets designated at fair value through other comprehensive income	Total
Bills receivable		339,322,789.73		339,322,789.73
Accounts receivable		666,021,403.75		666,021,403.75
Other receivables		249,397,827.25		249,397,827.25
Held-for-trading financial assets	679,095.34			679,095.34
Other investment in equity instruments			250,009,608.42	250,009,608.42

	Opening balance			
Financial assets	Financial assets at fair value through profit or loss	Loans and receivables	Financial assets designated at fair value through other comprehensive income	Total
Bills receivable		438,566,911.32		438,566,911.32
Accounts receivable		504,399,945.16		504,399,945.16
Other receivables		53,949,968.87		53,949,968.87
Other investment in equity instruments			364,442,481.28	364,442,481.28

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS (Continued)

1. Classification of financial instruments (Continued)

(2) The book value of various financial liabilities as at the balance sheet date is as follows:

Financial liabilities

	Closing balance			Opening balance		
Items	Financial liabilities at fair value through profit or loss	Other financial liabilities	Total	Financial liabilities at fair value through profit and loss	Other financial liabilities	Total
Short-term borrowings		434,252,466.63	434,252,466.63		557,298,613.98	557,298,613.98
Bills payable		490,689,505.29	490,689,505.29		566,500,363.01	566,500,363.01
Accounts payable		889,384,282.44	889,384,282.44		748,485,746.95	748,485,746.95
Other payables		1,493,314,794.18	1,493,314,794.18		1,490,611,158.91	1,490,611,158.91
Non-current liabilities mature within one year		497,519,566.90	497,519,566.90		222,729,511.26	222,729,511.26
Long-term borrowings		595,375,744.44	595,375,744.44		395,398,700.00	395,398,700.00

2. Financial risk management objectives and policies

The Group's major financial instruments include accounts receivable, other investments in equity instruments, bank borrowings, other interest-bearing loans, cash at bank and on hand, accounts payable and other payables. Such financial instruments are mainly used for financing the Group's operation. The Group has a number of other financial assets and liabilities arising from its diversified operation, such as accounts receivable and accounts payable. Risks related to such financial instruments include market risk, credit risk and liquidity risk. The Board of the Group is in charge of monitoring and managing such risks and ensures responsive measures to be taken in a timely and effectively manner.

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS (Continued)

3. Market risk

Market risk of financial instruments is the risk of fluctuation in the fair value of financial instruments or future cash flow arising from changes in market price. Market risk includes interest rate risk, exchange risk and other price risk.

(1) Interest rate risk

Interest rate risk is the risk of fluctuation in the fair value of financial instruments or future cash flow arising from changes in market interest rate.

The Group's risk of changes in market interest rates is mainly related to the long-term liabilities that accrue interests at floating interest rates. The Group's fixed-rate borrowings are exposed to risks from change in the interest rate of bank balance and bank borrowings. The Group currently has no interest rate hedging policy to eliminate risks, however, the Board will monitor the interest rate risk and take corresponding and necessary financial measures to control such risks when it reasonably estimates material risks relating to movement of interest rate.

The Group is also exposed to cash flow risk in relation to variable-rate bank deposit, bank borrowings and other borrowings from financial institutions to some extent. It is the Group's policy to keep certain borrowings at floating rate of interests so as to minimise risk from fluctuation of interest rate.

The Group is also exposed to interest rates risk in respect of financial liabilities. The Group's cash flow interest rate risk is mainly concentrated on its variable-rate bank borrowings, other borrowings from financial institutions and borrowings under finance leases based on the People Bank of China Prescribed Interest Rate.

Sensitivity analysis:

The Group's sensitivity analysis on interest rate is based on the assumption that interest income and interest expenses from variable-rate financial instruments may be affected by changes in market interest rates and the amount of liability outstanding at the end of the reporting period was outstanding for the whole year. To allow the management make rational assessment of the change in interest rate, a 100 basis points increase or decrease is used when reporting interest rate risk internally to key management personnel.

Based on the above assumptions and on the condition that the other variables remain unchanged, the potential and reasonable change in interest rate may result in an increase or decrease of RMB27,521,800 (2017: RMB24,915,000) (before tax) in current profit or loss and owners' equity, mainly due to variable-rate risk from interest-bearing liabilities.

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS (Continued)

3. Market risk (Continued)

(2) Exchange rate risk

Exchange rate risk refers to the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in foreign exchange rates. Exchange rate risk may arise from financial instruments denominated in foreign currencies other than the functional currency.

The exchange rate risk that the Group is exposed to is mainly related to the operating activities of the Group (when income and expenses are settled with the currencies other than the functional currency of the Company). The Group mainly operates in the PRC. Majority of its revenue and operating costs and cost of sales are denominated in RMB. Certain accounts receivable, bank deposits and bank borrowing are denominated in the United States Dollars ("USD") and Euro ("EUR"). Such amounts are exposed to fluctuations in the value of RMB against USD and EUR. Any significant exchange loss/gain arising from significant appreciation/depreciation of RMB against USD and EUR would be recorded in profit or loss.

Relevant foreign currency assets and foreign currency liabilities include: monetary funds denominated in foreign currencies, accounts receivable, etc. As at 31 December 2018, details of the amount of the Group's financial assets and financial liabilities denominated in foreign currencies which are translated into RMB are set out in "Note V (LIII) Foreign currency items".

Sensitivity analysis

The sensitivity rate represented in the appreciation or depreciation from exchange of RMB dominated amounts of the Group was 10% (2017: 10%). As of 31 December 2018, if RMB had strengthened/weakened 10% (2017: 10%) against USD and EUR, with all other variables held constant, the Group's profit for the year would have been approximately RMB13,851,300 lower/higher (2017: RMB12,702,000), mainly as a result of foreign exchange losses/gains on translation of the USD and EUR denominated amounts.

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS (Continued)

4. Credit risk

Credit risk refers to the risk that the party of a financial instrument does not fulfill its obligations and creates financial losses on the other side. Credit risk is managed on a group basis. Credit risk mainly arises from bank deposits and accounts receivable.

As at 31 December 2018, the Group's maximum exposures to credit risk which will cause a financial loss to the Group due to failure to discharge payment obligation by customers are arising from the carrying amount of the respective financial assets.

The restricted bank deposits of the Group are mainly placed at state-owned banks and other large and medium-sized banks, as such, the Group does not expect significant credit risk against bank deposits.

The Group's concentration of credit risk by geographical locations is mainly in the PRC, which accounted for approximately 82.76% of the total accounts and bills receivable as at 31 December 2018.

As at 31 December 2018, the Group has concentration of credit risk 11.60% (2017: 5%) and 32.10% (2017: 14%) of the total accounts and bills receivable was due from the Group's largest customer and the five largest customers in terms of sales respectively. Sales to the largest customer and aggregate sales to the five largest customers represents 13.03% (2017: 17%) and 34.02% (2017: 50%) of the Group's revenue respectively. The Group has policies in place to ensure that sale of products are made to customers with a sound credit history. The Group also performs periodic credit evaluations of its customers and makes sufficient provision for impairment in accounts and bills receivable in its financial statements.

For the quantitative data of credit risk exposure of the Group arising from accounts receivable and other receivables, please refer to "Note V (III)" and "Note V (V)".

VIII. RISK RELATING TO FINANCIAL INSTRUMENTS (Continued)

5. Liquidity risk

Liquidity risk is the risk that the Group may encounter deficiency of funds in meeting obligations settled with cash or other financial assets delivery.

In managing liquidity risk, the Group ensures to monitor the cash and cash equivalent the management considered as sufficient, in order to meet the Group's needs for operation, and lower the effects from fluctuation of cash flow. The management monitors the usage of bank borrowings, and ensures compliance with the borrowing agreements. At the same time, the Group secures adequate committed lines of funding from major financial institutions to meet its liquidity requirements in the short and longer term.

As at 31 December 2018, the total current liabilities of the Group amounted to RMB3.966 billion, indicating that the Group was exposed to liquidity risk. The Board of the Group is of the opinion that it will have sufficient working capital for its normal operation. For details, please refer to note V (III) and V (V) thereto.

The financial liabilities held by the Group at the end of year are analysed at terms of the remaining undiscounted contractual cash flows as follows:

			Closing Balance		
Items	Within 1 year	1–2 years	2–3 years	Over 3 years	Total
Short-term borrowings	434,252,466.63				434,252,466.63
Bills payable	490,689,505.29				490,689,505.29
Accounts payable	758,391,661.66	88,207,014.92	8,715,723.71	34,069,882.15	889,384,282.44
Other payables	404,961,735.26	323,005,293.06	264,936,520.32	500,411,245.54	1,493,314,794.18
Non-current liabilities due within one year		497,519,566.90			497,519,566.90
Long-term borrowings		72,454,929.27	418,596,151.79	162,906,709.58	653,957,790.64

6. Fair value measurement of financial instruments

For the shares of IRICO Display (stock code: 600707) which are publicly traded on the Shanghai Stock Exchange as held by the Group for the purpose of holding such shares, the Group presents such shares as other investment in equity instruments with the change in the fair value recognised as other comprehensive income, which has no impact on the net profit of the Group.

IX. CAPITAL MANAGEMENT

The goal of the Group's capital management policy is to ensure that the Group has the ability to continue its operations so as to provide returns to shareholders and benefit other stakeholders while maintaining the optimal capital structure to reduce the cost of capital.

For the purpose of maintaining or adjusting its capital structure, the Group may adjust the dividend to be paid to the shareholders, return of capital to the shareholders, issue of new shares or disposal or assets so as to reduce debts.

The table below sets out the gearing ratio of the Group which is used by the Group to monitor its capital management:

Items	31 December 2018	31 December 2017
Gearing ratio	95.61%	94.74%

X. FAIR VALUE

(I) Analysis on assets and liabilities measured at fair value by fair value levels

Items	Level 1 fair value measurement	Level 2 fair value measurement	Level 3 fair value measurement	Closing Balance
I. Continuing fair value measurement				
(I) Held-for-trading financial assets				
1. Investment in equity instruments	679,095.34			679,095.34
(II) Other investment in equity instruments	146,101,529.49		103,908,078.93	250,009,608.42

(II) Basis for determining the market price of items persistently and non-persistently measured at fair value at the first level

The Group's investments in equity instruments which are persistently measured at level 1 fair value at the end of the period are publicly issued shares, and the fair value at the end of the period represents the share price as at 31 December 2018. The other investments in equity instruments measured at level 1 fair value are publicly issued shares of IRICO Display held by the Group not for short-term trading, and the fair value at the end of the period represents the share price as at 31 December 2018.

X. FAIR VALUE (Continued)

(III) Items persistently measured at fair value at the third level, adjustment between opening and closing carrying amount and sensitivity analysis on unobservable parameters

Other investments in equity instruments held by the Group which are persistently measured at level 3 fair value represent 7.3% equity interest in Shaanxi Caihong Electronics Glass Co., Ltd, which is an unlisted company. As the fair value can not be obtained on continuous basis, the change in fair value is recognized as the closing carrying amount of the investee.

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES

(I) The parent company of the Group

Name	Place of registration	Nature of Business	Registered Capital	Percentages of shareholding in the Group held by the parent company *(%)*	Percentages of voting rights in the Group held by the parent company *(%)*
IRICO Group	Beijing	Production and sales of Electronic components	2,517,167,000	71.74	71.74

The ultimate controller of the Group: China Electronics Corporation*

(II) Information on the subsidiaries of the Group

Please refer to Note "VII. Interest in other entities" for details.

(III) Information on associates and joint ventures of the Company

Please refer to Note "VII. Interest in other entities" for details of the major associates and joint ventures of the Company.

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(IV) Information on other related parties of the Company

Name of other related parties	Relationship between other related party and the Group
Hefei IRICO Epilight Technology Co., Ltd. (合肥彩虹藍光科技有限公司)	Same parent company
Zhongdian IRICO (中電彩虹)	Same parent company
Kunshan IRICO Industry Co., Ltd. (昆山彩虹實業有限公司)	Same de facto controller
Zhuhai Caizhu (珠海彩珠)	Same de facto controller
Nanjing Huadong Electronics Group Co., Ltd. (南京華東電子進出口有限公司)	Same de facto controller
Zhongdian Panda Trade Development Limited Company (南京中電熊猫貿易發展有限公司)	Same de facto controller
Nanjing CEC Panda Flat Panel Display Technology Co., Ltd. (南京中電熊猫平板顯示科技有限公司)	Same de facto controller
Nanjing CEC Panda LCD Technology Co., Ltd. (南京中電熊猫液晶顯示科技有限公司)	Same de facto controller
Nanjing Zhongdian Panda Property Management Co., Ltd. (南京中電熊猫物業管理有限公司)	Same de facto controller
Panda Xinxing Industrial Co., Ltd. (南京熊猫新興實業有限公司)	Same de facto controller
Nanjing CEC Panda Modern Services Co., Ltd. (南京中電熊猫現代服務產業有限公司)	Same de facto controller
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Same de facto controller
Xi'an IRICO Information Co., Ltd. (西安彩虹資訊有限公司)	Same de facto controller
Xianyang IRICO Electronic Accessories Co., Ltd. (咸陽彩虹電子配件有限公司)	Same de facto controller
Xianyang IRICO Industry Company Limited (咸陽彩虹集團實業有限公司)	Same de facto controller
Xianyang IRICO Labour Service Company (咸陽彩虹集團勞動服務公司)	Same de facto controller
Xianyang IRICO Hospital (咸陽彩虹醫院)	Same de facto controller
China Electronics Commercial (中電通商)	Same de facto controller
China Electronics Financial Co., Ltd. (中國電子財務有限責任公司)	Same de facto controller
China Electronics System Engineering No. 3 Construction Co., Ltd. (中國電子系統工程第三建設有限公司)	Same de facto controller
Rui Bou Electronics (HK) Limited (瑞博電子(香港)有限公司)	Same de facto controller
Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	An associated company of shareholders
Xianyang IRICO Solar Photovoltaic Technology Co., Ltd.* (咸陽彩虹光伏科技有限公司)	Other related relationship
IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	Other related relationship
IRICO (Zhangjiagang) Flat Panel Display Co., Ltd. (彩虹(張家港)平板顯示有限公司),	Other related relationship
IRICO Display Devices Co., Ltd.* (彩虹顯示器件股份有限公司)	Other related relationship
Xianyang Caiqin Electronics Device Co., Ltd. (咸陽彩秦電子器件有限責任公司)	Other related relationship
Shaanxi IRICO Optoelectronic Materials Company* (陝西彩虹光電材料總公司)	Other related relationship

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions

1. *Related party transactions for purchase and sales of goods/receipt and provision of services*

Name of related parties	Type	Subject	Pricing methods and decision-making process	Amount for the period		Amount for the same period last year	
				Amount	As a percentage of same type of transactions *(%)*	Amount	As a percentage of same type of transactions *(%)*
For sales of products and rendering of services:							
IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	Sales of product	Electricity charge	Market price	895,031.95	6.29		
IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	Sales of product	Electricity charge	Market price	7,943,105.18	92.30	6,432,901.01	91.72
Hefei IRICO Epilight Technology Co., Ltd. (合肥彩虹藍光科技有限公司)	Sales of product	Sales of goods	Market price			27,777.77	
Nanjing CEC Panda Flat Panel Display Technology Co., Ltd. (南京中電熊猫平板顯示科技有限公司)	Sales of product	Electricity charge	Market price	3,510,446.99	24.69		
Nanjing CEC Panda Flat Panel Display Technology Co., Ltd. (南京中電熊猫平板顯示科技有限公司)	Sales of product	Sales of goods	Market price	25,746,696.36	23.98	16,387,767.15	2.37
Nanjing CEC Panda LCD Technology Co., Ltd. (南京中電熊猫液晶顯示科技有限公司)	Sales of product	Sales of goods	Market price	17,808,000.00	16.59	11,206,000.00	1.62
Xianyang IRICO Optoelectronics Technology Co., Ltd. (咸陽彩虹光電科技有限公司)	Sales of product	Sales of goods	Market price	16,656,000.00	15.51		
Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	Sales of product	Sales of goods	Market price			71,303.27	0.01
IRICO (Liquan) (禮泉彩虹)	Rendering of service	Charges for maintenance of power station	Market price	155,660.34	10.38	56,603.76	
Zhongdian IRICO (中電彩虹)	Sales of product	Disposal of fixed assets	Agreed price			1,169,912.52	100.00
IRICO (Wuhan) (武漢彩虹)	Rendering of service	Charges for maintenance of power station	Market price	311,320.77	20.75		
Panda Xinxing Industrial Co., Ltd. (南京熊猫新興實業有限公司)	Sales of product	Electricity charge	Market price	2,115,578.45	14.88		
Kunshan IRICO Industry Co., Ltd. (昆山彩虹實業有限公司)		Deposits interest	Market price	228,575.65	5.31		
Zhuhai Caizhu (珠海彩珠)		Deposits interest	Market price	171,337.49	3.98		

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

1. *Related party transactions for purchase and sales of goods/receipt and provision of services (Continued)*

Name of related parties	Type	Subject	Pricing methods and decision-making process	Amount for the period		Amount for the same period last year	
				Amount	As a percentage of same type of transactions *(%)*	Amount	As a percentage of same type of transactions *(%)*
Xianyang IRICO Electronic Accessories Co., Ltd. (咸陽彩虹電子配件有限公司)		Deposits interest	Market price	60,008.23	1.39		
For purchase of products and receipt of services							
IRICO (Hefei) LCD Glass Co., Ltd. (彩虹 (合肥)液晶玻璃有限公司)	Purchase of products	Electricity charge	Production costs	119,252,852.62	5.77	69,223,615.52	3.29
Xianyang IRICO Solar Photovoltaic Technology Co., Ltd.* (咸陽彩虹光伏科技有限公司)	Purchase of products	Electricity charge	Production costs	233,471.69	0.01	398,937.46	0.02
Nanjing Huadong Electronics Group Co., Ltd. (南京華東電子進出口有限公司)	Purchase of products	Raw materials	Market price	25,241,868.16	5.85	12,595,347.69	0.60
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Purchase of products	Telephone bills	Market price	55,542.23	100.00	146,065.04	100.00
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Purchase of products	Utility fees	Market price	73,011,789.66	3.53	118,843,884.35	100.00
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Purchase of products	Payment for industrial oxygen	Market price	1,184.62	0.00		
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Purchase of products	Payment for liquid oxyen	Market price	571,172.96	0.03		
Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	Purchase of products	Materials	Market price	31,077,084.46	1.50	35,842,812.71	1.70
Zhongdian IRICO (中電彩虹)	Purchase of products	Oil	Market price	1,176,587.39	0.06	2,350,102.57	100.00

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

1. *Related party transactions for purchase and sales of goods/receipt and provision of services (Continued)*

Name of related parties	Type	Subject	Pricing methods and decision-making process	Amount for the period: Amount	Amount for the period: As a percentage of same type of transactions (%)	Amount for the same period last year: Amount	Amount for the same period last year: As a percentage of same type of transactions (%)
Zhongdian IRICO (中電彩虹)	Receipt of services	Loading/unloading services fees	Market price	185,070.00	0.01		
Zhongdian IRICO (中電彩虹)	Purchase of products	Payment for spare parts	Market price	6,152,817.89	0.30		
Xianyang IRICO Hospital (咸陽彩虹醫院)	Receipt of services	Expenditure for medical examination	Market price	13,712.00	100.00		
Zhongdian Panda Trade Development Limited Company (南京中電熊猫貿易發展有限公司)	Purchase of products	Auxiliary materials	Market price	15,586,643.35	0.75	7,725,438.36	0.37
Xianyang IRICO Solar Photovoltaic Technology Co., Ltd.* (咸陽彩虹光伏科技有限公司)	Purchase of products	Utility fees	Market price			1,000.00	
Hefei IRICO Epilight Technology Co., Ltd. (合肥彩虹藍光科技有限公司)	Purchase of products	Purchase of products	Market price			76,068.38	
Nanjing Zhongdian Panda Property Management Co., Ltd. (南京中電熊猫物業管理有限公司)	Receipt of services	Cleaning services fees	Market price	137,919.81	0.01		
China Electronics System Engineering No.2 Construction Co., Ltd. (中國電子系統工程第二建設有限公司)	Purchase of products	Equipment	Market price	1,981,981.98	0.09		
IRICO Group (彩虹集團)		Interest on borrowings	Market price	19,715,161.09	22.83		
Zhongdian IRICO (中電彩虹)		Interest on borrowings	Market price	4,358,956.23	5.05	5,424,126.18	
Xianyang IRICO Electronic Accessories Co., Ltd. (咸陽彩虹電子配件有限公司)		Interest on borrowings	Market price	60,008.23	0.07		
Kunshan IRICO Industry Co., Ltd. (昆山彩虹實業有限公司)		Interest on borrowings	Market price	441,041.64	0.51		
Zhuhai Caizhu (珠海彩珠)		Interest on borrowings	Market price	884,500.00	1.02		

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

2. *Leasing with related parties*

Name of lessor	Name of lessee	Assets under lease	Income/fees recognized from leasing for the period	Income/fees recognized from leasing for the same period last year
Zhongdian IRICO (中電彩虹)	The Company	Premises leasing	2,042,227.40	5,800,501.58
Zhongdian IRICO (中電彩虹)	IRICO New Materials (彩虹新材料)	Premises leasing	1,080,642.96	1,080,642.96
IRICO Group (彩虹集團)	IRICO New Materials (彩虹新材料)	Property management fee	244,225.41	270,640.52
Zhongdian IRICO (中電彩虹)	IRICO New Materials (彩虹新材料)	Property management fee	28,466.59	
Hefei Photovoltaic (合肥光伏)	IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	Building and structures	5,565,237.74	4,346,049.02
Hefei Photovoltaic (合肥光伏)	Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	Building and structures	439,386.79	
彩虹(張家港)平板顯示有限公司	IRICO Yongneng (彩虹永能)	Vehicles leasing	12,931.03	25,641.02
Zhongdian IRICO (中電彩虹)	The Company	Property management fee	430,000.00	1,126,094.54
南京中電熊猫現代服務產業有限公司	Nanjing Green Energy (南京綠能)	Premises leasing	196,101.41	
Zhongdian IRICO (中電彩虹)	Zhuhai Caizhu (珠海彩珠)	Property management fee		242,484.65

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

3. *Guarantee with related parties*

Guarantor	Guaranteed parties	Amount of Guarantee	Balance of Guarantee	Commencement date	Maturity date	Whether the guarantee has been executed
Zhongdian IRICO (中電彩虹)	The Company	50,000,000.00	50,000,000.00	2018.9.10	2019.9.10	No
IRICO Group (彩虹集團)	The Company	50,000,000.00	50,000,000.00	2017.12.25	2021.3.31	No
IRICO Group (彩虹集團)	The Company	50,000,000.00	50,000,000.00	2018.1.9	2021.3.31	No
IRICO Group (彩虹集團)	The Company	50,000,000.00	50,000,000.00	2018.6.15	2022.6.12	No
IRICO Group (彩虹集團)	The Company	47,500,000.00		2016.6.7	2018.6.1	Yes
IRICO Group (彩虹集團)	The Company	100,000,000.00	75,000,000.00	2018.6.30	2022.6.30	No
IRICO Group (彩虹集團)	The Company	1,000,000.00	700,000.00	2016.6.30	2023.6.30	No
IRICO Group (彩虹集團)	The Company	800,000,000.00	210,000,000.00	2016.7.1	2023.7.1	No
IRICO Group (彩虹集團)	The Company	300,000,000.00	53,710,000.00	2016.12.15	2022.12.15	No
IRICO Group (彩虹集團)	The Company		**36,280,000.00**	2017.05.19	2022.12.15	No
IRICO Group (彩虹集團)	The Company		**115,948,000.00**	2017.10.09	2022.12.15	No
IRICO Group (彩虹集團)	The Company		**30,000,000.00**	2018.1.30	2022.12.15	No
IRICO Group (彩虹集團)	The Company		**50,000,000.00**	2018.4.10	2022.12.15	No
IRICO Group (彩虹集團)	The Company		**14,062,000.00**	2018.08.01	2022.12.15	No
IRICO Group (彩虹集團)	The Company	70,000,000.00	70,000,000.00	2018.3.16	2021.3.16	No
IRICO Group (彩虹集團)	The Company	40,000,000.00	30,000,000.00	2018.10.8	2021.10.8	No
IRICO Group (彩虹集團), Zhongdian IRICO (中電彩虹)	The Company	20,000,000.00	20,000,000.00	2018.01.02	2021.01.21	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	100,000,000.00	16,000,000.00	2018.7.23	2021.7.24	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)		**10,000,000.00**	2018.5.4	2021.5.5	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)		**30,000,000.00**	2017.11.22	2022.11.23	No

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

3. *Guarantee with related parties (Continued)*

Guarantor	Guaranteed parties	Amount of Guarantee	Balance of Guarantee	Commencement date	Maturity date	Whether the guarantee has been executed
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)		7,000,000.00	2017.11.29	2022.11.30	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	40,000,000.00	30,000,000.00	2018.8.15	2020.8.15	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)		10,000,000.00	2018.8.15	2020.8.15	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	100,000,000.00	50,000,000.00	2018.8.31	2021.9.1	No
IRICO Group (彩虹集團), Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	210,000,000.00	177,067,944.44	2018.4.16	2023.4.17	No
IRICO Group (彩虹集團), Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	200,000,000.00	200,000,000.00	2018.10.16	2021.10.18	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)	300,000,000.00	74,000,000.00	2017.8.21	2024.8.22	No
Zhongdian IRICO (中電彩虹)	Hefei Photovoltaic (合肥光伏)		114,245,000.00	2017.8.21	2024.8.22	No
IRICO Group (彩虹集團), The Company	Nanjing New Energy (南京新能源)	46,000,000.00	46,000,000.00	2018.12.13	2025.12.13	No
The Company	IRICO New Materials (彩虹新材料)	50,000,000.00	49,700,000.00	2017.8.21	2019.8.21	No
The Company	IRICO New Materials (彩虹新材料)	15,000,000.00	10,000,000.00	2018.11.21	2019.11.20	No
The Company, Hefei Photovoltaic (合肥光伏)	Yan'an New Energy (延安新能源)	50,000,000.00	50,000,000.00	2018.11.30	2021.11.30	No
IRICO Group (彩虹集團)	IRICO Yongneng (彩虹永能)	60,000,000.00	40,000,000.00	2018.7.24	2019.7.23	No

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

4. Borrowings from or lending to related parties

Related Party	Borrowing/ lending	Amount	Commencement date	Maturity date	Interest rate
IRICO Group (彩虹集團)	Borrowing	200,000,000.00	2018.9.1	2019.9.1	3.48%
IRICO Group (彩虹集團)	Borrowing	151,000,000.00	2018.1.1	2018.12.20	3.48%*(note)*
IRICO Group (彩虹集團)	Borrowing	300,000,000.00	2018.1.1	2018.12.20	1.20%*(note)*
Zhongdian IRICO (中電彩虹)	Borrowing	106,114,055.83	2018.1.1	2018.12.20	3.48%*(note)*
Zhongdian IRICO (中電彩虹)	Borrowing	40,000,000.00	2018.12.14	2019.12.14	5.50%
Zhongdian IRICO (中電彩虹)	Borrowing	30,000,000.00	2018.12.19	2019.12.19	5.50%
Zhuhai Caizhu (珠海彩珠)	Borrowing	40,000,000.00	2018.1.1	2018.12.31	Interest-free
Kunshan IRICO Industry Co., Ltd. (昆山彩虹實業有限公司)	Borrowing	10,000,000.00	2018.1.1	2018.12.31	4.35%
Zhuhai Caizhu (珠海彩珠)	Lending	30,000,000.00	2018.1.1	2018.12.31	4.35%

Note: The Company has entered into borrowing agreements with IRICO Group and Zhongdian IRICO in respect of the three borrowings in 2019, for a term of one year.

5. Assets transfer and debts restructuring with related parties

Related Party	Transaction subject	Amount for the period: Amount	Amount for the period: As a percentage of same tape of transactions *(%)*	Amount for the same period last year: Amount	Amount for the same period last year: As a percentage of same tape of transactions *(%)*
Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	Disposal of equipment			29,729,838.85	88.59
Zhongdian IRICO (中電彩虹)	Disposal of equity interest	131,882,093.71	100	71,439,750.00	100
IRICO Group (彩虹集團)	Gains from debt restructuring			25,631,147.22	98.09

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(V) Related party transactions (Continued)

6. *Compensation for key management personnel*

Remuneration for key management personnel	Amount for the period	Amount for the same period last year
Total	**4,089,854.00**	4,149,868.09

7. *Other related party transactions*

The Group's balance of deposits with China Electronics Financial Co., Ltd. (中國電子財務有限責任公司) for the period amounted to RMB2,964,209.36, and interest derived from deposits amounted to RMB84,684.20; the closing balance of loans and interest accrued on loans for the year amounted to RMB100,000,000.00 and RMB6,580,627.74, respectively.

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(VI) Receivables from and payables to related parties

1. *Receivables from related parties*

Item	Related Party	Closing balance Carrying amount	Closing balance Allowance for bad debts	Opening balance Carrying amount	Opening balance Allowance for bad debts
Bills receivables	Xianyang IRICO Solar Photovoltaic Technology Co., Ltd.* (咸陽彩虹光伏科技有限公司)			3,600,000.00	
Accounts receivables	Zhongdian IRICO	4,676,836.18		48,178,836.18	
Accounts receivables	IRICO Group	7,137,268.75			
Accounts receivables	Nanjing CEC Panda LCD Technology Co., Ltd. (南京中電熊猫液晶顯示科技有限公司)	3,107,408.00		6,456,060.00	
Accounts receivables	Nanjing CEC Panda Flat Panel Display Technology Co., Ltd. (南京中電熊猫平板顯示科技有限公司)	4,498,547.97		6,784,011.00	
Accounts receivables	Xianyang Caihong Optoelectronics Technology Co., Ltd.(咸陽彩虹光電科技有限公司)	7,546,960.00			
Accounts receivables	Nanjing Huadong Electronics Group Co., Ltd. (南京華東電子進出口有限公司)	4,342,692.00			
Accounts receivables	Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	80,541.51			
Prepayments	Xianyang IRICO Labour Service Company (咸陽彩虹集團勞動服務公司)	56,710.54		56,710.54	
Prepayments	Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	96,000.00		360,000.00	
Prepayments	Zhongdian IRICO	17,000.59		1,284.64	
Prepayments	Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	860,000.00			
Prepayments	IRICO Group			792,846.21	
Other receivables	IRICO Group	87,795,221.49		7,977,337.06	
Other receivables	Xi'an IRICO Information Co., Ltd (西安彩虹資訊有限公司)	3,127,691.14		3,127,691.14	
Other receivables	China Electronics Commercial (中電通商)	18,000,000.00		18,000,000.00	
Other receivables	Zhongdian IRICO	90,000,000.00			
Other receivables	Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	6,000.00		6,000.00	
Other receivables	IRICO Liquan	3,465,783.00		3,565,783.00	
Other receivables	IRICO Changwu	1,650,000.00		3,060,000.00	
Other receivables	Shaanxi IRICO Optoelectronic Materials Company* (陝西彩虹光電材料總公司)	3,060,000.00			
Other receivables	IRICO Wuhan	450,000.00		800,000.00	
Other receivables	Hefei IRICO Epilight Technology Co., Ltd. (合肥彩虹藍光科技有限公司)	780,000.00			
Other non-current assets	China Electronics System Engineering No.2 Construction Co., Ltd. (中國電子系統工程第二建設有限公司)			550,000.00	
Total		240,754,661.17		103,316,559.77	

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(VI) Receivables from and payables to related parties (Continued)

2. *Payables to related parties*

Item	Related Party	Closing balance	Opening balance
Short-term borrowings	China Electronics Financial Co., Ltd. (中國電子財務有限責任公司)	100,000,000.00	198,298,613.98
Accounts payables	IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	19,958,863.51	10,443,758.20
Accounts payables	IRICO Group	1,508,252.71	1,637,767.80
Accounts payables	Xianyang IRICO Industry Company Limited (咸陽彩虹集團實業有限公司)	136,265.41	18,928.71
Accounts payables	Nanjing Huadong Electronics Group Co., Ltd. (南京華東電子進出口有限公司)		1,757,400.00
Accounts payables	Zhongdian Xiongmao Trade Development Limited Company (南京中電熊貓貿易發展有限公司)	8,619,412.16	8,839,471.31
Accounts payables	Rui Bou Electronics (HK) Limited (瑞博電子 (香港)有限公司)		55,637,848.26
Accounts payables	Shaanxi IRICO Optoelectronic Materials Company* (陝西彩虹光電材料總公司)	79.69	79.69
Accounts payables	Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	9,754,072.22	2,753,478.21
Accounts payables	Xi'an IRICO Information Co., Ltd (西安彩虹資訊有限公司)	780,708.17	780,708.17
Accounts payables	Xianyang IRICO Labour Service Company (咸陽彩虹集團勞動服務公司)	3,211.11	3,211.11
Accounts payables	Xianyang IRICO Hospital (咸陽彩虹醫院)	69,745.50	590,075.00
Accounts payables	Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	12,234,341.20	7,697,137.43
Accounts payables	Zhongdian IRICO	5,707,736.96	10,461,656.71
Accounts payables	China Electronics System Engineering No. 3 Construction Co., Ltd. (中國電子系統工程第三建設有限公司)	2,037,431.50	408,000.00
Accounts payables	Xianyang Caiqin Electronics Device Co., Ltd. (咸陽彩秦電子器件有限責任公司)	4,740,348.60	
Accounts payables	Nanjing Zhongdian Xiongmao Property Management Co., Ltd. (南京中電熊貓物業管理有限公司)	186,450.00	
Accounts payables	Xianyang IRICO Solar Photovoltaic Technology Co., Ltd.* (咸陽彩虹光伏科技有限公司)	175,113.25	
Accounts payables	Xianyang IRICO Electronic Accessories Co., Ltd. (咸陽彩虹電子配件有限公司)	827,705.60	
Receipts in advance	IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	1,330,350.01	
Other payables	IRICO Group	671,993,191.55	763,050,310.86
Other payables	Zhongdian IRICO	177,056,069.57	149,616,055.83

XI. RELATIONSHIPS AND TRANSACTIONS WITH RELATED PARTIES (Continued)

(VI) Receivables from and payables to related parties (Continued)

2. Payables to related parties (Continued)

Item	Related Party	Closing balance	Opening balance
Other payables	Kunshan IRICO Industry Co., Ltd. (昆山彩虹實業有限公司)	42,652,778.11	41,985,458.10
Other payables	Xianyang IRICO Electronic Accessories Co., Ltd. (咸陽彩虹電子配件有限公司)	7,883,156.51	8,583,805.65
Other payables	China Electronics System Engineering No.2 Construction Co., Ltd. (中國電子系統工程第二建設有限公司)	50,000.00	50,000.00
Other payables	Hefei IRICO Epilight Industry Co., Ltd. (合肥彩虹藍光實業有限公司)	30,000.00	30,000.00
Other payables	IRICO Wuhan	10,406,002.65	9,456,002.65
Other payables	Zhuhai Caizhu	99,927,674.25	
Other payables	IRICO Electronics Materials Company (彩虹電子物資公司)	2,215,275.62	2,215,275.62
Other payables	China Electronics Commercial (中電通商)	453108.41	
Other payables	China Electronics System Engineering No. 3 Construction Co., Ltd. (中國電子系統工程第三建設有限公司)	1,310.00	1,310.00
Interest payable	Zhongdian IRICO	2,159,575.59	159,091.74
Interest payable	IRICO Group	10,329,885.59	603,935.93
Other non-current liabilities due within one year	China Electronics Commercial (中電通商)	125,250,000.00	60,200,000.00
Long-term borrowings	China Electronics Commercial (中電通商)	160,450,000.00	210,700,000.00
Bills payable	IRICO (Hefei) LCD Glass Co., Ltd. (彩虹(合肥)液晶玻璃有限公司)	33,500,000.00	31,270,000.00
Bills payable	IRICO Display Devices Co., Ltd. (彩虹顯示器件股份有限公司)		1,358,000.00
Bills payable	Hefei IRICO Epilight Industry Co., Ltd. (合肥彩虹藍光實業有限公司)	270,000.00	
Bills payable	Zhongdian Xiongmao Trade Development Limited Company (南京中電熊猫貿易發展有限公司)	9,200,000.00	6,910,000.00
Bills payable	Shaanxi IRICO Energy Services Corporation (陝西彩虹能源服務有限公司)	11,804,031.53	25,986,040.73
Bills payable	Xianyang Cailian Packaging Materials Co., Ltd. (咸陽彩聯包裝材料有限公司)	7,600,000.00	3,587,808.80
Bills payable	Zhongdian IRICO (中電彩虹)	700,000.00	
Bills payable	China Electronics System Engineering No. 3 Construction Co., Ltd. (中國電子系統工程第三建設有限公司)	708,000.00	2,044,000.00
Total		1,542,710,146.98	1,617,135,230.49

XII. COMMITMENTS

The Group has entered into the business contracts, and the outstanding substantial payments as agreed are set out as below:

Project name	Contractual investment *(RMB0'000)*	Investment recognized *(RMB0'000)*	Investment not recognized *(RMB0'000)*
Hefei Photovoltaic Glass Project	97,448.77	80,133.60	17,315.17
Nanjing CEC Panda distributed power stations	7635.16	6327.46	1307.70
Nanjing Lide Dongfang distributed photovoltaic power generation project	1405.21	957.00	448.21
Quartz sand mines integration and quartz sand plant construction project of Hanzhong Jiarunze	1,377.48	1,321.92	55.56
Solar photovoltaic glass furnace	65,202.39	37,169.11	28,033.28
Total	173,069.01	125,909.09	47,159.92

XIII. POST BALANCE SHEET EVENTS

(I) Proposed Non-Public Issue of Shares

According to the announcements of the Company on 24 July 2017, 6 October 2017, 1 February 2018, 18 April 2018 and 23 January 2019 in relation to the issuance of new H shares, the Company will issue not more than 2.3 billion new H shares, and the proceeds to be raised therefrom will be used in Yan'an Photovoltaic Glass Project, Hefei Photovoltaic Glass Project (Phase II), Xianyang Photovoltaic Glass Relocation and Technical Innovation Project, IRICO Yongneng 2GW Photovoltaic modules and to supplement the working capital of the Company. Pursuant to the subscription agreements, each of Zhongdian IRICO, Zhangjiagang Investment, Yan'an Dingyuan and Hefei Xincheng has conditionally agreed to subscribe in cash for, and the Company has conditionally agreed to allot and issue, not more than 900 million, 500 million, 300 million and 200 million new H shares at a consideration of RMB900 million, RMB500 million, RMB300 million and RMB200 million, respectively. As at 23 January 2019, the number of issued shares of the Company was 2,232,349,400 shares, comprising 1,601,468,000 domestic shares and 630,881,400 H shares. The total number of H shares entitling the H shareholders to attend and vote on the resolutions proposed at the H shares class meeting was 630,881,400 shares.

XIV. OTHER SIGNIFICANT EVENTS

(I) Segment Reporting

1. *Preparation basis and accounting policy of the segment reporting*

The Group's operating segments are mainly based on the information reported to the chief operating decision maker for the purposes of resource allocation and assessment of segment performance, and focus on types of goods. The Group has the following four major operating segments: (a) solar photovoltaic business, (b) new materials business – production and sales of luminous materials and lithium battery anode materials, (c) trading business – trading of solar modules and other related accessories, and (d) others.

2. *Financial information of the segment reporting*

Amount for the period	Solar photovoltaic business	New materials business	Trading business	Others	Intersegment eliminations
I. Operating revenue	1,729,784,431.54	452,088,053.33	107,363,398.77	42,683,173.15	
II. Operating cost	1,545,831,038.05	417,802,394.33	101,840,795.74	23,538,973.28	
III. Gain from investments in associates and joint ventures	-1,544,793.72				
IV. Asset impairment losses and credit impairment losses	11,678,764.66	2,316,695.48		79,862.63	2,990,744.28
V. Depreciation and amortization	85,703,562.80	1,362,098.66	3,618,434.35	135,113.19	
VI. Total profit	21,786,110.51	26,571,080.38	4,935,030.21	10,198,700.59	23,466,852.72
VII. Income tax expenses	171,493.96	387,470.07			-387,470.07
VIII. Net profit	21,614,616.55	26,183,610.31	4,935,030.21	10,198,700.59	23,854,322.79
IX. Total assets	3,553,854,874.16	429,297,777.95	234,975,291.17	2,313,192,535.31	-1,661,404,470.80
X. Total liabilities	2,103,876,546.76	171,679,162.58	129,936,517.28	2,582,192,428.51	-331,355,399.45

Amount for the same period last year	Solar photovoltaic business	New materials business	Trading business	Others	Intersegment eliminations
I. Operating revenue	1,682,440,126.97	319,014,136.55	361,947,434.95	108,064,214.86	
II. Operating cost	1,446,727,619.55	301,114,958.59	355,553,435.69	90,406,264.17	
III. Gain from investments in associates and joint ventures	-13,582,527.28				
IV. Asset impairment losses and credit impairment losses	11,852,256.75	11,241,915.77	2,418,900.62	-896,768.59	
V. Depreciation and amortization	70,853,517.13	1,496,404.49	3,308,083.74	1,898,902.88	
VI. Total profit	179,484,657.35	8,803,392.03	2,681,886.80	-73,226,981.39	-11,586,085.37
VII. Income tax expenses	5,874,431.25	-549,160.19			549,160.19
VIII. Net profit	173,610,226.10	9,352,552.22	2,681,886.80	-73,226,981.39	-12,135,245.56
IX. Total assets	3,065,594,028.40	393,402,197.29	463,042,612.60	2,426,405,586.08	-1,752,426,462.87
X. Total liabilities	1,481,911,982.11	161,967,192.23	248,500,425.64	2,763,396,320.31	-301,317,293.18

XIV. OTHER SIGNIFICANT EVENTS (Continued)

(I) Segment Reporting (Continued)

3. Operating revenue classified by customers' geographical location

Geographical location	Amount for the period	Amount for the same period last year
PRC Northeast Region		4,000,555.01
PRC Eastern Region	1,489,156,265.98	1,203,833,700.13
PRC Southern Region	108,057,085.95	373,981,597.91
PRC Northwest Region	189,650,900.91	286,680,980.08
PRC Northern Region	134,587,649.83	286,726,564.18
PRC Central Region	47,377,691.17	19,696,878.14
PRC Southwest Region	62,871,599.07	32,816,189.82
Overseas Region	300,217,863.88	263,729,448.06
Total	2,331,919,056.79	2,471,465,913.33

4. Non-current assets classified by its geographical location

Geographical location	Closing balance	Opening balance
PRC Eastern Region	2,163,695,436.72	898,284,415.91
PRC Southern Region		113,715,322.44
PRC Northwest Region	876,132,410.89	1,630,566,391.45
Total	3,039,827,847.61	2,642,566,129.80

5. Degree of reliance on major customers

The operating revenue from a major customer of the solar photovoltaic product segment for the year was RMB303,438,979.06, representing 13.01% of the operating revenue of the Group for the period.

(II) Auditor's remuneration

Auditor's remuneration	Amount for the period	Amount for the same period last year
Total	2,820,000.00	2,820,000.00

XIV.OTHER SIGNIFICANT EVENTS (Continued)

(III) Rumination of directors, supervisors and senior management

1. *Rumination of directors, supervisors and senior management*

Directors/supervisors	Fees	Salary and allowance	Social insurance and housing provident	Total
Directors				
Si Yuncong				
Zou Changfu				
Huang Mingyan				
Chen Changqing				
Fan Laiying				
Chen Xiaoning				
Feng Bing	100,000.00			100,000.00
Wang Jialu	100,000.00			100,000.00
Wang Zhicheng	100,000.00			100,000.00
Subtotal	300,000.00			300,000.00
Supervisors				
Ding Wenhui				
Tang Haobo		231,825.14	72,174.84	303,999.98
Zhao Lefei		258,823.91	72,174.84	330,998.75
Sun Haiying	80,000.00			80,000.00
Wu Xiaoguang	80,000.00			80,000.00
Subtotal	160,000.00	490,649.05	144,349.69	794,998.74
Senior management				
Zou Changfu		475,813.89	72,174.84	547,988.73
Hong Yuan		13,868.37	5,871.60	19,739.97
Ma Zhibin		300,714.05	72,174.84	372,888.89
Gu Qiang		317,440.74	72,174.84	389,615.58
Chen Xiaoning		318,717.17	74,970.71	393,687.88
Yuan Guanqing		393,853.21	99,486.71	493,339.92
Wu Wenchao		313,676.99	72,174.84	385,851.83
Ni Huadong		287,947.10	103,795.34	391,742.44
Subtotal		2,422,031.52	572,823.72	2,994,855.24
Total	460,000.00	2,912,680.57	717,173.41	4,089,853.98

2. *Remuneration of the five highest paid individuals*

All of the five highest paid individuals of the Company during the year are included in the above list of remuneration of directors and supervisors.

XIV. OTHER SIGNIFICANT EVENTS (Continued)

(IV) Other significant transactions and matters which have impacts on the decisions of investors

None.

(V) Improvement Measures to Ensure Going-Concern Ability

As stated in Note II, during the year 2018, the Company achieved consistent increase in production capacity of the production lines, continuous improvement in respect of the proportion of qualified products, significant reduction of production cost and steady progress of project construction, technological innovation and enhancement of quality and efficiency. Meanwhile, the Company obtained gains on investment of RMB144.15 million from the transfer of 51% equity interests in Zhuhai Caizhu Industrial Co., Ltd.* (珠海彩珠實業有限公司) (Zhuhai Caizhu). For the year 2018, the Company recorded total profit of RMB86.96 million in aggregate. As at 31 December 2018, the net current liabilities of the Company amounted to RMB2,135.64 million, indicating that the Company would be under heavy debt repayment pressure in the short term. As such, the Company adopted the following measures to ensure capital security and improve operating performance:

(1) The Company has obtained a financial support commitment letter from IRICO Group, the controlling shareholder of the Company;

(2) The Company will actively push forward its additional issuance of shares and has obtained approval from the SASAC. Upon completion of the additional issuance, the Company will speed up the construction of projects financed by the proceeds and put them into production, thus creating new profit growth points for the Company. Meanwhile, the Group's asset-liability ratio and finance costs will be significantly reduced.

(3) As Phase II of Hefei Photovoltaic Glass and Yan'an Photovoltaic Glass project commenced operation at the end of 2018 and in 2019, respectively, the Group's future production, sales volume, revenue and the market share of its products are expected to increase significantly;

(4) The Company will continue to promote lean production management, and further reduce product costs through technological innovations, improving rate of qualified products, implementing centralized purchase of bulk materials, carrying out comprehensive benchmarking and other measures.

XV. SUPPLEMENTAL INFORMATION

(I) Breakdown of non-recurring profit or loss for the current period

Item	Amount	Note
1. Profit/loss on disposal of non-current assets, including write-off of provision for asset impairment	55,533.98	
2. Tax refund, deduction and exemption as a result of ultra vires or without formal approval or of an incidental nature		
3. Government grant recognized in current profit or loss, except for those acquired in the ordinary course of business and granted on fixed amount basis or enjoyed on continuous fixed amount basis subject to certain standards	44,164,887.91	
4. Funds occupation fee accounted for in the profit or loss of the current period charged to non-financial enterprises		
5. Gains arising from the difference between the investment cost for acquisition of subsidiaries, associates and joint ventures by an enterprise and the fair value of the identifiable net assets of the invested entity at the time of acquisition		
6. Profit or loss from swap of non-monetary assets		
7. Profit or loss from entrusted investment or asset management		
8. Provision for assets impairment due to force majeure including natural disasters		
9. Profit or loss from debt restructuring		
10. Expenses arising from enterprise restructuring, such as staff resettlement, integration, etc.		
11. Profit or loss from the excess of the fair value compared to the unfair consideration of a transaction		
12. Current net profit or loss of subsidiaries resulting from merger of enterprises under common control from the beginning of the period to the date of merger		
13. Profit or loss from contingencies irrelevant to the normal operations of the Company		
14. Apart from hedging instruments relating to the normal operations of the Company, profit or loss from change in fair value of held-for-trading financial assets and held-for-trading financial liabilities, and investment income from disposal of held-for-trading financial assets, held-for-trading financial liabilities and available-for-sale financial assets	670,087.59	

XV. SUPPLEMENTAL INFORMATION (Continued)

(I) Breakdown of non-recurring profit or loss for the current period (Continued)

Item	Amount	Note
15. Reversal impairment provision for accounts receivable tested for impairment separately		
16. Profit or loss from external entrusted loans		
17. Profit or loss from changes in fair value of investment properties using the fair value model for subsequent measurement		
18. Effect of one-off adjustment to current profit or loss in accordance with laws and regulations on taxation and accounting, etc.		
19. Investment income from disposal of long-term equity investment	144,153,897.33	
20. Other non-operating income and expenses save for the above	1,801,470.97	
21. Other profit or loss items falling within the meaning of non-recurring profit or loss		
22. Effect of income tax	-3,887,019.18	
23. Effect of minority interests	-12,371,889.86	
Total	174,586,968.74	

(II) Return on net assets and earnings per share

	Weighted average return on net assets (%)		Earnings per share			
			Basic earnings per share		Diluted earnings per share	
Profit for the reporting period	For the year	For the previous year	For the year	For the previous year	For the year	For the previous year
Net profit attributable to holders of ordinary shares of the Company	**155.65**	79.87	**0.04**	0.04		
Net profit attributable to holders of ordinary shares of the Company after deducting non-recurring profit or loss items	**-55.80**	-77.01	**–0.04**	–0.04		

Five-Year Financial Summary

Unit: RMB0'000

Item	2018	2017	2016	2015	2014
Operating revenue	**233,192**	247,147	187,105	163,084	232,983
Total profit (total loss is represented by "-")	**8,696**	10,616	9,818	52,470	-171,678
Income tax expenses	**17**	587	137	30	144
Net profit (net loss is represented by "-")	**8,679**	10,028	9,681	52,440	-171,823
Including: Net profit attributable to the shareholders of the Company (net loss is represented by "-")	**8,130**	9,001	9,831	68,299	-83,534
Minority interests (net loss is represented by "-")	**549**	1,027	-149	-15,859	-88,289
Total assets	**487,078**	459,661	364,681	316,597	794,415
Total liabilities	**465,699**	435,502	350,954	304,524	731,385
Owner's equity	**21,378**	24,159	13,727	12,073	63,030
Including: Equity attributable to equity shareholders of the Company	**9,324**	12,654	6,769	3,155	-61,224
Minority interests	**12,054**	11,505	6,958	8,918	124,254

Earnings per share (RMB)	**0.0364**	0.0403	0.0440	0.3059	-0.3741

Corporate Information

Executive Directors

Si Yuncong	Chairman
Zou Changfu	Resigned as an executive director on 13 February 2019
Chen Xiaoning	Appointed as a non-executive director on 26 October 2018 and re-designated as an executive director on 13 February 2019

Non-executive Director

Huang Mingyan	Resigned as a non-executive director on 26 October 2018
Chen Changqing	Resigned as a non-executive director on 26 October 2018
Fan Laiying	

Independent Non-executive Directors

Feng Bing
Wang Jialu
Wang Zhicheng

Audit Committee

Wang Zhicheng
Fan Laiying
Feng Bing
Wang Jialu

Chief Financial Officer

Gu Qiang

Secretary to the Board

Ni Huadong

Company Secretary

Chu Xiaohang

Authorized Representatives

Zou Changfu	Ceased to be an authorized representative on 13 February 2019
Chen Xiaoning	Appointed as an authorized representative on 13 February 2019
Chu Xiaohang	

Corporate Information (Continued)

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