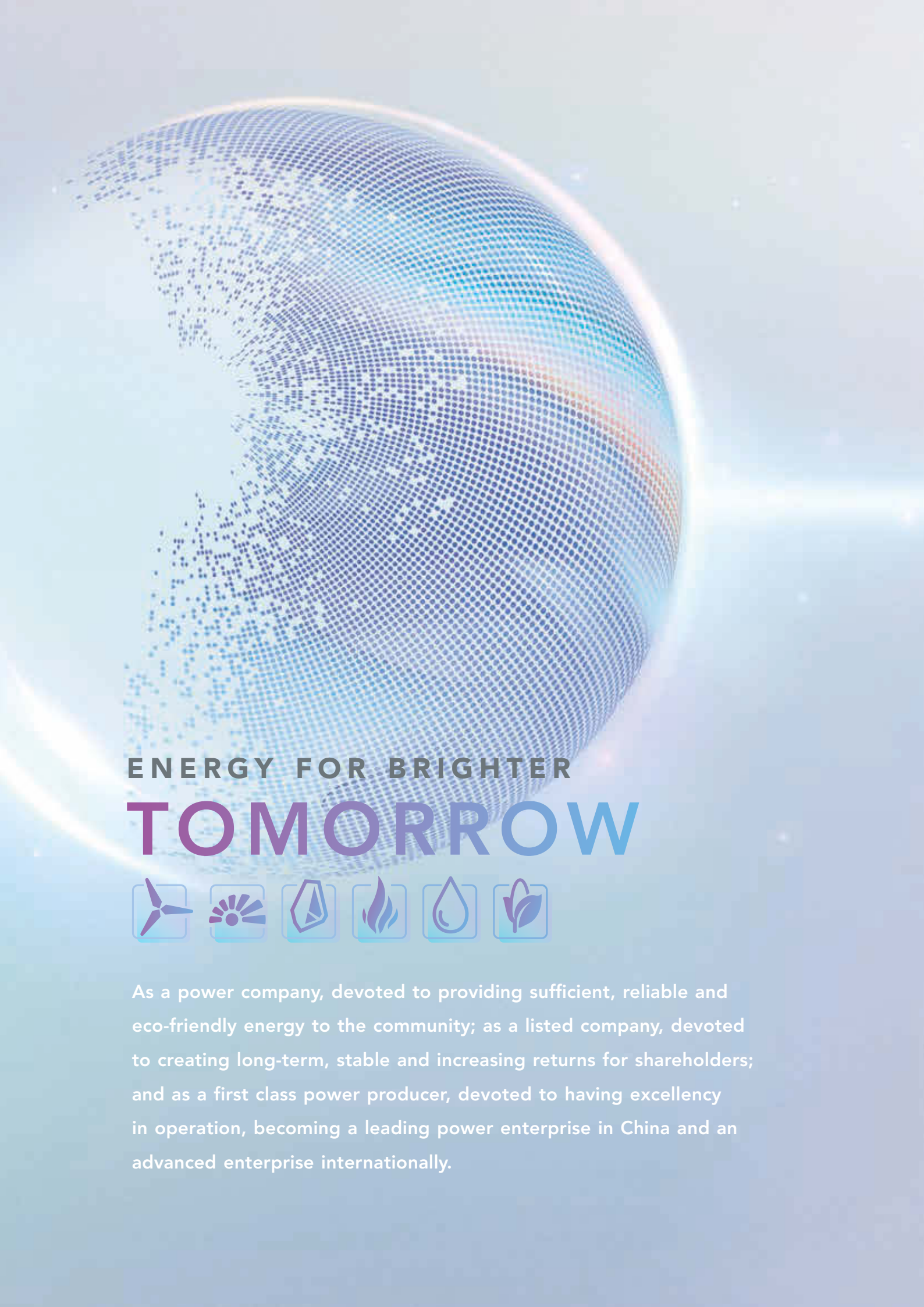


POWERING TOMORROW

Interim Report **2022**

 華能國際電力股份有限公司
Huaneng Power International, Inc.

STOCK CODE : 902



ENERGY FOR BRIGHTER
TOMORROW



As a power company, devoted to providing sufficient, reliable and eco-friendly energy to the community; as a listed company, devoted to creating long-term, stable and increasing returns for shareholders; and as a first class power producer, devoted to having excellency in operation, becoming a leading power enterprise in China and an advanced enterprise internationally.

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Prepared In Accordance With International Financial Reporting Standards

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INTERIM RESULTS FOR 2022

The Board of Directors of Huaneng Power International, Inc. (the “Company”) announces the unaudited operating results for the six months ended 30 June 2022 and a comparison with the operating results for the same period of last year. For the six months ended 30 June 2022, the Company and its subsidiaries recorded consolidated operating revenue of RMB116.87 billion, representing an increase of 22.68% compared to the same period of last year. The net loss attributable to equity holders of the Company was RMB3.22 billion, representing a decrease of 176.91% compared to the same period of last year. The losses per share was RMB0.27. The net asset (excluding equity interests attributable to minority shareholders and other equity instruments) per share was RMB3.89.

Please refer to the unaudited financial information below for details of the operating results.

BUSINESS REVIEW FOR THE FIRST HALF OF THE YEAR

In the first half of the year, in the face of the complex and severe market situation, the Company closely focused on the annual goals and tasks and proactively responded to and overcame a variety of challenges, such as the sharp rise in fuel prices, maintained general stability in safety production and pushed forward transformation and development in an orderly manner, actively fulfilling the responsibility of providing sufficient, reliable and environmentally friendly electric energy for the society.

1. Power Generation

In the first half of the year, the Company’s total on-grid power generation of the power plants within China on consolidated basis amounted to 196.544 billion kWh, representing a decrease of 5.61% over the same period last year. The average utilization hours of the Company’s power plants within China were 1,760 hours, representing a decrease of 220 hours over the same period last year. The Company’s market-based power transaction ratio was 87.81%, representing an increase of 26.76 percentage points over the same period last year.

The decrease in the Company’s power generation was mainly attributable to: in the second quarter, the demand for electricity in the areas where the Company’s power plants are located dropped significantly and the Company’s coal-fired power plants were greatly affected; the water supply of hydropower was relatively better, the installed capacity of wind power and photovoltaics continued to grow, and the power generation of clean energy increased year-on-year, occupying the growth space of thermal power; the fuel cost of thermal power units continued to operate at a high level, and the thermal power generation of the Company decreased year-on-year; in order to ensure the power supply during the peak summer period, the Company arranged the coal-fired power units to carry out maintenance work during the trough period in advance.

Meanwhile, the Company adhered to the overall balancing of volume and price, and continuously strengthened the coordination between the wholesale power market and the retail market, as well as the coordination of medium and long-term transactions and spot transactions, thereby effectively consolidating and improving the electricity price level comprehensively. In the first half of the year, the Company’s average on-grid electricity settlement price for its power plants within China was RMB505.69 per MWh, representing an increase of 20.70% over the same period last year.

2. Cost Control

In the first half of the year, the coal price was at a high level due to various factors including continuous tight supply of domestic and foreign coal resources. The Company scientifically researched and judged the market trend, actively solicited the support of national policies, vigorously carried out the signing and performance of medium and long-term thermal coal contracts and the supplementary signing of emergency guarantee contracts for imported coal, and continuously optimized the supply structure of domestic and foreign trade. With long-term agreement realization as the mainstay and spot replenishment as the supplement, the Company increased the inventory level in an orderly manner, and gave play to the role of inventory as a “reservoir” for control risks. The Company strengthened the internal coordination

within the coal power industry, stabilized the basic supply under long-term agreements, and endeavored to control coal purchase prices to ensure safe and stable supply. However, affected by the overall market situation, the Company's fuel purchase price rose sharply year-on-year, especially the coal purchase price of power plants in the seaborne coal area where the Company's installed capacity accounted for a large proportion. In the first half of the year, the fuel cost per unit of power sold by the Company's domestic power plants increased by 50.49% year-on-year.

3. Energy Conservation and Environmental Protection

In the first half of the year, the coal consumption of power supply of the thermal power units of the Company was 286.04g/kWh and the house consumption rate of plants was 4.24% with energy consumption maintaining a leading position in China. With respect to air pollution emissions, the power generation companies affiliated to the Company have maintained ultra-low-emissions. Pollutant emissions have met or outperformed the national emission standards. With respect to treatment of wastewater discharge and coal yards and ash yards, the Company has carried out technological transformation projects in power plants in key regions. Such projects have been promoted in an orderly manner as scheduled to ensure that pollutant emissions in relevant power plants meet the requirements under pollution discharge permits and other ecological and environmental protection policies.

4. Project Development and Construction

In the first half of the year, the Company proceeded smoothly in the construction of power generation projects. In the first half of the year, the Company added 3,503.72 MW of controlled generation capacity, including 350 MW of coal power controlled generation capacity, 1,945.9 MW of wind power controlled generation capacity, 1,136.42 MW of solar energy controlled generation capacity, 40 MW of biomass controlled generation capacity, 1.4 MW of hydropower controlled generation capacity and 30 MW arising from acquisition of Hebei Nangong agricultural photovoltaic project. As of 30 June 2022, the Company's controlled generation capacity was 122,199 MW, and low carbon clean energy (wind power, solar energy, hydropower, combined cycle, biomass power) accounted for 24.33% of the installed capacity.

5. Overseas Businesses

In the first half of the year, the accumulated power generation of Tuas Power Ltd. ("Tuas Power"), a wholly-owned subsidiary of the Company in Singapore, accounted for a market share of 23.2%, representing an increase of 2.7 percentage points compared to the same period last year. The pre-tax profit of Singapore business was RMB741 million, representing an increase in pre-tax profit of RMB796 million over the same period last year. In the first half of the year, Singapore's economy and electricity demand grew faster, and the market electricity price was relatively high. Tuas Power maintained the safe and stable operation of its generator units, and actively expanded its retail electricity business. The profit margin contribution of electricity sales increased significantly year-on-year.

In the first half of the year, the pre-tax profit of the operations in Pakistan was RMB255 million, representing a decrease of RMB152 million compared to the same period last year.

PROSPECTS FOR THE SECOND HALF OF 2022

At present, China's macroeconomic operation continues to stabilize and recover, and positive factors are increasing. In the second half of the year, a package of policy measures to continuously deepen and stabilize the economy will be implemented and effective, driving the gradual return of economic growth to a reasonable range. Adhere to the policy of seeking progress while maintaining stability, the Company will seize opportunities, overcome difficulties and create benefits, and further improve production safety, business management, green development, technological innovation, deepening reform, corporate governance, and other areas, striving to complete the annual work goals and tasks.

In terms of power market, in the second half of the year, upholding the principle of maximization of the overall interests, the Company will closely monitor the growth of power demand in various regions, and strive to generate more and additional profitable electricity by taking advantage of the favorable opportunities during the peak in summer and winter. The Company will strengthen industry synergy, actively respond to market changes, take advantage of the policy of the increase in tariff, and maintain the electricity price level. The Company will fully develop the electricity sales market, improve the operation level of the energy sales company, and fulfil contract for carbon market transactions in lower cost.

In terms of the coal market, in the second half of the year, as the state will further promote the increase in production and supply and implement price supervision policies, domestic coal supply will continue to remain high. The full coverage of medium and long-term contracts for thermal coal will play a supportive role in controlling fuel costs for coal power companies. It is expected that the coal market will maintain stable operation in the second half of the year. Affected by the tight global energy supply, the complementary role of imported coal will be weakened. In the face of the complicated coal market situation, the Company will seize the policy opportunity of full coverage of long-term contracts and the signing of emergency guarantee contracts for

imported coal, and strive to achieve 100% contract signing, 100% contract performance, and 100% implementation of price policy under the medium and long-term contract. The Company will endeavor to improve the fulfillment rate of long-term contracts, and give full play to the ballast role of long-term contracts in securing supply and stabilizing prices. The Company will continue to adjust the proportion of domestic and foreign trade structures, dynamically optimize the procurement structure of imported coal, and continuously improve the capability of price control. The Company will use the advantages of the internal industrial chain and the coal production capacity of Huaneng Group to stabilize the market and control coal prices. The Company will increase coal blending efforts without compromising safety and environmental protection, and make endeavors to reduce fuel costs.

In terms of the capital market, judging from the second quarter regular meeting of the Monetary Policy Committee of the PBOC, in the second half of the year, the state will continue to increase efforts in implementation of a prudent monetary policy. It will give full play to the dual functions of monetary policy tools in terms of volume and structure to provide stronger support for the real economy, and give full play to the efficiency and guiding role of the reform of the interest rate quoted in the loan market to promote the reduction of the comprehensive financing cost of enterprises. With respect to debts denominated in foreign currencies, given the Company has only a small amount of such debts, the fluctuation in the corresponding interest rates has a less impact on the Company. The Company will enhance capital operation, innovate financing instrument and expand financing channels. The Company will also proactively take advantage of green finance policy and speed up capital turnover by means of the issuance of ultra-short financing bonds, and etc.. Meanwhile, the Company will pay close attention to changes in domestic and overseas capital markets, adjust financing strategies in a timely manner on the premise of ensuring capital needs, seize the market window period and make good use of policies such as special re-lending tools for supporting clean and efficient use of coal and carbon emission reduction support tools, to make efforts to control financing costs, mitigate capital risks, and realise cost reduction and efficiency improvement.

In the second half of the year, the Company will continue to adhere to the concept of safe development, and continuously deepen risk examination and management in key areas. It will persevere in improving quality and efficiency, focus on maintaining coal quantity and controlling price, strengthen electric heating marketing management, continuously optimise capital management and control, and further improve the benefits of overseas projects. It will adhere to green and low-carbon development, promote the implementation of the carbon peaking action plan, intensify the development and construction of new energy, accelerate the optimization of thermal power structure, and expand comprehensive energy services. It will adhere to independent technological innovation, deepen the research on key core technologies, increase the achievement conversion and application promotion, accelerate digital transformation, and continuously improve the system and mechanism of scientific and technological innovation. It will persistently deepen enterprise reform and improve management, deepen the governance of the listed company, strengthen internal management of enterprises, and effectively improve management efficiency. It will persistently deepen the construction of corporate culture, solidly perform social responsibilities, and establish a good corporate image.

MANAGEMENT'S DISCUSSION AND ANALYSIS

(Prepared under International Financial Reporting Standards ("IFRS"))

General

The principal activities of the Company are construction, operation and management of large power plants within China. As of 30 June 2022, the Company had a controlled installed capacity of 122,199 MW, of which approximately 24.33% was from clean energy sources (wind, photovoltaic, hydro, combine cycle and biomass power generation). The Company's power plants are located in 26 provinces, autonomous regions and municipalities within China. The Company is also the sole owner of a power enterprise in Singapore and has invested in a power

company located in Pakistan. The Company is among the largest listed power companies in China.

In accordance with the provisions on trial operation sales revenue in the amendment to IAS No. 16 "Property, Plant and Equipment: Proceeds Before Intended Use" issued by the International Accounting Standards Board in May 2020, the Company has made retrospective adjustments to the data for the same period of last year.

For the six months ended 30 June 2022, the operating revenue of the Company amounted to RMB116,869 million, representing an 22.68% increase over the same period of last year. The net loss attributable to equity holders of the Company was RMB3.22 billion, representing a decrease of 176.91% as compared with the same period of last year. The losses per share was RMB0.27.

A. Operating Results

1. Operating results for the first half of 2022

For the second quarter of 2022, the Company's total power generation by power plants within China on a consolidated basis amounted to 88.827 billion kWh, representing a decrease of 13.81% from the same period last year. For the first half of 2022, the Company's total power generation by power plants within China on a consolidated basis amounted to 196.544 billion kWh, representing a decrease of 5.61% from the same period last year. For the first half of 2022, the Company's average on-grid electricity settlement price for its power plants within China amounted to RMB505.69 per MWh, representing an increase of 20.70% over the same period last year. For the first half of 2022, 87.81% of the total volume of electricity sold by the Company were completed through market-based transactions, representing an increase of 26.76 percentage points over the same period last year.

- 6 The decrease in the Company's power generation was mainly attributable to:
1. In the second quarter, the Company witnessed a huge decline in electricity demand in regions such as Shanghai, Guangdong, Jilin, Hainan, Liaoning, Jiangsu, Fujian, Hebei, Hunan, Zhejiang, Shandong and Heilongjiang, which resulted in a significant adverse impact on the operating performance of the Company's coal power plants in these regions.
 2. In the first half of 2022, there was relatively sufficient water supply for hydropower plants and the installed capacity of wind power and photovoltaic power plants continued to grow, resulting in the increase in clean energy power generation, which in turn deterred the growth of the Company's thermal power generation. Meanwhile, the fuel cost of thermal power units continued to run at a high level, resulting in a year-on-year reduction of the Company's thermal power generation.
 3. To ensure power supply during the peak summer season, the Company scheduled maintenance work for thermal power generation units in advance and during low-demand periods.
- The volume of electricity sold by the Company's power plants in China during the six months ended 30 June 2022 is listed below (in billion kWh):

Type of power generation/Region	Electricity Sold			
	April to June 2022	Change	January to June 2022	Change
Coal-fired	73.973	-17.70%	167.338	-8.04%
Combined Cycle	5.192	-20.91%	11.836	-11.66%
Wind-power	7.500	43.53%	13.761	30.61%
PV	1.648	77.43%	2.735	69.63%
Hydro-power	0.322	6.59%	0.510	17.32%
Biomass	0.191	17.30%	0.365	29.79%
Heilongjiang Province	2.783	-16.06%	5.684	-8.67%
Coal-fired	2.199	-24.83%	4.630	-16.01%
Wind-power	0.487	37.94%	0.870	35.34%
PV	0.084	127.74%	0.161	134.57%
Biomass	0.013	–	0.023	–
Jilin Province	2.488	1.49%	5.153	9.22%
Coal-fired	1.521	-21.75%	3.498	-6.37%
Wind-power	0.798	137.92%	1.342	101.13%
Hydro-power	0.031	87.94%	0.031	87.73%
PV	0.068	-10.24%	0.137	-1.43%
Biomass	0.069	-12.66%	0.145	-9.01%
Liaoning Province	3.142	-34.21%	7.239	-19.34%
Coal-fired	2.707	222.85%	6.416	-25.78%
Wind-power	0.373	211.50%	0.718	200.30%
Hydro-power	0.008	-32.45%	0.009	-27.89%
PV	0.053	21.53%	0.096	20.60%
Inner Mongolia	0.199	5.05%	0.393	14.27%
Wind-power	0.199	5.05%	0.393	14.27%

Type of power generation/Region	Electricity Sold			
	April to June 2022	Change	January to June 2022	Change
Hebei Province	2.609	-0.08%	5.717	6.00%
Coal-fired	2.296	-7.01%	5.142	0.75%
Wind-power	0.177	37.11%	0.346	30.06%
PV	0.136	961.47%	0.228	897.24%
Gansu Province	3.537	10.21%	7.299	-4.05%
Coal-fired	2.804	8.48%	6.048	-4.59%
Wind-power	0.733	17.37%	1.251	-1.33%
Ningxia	0.008	12.45%	0.012	10.62%
PV	0.008	12.45%	0.012	10.62%
Beijing	1.528	-11.80%	3.928	-3.96%
Coal-fired	-	-100.00%	0.588	-9.18%
Combined Cycle	1.528	-11.80%	3.339	-2.98%
Tianjin	1.082	-12.85%	2.771	-3.81%
Coal-fired	0.969	-9.71%	2.182	-2.29%
Combined Cycle	0.108	-33.92%	0.581	-9.21%
PV	0.005	2.03%	0.008	3.56%
Shanxi Province	1.360	-18.42%	4.154	-8.55%
Coal-fired	0.889	-33.53%	2.120	-23.71%
Combined Cycle	0.010	-	1.208	2.84%
Wind-power	0.168	16.86%	0.324	27.63%
PV	0.292	57.46%	0.502	49.96%
Shandong Province	18.560	0.32%	39.613	4.54%
Coal-fired	17.511	-2.08%	37.813	2.91%
Wind-power	0.630	63.04%	1.126	48.92%
PV	0.309	108.88%	0.478	76.01%
Biomass	0.109	30.32%	0.196	61.47%
Henan Province	5.63	3.82%	11.181	4.17%
Coal-fired	4.410	0.40%	9.085	4.11%
Combined Cycle	0.031	-55.17%	0.059	-34.84%
Wind-power	1.181	23.89%	2.025	6.34%
PV	0.008	5.71%	0.012	-4.48%
Jiangsu Province	8.834	-13.63%	18.313	-10.50%
Coal-fired	6.105	-18.05%	12.936	-15.67%
Combined Cycle	1.416	-18.59%	2.840	-3.80%
Wind-power	1.218	26.34%	2.382	16.86%
PV	0.094	27.75%	0.155	16.85%
Shanghai	2.693	-39.51%	8.295	-15.52%
Coal-fired	2.554	-36.64%	7.911	-13.92%
Combined Cycle	0.129	-68.79%	0.367	-40.14%
PV	0.010	23.00%	0.017	12.22%

Type of power generation/Region	Electricity Sold			
	April to June 2022	Change	January to June 2022	Change
Chongqing	2.288	-19.43%	5.966	-8.28%
Coal-fired	1.714	-22.25%	4.800	-4.65%
Combined Cycle	0.473	-17.32%	0.987	-26.54%
Wind-power	0.101	59.62%	0.179	40.97%
Zhejiang Province	7.283	-12.61%	14.003	-5.70%
Coal-fired	6.644	-16.24%	13.107	-8.16%
Combined Cycle	0.332	-11.37%	0.368	-31.95%
Wind-power	0.244	2,129.14%	0.425	3,782.11%
PV	0.062	286.58%	0.103	289.05%
Hubei Province	3.106	-15.96%	7.719	-7.74%
Coal-fired	2.719	-21.12%	7.065	-10.51%
Wind-power	0.198	30.47%	0.354	6.93%
Hydro-power	0.097	5.79%	0.155	18.42%
PV	0.092	1,527.99%	0.145	1,290.68%
Hunan Province	1.725	-25.03%	4.347	-13.17%
Coal-fired	1.418	-29.54%	3.749	-16.47%
Wind-power	0.189	12.47%	0.366	6.90%
Hydro-power	0.096	-11.65%	0.198	27.55%
PV	0.022	86.87%	0.034	63.76%
Jiangxi Province	5.580	10.87%	12.791	25.56%
Coal-fired	5.142	9.58%	12.059	25.96%
Wind-power	0.278	14.45%	0.486	12.23%
PV	0.160	64.09%	0.245	36.46%
Anhui Province	1.621	30.61%	3.509	26.12%
Coal-fired	1.267	23.12%	2.840	24.39%
Wind-power	0.298	71.44%	0.579	34.92%
Hydro-power	0.030	-21.90%	0.049	-29.63%
PV	0.026	-	0.040	-
Fujian Province	2.586	-44.33%	6.400	-28.04%
Coal-fired	2.582	-44.39%	6.393	-28.08%
PV	0.004	38.66%	0.008	29.10%
Guangdong Province	6.377	-30.67%	12.697	-22.44%
Coal-fired	5.270	-33.83%	10.801	-24.07%
Combined Cycle	1.097	-10.65%	1.880	-11.88%
PV	0.010	61.96%	0.015	30.56%
Guangxi	0.152	-23.36%	0.348	-9.00%
Combined Cycle	0.067	-37.91%	0.168	-20.73%
Wind-power	0.085	-6.14%	0.180	5.62%
Yunnan Province	1.071	-52.98%	3.841	-27.90%
Coal-fired	0.976	-54.67%	3.567	-29.46%
Wind-power	0.089	-28.80%	0.266	-1.19%
Hydro-power	0.007	436.78%	0.008	422.25%

Type of power generation/Region	Electricity Sold			
	April to June 2022	Change	January to June 2022	Change
Guizhou Province	0.206	48.85%	0.386	82.09%
Wind-power	0.036	-25.23%	0.100	-2.40%
PV	0.171	87.77%	0.286	160.78%
Hainan Province	2.380	-29.10%	4.788	-15.34%
Coal-fired	2.276	-26.86%	4.590	-12.75%
Combined Cycle	0.000	-99.89%	0.037	-85.49%
Wind-power	0.020	16.68%	0.048	24.01%
Hydro-power	0.052	59.58%	0.061	22.87%
PV	0.032	3.20%	0.053	-2.98%
Total	88.827	-13.81%	196.544	-5.61%

Note 1: In accordance with the relevant provisions of the Notice of the Ministry of Finance of the People's Republic of China on the Interpretation of Accounting Standards for Business Enterprises (No. 15), the on-grid electricity generated by the commissioning units was included in the electricity sold statistics, and the on-grid electricity generated by the commissioning units during the same period last year was restated and adjusted.

For the second quarter of 2022, the accumulated power generation of Tuas Power Ltd., the Company's wholly owned subsidiary in Singapore, accounted for a market share of 23.7%, representing an increase of 3.3 percentage points from the same period last year. For the first half of 2022, the total power generation of Tuas Power Ltd. accounted for a market share of 23.2%, representing an increase of 2.7 percentage points from the same period last year.

2. Comparative analysis of operating results

2.1 Operating revenue and tax and levies on operations

Operating revenue mainly consists of revenue from the sale of electricity. For the first half of 2022, the consolidated operating revenue of the Company and its subsidiaries amounted to RMB116.869 billion, representing an increase of 22.68% from RMB95.261 billion for the same period of 2021. The operating revenue from domestic operations of the Company increased by RMB11.949 billion over the same period of last year, mainly due to the increase in average tariff in China. The operating revenue from the operations of the Company in Singapore increased by RMB8.887 billion over the same period of last year, which was mainly attributable to the simultaneous increase in both the tariff and electricity sold. The operating revenue from the operations of the Company in Pakistan increased by RMB0.772 billion.

Tax and levies on operations mainly consist of City Construction Tax, Real Estate Tax, Land Use Tax, Education Surcharges, Environment Protection Tax, Resources Tax, Stamp Duties, and Vehicle and Vessel Tax, etc. For the first half of 2022, the tax and levies on operations of the Company and its subsidiaries were RMB0.647 billion, representing a decrease of RMB294 million from RMB0.941 billion for the same period of last year.

2.2 Operating expenses

For the first half of 2022, the total operating expenses of the Company and its subsidiaries were RMB116.568 billion, representing an increase of 37.12% from the same period last year. The operating expenses in domestic operations of the Company increased by RMB22.350 billion, or 28.80%, from the same period last year due to the increase in fuel costs. The operating expenses from the operations in Singapore increased by RMB8.144 billion. The increase was mainly due to the increase in tariff in Singapore, which in turn increased the cost of electricity procurement. The operating expenses from the operations in Pakistan increased by RMB1.061 billion primarily due to the increase in coal price.

2.2.1 Fuel costs

Fuel costs account for the majority of the operating expenses of the Company and its subsidiaries. For the first half of 2022, fuel costs of the Company and its subsidiaries increased by 40.70% to RMB80.736 billion due to the sharp increase in the purchase price of fuel. Fuel costs from domestic operations of the Company and its subsidiaries increased by RMB21.884 billion. Fuel costs in Singapore increased by RMB1.470 billion from the same period last year.

2.2.2 Depreciation

For the first half of 2022, depreciation expenses of the Company and its subsidiaries amounted to RMB11.972 billion, representing an increase of RMB0.877 billion. The depreciation expenses of the Company's domestic operations increased by RMB854 million compared to the same period last year. The depreciation expenses of the Company's operations in Singapore decreased by RMB23 million.

2.2.3 Labor

Labor costs consist of salaries of employees and contributions payable for employees' housing funds, medical insurance, pension and unemployment insurance, as well as training costs. For the first half of 2022, labor costs of the Company and its subsidiaries amounted to RMB6.734 billion, representing a decrease of RMB0.153 billion from RMB6.887 billion for the same period last year.

2.2.4 Maintenance

The maintenance costs of the Company and its subsidiaries for the first half of 2022 remained relatively stable at RMB1.776 billion. The maintenance costs of the Company and its subsidiaries were RMB1.778 billion for the same period last year.

2.2.5 Other operating expenses (including electricity power purchase costs and service fees paid to HIPDC)

For the first half of 2022, other operating expenses of the Company and its subsidiaries were RMB15.350 billion, representing an increase of RMB7.478 billion from RMB7.872 billion for the same period of last year. The other operating expenses from the Company's domestic operations decreased by RMB0.226 billion. Other operating expenses of the operations in Singapore increased by RMB6.643 billion compared to the same period last year, mainly due to an increase of RMB6.601 billion in electricity procurement costs. Other operating expenses of the Company's operations in Pakistan increased by RMB1.061 billion compared to the same period last year, mainly due to an increase in fuel costs led by the increase in coal price.

2.3 Financial expenses

Financial expenses of the Company and its subsidiaries were RMB5.024 billion for the first half of 2022, representing an increase of RMB701 million from RMB4.323 billion for the same period last year. Financial expenses for the Company's domestic operation increased by RMB887 million, mainly due to the increase in interest-bearing debts. Financial expenses for the Company's operations in Singapore decreased by RMB50 million. Financial expenses for the Company's operations in Pakistan decreased by RMB136 million.

2.4 Share of profits less losses of associates and joint ventures

For the first half of 2022, the share of profits less losses of associates and joint ventures was RMB0.674 billion, representing a decrease of RMB253 million from RMB0.927 billion for the same period last year, mainly due to the decrease in profits of the Company's associates and joint ventures, for examples, Shenzhen Energy Group Co., Ltd. ("Shenzhen Energy").

2.5 Income tax expenses

For the first half of 2022, the Company and its subsidiaries recognized income tax expenses of RMB360 million in the negative, representing a decrease of RMB1.417 billion from RMB1.057 billion for the same period last year. The income tax expenses for the Company's domestic operation decreased by RMB1.545 billion due to the loss incurred for such operation.

2.6 Net profit attributable to equity holders of the Company

For the first half of 2022, the net loss attributable to equity holders of the Company was RMB3.22 billion, representing a decrease of 176.91% from RMB4.187 billion of the same period last year. The loss attributable to equity holders of the Company from its domestic operations was RMB3.933 billion, representing a decrease of 196.21%, mainly due to the sharp increase in the purchase price of coal. The net profit attributable to equity holders

of the Company from its operations in Singapore was RMB613 million, representing an increase of RMB675 million as compared to a loss of RMB62 million for the same period last year, which was due to the significant increase in tariff in Singapore, which in turn increased the marginal contribution of electricity sales per unit. The net profit attributable to equity holders of the Company from its operations in Pakistan was RMB100 million.

2.7 Comparison of financial positions

As of 30 June 2022, consolidated total assets of the Company and its subsidiaries amounted to RMB490.021 billion, representing a decrease of 2.21% from RMB501.104 billion as of 31 December 2021. As of 30 June 2022, consolidated total liabilities of the Company and its subsidiaries were RMB360.978 billion, representing a decrease of 1.70% from RMB367.213 billion as of 31 December 2021. Our asset-liability ratio as of 30 June 2022 was 73.67%.

2.8 Major financial position ratios

	30 June 2022	31 December 2021 (Restated)
Ratio of liability to equity holders' equity	3.29	3.24
Current ratio	0.49	0.50
Quick ratio	0.41	0.41
	First six months of 2022	First six months of 2021
Multiples of interest earned	0.10	2.12

Formula of the financial ratios:

Ratio of liabilities to shareholders' equity = balance of liabilities as of the year end/balance of shareholders' equity (excluding non-controlling interests) as of the year end

Current ratio = balance of current assets as of the year end/balance of current liabilities as of the year end

Quick ratio = (balance of current assets as of the year end – net inventories as of the year end)/balance of current liabilities as of the year end

Multiples of interest earned = (profit before tax + interest expense)/interest expenditure (inclusive of capitalized interest)

The ratio of liabilities to shareholder's equity as of 30 June 2022 increased as compared to 31 December 2021 due to the decrease in shareholders' equity as a result of the loss from operations. The current ratio and quick ratio remained relatively stable. The multiples of interest earned decreased due to the incurrence of pre-tax loss for the first six months this year, as compared to a gain of pre-tax profits for the same period last year.

As of 30 June 2022, the net current liabilities of the Company and its subsidiaries were RMB85.762 billion. Based on the Company's successful financing history, credit line granted by banks that can be withdrawn at any time and good credit support, the Company believes that it is able to repay its debts in a timely manner when due, obtain long-term loans through financing activities and meet the funding needs of its business development.

B. Liquidity and Cash Resources

1. Liquidity

	For the Six Months Ended 30 June		
	2022 RMB billion	2021 RMB billion (Restated)	Change %
Net cash provided by operating activities	20.088	19.269	4.25
Net cash used in investing activities	(15.019)	(17.220)	(12.78)
Net cash used in financing activities	(5.47)	(1.755)	211.61
Currency exchange impact	0.071	0.073	(2.74)
Net increase in cash and cash equivalents	(0.328)	0.368	(189.13)
Cash and cash equivalents as at the beginning of the period	15.555	13.258	17.33
Cash and cash equivalents as at the end of the period	15.226	13.626	11.74

For the first half of 2022, net cash provided by operating activities of the Company and its subsidiaries was RMB20.088 billion, representing an increase of 4.25% from the same period last year, mainly attributable to the decrease of operating receivables and decrease of the amount of funds occupied by inventory as compared with the same period of last year. Net cash used in investing activities was RMB15.019 billion for the first half of 2022, representing a decrease of 12.78% from the same period last year, mainly due to decrease of large and medium-sized infrastructure projects during current period as compared with that of last period. Major financing activities conducted by the Company during the first half of 2022 were debt financing. For the first half of 2022, the Company's borrowed an additional RMB111.990 billion, issued super short-term bond of RMB10.300 billion and long-term bond of RMB6.9 billion, repaid RMB110.364 billion of loans and RMB18 billion of super-short-term bond, interest payment of RMB6.237 billion.

As of 30 June 2022, the cash and cash equivalents of the Company and its subsidiaries included RMB in the amount of 13.239 billion, SGD equivalent to RMB1.246 billion, US Dollars equivalent to RMB0.500 billion, Pakistan Rupees equivalent to RMB0.203 billion and Japanese Yen equivalent to RMB0.038 billion.

2. Capital expenditure and cash resources

2.1 Capital expenditure on infrastructure construction and renovation projects

The actual capital expenditure of the Company in the first half of 2022 was RMB11.435 billion, which was mainly used for the construction of infrastructure and renovation, including RMB1.502 billion for Zhejiang Cangnan Offshore, RMB853 million for Zhuanghe Wind-power, RMB537 million for Dalian Chuanbo, RMB520 million for Jiangxi Clean Energy, RMB475 million for Shidongkou I, RMB330 million for Zaoyang New Energy, RMB312 million for Yangpu Co-generation, RMB308 million for Yuhuan Power, RMB276 million for Diandong Yuwang Mining, RMB226 million for Jilin Renewable Energy, RMB217 million for Liaocheng Gaotang New Energy, RMB217 million for Dalian Co-generation, RMB215 million for

Da'an Clean Energy, RMB213 million for Qingdao Co-generation, RMB202 million for Diandong Power, RMB194 million for Dashiqiao New Energy, RMB184 million for Tongyu Clean Energy, RMB173 million for Ranghuluqu Clean Energy, RMB168 million for Caofeidian Clean Energy, RMB165 million for Napo Clean Energy, RMB157 million for Chaoan New Energy, RMB151 million for Hanhao New Energy, RMB146 million for Wulian New Energy, RMB145 million for Lantian Co-generation, RMB134 million for Beijing Co-generation. Capital construction and renovation expenditures for other projects totaled RMB3.415 billion.

2.2 Cash resources and anticipated financing costs

The above capital expenditures are sourced mainly from internal capital, cash flows provided by operating activities, and debt and equity financing. The Company expects to incur significant capital expenditures for construction and renovation in the coming years. The Company plans to proceed with such plan following the principles of commercial viability, while proactively developing other planned new projects to lay the foundation for the Company's long-term growth. The Company plans to continue funding its capital expenditure requirement using internal capital, cash flows provided by operating activities, and debt and equity financing.

Good operating results and sound credit status provide the Company with strong financing capabilities. As of 30 June 2022, the undrawn banking facilities available to the Company and its subsidiaries exceeded RMB300 billion, which were granted by commercial banks such as Bank of China, China Construction Bank and Industrial and Commercial Bank of China.

The Company completed the issuances of unsecured super short-term bonds in 6 installments on January 5, January 7, January 26, February 9, February 11 and March 17, in the principal amount of RMB2 billion, 2 billion, 300 million, 2 billion, 2 billion and 2 billion, with nominal annual interest rates of 2.10%, 2.08%, 2.32%, 2.00%, 2.00% and 2.00%, respectively. Each installment of the notes was denominated in RMB, issued at par value, and would successively mature in 58 days, 46 days, 180 days, 41 days, 32 days and 90 days from the value date.

The Company, through its subsidiary SinoSing Power, issued two tranches of secured corporate bonds of RMB300 million and RMB300 million on 20 February 2020 with coupon rate of 2.25% and 2.63%, respectively. The instruments were denominated in US dollars and issued at 99.653% and 99.277% of the par value with maturity of five years and ten years from the value date, respectively. The bonds are guaranteed by Huaneng Group.

The Company completed the issuances of mid-term notes in 5 installments on February 25, March 4, April 22, April 26 and June 23, in the principal amount of RMB1.5 billion, 3 billion, 1.5 billion, 500 million and 300 million, with nominal annual interest rates of 3.74%, 2.84%, 3.70%, 2.92% and 2.37%, respectively. Each installment of the notes was denominated in RMB, issued at par value, and would successively mature in ten years, three years, fifteen years, three years and three years from the value date.

As of 30 June 2022, short-term loans of the Company and its subsidiaries totaled RMB89.344 billion (end of 2021: RMB91.897 billion). Loans from banks carried interest rates ranging from 1.63% to 14.79% per annum (end of 2021: 2.00% to 11.35%).

As of 30 June 2022, short-term bonds payable by the Company and its subsidiaries were RMB506 million (end of 2021: RMB8.223 billion).

As of 30 June 2022, the Company and its subsidiaries' long-term loans (including long-term loans due within one year) totaled RMB158.810 billion (end of 2021: RMB154.072 billion), including RMB loans of RMB143.262 billion (end of 2021: RMB138.436 billion), USD loans of USD1.244 billion (end of 2021: USD1.376 billion), EUR loans of EUR5 million (end of 2021: EUR7 million), SGD loans of SGD1.466 billion (end of 2021: SGD1.456 billion), YEN loans of 2.101 billion yen (end of 2021: 2.151 billion yen). Among them, US dollar loans and SGD loans are floating rate loans, and other foreign currency loans are fixed rate loans. As of 30 June 2022, the annual interest rate for long-term bank borrowings was 0.75% to 5.46% (end of 2021: 0.75% to 4.98%).

The Company and its subsidiaries will closely monitor any change in the exchange rate and interest rate markets and carefully assess the currency rate and interest rate risks.

Combining the current development of the power generation industry and the growth of the Company, the Company will make continuous efforts to not only meet cash requirements of its daily operations, constructions and acquisitions, but also establish an optimal capital structure to minimize the cost of capital and manage financial risks through effective financial management activities, thus generating sustainable and stable returns for its shareholders.

2.3 Other financing requirements

Pursuant to the memorandum and articles of the Company, given the net loss attributable to its shareholders for the year of 2021 and considering the need for future investments in accordance with the Company's plan for transformation and development and the increase of the Company's debt-asset ratio in 2021, the board of directors of the company has recommended no dividends be distributed for 2021, which has been approved by the annual general meeting of the Company. As of the date of this report, the Company has no declared but unpaid dividend.

C. Performance of Significant Investments and Their Prospects

The Company acquired 25% equity interest in Shenzhen Energy Group for RMB2.39 billion on 22 April 2003. In 2011, Shenzhen Energy Group divided into a remainder company of the same name and a new company Shenzhen Energy Management Company (“SE Management”), and the Company holds 25% equity interests in each of the two successors. The Company acquired 200 million shares from Shenzhen Energy Corporation (“Shenzhen Energy”), a subsidiary of Shenzhen Energy Group in December 2007. Shenzhen Energy allotted shares with its capital surplus in 2011. In February 2013, Shenzhen Energy merged with SE Management through the combination of directional seasoned offering and cash payment to shareholders of SE management, Shenzhen State-owned Assets Administration Commission and the Company. After the merger, the Company held 992 million shares of Shenzhen Energy, representing 25.02% of its equity interests. These investments brought a net profit attributable to the Company of RMB230 million for the first half year of 2022 under IFRS. These investments are expected to provide stable returns to the Company.

The Company held 60% direct equity interest in Huaneng Sichuan Energy Development Co. Ltd (“Sichuan Energy Development”) as of 31 December 2006. In January 2007, Huaneng Group increased its capital investment in Sichuan Energy Development by RMB615 million, thus reducing the Company’s equity interest in Sichuan Energy Development to 49% and making Huaneng Group the controlling shareholder of Sichuan Energy Development. This investment brought a net profit attributable to the Company of RMB142 million for the first half year of 2022 under IFRS. This investment is expected to provide stable returns to the Company.

D. Employee Benefits

As of 30 June 2022, the Company and its subsidiaries had 56,746 employees within and outside the PRC. During the six months ended 30 June 2022, there was no change to the Company’s compensation plan and training program.

E. Guarantee for Loans and Restricted Assets

As of 30 June 2022, (i) the Company provided guarantee for long-term bank loans of Tuas Power Ltd in the amount of RMB6.393 billion, (ii) Huaneng Heilongjiang Power Company Limited, a subsidiary of the Company, provided guarantees to its subsidiary Daqing Lv Yuan Wind-Power Company Limited of RMB538 million, and (iii) Huaneng Shandong Power Company Limited, a subsidiary of the Company, provided guarantee for Huaneng Shandong Ruyi (HK) Energy Limited in the amount of RMB1.075 billion, a subsidiary of the Company, provided guarantee for Huaneng Shandong Ruyi (Pakistan) Energy (Private) Company Limited in the amount of RMB6.653 billion, a subsidiary of the Company, provided guarantee for Huaneng Shandong Ruyi (HK) investment Company Limited in the amount of RMB201 million.

As of 30 June 2022, the details of secured loans of the Company and its subsidiaries were as follows:

1. As of 30 June 2022, short-term loans of approximately RMB747 million (RMB829 million at the end of 2021) represented the notes receivable that were discounted with recourse. As these notes receivable had not yet matured, the proceeds received were recorded as short-term loans.

2. As of 30 June 2022, long-term loans of approximately RMB4.352 billion (RMB4.595 billion at the end of 2021) of the Company and its subsidiaries were secured by certain property, plant and equipment with net book value of RMB5.159 billion (RMB5.025 billion at the end of 2021).
3. As of 30 June 2022, long-term loans of approximately RMB4.420 billion (RMB4.516 billion at the end of 2021) were secured by the rights to receive payment for electricity generated of the Company and its subsidiaries; the long-term loans of RMB2.013 billion (RMB2.814 billion at the end of 2021) of the Company and its subsidiaries were secured by certain equity interests; the long-term loans of RMB50 million (RMB20 million at the end of 2021) were secured by the carbon emission trading rights.

As of 30 June 2022, the restricted bank deposits of the Company and its subsidiaries were RMB0.356 billion (RMB0.796 billion at the end of 2021).

As of 30 June 2022, book of bills receivable discounted or endorsed but not expired or derecognized amounted to RMB2.310 billion (RMB2.237 billion at the end of 2021).

As of 30 June, 2022, the Company had no material contingent liabilities.

As at 30 June 2022, certain land use right with net book value of RMB17 million (31 December 2021: RMB17 million) was in a state of seizure due to pre-litigation preservation.

F. Risk Factors

Risks Relating to Covid-19

China is currently faced with increasing challenges from foreign imported COVID-19 cases amid the resurgence of the pandemic around the world. China has reported several regional cluster infections and its prevention and control efforts continue to be tested by the complexity and severity of the pandemic.

The Company remains committed to the “dynamic COVID-zero” policy. The Company will promptly and actively respond to new COVID cases, comply with pandemic prevention and control requirements prescribed by governmental authorities, strictly implement normalized pandemic prevention and control measures, closely monitor and manage its pandemic prevention and control efforts, and maintain the normal operation of its business.

Risks Relating to the Electricity Sector and Market Risks

- (1) The growth in nation-wide electricity consumption noticeably slowed down in the first half of 2022 and the demand for electricity fell sharply in several regions in China as a result of the pandemic during the same period. The rate of increase of electricity consumption normalized in the second half of 2022 as China implemented a series of policies aimed at maintaining stable economic performance. Risks of regional and local COVID-19 outbreaks persist nonetheless, which could continue to challenge the growth of electricity consumption and result in uncertainties in the prospect of an increase in power generation.

- (2) New energy maintained a strong growth momentum in the first half of 2022 and is accounting for a growing proportion of the total installed capacity in China. Thermal power plants are faced with increased pressure to ensure sustainable supply during peak demand and in performing peak-shaving services. Certain regions in China are expected to be exposed to risks of temporary electricity shortages in the second half of the year, and thermal power companies are about to experiencing challenges in their operations as well as in meeting electricity demand due to high fuel prices and the price inversion related to imported coal.
- (3) The increase in electricity tariff, including on a reasonable basis, is regulated in several regional markets. The guaranteed volume of fixed-price purchase of electricity continues to decline in the new energy sector and the market is dominated by a downward pricing regime. The pricing mechanism for green power has yet to be developed and new energy power generating enterprises continue to be daunted by the difficulty in reaping the benefit of the “green premium.” In addition, the mid-term, long-term and spot electricity prices tend to only reflect the value of the energy per se while leaving the values of backup and peak-shaving services out of the equation, rendering it difficult to obtain sufficient return on investments in generator sets.

The Company's operation is encumbered by the foregoing challenges. Meanwhile, from the policy-making perspective, China continues to introduce policies to enhance the reliability of coal supply and the stability of coal price and promote the development of power ancillary services, capacity compensation and price transmission mechanisms in order to ensure a balance of interests among market participants. As it continues to improve, the market mechanism of the power sector will provide sound foundation and conditions for the steady operation and sustainable development of the Company's business. The Company will actively pursue a green transformation, accelerate its adoption of clean energy, optimize and upgrade the composition of its installed capacity. The Company is also committed to strengthening its policy research effort, actively adapting to the development of the power sector as guided by the carbon peak and carbon neutrality goal, continuing to promote the standardization of market operation, adjusting pricing strategies in a timely manner, and making every endeavor to prevent and control risks relating to electricity price.

Risks Relating to the Coal Market

- (1) The first half of 2022 saw an increase in coal production in China and soaring price for domestically produced coal. On the other hand, imported coal was beset with price inversion. Uncertainties with respect to the increase in coal supply in China are expected for the second half of the year amid a tightening global energy supply and considering the potential impact of the pandemic and environmental and safety inspections that may be carried out.
- (2) The Chinese economy is expected to recover in the latter half of 2022 and generate an increase in electricity consumption. As the off-season of clean energy approaches, thermal power will continue to be relied upon to ensure that energy demands are met and coal consumption will likely increase as compared with the first half of the year.

- (3) Policies promoting the full coverage of medium and long-term contracts for coal for power generation and the associated pricing mechanisms have yet to be fully implemented at the moment. There are also difficulties with the signing of medium and long-term contracts for imported coal as emergency supply. Coal prices remain high and the dual challenges of ensuring sufficient fuel supply and controlling fuel price have surfaced.

The Company will closely monitor changes in China's policy landscape and the coal market, actively promote the signing of mid- and long-term contracts for power coal as well as for imported emergency supply coal, continuously improve the level of internal coal and electricity coordination, give full play to the supporting role of industrial coordination, endeavor to secure more long term contracts, strengthen the performance of long term contracts, improve the fulfilment of long term contracts, stabilize long term coal supply, effectively control coal price, and ensure the safe and stable supply of coal.

Risks Relating to the Carbon Market

After the launch of China's national emissions trading schemes, the Company has created a carbon trading management system and successfully completed the first transaction on the national carbon market. The Company leads the industry in terms of its overall energy utilization rate and its overall fulfilment cost for carbon trading in 2019-2020 remains at a healthy level compared with similar companies. While the allocation of emission allowances for 2021 and beyond has yet to be determined, the Company expects a gradual tightening of quotas which will be accompanied by the risks of increased cost for power generation. Trading by institutions and individuals, once permitted, may further result in an increase of fulfilment cost for carbon trades by electricity generating companies. In addition, the Singapore government has announced its plan to impose a higher carbon tax in 2024 and 2025. If the Company's Singapore subsidiary, Tuas Power, is unable to pass such carbon tax to electricity users through the operation of the market, its economic efficiency will be affected.

The Company will closely monitor the policy landscape relating to the carbon market in China and overseas, continue to strengthen its management of carbon trading activities and optimize its carbon trading strategies. At the same time, the Company will pay close attention to the relaunch of the China Certified Emission Reductions scheme and to make full use of the offset mechanism under such scheme and strive to timely bring its carbon trading fulfilment cost to a relatively low level.

Environmental Risks

New generation units of the Company's coal-fired power plants are equipped with advanced technologies and powerful flue gas purification systems, while other generation units were retooled to achieve ultra-low emission as stipulated by the Chinese government. The Company's generation units are readily adaptable to changes in weather conditions, fuel quality, electric and thermal loads as well as other internal and external factors and are in compliance with standards prescribed by local environmental protection agencies and energy regulators. The Chinese government attaches great importance to the prevention and control of pollution, and has imposed strict requirements on power companies in this regard. Some of the Company's power plants located near the Yangtze River, Yellow River basins and around the Bohai Sea face environmental risks in terms of their wastewater treatment, ash yards and coal yards.

The Company actively follows up on the concerns of environmental protection authorities, cautiously select from advanced technical solutions that are applicable, and make efforts to upgrade its wastewater treatment systems, build closed coal yards, and improve the recycling and utilization of coal ash in order to ensure that risks to the environment are addressed and effectively resolved in a timely manner.

Risks Relating to the Capital Market

The second quarterly meeting of the PBOC's Monetary Policy Committee indicated that a prudent monetary policy would continue to be implemented in fulfilling the dual mandates of monetary policy tools to regulate the overall money supply and alter the market structure. Such policy will be brought into play to provide stronger support to the real economy, promote the efficiency and guiding effect of the reform of loan prime rate and lower the financing cost for enterprises. The Company's total debts denominated in foreign currencies are relatively not material in amount and fluctuations in interest rates applicable to its foreign currency debts are not expected to have a material impact overall. The Company will strengthen the management of its capital structure, innovate financing tools, expand financing channels, actively utilize green financing policies, and accelerate capital turnover through super-short-term financings. At the same time, the Company will closely monitor changes in the domestic and overseas capital markets and strive to control its financing cost, stave off funding risks and achieve cost reduction and improved efficiency by adjusting its financing strategies in a timely manner while ensuring its capital demand is met, seizing market opportunities and benefiting from favorable policies such as refinancing programs dedicated to the clean and efficient use of coal and schemes supporting carbon emission reduction.

SHARE CAPITAL STRUCTURE

As at 30 June 2022, total issued share capital of the Company amounted to 15,698,093,359 shares, of which 10,997,709,919 shares were domestic shares, representing 70.06% of the total issued share capital, and 4,700,383,440 shares were foreign shares, representing 29.94% of the total issued share capital. In respect of foreign shares, China Huaneng Group Co., Ltd. ("Huaneng Group") through its wholly-owned subsidiaries China Hua Neng Group Hong Kong Limited and China Huaneng Group Treasury Management (Hong Kong) Limited, held 472,000,000 and 131,596,000 shares, representing 3.01% and 0.84% of the total issued share capital of the Company, respectively. In respect of domestic shares, Huaneng International Power Development Corporation ("HIPDC") owned a total of 5,066,662,118 shares, representing 32.28% of the total issued share capital of the Company, while Huaneng Group held 1,555,124,549 shares, representing 9.91% of the total issued share capital of the Company. Through its controlling subsidiary China Huaneng Finance Corporation Limited, Huaneng Group held 29,994,199 shares, representing 0.19% of the total issued share capital of the Company. Other domestic shareholders held a total of 4,345,929,053 shares, representing 27.68% of the total issued share capital.

PURCHASE, SALE OR REDEMPTION OF SHARES

The Company and its subsidiaries did not sell any other types of securities and did not purchase or redeem its own shares or other securities in the first half of 2022.

SHAREHOLDINGS OF MAJOR SHAREHOLDERS

The following table summarises the shareholdings of the top ten shareholders of the Company's shares as at 30 June 2022:

Name of Shareholders	Total shareholdings as at end of the reporting period	Percentage of shareholding in total issued shares (%)
Huaneng International Power Development Corporation	5,066,662,118	32.28%
HKSCC Nominees Limited*	4,127,184,180	26.29%
China Huaneng Group Co., Ltd.	1,555,124,549	9.91%
Hebei Construction & Investment Group Co., Ltd.	493,316,146	3.14%
China Hua Neng Group Hong Kong Limited	472,000,000	3.01%
China Securities Finance Corporation Limited	466,953,720	2.97%
Jiangsu Guoxin Investment Group Limited	309,774,700	1.97%
Liaoning Energy Investment (Group) Limited Liability Company	244,205,000	1.56%
Dalian Municipal Construction Investment Company Limited	231,650,000	1.48%
Hong Kong Securities Clearing Company Limited	130,030,349	0.83%

* HKSCC Nominees Limited acts as nominee of holders of H shares of the Company and its shareholdings in the Company represent the total number of H shares held by it as nominee of H shareholders.

MATERIAL INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES OF THE COMPANY

As at 30 June 2022, the interests or short positions of persons who were entitled to exercise or control the exercise of 5% or more of the voting power at any of the Company's general meetings (excluding the Directors, Supervisors and chief executive) in the shares or underlying shares of equity derivatives of the Company as recorded in the register required to be kept under Section 336 of the Securities and Futures Ordinance (Cap. 571 of the laws of Hong Kong) (the "SFO") were as follows:

Name of shareholder	Class of shares	Number of shares held (share)		Capacity	Approximate percentage of shareholding in the Company's total issued share capital	Approximate percentage of shareholding in the Company's total issued domestic shares	Approximate Percentage of shareholding in the Company's total issued H Shares
Huaneng International Power Development Corporation (Note 2)	Domestic shares	5,066,662,118(L)		Beneficial owner	32.28%(L)	46.07%(L)	-
China Huaneng Group Co., Ltd. (Note 3)	Domestic shares	1,555,124,549(L)		Beneficial owner	9.91%(L)	14.14%(L)	-
China Huaneng Group Co., Ltd. (Note 4)	H Shares	603,596,000 (L)		Beneficial owner	3.85%(L)	-	12.84%(L)

Notes:

- (1) The letter "L" denotes a long position.
- (2) As of the Latest Practicable Date, China Huaneng Group Co., Ltd. holds 75% direct interests and 25% indirect interests in HIPDC.
- (3) Besides of the 1,555,124,549 domestic shares, China Huaneng Group Co., Ltd. through its controlling subsidiary, China Huaneng Finance Corporation Limited held 29,994,199 domestic shares.
- (4) China Huaneng Group Co., Ltd. held 472,000,000 H shares through its wholly-owned subsidiary, China Hua Neng Group Hong Kong Limited, and held 131,596,000 H shares through its indirect wholly-owned subsidiary, China Huaneng Group Treasury Management (Hong Kong) Limited.

Save as stated above, as at 30 June 2022, in the register required to be kept under Section 336 of SFO, no other persons were recorded to hold any interests or short positions in the shares or underlying shares of the equity derivatives of the Company.

DIRECTORS' AND SUPERVISORS' RIGHT TO PURCHASE SHARES

The Company has adopted a code with the standard not lower than that of the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited ("Listing Rules"). Following enquiries made by the Company, all Directors and Supervisors confirmed that they have complied with the Code throughout the first half of 2022.

As at 30 June 2022, none of the directors, chief executive officer or supervisors of the Company had any interest or short position in the shares, underlying shares and/or debentures (as the case may be) of the Company or any of its associated corporations (within the definition of Part XV of the SFO) which was required to be notified to the Company and the Stock Exchange of Hong Kong Limited ("Hong Kong Stock Exchange") pursuant to Divisions 7 and 8 of Part XV of the SFO (including interest and short position which any such Director, chief executive

officer or Supervisor is taken or deemed to have under such provisions of the SFO) or which was required to be entered in the register required to be kept by the Company pursuant to Section 352 of the SFO or which was otherwise required to be notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Companies as contained in Appendix 10 to the Listing Rules.

PUBLIC FLOAT

As at the date of this interim report, the Company has maintained the prescribed public float under the Listing Rules and as agreed with the Hong Kong Stock Exchange, based on the information that is publicly available to the Company and within the knowledge of the directors of the Company.

DIVIDENDS

It was resolved by the Board not to distribute dividends for the first half of 2022.

DISCLOSURE OF MATERIAL EVENTS

In view of the extremely low market demand and trading volume for the Company's American Depositary Shares ("ADSs"), the considerable administrative burden and costs associated with the ongoing disclosure obligations and related matters associated with listing in the U.S., based on its growth needs and its own business considerations, the Company voluntarily elected to delist from the New York Stock Exchange ("NYSE") and deregistered its ADSs facility. On 7 July 2022 (U.S. Eastern time), the Company's delisting of ADSs from the NYSE became effective. On 12 July 2022, the Company's ADS depository bank, The Bank of New York Mellon, gave notice to holders of ADSs of the termination of the deposit agreement, which will be terminated on 11 October 2022.

CORPORATE GOVERNANCE

The Company always places emphasis on corporate governance. After years of experience and practice, the Company has gradually formed a standardised and enhanced governance structure, thereby establishing a sound and effective system that is appropriate to the Company's own development requirements. The Company persists on maximising the benefits of the Company and its shareholders as a whole, treating all of its shareholders fairly and striving for the long-term, stable and increasing returns for shareholders of the Company.

During the reporting period, the Company has complied with the relevant provisions of the Corporate Governance Code set out in Appendix 14 of the Listing Rules.

(a) Code of Corporate Governance

In recent years, the Company adopted the following measures in order to strengthen corporate governance and enhance the Company's operation quality:

(1) Enhancing and improving corporate governance

In addition to complying with the provisions of the applicable laws, as a public company, the Company is subject to the regulations of the securities regulatory authorities of the listing places and the supervision of investors at large. Accordingly, our fundamental principles are to adopt a corporate governance structure that balances and coordinates the decision-making powers, supervisory powers and operating powers, to act with honesty and integrity, and to operate in accordance with laws and regulations.

Over the years, the Board has formulated and implemented the Rules and Procedures of the General Meetings; Rules and Procedures of the Board of Directors Meetings; the Rules and Procedures of the Supervisory Committee Meetings; the Detailed Rules on the Work of the General Manager; the Detailed Rules on the Work of the Strategy Committee of the Board of Directors; the Detailed Rules on the Work of the Audit Committee of the Board of Directors; the Detailed Rules on the Work of the Nomination Committee of the Board of Directors; the Detailed Rules on the Work of the Remuneration and Appraisal Committee of the Board of Directors; the System on Work of Independent Directors, the System on Work of Independent Directors on the Annual Report and the Work Regulations on Annual Report for the Audit Committee, and amended relevant regulations and systems according to the applicable laws and the development needs of the Company.

The Board of Directors of the Company always regards the enhancement of corporate governance and the regulation of the three meetings as its own responsibility, continuously strengthens its own construction, and operates in compliance with laws and regulations, laying a solid foundation for the Company's sustained and healthy development. In the first half of 2022, under the proper leadership of the Board of Directors, the Company strengthened its mission, paid close attention to the implementation of responsibilities, actively responded to multiple challenges, and coordinated the work of epidemic prevention and control, production and operation, and reform and development. The Company maintained a stable production safety and a stable supply of electricity and heat, and actively performed its duty of providing sufficient, reliable and environmentally friendly electricity for the community. The Company always adheres to the rule of law and operates in compliance with regulations. The Company continues to pay attention to new changes in national and local regulatory laws and regulations, effectively implements new regulatory policies and requirements, continuously strengthens risk prevention and control, solidly promotes internal control management, carries out high-quality information disclosure, actively strengthens communication and interaction with investors, continuously promotes the construction

of ESG system, builds a harmonious and win-win corporate culture with stakeholders, actively safeguards the interests of shareholders, strives to protect the legitimate rights and interests of small and medium investors, and promotes the continuous improvement of corporate governance.

All members of the Board jointly perform the duties of corporate governance. During the reporting period, the Board has included the following in its scope of duties and authority:

1. Establishing and reviewing the Company's corporate governance policies and codes, and making such amendments as it deems necessary to ensure the effectiveness of such policies and codes;
2. Reviewing and supervising the training and sustained professional development of the Company's directors and senior management;
3. Reviewing and supervising the Company's policies and codes regarding the observance of laws and regulatory requirements;
4. Formulating, reviewing and supervising the codes of conduct and compliance handbook applicable to directors and employees; and
5. Reviewing the Company's status on compliance with the Code on Corporate Governance Practices and the disclosures made in the Corporate Governance Report.

(2) Enhancing and improving the information disclosure system

The Company stresses on the importance of external information disclosure. The Company has established the Information Disclosure Committee which comprises the secretary to the Board of Directors, the chief accountant, managers of each functional department to be responsible for reviewing the Company's regular reports. The Company has implemented the system of holding regular information disclosure meetings every Monday, chaired by the secretary to the Board of Directors and attended by relevant business departments, to notify and discuss major issues relating to the Company's operations, which provide a guarantee for the Company to perform its information disclosure obligations timely. The Company has successively formulated and implemented the relevant information disclosure system, and has made timely amendments thereto according to regulatory requirements. The current functioning systems include the Measures on Information Disclosure Management, the Measures on Related Transaction Management, Measures for the Administration of Insiders, the Measures on Investor Relations Management, the Detailed Rules on the Work of the Information Disclosure Committee, Management Measures for Pursuing Responsibility regarding Material Errors in Information Disclosure of Annual Report, etc.. In 2022, in accordance with relevant regulatory rules and requirements and in conjunction with the Company's actual situation, the Administrative Measures on Investor Relations of the Company have correspondingly been revised to ensure that the system of the Company meets with the latest regulatory requirements. The above measures and system ensure the regulated operation of the Company, strengthen the truthfulness, accuracy, completeness and the timely disclosure of information, and at the same time enhance the quality as well as transparency of the information disclosure.

Relevant departments of the Company compiled answers and subsequent updates to questions regarding the hot topics of market concerns, and the Company's production, operation and operating results in a timely manner. The replies shall become the basis of external communication upon the approval of the Company's management and the authorised representatives of the Information Disclosure Committee. In addition, the Company conducts specialized training for the staff of the Company who are responsible for information disclosure on an irregular basis in order to continuously enhance their expertise.

(3) Regulating financial management system, strengthening internal control

The credibility of a listed company, to a large extent, relates to the quality of the preparation of financial statements and a regulated operation of financial activities. During the first half of 2022, the Company continued to adhere to the principle of good faith and fair treatment to its shareholders and made a lot of detailed work in preparing the financial reports and regulated financial operations, including:

1. In order to strictly implement the accounting rules, accounting standards and accounting systems, to strengthen accounting and accounts supervision, and to truthfully and fairly reflect the financial position, operating results and cash flow, the Company has formulated the Measures on Accounting, the Management Measures on Financial Accounting Reports, the Measures on Fixed Assets Management, the Measures on Cost Management and the Joint Audit Management Regulations on Financial Accounting and other rules and regulations. The Internal Control Manual of the Company includes the above rules into the internal control system, thus setting out clear procedures for its system. The Board, the Supervisory Committee and the Audit Committee of the Company have reviewed the Company's financial reports on a regular basis.

2. In regard to fund management, the Company has formulated a number of management measures including the Measures on Financial Management, the Measures on the Management of the Income and Expenditure of the Funds, the Measures on the Use and Management of Large Amount by Headquarter of the Company, the Measures on the Management of Bills of Exchange, the Measures on Management of Fund Raised, Rules on the Management of Transactions Involving Financial Derivatives, the Measures on Management of Financial Guarantee, the Measures on the Management of Provision of Security to Third Parties and the Measures for Regulating Fund Transfers with the Related Parties. The Company's Articles of Association also set out provisions relating to loans, guarantees and investment. In the annual reports of the Company over the previous years, the Company has engaged certified accountants to conduct auditing on the use of funds by the controlling shareholders and other related parties, and issue specific statements according to the requirements of the China Securities Regulatory Commission ("China Securities Regulatory Commission") and the Shanghai Stock Exchange ("Shanghai Stock Exchange") for confirmation that there has not been any violation of rules relating to the use of funds. Moreover, the Company also conducted quarterly review with respect to occupation of funds by related parties for non-operational purposes in order to avoid occupation of funds by related parties for non-operational purposes.
3. The overall objective of internal control of the Company is to promote implementation of the corporate strategy. Specific goals are to maintain lawful operation and management of the Company, asset safety, and truthfulness and completeness of financial reports and related information, thus promoting the overall enhancement of operating efficiency and actual effect.

The Company has comprehensively sort out internal and external risks and various business processes, and completed the "Internal Control Manual". From 5 aspects of environment control, risk assessment, process control, information and communication and monitoring, the sixth version of the "Internal Control Manual" currently in use by the Company detailed 25 business processes in revenue, material procurement, fuel procurement and capital management, and 19 soft elements including organizational structures, human resources management, antifraud and risk management, thereby comprehensively elaborating the Company's guiding principles and policies, work procedures and job duties of various posts, regulating the standard procedures of various business processes and realising a streamlined system. The Company has compiled the "Internal Control Evaluation Handbook", clarifying the three-tier internal control evaluation management system, the internal control evaluation mode that cooperates with daily evaluation and key supervision, standardized internal control evaluation procedures, evaluation methods, defect defining procedures and standards, and realizes internal control and standardization of evaluation. The Company conducts annual assessment on the applicability and effectiveness of the above system and regularly conducts revision and perfection in order to realise dynamic maintenance of the internal control system.

For the purpose of risk identification, the Company in the "Internal Control Manual" stipulates the corresponding control measures and defines key control points. Through the implementation of the "one post for one item system" at each control point, the control responsibility is divided to every post at various levels so that internal control and job responsibilities are combined and all members of staff can participate in the construction of internal control. The Company has implemented the internal control routine evaluation mechanism, set up the post of internal control evaluators in each department and subordinate unit respectively, conducted monthly internal control evaluation, and established a three- tier evaluation quality supervision mechanism respectively at the three levels of the Company, regional offices and basic level units by way of the internal control management system in order

to conduct real-time tracking of the implementation of internal control. During the first half of 2022, the Company has successfully completed a six-month internal control routine evaluation, thus effectively protecting and promoting the sustained and healthy development of the businesses of the Company and realising the stable operation of the internal control system. The Company has combined the new requirements and new changes in business and management and constantly advanced experience and common issues, and launched comprehensive and multilevel internal control training each year, and widely publicised internal control concepts and knowledge, thus continuously optimising the internal control environment.

The internal control and management departments, internal audit department and external auditors regularly report the internal control work situation to the Audit Committee of the Board of Directors respectively, thus ensuring the continued and effective operation of the internal control system. The Company has continuously improved the internal control assessment system and formulated the Internal Control Objective Assessment Management Measures. The Company conducts internal control target assessment every year, and the assessment results are fulfilled in a timely manner, which effectively guides units at all levels to pay attention to the quality of internal control work, and earnestly realize the in-depth goal of promoting management through internal control.

Upon full assessment, the management of the Company is of the opinion that the internal control system of the Company is sound and effective.

(b) Securities transactions by Directors

As a public company, the Company has strictly complied with the relevant restrictive provisions on securities transactions by directors imposed by the regulatory authorities of places of listing and we insist on the principle of complying with the strictest provision, that is, abiding by the strictest provision among listing places. We have adopted the Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix 10 to the Listing Rules as the model code for securities dealings by directors of the Company. According to the Management Rules in respect of the Shares of the Company held by the Directors, Supervisors and Senior Management of Huaneng Power International, Inc, the Company strictly requires the transfer of shares of the Company to be in accordance with the Company Law and relevant systems, prohibiting those who are in possession of securities transaction inside information using inside information in securities trading; and sets out detailed rules for those who are in possession of inside information. Following a specific enquiry on all the directors, supervisors and senior management of the Company, all the directors, supervisors and senior

management currently do not hold any shares of the Company and there is no material contract in which the directors, supervisor and senior management directly or indirectly have material interests.

(c) Board of Directors

The Board of Directors of the Company comprises of 15 members. Of the members of the tenth session of the board of directors, Mr. Zhao Keyu as the Chairman; Mr. Zhao Keyu and Mr. Zhao Ping as the Executive Directors; Mr. Huang Jian, Mr. Wang Kui, Mr. Lu Fei, Mr. Teng Yu, Mr. Mi Dabin, Mr. Cheng Heng, Mr. Li Haifeng and Mr. Lin Chong as the Non-executive Directors; and Mr. Xu Mengzhou, Mr. Liu Jizhen, Mr. Xu Haifeng, Mr. Zhang Xianzhi and Mr. Xia Qing as the Independent Non-executive Directors of the Company.

The Board of Directors of the Company has held five meetings during the reporting period, including regular meetings and ad hoc meetings. For details, please see the relevant announcements.

Details of the attendance of directors at the board meetings are as follows:

Name	Number of meetings to be attended	Number of meetings attended in person	Number of meetings attended by proxy	Rate of Attendance (%)
Executive Directors				
Zhao Keyu	5	5	0	100%
Zhao Ping	5	5	0	100%
Non-executive Directors				
Huang Jian	5	5	0	100%
Wang Kui	5	5	0	100%
Lu Fei	5	5	0	100%
Teng Yu	5	5	0	100%
Mi Dabin	5	5	0	100%
Cheng Heng	5	5	0	100%
Li Haifeng	5	5	0	100%
Lin Chong	5	5	0	100%
Independent non-executive Directors				
Xu Mengzhou	5	5	0	100%
Liu Jizhen	5	5	0	100%
Xu Haifeng	5	5	0	100%
Zhang Xianzhi	5	5	0	100%
Xia Qing	5	5	0	100%

As stated in the previous Corporate Governance Reports, the Company's Articles of Association set out in detail the duties and operational procedures of the Board (please refer to the Company's Articles of Association for details). The Board of the Company holds regular meetings to hear the reports on the Company's operating results and makes timely decisions. Material decisions on operation shall be discussed and approved by the Board. Ad hoc meetings may be held if necessary. Board meetings include regular meetings and ad hoc meetings. Regular meetings of the Board include: annual meeting, first quarterly meeting, half-yearly meeting and third quarterly meeting.

All arrangements for regular meetings have been notified to all directors at least 14 days prior to the meeting and the Company has ensured that each director thoroughly understood the agenda of the meeting and fully expressed his/her opinions, while all Independent Non-executive Directors expressed their independent directors' opinions on their respective duties. Minutes have been taken for all the meetings and filed at the Office of the Board.

Moreover, the Independent Non-executive Directors of the Company have submitted their independent non-executive director confirmation letters of 2021 according to the requirements of the Listing Rules.

The Directors considered that they have complied with the laws and regulations, and provisions of the Articles of Association, and have actively performed the duties faithfully and diligently. Apart from regular and ad hoc meetings, the Directors read the briefs of the Company on a regular basis, the Company's financial position and operating results and signing and performance of material agreements. The Directors reviewed the reports, data etc. of the Company regularly to understand the situation on production operation of the Company. Through on-site investigation, the independent Directors provided practical resolutions to the Company. All specialized committees under the Board actively carried out works and provided recommendations and policies which formed the basis of accurate policies for the Board.

During the period when the Board was not in session, the Chairman discharged part of the duties of the Board, including but not limited to (1) to examine and approve the proposals in respect of establishing or cancelling development and construction projects; (2) to examine and approve proposals of the in relation to the appointment, removal and transfer of managers of various departments of the Company and managers of external branches; (3) to examine and approve plans on the use of significant funds; (4) to examine and approve proposals on the establishment or cancellation of branch companies or branch organs; and (5) to examine and approve other major issues.

The Board has summarised the implementation and execution of work during the reporting period taking into consideration of opinions of the Supervisory Committee and the Senior Management of the Company. The Board is of the opinion that it has effectively fulfilled its duties to safeguard the interests of the Company and its shareholders.

Directors who attended the 2021 annual general meeting of the Company were Zhao Keyu (Chairman), Zhao Ping (Director), Huang Jian (Director), Wang Kui (Director), Lu Fei (Director), Teng Yu (Director), Xu Mengzhou (Independent Non-executive Director) and Zhang Xianzhi (Independent Non-executive Director).

(d) Chairman and President

The Company shall have a Chairman and a President who shall perform their duties respectively and separately according to the Articles of Association.

The division of duties of the Board and the senior management remained the same as disclosed in the previous Corporate Governance Reports.

(e) Non-executive Directors

According to the Articles of Association, the term of office of each member of the Board of the Company shall not exceed three years (inclusive) and the members may be eligible for re-election. However, the term of office of Independent Non-executive Directors shall not exceed six years (inclusive) according to the relevant regulations of the China Securities Regulatory Commission.

The respective terms of office of the Non-executive Directors are as follows:

Name of Non-executive Directors	Term of office
Huang Jian	16 June 2020-2023
Wang Kui	16 June 2020-2023
Lu Fei	16 June 2020-2023
Teng Yu	16 June 2020-2023
Mi Dabin	16 June 2020-2023
Cheng Heng	16 June 2020-2023
Li Haifeng	22 December 2020-2023
Lin Chong	16 June 2020-2023

(f) Directors' Remuneration

According to the relevant PRC laws and the Articles of Association, the Board has established the Remuneration and Appraisal Committee which operates in accordance with the Detailed Rules on the Work of the Remuneration and Appraisal Committee and is mainly responsible for studying the appraisal standards of the directors and senior management personnel of the Company, conducting appraisals and making proposals; responsible for studying and examining the remuneration policies and proposals of the directors and senior management personnel of the Company. The Remuneration and Appraisal Committee will review and submit annual total wages to the board of directors annually. Each of the Executive Directors has signed a director's service contract in accordance with the requirement of the Stock Exchange.

Members of the tenth session of the Remuneration and Appraisal Committee of the board of directors are Mr. Xu Mengzhou, Mr. Zhao Ping, Mr. Cheng Heng, Mr. Li Haifeng, Mr. Liu Jizhen, Mr. Xu Haifeng and Mr. Zhang Xianzhi; among whom Mr. Xu Mengzhou, Mr. Liu Jizhen, Mr. Xu Haifeng and Mr. Zhang Xianzhi are Independent Non-executive Directors and Mr. Xu Mengzhou is the chairman of the committee.

The Remuneration and Appraisal Committee under the Board operates in accordance with the Detailed Rules on the Work of the Remuneration and Appraisal Committee. The Remuneration and Appraisal Committee convened the first meeting in 2022 on 21 March 2022, at which the Report of Total Wage Expenses was reviewed and the Company's arrangement for the total wage in 2022 was approved. In the second half of 2022, the Remuneration and Appraisal Committee will carry out the work according to the actual situation and the above Detailed Rules at appropriate time.

During the reporting period, the attendance of meetings of the Remuneration and Appraisal Committee of the Company's Board was as follows:

Name of meeting	Date of meeting	Members who attended the meeting in person	Members who attended the meeting by proxy
First meeting of the Remuneration and Appraisal Committee of the Tenth Session of the Board in 2022	21 March 2022	Xu Mengzhou, Zhao Ping, Cheng Heng, Li Haifeng, Liu Jizhen, Xu Haifeng and Zhang Xianzhi	-

(g) Nomination of Directors

According to the relevant PRC laws and the relevant provisions of the Articles of Association, the Board has established the Nomination Committee. Governed by the Detailed Rules on the Works of the Nomination Committee, the Committee is mainly responsible for studying the selection standards and procedures for candidates for directors and senior management personnel of the Company according to the directors' qualifications requirements under the Company Law and Securities Law and the needs of the operational management of the Company, and making proposals thereon to the Board; searching for qualified candidates for directors and suitable persons for senior management personnel on a wide basis; and examining the candidates for directors and suitable persons for senior management personnel and making proposals thereon. Currently, the nomination of the candidates for directors of the Company is mainly made by shareholders. The nominations, after examination of the relevant qualification by the Nomination Committee, will be submitted to the Board of Directors. The President of the Company was appointed by the Board and the candidates for the Vice President and management were nominated by the President. Such nominations, after examination of the relevant qualification by the Nomination Committee, will be submitted to the Board of Directors.

Members of the tenth session of the Nomination Committee of the board of directors are Mr. Liu Jizhen, Mr. Zhao Keyu, Mr. Mi Dabin, Mr. Lin Chong, Mr. Xu Mengzhou, Mr. Zhang Xianzhi and Mr. Xia Qing, among whom Mr. Liu Jizhen, Mr. Xu Mengzhou, Mr. Zhang Xianzhi and Mr. Xia Qing are Independent Non-executive Directors and Mr. Liu Jizhen is the chairman of the committee.

During the reporting period, the Nomination Committee of the Company's Board did not convene any meeting.

(h) Appointment of Auditors

Ernst & Young and Ernst & Young Hua Ming LLP were appointed as the overseas and domestic auditor for 2022, respectively.

(i) Audit Committee

According to the requirements of the regulatory authorities of the jurisdictions where the Company is listed and the relevant provisions of the Articles of Association, the Board has established the Audit Committee. Governed by the Detailed Rules on the work of the Audit Committee, the Audit Committee is mainly responsible for assisting the Board in the supervision of:

- (1) the accuracy of the Company's financial statements;
- (2) the Company's compliance with laws and regulations;
- (3) the qualification and independence of the Company's independent auditors;
- (4) the performance of the Company's independent auditors and internal auditing departments of the Company; and
- (5) the control and management of the related party transactions of the Company.

The Company convenes four regular meetings of the Audit Committee of the Board of Directors each year, at least two of which will be conducted with the Company's external auditors to listen to reports on audit planning, work arrangement and audit works generally. The Board has formulated the Management Rules on Whistle-Blowing through Hotlines and Mailboxes, and, pursuant to which the Audit Committee will be responsible for the management of the whistle-blowing hotlines and mailboxes.

Members of the Audit Committee comprises of five directors. Members of the tenth session of the Audit Committee of the board of directors are, namely, Mr. Zhang Xianzhi, Mr. Xu Mengzhou, Mr. Liu Jizhen, Mr. Xu Haifeng and Mr. Xia Qing, among whom Mr. Zhang Xianzhi is the chairman of the committee.

During the reporting period, the Audit Committee held three meetings. As per Audit Committee's duties, the Audit Committee has communicated separately and respectively with the Company's counsels, external auditors, management and the relevant functional departments of the Company. With the understandings on the applicable laws and regulations of those jurisdictions in which the shares of the Company are listed, the anti-fraud position in the Company, the recruitment of staff, the implementation and execution of internal control mechanisms, the audit work carried out by external auditors and the responsible officers of the audit department, the Audit Committee has rendered their views and suggestions.

During the reporting period, the attendance of meetings of members of the Audit Committee was as follows:

Name of meeting	Date of meeting	Members who attended the meeting in person	Members who attended the meeting by proxy
First meeting of the Audit Committee of the Tenth Session of the Board in 2022	25 February 2022	Zhang Xianzhi, Xu Mengzhou, Liu Jizhen, Xu Haifeng and Xia Qing	-
Second meeting of the Audit Committee of the Tenth Session of the Board in 2022	21 March 2022	Zhang Xianzhi, Xu Mengzhou, Liu Jizhen, Xu Haifeng and Xia Qing	-
Third meeting of the Audit Committee of the Tenth Session of the Board in 2022	25 April 2022	Zhang Xianzhi, Xu Mengzhou, Liu Jizhen, Xu Haifeng and Xia Qing	-

(j) Responsibility assumed by the Directors in relation to the financial statements

The Directors of the Company confirm that they shall assume the relevant responsibility in relation to the preparation of the financial statements of the Company, ensure that the preparation of the financial statements of the Company complies with the relevant laws and regulations and the applicable accounting standards and also warrant that the financial statements of the Company will be published in a timely manner.

(k) Senior management's interests in shares

None of the senior management of the Company holds any shares of the Company.

(l) Strategy Committee

For compliance with the relevant requirements of the regulations in the jurisdictions where the shares of the Company are listed as well as the Articles of Association of the Company, the Board has established a Strategy Committee. Governed by the Detailed Rules on the Work of the Strategy Committee, the Strategy Committee is primarily responsible for:

- (1) reviewing and advising on the Company's long-term strategic development plan;
- (2) reviewing and advising on the major fund raising proposals that need to be approved by the Board;
- (3) reviewing and advising on the major production and operating projects that need to be approved by the Board;
- (4) studying and advising on the matters that would significantly affect the development of the Company;
- (5) examining the implementation of the abovementioned matters;

- (6) comprehensive risk management of the Company to improve the Company's overall risk resistance; and
- (7) other matters as requested by the Board of Directors.

The tenth session of the Strategy Committee of the board of directors comprises of seven directors, namely, Mr. Zhao Keyu, Mr. Zhao Ping, Mr. Huang Jian, Mr. Wang Kui, Mr. Lu Fei, Mr. Liu Jizhen and Mr. Xu Haifeng, of whom Mr. Liu Jizhen and Mr. Xu Haifeng are Independent Non-executive Directors. Mr. Zhao Keyu is the chairman of the Strategy Committee.

During the reporting period, members of the Strategy Committee did not arrange any meetings.

(m) Directors' and senior management's training

The Company organises its Directors and Supervisors to attend the trainings provided by regulatory authorities every year. During the reporting period, the directors and supervisors of the Company attended training of directors and supervisors according to regulatory requirements. A total of 20 person times of Directors, Supervisors and senior management attended various professional trainings.

The Company conducts introduction by legal counsels of all three listing jurisdictions specifically to all Independent Non-executive Directors of the Audit Committee of the Company twice a year with respect to the updated regulatory laws, the application of relevant systems to the Company and the Company's performance of the rules and regulations in places where the Company's shares are listed.

The Company attaches importance to the training and continuing development of senior management. The Company organises members of senior management to participate the training courses provided by relevant State authorities, industrial managing authorities and industrial associations.

REVIEW BY THE AUDIT COMMITTEE

The interim results of 2022 have been reviewed by the Audit Committee of the Company.

LEGAL PROCEEDINGS

As at 30 June 2022, the Company and its subsidiaries were not involved in any material litigation or arbitration and no material litigation or claim of material importance was pending or threatened against or by the Company as far as the Company is aware.

DOCUMENTS FOR INSPECTION

Copies of the interim report for 2022 will be available at the following addresses and website:

PRC: Huaneng Power International, Inc.
Huaneng Building
6 Fuxingmennei Street Xicheng District Beijing
The People's Republic of China

Telephone Number: (8610) 6322 6999

Fax Number: (8610) 6322 6888

Hong Kong: Wonderful Sky Financial Group Limited
9th Floor, Central Plaza,
99 Queen's Road Central, Hong Kong

Tel: (852) 2851 1038

Fax: (852) 3102 0210

Website of the Company: <http://www.hpi.com.cn>

By Order of the Board
Huaneng Power International, Inc.
Zhao Keyu
Chairman

As at the date of this interim report, the directors of the Company are:

Zhao Keyu (*Executive Director*)

Zhao Ping (*Executive Director*)

Huang Jian (*Non-executive Director*)

Wang Kui (*Non-executive Director*)

Lu Fei (*Non-executive Director*)

Teng Yu (*Non-executive Director*)

Mi Dabin (*Non-executive Director*)

Cheng Heng (*Non-executive Director*)

Li Haifeng (*Non-executive Director*)

Lin Chong (*Non-executive Director*)

Xu Mengzhou (*Independent Non-executive Director*)

Liu Jizhen (*Independent Non-executive Director*)

Xu Haifeng (*Independent Non-executive Director*)

Zhang Xianzhi (*Independent Non-executive Director*)

Xia Qing (*Independent Non-executive Director*)

Beijing, the PRC
27 July 2022

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION (UNAUDITED)

AS AT 30 JUNE 2022
(Amounts expressed in thousands of RMB)

	Notes	As at 30 June 2022	As at 31 December 2021 (Restated)
ASSETS			
Non-current assets			
Property, plant and equipment	5	321,271,158	320,874,058
Right-of-use assets		19,379,292	19,603,927
Investments in associates and joint ventures		23,345,762	23,085,782
Investment properties		623,378	635,268
Other equity instrument investments		722,205	729,070
Power generation licences		3,863,234	3,783,756
Mining rights		1,611,486	1,611,486
Deferred income tax assets	18	5,576,291	4,907,081
Derivative financial assets		86,815	69,753
Goodwill	7	14,490,573	14,276,224
Other non-current assets	8	17,857,203	19,056,005
Total non-current assets		408,827,397	408,632,410
Current assets			
Inventories		12,511,958	16,824,431
Other receivables and assets	9	13,783,886	14,698,932
Accounts and notes receivable	10	38,519,642	43,877,997
Contract assets		57,286	66,974
Derivative financial assets		737,523	652,458
Bank balances and cash	23	15,582,951	16,350,332
Total current assets		81,193,246	92,471,124
Total assets		490,020,643	501,103,534

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION (UNAUDITED)

AS AT 30 JUNE 2022
(Amounts expressed in thousands of RMB)

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Huaneng Power International, Inc.

	Notes	As at 30 June 2022	As at 31 December 2021 (Restated)
EQUITY AND LIABILITIES			
Capital and reserves attributable to equity holders of the Company			
Share capital		15,698,093	15,698,093
Other equity instruments	11	48,565,562	48,417,977
Capital surplus		25,957,012	25,667,502
Surplus reserves		8,140,030	8,140,030
Currency translation differences		(1,358,491)	(1,443,398)
Retained earnings		12,626,462	16,900,471
		109,628,668	113,380,675
Non-controlling interests		19,414,347	20,509,649
Total equity		129,043,015	133,890,324
Non-current liabilities			
Long-term loans	12	144,438,891	136,857,716
Long-term bonds	13	36,378,393	29,396,919
Lease liabilities		5,268,804	6,138,846
Deferred income tax liabilities	18	2,156,677	2,300,088
Derivative financial liabilities		21,896	99,323
Other non-current liabilities	14	5,757,627	6,022,017
Total non-current liabilities		194,022,288	180,814,909
Current liabilities			
Accounts payable and other liabilities	15	51,131,051	54,609,553
Contract liabilities		804,963	3,274,770
Taxes payable		1,113,615	2,053,418
Dividends payable		903,478	1,041,452
Derivative financial liabilities		20,131	41,034
Short-term bonds	16	506,235	8,222,517
Short-term loans	17	89,343,944	91,896,725
Current portion of long-term loans	12	14,371,332	17,213,799
Current portion of long-term bonds	13	7,276,398	7,175,540
Current portion of lease liabilities		1,417,397	800,521
Current portion of other non-current liabilities	14	66,796	68,972
Total current liabilities		166,955,340	186,398,301
Total liabilities		360,977,628	367,213,210
Total equity and liabilities		490,020,643	501,103,534

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB, except per share data)

	Notes	For the six months ended 30 June	
		2022	2021 (Restated)
Operating revenue	4	116,869,062	95,260,685
Tax and levies on operations		(646,671)	(941,228)
		116,222,391	94,319,457
Operating expenses			
Fuel		(80,735,805)	(57,381,701)
Maintenance		(1,775,893)	(1,777,587)
Depreciation	20	(11,971,751)	(11,094,935)
Labour		(6,734,482)	(6,887,317)
Service fees on transmission and transformer facilities of HIPDC		(23,974)	(47,947)
Purchase of electricity		(9,170,378)	(2,608,897)
Others	20	(6,156,088)	(5,215,390)
Total operating expenses		(116,568,371)	(85,013,774)
(Loss)/profit from operations		(345,980)	9,305,683
Interest income		159,635	135,032
Financial expenses, net			
Interest expense	20	(5,106,270)	(4,258,960)
Exchange gain/(loss) and bank charges, net		81,945	(64,301)
Total financial expenses, net		(5,024,325)	(4,323,261)
Share of profits and losses of associates and joint ventures		673,538	926,872
Loss on fair value changes of financial assets/liabilities		–	(28)
Other investment income/(loss)		2,236	(943)
(Loss)/profit before income tax expense		(4,534,896)	6,043,355
Income tax expense	21	359,641	(1,056,714)
Net (loss)/profit		(4,175,255)	4,986,641

INTERIM CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB, except per share data)

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Huaneng Power International, Inc.

	Notes	For the six months ended 30 June	
		2022	2021 (Restated)
Other comprehensive income/(loss), net of tax			
<i>Items that will not be reclassified to profit or loss:</i>			
Fair value changes of other equity instrument investments		511	4,180
Share of other comprehensive loss of joint ventures and associates		(21,939)	(34,206)
Income tax effect		–	(1,045)
<i>Items that may be reclassified subsequently to profit or loss:</i>			
Share of other comprehensive income of joint ventures and associates		28,618	980
Cash flow hedges:			
Effective portion of changes in fair value of hedging instruments arising during the period		1,367,092	991,452
Reclassification adjustments for gains included in profit or loss		(1,244,445)	(237,742)
Exchange differences on translation of foreign operations		(160,135)	(305,307)
Income tax effect		(20,850)	(128,132)
Other comprehensive (loss)/income, net of tax		(51,148)	290,180
Total comprehensive (loss)/income		(4,226,403)	5,276,821
Net (loss)/profit attributable to:			
– Equity holders of the Company		(3,220,203)	4,186,861
– Non-controlling interests		(955,052)	799,780
Total comprehensive (loss)/income attributable to:			
– Equity holders of the Company		(3,057,567)	4,455,738
– Non-controlling interests		(1,168,836)	821,083
(Losses)/earnings per share attributable to the ordinary shareholders of the Company (expressed in RMB per share)			
– Basic and diluted	22	(0.27)	0.20

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB)

	Attributable to equity holders of the Company										Total equity			
	Capital surplus													
	Share capital	Other equity instruments	Share premium	Hedging reserve	Fair value reserve of financial assets through other comprehensive income	Other reserve in other comprehensive income	Other capital reserve	Subtotal	Surplus reserves	Currency translation differences		Retained earnings	Total	Non-controlling interests
Balance as at 31 December 2020	15,698,093	48,419,779	24,770,682	(77,707)	427,126	(105,910)	1,148,359	26,162,550	8,140,030	(738,927)	32,164,398	129,845,923	21,770,275	151,616,198
Effect of adoption of IAS 16 amendments	-	-	-	-	-	-	-	-	-	-	16,860	16,860	51	16,911
Balance as at 1 January 2021 (Restated)	15,698,093	48,419,779	24,770,682	(77,707)	427,126	(105,910)	1,148,359	26,162,550	8,140,030	(738,927)	32,181,258	129,862,783	21,770,326	151,633,109
Profit for the six months ended 30 June 2021	-	1,059,926	-	-	-	-	-	-	-	-	3,126,935	4,186,861	799,780	4,986,641
Other comprehensive income/(loss):														
Fair value changes of other equity instrument investments, net of tax	-	-	-	-	3,108	-	-	-	-	-	-	-	-	3,135
Share of other comprehensive (loss)/income of investees - accounted for under the equity method, net of tax	-	-	-	-	(34,206)	980	-	(33,226)	-	-	-	(33,226)	-	(33,226)
Changes in fair value of effective portion and reclassification of cash flow hedges, net of tax	-	-	-	607,865	-	-	-	607,865	-	(308,870)	-	(308,870)	17,713	625,578
Currency translation differences	-	-	-	-	-	-	-	-	-	-	-	-	3,563	(305,307)
Total comprehensive income/(loss) for the six months ended 30 June 2021	-	1,059,926	-	607,865	(31,098)	980	-	577,747	-	(308,870)	3,126,935	4,455,738	821,083	5,276,821
Distribution of other equity instruments (Note 11)	-	(1,539,999)	-	-	-	-	-	-	-	-	-	(1,539,999)	-	(1,539,999)
Dividends relating to 2020 (Note 11)	-	-	-	-	-	-	-	-	-	-	(2,825,657)	(2,825,657)	(302,421)	(3,128,078)
Capital injections from non-controlling interests of subsidiaries	-	-	-	-	-	-	12,358	12,358	-	-	-	-	1,027,928	1,040,286
Share of other capital reserve of investees accounted for under the equity method	-	-	-	-	-	-	851	851	-	-	-	-	-	851
Acquisition of non-controlling interests of subsidiaries	-	-	-	-	-	-	(915,693)	(915,693)	-	-	-	(915,693)	853,739	(61,954)
Deregistration of a subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	(13,388)	(13,388)
Balance as at 30 June 2021	15,698,093	47,939,706	24,770,682	530,158	396,028	(104,930)	245,875	25,837,813	8,140,030	(1,047,797)	32,482,536	129,050,381	24,157,267	153,207,648

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB)

	Attributable to equity holders of the Company										Total equity			
	Capital surplus													
	Share capital	Other equity instruments	Share premium	Hedging reserve	Fair value reserve of financial assets at fair value through other comprehensive income	Other reserve in other comprehensive income	Other capital reserve	Subtotal	Surplus reserves	Currency translation differences		Retained earnings	Total	Non-controlling interests
Balance as at 31 December 2021	15,690,093	48,417,977	24,770,682	407,974	349,680	(107,351)	246,517	25,667,502	8,140,030	(1,443,398)	16,567,610	115,047,814	20,510,199	133,558,013
Effect of adoption of IAS 16 amendments	-	-	-	-	-	-	-	-	-	-	332,861	332,861	(550)	332,311
Balance as at 1 January 2022 (Restated)	15,690,093	48,417,977	24,770,682	407,974	349,680	(107,351)	246,517	25,667,502	8,140,030	(1,443,398)	16,900,471	113,380,675	20,509,649	133,890,324
Profit/(loss) for the six months ended 30 June 2022	-	1,059,926	-	-	-	-	-	-	-	-	(4,280,129)	(3,220,203)	(955,052)	(4,175,255)
Other comprehensive (loss)/income:														
Fair value changes of other equity instrument investments, net of tax	-	-	-	-	511	-	-	511	-	-	-	-	-	511
Share of other comprehensive income/(loss) of investees - accounted for under the equity method, net of tax	-	-	-	-	(21,939)	28,618	-	6,679	-	-	-	6,679	-	6,679
Changes in fair value of effective portion and reclassification of cash flow hedges, net of tax	-	-	-	70,539	-	-	-	70,539	-	-	-	70,539	31,258	101,797
Currency translation differences	-	-	-	-	-	-	-	-	84,907	84,907	-	84,907	(245,042)	(160,135)
Total comprehensive income/(loss) for the six months ended 30 June 2022	-	1,059,926	-	70,539	(21,428)	28,618	-	71,729	-	84,907	(4,280,129)	(3,057,567)	(1,168,836)	(4,226,403)
Distribution of other equity instruments (Note 11)	-	(912,341)	-	-	-	-	-	-	-	-	-	(912,341)	-	(912,341)
Dividends relating to 2021 (Note 11)	-	-	-	-	-	-	-	-	-	-	-	-	(437,982)	(437,982)
Capital injections from non-controlling interests of subsidiaries	-	-	-	-	-	-	-	-	-	-	-	-	476,539	476,539
Share of other capital reserve of investees accounted for under the equity method	-	-	-	-	-	-	210,028	210,028	-	-	-	210,028	-	210,028
Acquisition of non-controlling interests of subsidiaries	-	-	-	-	-	-	6,857	6,857	-	-	-	6,857	35,063	41,920
Disposal of equity investments at fair value through other comprehensive income	-	-	-	-	(5,104)	-	-	(5,104)	-	-	5,104	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	1,016	1,016	(86)	930
Balance as at 30 June 2022	15,690,093	48,565,562	24,770,682	478,513	323,148	(78,733)	463,402	25,957,012	8,140,030	(1,358,491)	12,626,462	109,628,668	19,414,347	129,043,015

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB)

	Notes	For the six months ended 30 June	
		2022	2021 (Restated)
OPERATING ACTIVITIES			
(Loss)/profit before income tax expense		(4,534,896)	6,043,355
Adjustments to reconcile profit before income tax expense to net cash provided by operating activities:			
Depreciation of property, plant and equipment	20	11,519,864	10,750,687
Depreciation of right-of-use assets	20	451,887	344,248
Provision for impairment on other non-current assets	20	1,163	1,720
Amortisation of other non-current assets	20	49,487	66,726
Recognition/(reversal) of provision for loss allowance of receivables	20	64,821	(3,326)
Reversal of provision for inventory obsolescence	20	(1,423)	(969)
Loss on fair value changes of financial assets/liabilities		–	28
Other investment gain		(2,236)	(4,422)
Net gain on disposals of non-current assets	20	(121,204)	(177,331)
Share of profits less losses of associates and joint ventures		(673,538)	(926,872)
Interest income		(159,635)	(135,032)
Interest expense	20	5,106,270	4,258,960
Others		(536,307)	(103,514)
Changes in working capital:			
Inventories		4,311,316	(2,075,480)
Other receivables and assets		(337,969)	(178,760)
Accounts and notes receivable		5,251,525	(1,692,195)
Contract assets		9,688	897
Restricted cash		86,935	46,710
Accounts payable and other liabilities		(1,939,095)	4,795,294
Contract liabilities		(2,471,827)	(955,236)
Taxes payable		3,892,261	239,053
Interest received		159,635	135,032
Income tax expense paid		(39,076)	(1,160,799)
Net cash provided by operating activities		20,087,646	19,268,774

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB)

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Huaneng Power International, Inc.

	For the six months ended 30 June	
	2022	2021 (Restated)
INVESTING ACTIVITIES		
Payment for the purchase of property, plant and equipment	(14,631,655)	(17,763,006)
Proceeds from disposal of property, plant and equipment, land use rights and other non-current assets	334,074	75,978
Payment for the purchase of other non-current assets	(4,315)	(1,044)
Cash dividends received	324,703	522,630
Capital injections for investments in associates and joint ventures	(1,010,000)	(179,100)
Cash paid for acquiring other equity instrument investments	–	(102,796)
Cash paid for acquiring subsidiaries, net of cash paid	(40,919)	–
Cash received from the repayment of entrusted loans	–	223,410
Others	9,580	4,407
Net cash used in investing activities	(15,018,532)	(17,219,521)

The notes on pages 42 to 97 are an integral part of this unaudited interim condensed consolidated financial information.

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB)

	Notes	For the six months ended 30 June	
		2022	2021 (Restated)
FINANCING ACTIVITIES			
Issuance of short-term bonds		10,300,000	13,000,000
Repayments of short-term bonds		(18,000,000)	(18,000,000)
Proceeds from new short-term loans		77,968,135	62,068,409
Repayments of short-term loans		(80,500,217)	(59,898,253)
Proceeds from new long-term loans		34,017,380	20,240,504
Repayments of long-term loans		(29,863,916)	(17,576,355)
Issuance of long-term bonds		6,899,712	11,300,000
Repayments of long-term bonds		–	(7,500,000)
Interest paid		(6,237,221)	(5,310,459)
Net capital injection from non-controlling interests of subsidiaries		476,539	1,040,286
Dividends paid to non-controlling interests of subsidiaries		(575,956)	(84,328)
Lease payments		(298,660)	(999,835)
Cash paid for acquisition of non-controlling interests of subsidiaries		–	(61,958)
Others		345,358	26,960
Net cash used in financing activities		(5,468,846)	(1,755,029)
Effect of foreign exchange rate changes, net		71,367	73,423
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		(328,365)	367,647
Cash and cash equivalents at beginning of the period		15,554,825	13,257,892
CASH AND CASH EQUIVALENTS AT END OF THE PERIOD	23	15,226,460	13,625,539

NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL INFORMATION

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB unless otherwise stated)

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Huaneng Power International, Inc.

1. COMPANY ORGANISATION AND PRINCIPAL ACTIVITIES

Huaneng Power International, Inc. (the “Company”) was incorporated in the People’s Republic of China (the “PRC”) as a Sino-foreign joint stock limited company on 30 June 1994. The registered address of the Company is Huaneng Building, 6 Fuxingmennei Street, Xicheng District, Beijing, the PRC. The Company and its subsidiaries (collectively, the “Group”) are principally engaged in the generation and sale of electric power to the respective regional or provincial grid companies in the PRC, Republic of Singapore (“Singapore”) and Islamic Republic of Pakistan (“Pakistan”). The Company conducts its business in Singapore through SinoSing Power Pte Ltd. (“SinoSing Power”) and its subsidiaries and in Pakistan through Huaneng Shandong Ruyi (Hong Kong) Energy Co., Ltd. (“Hong Kong Energy”) and its subsidiaries.

The directors consider Huaneng International Power Development Corporation (“HIPDC”) and China Huaneng Group Co., Ltd. (“Huaneng Group”) as the controlling shareholders of the Company, with HIPDC being the parent company and Huaneng Group being the ultimate parent company of the Company, respectively. Both HIPDC and Huaneng Group are incorporated in the PRC.

2. BASIS OF PREPARATION

This unaudited interim condensed consolidated financial information (“interim financial information”) for the six months ended 30 June 2022 has been prepared in accordance with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, and International Accounting Standard (“IAS”) 34 “Interim Financial Reporting”. This interim financial information should be read in conjunction with the annual financial statements for the year ended 31 December 2021, which have been prepared in accordance with International Financial Reporting Standards (“IFRSs”) issued by the International Accounting Standards Board (the “IASB”). This interim financial information was approved for issuance on 26 July 2022.

The accounting policies adopted in the preparation of the interim financial information are consistent with those applied in the preparation of the Group’s annual consolidated financial statements for the year ended 31 December 2021, except for the adoption of the revised IFRSs effective as of 1 January 2022. Details of any changes in accounting policies are set out in note 3.

The preparation of interim financial information in conformity with IAS 34 requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses on a year to date basis. Actual results may differ from these estimates.

2. BASIS OF PREPARATION *(Continued)*

This interim financial information contains condensed consolidated financial statements and selected explanatory notes. The notes include an explanation of events and transactions that are significant to an understanding of the changes in financial position and performance of the Group since the 2021 annual financial statements. The interim condensed consolidated financial statements and notes thereto do not include all the information required for a full set of financial statements prepared in accordance with IFRSs.

The financial information relating to the financial year ended 31 December 2021 that is included in the interim financial information as comparative information does not constitute the Company's annual consolidated financial statements for that financial year but is derived from those financial statements. The annual consolidated financial statements for the year ended 31 December 2021 are available from the Company's registered office. The auditors have expressed an unqualified opinion on those financial statements in their report dated 22 March 2022.

As at and for the six months ended 30 June 2022, a portion of the Group's funding requirements for capital expenditures was partially satisfied by short-term financing. Consequently, as at 30 June 2022, the Group had net current liabilities of approximately Renminbi Yuan ("RMB") 85,762 million. Taking into consideration of the Group's undrawn available banking facilities exceeded RMB300 billion as at 30 June 2022, the Group expects to refinance certain of its short-term loans and bonds and also considers alternative sources of financing, where applicable and when needed. Therefore, the directors of the Company are of the opinion that the Group will be able to meet its liabilities as they fall due within the next twelve months and accordingly, the interim financial information is prepared on a going concern basis.

3. PRINCIPAL ACCOUNTING POLICIES

The accounting policies adopted in the preparation of the interim condensed consolidated financial statements are consistent with those applied in the preparation of the Group's annual consolidated financial statements for the year ended 31 December 2021, except for the adoption of the following revised IFRSs for the first time for the current period's financial information.

Amendments to IFRS 3

Amendments to IAS 16

Amendments to IAS 37

Annual Improvements to IFRSs 2018-2020

Reference to the Conceptual Framework

Property, Plant and Equipment: Proceeds before Intended Use

Onerous Contracts – Cost of Fulfilling a Contract

Amendments to IFRS 1, IFRS 9, Illustrative

Examples accompanying IFRS 16, and IAS 41

NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL INFORMATION

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB unless otherwise stated)

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Huaneng Power International, Inc.

3. PRINCIPAL ACCOUNTING POLICIES (Continued)

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

- (a) Amendments to IFRS 3 replace a reference to the previous Framework for the Preparation and Presentation of Financial Statements with a reference to the Conceptual Framework for Financial Reporting issued in March 2018 without significantly changing its requirements. The amendments also add to IFRS 3 an exception to its recognition principle for an entity to refer to the Conceptual Framework to determine what constitutes an asset or a liability. The exception specifies that, for liabilities and contingent liabilities that would be within the scope of IAS 37 or IFRIC 21 if they were incurred separately rather than assumed in a business combination, an entity applying IFRS 3 should refer to IAS 37 or IFRIC 21 respectively instead of the Conceptual Framework. Furthermore, the amendments clarify that contingent assets do not qualify for recognition at the acquisition date. The Group has applied the amendments prospectively to business combinations that occurred on or after 1 January 2022. As there were no contingent assets, liabilities and contingent liabilities within the scope of the amendments arising in the business combination that occurred during the period, the amendments did not have any impact on the financial position and performance of the Group.
- (b) Amendments to IAS 16 prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling any such items, and the cost of those items, in profit or loss. The Group has applied the amendments retrospectively to items of property, plant and equipment made available for use on or after 1 January 2021.

Set out below are the amounts by which each financial statement line item was affected as at 1 January 2022 as a result of the adoption of the amendments to IAS 16:

	Increase/(decrease) RMB'000
Assets	
Property, plant and equipment	284,433
Investments in associates and joint ventures	47,878
Total assets	<u>332,311</u>
Equity	
Retained earnings	332,861
Non-controlling interests	<u>(550)</u>
	<u>332,311</u>

3. PRINCIPAL ACCOUNTING POLICIES (Continued)

- (c) Amendments to IAS 37 clarify that for the purpose of assessing whether a contract is onerous under IAS 37, the cost of fulfilling the contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract include both the incremental costs of fulfilling that contract (e.g., direct labour and materials) and an allocation of other costs that relate directly to fulfilling that contract (e.g., an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract as well as contract management and supervision costs). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The Group has applied the amendments prospectively to contracts for which it has not yet fulfilled all its obligations at 1 January 2022 and no onerous contracts were identified. Therefore, the amendments did not have any impact on the financial position or performance of the Group.
- (d) *Annual Improvements to IFRSs 2018-2020* sets out amendments to IFRS 1, IFRS 9, Illustrative Examples accompanying IFRS 16, and IAS 41. Details of the amendments that are applicable to the Group are as follows:
- IFRS 9 *Financial Instruments*: clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. The Group has applied the amendment prospectively to financial liabilities that are modified or exchanged on or after 1 January 2022. As there was no modification of the Group's financial liabilities during the period, the amendment did not have any impact on the financial position or performance of the Group.
 - IFRS 16 *Leases*: removes the illustration of payments from the lessor relating to leasehold improvements in Illustrative Example 13 accompanying IFRS 16. This removes potential confusion regarding the treatment of lease incentives when applying IFRS 16.

NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL INFORMATION

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB unless otherwise stated)

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4. REVENUE AND SEGMENT INFORMATION

(a) Disaggregation of revenue

In the following table, revenue is disaggregated by major products and/or service lines of revenue recognition. The table also includes a reconciliation of the disaggregated operating revenue to the Group's reportable segments (Note 4(b)).

	PRC power segment	Overseas segment Note i	All other segments	Inter-segment revenue	Total
For the six months ended 30 June 2022					
– Sales of power and heat	96,868,713	14,431,974	–	–	111,300,687
– Sales of coal and raw materials	762,707	5,710	–	–	768,417
– Port service	–	–	298,789	(178,617)	120,172
– Transportation service	–	–	109,689	(89,746)	19,943
– Lease income	46,845	566,202	–	–	613,047
– Others	1,223,265	2,818,414	14,121	(9,004)	4,046,796
Total	98,901,530	17,822,300	422,599	(277,367)	116,869,062
	PRC power segment	Overseas segment Note i	All other segments	Inter-segment revenue	Total
For the six months ended 30 June 2021 (Restated)					
– Sales of power and heat	84,753,960	5,542,341	–	–	90,296,301
– Sales of coal and raw materials	1,086,965	547	–	–	1,087,512
– Port service	–	–	326,136	(199,921)	126,215
– Transportation service	–	–	95,467	(71,331)	24,136
– Lease income	49,148	894,249	–	–	943,397
– Others	1,056,085	1,725,681	17,271	(15,913)	2,783,124
Total	86,946,158	8,162,818	438,874	(287,165)	95,260,685

Note i: Overseas segment mainly consists of the operations in Singapore and Pakistan.

The revenue from the sale of power and heat and the sale of coal and raw materials is recognised at the point in time upon the transfer of products, whereas the revenue from port service, transportation service, maintenance service, and heating pipeline service is recognised over time during the provision of such services. Lease income is recognised over the lease term.

4. REVENUE AND SEGMENT INFORMATION *(Continued)*

(b) Segment information

Directors and certain senior management of the Company perform the function as the chief operating decision maker (collectively referred to as the “senior management”). The senior management reviews the internal reporting of the Group in order to assess performance and allocate resources. The Company has determined the operating segments based on these reports. The reportable segments of the Group are the PRC power segment, overseas segment and all other segments (mainly including port and transportation operations). No operating segments have been aggregated to form a reportable segment.

Senior management assesses the performance of the operating segments based on a measure of profit before income tax expense under China Accounting Standards for Business Enterprises (“PRC GAAP”) excluding dividend income received from other equity instrument investments, share of profits of China Huaneng Finance Co., Ltd. (“Huaneng Finance”) and operating results of the centrally managed and resource allocation functions of the headquarters (“segment results”). Other information provided, except as noted below, to the senior management of the Company is measured under PRC GAAP.

Segment assets exclude prepaid income tax, deferred income tax assets, other equity instrument investments, investment in Huaneng Finance and assets related to the centrally managed and resource allocation functions of the headquarters that are not attributable to any operating segment (“corporate assets”). Segment liabilities exclude current income tax liabilities, deferred income tax liabilities and liabilities related to the centrally managed and resource allocation functions of the headquarters that are not attributable to any operating segment (“corporate liabilities”). These are part of the reconciliation to total assets and liabilities of the statement of financial position.

All sales among the operating segments have been eliminated as internal transactions when preparing consolidated financial statements.

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48 4. REVENUE AND SEGMENT INFORMATION (Continued) (b) Segment information (Continued)

(Under PRC GAAP)

	PRC power segment	Overseas segment	All other segments	Total
For the six months ended 30 June 2022				
Total revenue	98,901,530	17,822,300	422,599	117,146,429
Intersegment revenue	–	–	(277,367)	(277,367)
Revenue from external customers	98,901,530	17,822,300	145,232	116,869,062
Segment results	(5,426,254)	1,016,797	315,073	(4,094,384)
Interest income	96,963	61,711	961	159,635
Interest expense	(4,670,352)	(367,771)	(64,736)	(5,102,859)
Impairment loss	(1,526)	1,786	–	260
Credit loss	9,086	(73,907)	–	(64,821)
Depreciation and amortisation	(11,257,086)	(311,916)	(111,660)	(11,680,662)
Net gain on disposal of non-current assets	121,223	–	(2)	121,221
Share of profits less losses of associates and joint ventures	301,718	–	298,495	600,213
Income tax expense	414,593	(127,508)	(14,475)	272,610

(Under PRC GAAP)

	PRC power segment	Overseas segment	All other segments	Total
For the six months ended 30 June 2021 (Restated)				
Total revenue	86,946,158	8,162,818	438,874	95,547,850
Intersegment revenue	–	–	(287,165)	(287,165)
Revenue from external customers	86,946,158	8,162,818	151,709	95,260,685
Segment results	5,911,840	367,705	335,794	6,615,339
Interest income	75,598	58,418	1,016	135,032
Interest expense	(3,831,679)	(349,919)	(68,732)	(4,250,330)
Impairment loss	(1,660)	909	–	(751)
Credit loss	3,572	(246)	–	3,326
Depreciation and amortisation	(10,405,542)	(290,094)	(112,256)	(10,807,892)
Net gain on disposal of non-current assets	190,115	52	–	190,167
Share of profits less losses of associates and joint ventures	572,523	–	284,874	857,397
Income tax expense	(1,134,044)	918	(21,657)	(1,154,783)

4. REVENUE AND SEGMENT INFORMATION (Continued)

(b) Segment information (Continued)

(Under PRC GAAP)

	PRC power segment	Overseas segment	All other segments	Total
30 June 2022				
Segment assets	418,100,238	41,740,790	10,880,935	470,721,963
Including:				
Additions to non-current assets (excluding financial assets and deferred income tax assets)	13,688,353	19,821	3,984	13,712,158
Investments in associates	14,324,319	–	5,122,485	19,446,804
Investments in joint ventures	1,100,073	–	1,262,294	2,362,367
Segment liabilities	(331,448,132)	(24,438,645)	(2,068,139)	(357,954,916)

(Under PRC GAAP)

	PRC power segment	Overseas segment	All other segments	Total
31 December 2021 (Restated)				
Segment assets	430,475,031	40,378,092	10,938,171	481,791,294
Including:				
Additions to non-current assets (excluding financial assets and deferred income tax assets)	48,632,163	485,642	674,173	49,791,978
Investments in associates	14,030,416	–	4,995,904	19,026,320
Investments in joint ventures	1,346,963	–	1,151,581	2,498,544
Segment liabilities	(337,445,709)	(23,857,688)	(2,655,232)	(363,958,629)

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50 4. REVENUE AND SEGMENT INFORMATION (Continued)

(b) Segment information (Continued)

A reconciliation of segment results to profit before income tax expense is provided as follows:

	For the six months ended 30 June	
	2022	2021 (Restated)
Segment results (PRC GAAP)	(4,094,384)	6,615,339
Reconciling items:		
Loss related to the headquarters	(149,949)	(193,327)
Investment income from Huaneng Finance	68,373	77,312
Dividend income of other equity instrument investments	–	(16)
Impact of other IFRS adjustments*	(358,936)	(455,953)
(Loss)/profit before income tax expense per unaudited interim consolidated statement of comprehensive income	(4,534,896)	6,043,355

Reportable segments' assets are reconciled to total assets as follows:

	As at	As at
	30 June 2022	31 December 2021 (Restated)
Total segment assets (PRC GAAP)	470,721,963	481,791,294
Reconciling items:		
Investment in Huaneng Finance	1,419,359	1,426,986
Deferred income tax assets	6,328,203	5,503,847
Prepaid income tax	350,790	695,156
Other equity instrument investments	722,205	729,070
Corporate assets	264,853	254,442
Impact of other IFRS adjustments*	10,213,270	10,702,739
Total assets per unaudited interim condensed consolidated statement of financial position	490,020,643	501,103,534

4. REVENUE AND SEGMENT INFORMATION (Continued)

(b) Segment information (Continued)

Reportable segments' liabilities are reconciled to total liabilities as follows:

	As at 30 June 2022	As at 31 December 2021
Total segment liabilities (PRC GAAP)	(357,954,916)	(363,958,629)
Reconciling items:		
Current income tax liabilities	(273,301)	(227,880)
Deferred income tax liabilities	(999,639)	(900,885)
Corporate liabilities	(908,289)	(1,089,086)
Impact of other IFRS adjustments*	(841,483)	(1,036,730)
Total liabilities per unaudited interim consolidated statement of financial position	(360,977,628)	(367,213,210)

Other material items:

	Reportable segment total	Headquarters	Share of profits of Huaneng Finance	Impact of other IFRS adjustments*	Total
For the six months ended 30 June 2022					
Total revenue	116,869,062	-	-	-	116,869,062
Interest expense	(5,102,859)	(3,411)	-	-	(5,106,270)
Impairment loss	260	-	-	-	260
Credit loss	(64,821)	-	-	-	(64,821)
Depreciation and amortisation	(11,680,662)	(1,633)	-	(338,943)	(12,021,238)
Net gain/(loss) on disposal of non-current assets	121,221	-	-	(17)	121,204
Share of profits less losses of associates and joint ventures	600,213	-	68,373	4,952	673,538
Income tax expense	272,610	-	-	87,031	359,641

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52 4. REVENUE AND SEGMENT INFORMATION (Continued)

(b) Segment information (Continued)

Other material items: (Continued)

	Reportable segment total	Headquarters	Share of profits of Huaneng Finance	Impact of other IFRS adjustments*	Total
For the six months ended 30 June 2021					
Total revenue (Restated)	95,260,685	-	-	-	95,260,685
Interest expense	(4,250,330)	(8,630)	-	-	(4,258,960)
Impairment loss	(751)	-	-	-	(751)
Credit loss	3,326	-	-	-	3,326
Depreciation and amortisation (Restated)	(10,807,892)	(25,232)	-	(328,537)	(11,161,661)
Net gain/(loss) on disposal of non-current assets	190,167	-	-	(12,836)	177,331
Share of profits less losses of associates and joint ventures (Restated)	857,397	-	77,312	(7,837)	926,872
Income tax expense	(1,154,783)	-	-	98,069	(1,056,714)

* Other IFRS adjustments above primarily represented the classification adjustments and adjustments related to business combinations under common control and borrowing costs. Other than the classification adjustments, the differences will be gradually eliminated following subsequent depreciation and amortisation of related assets or the extinguishment of liabilities.

Geographical information (Under IFRSs):

(i) External revenue generated from the following countries:

	For the six months ended 30 June	
	2022	2021 (Restated)
PRC	99,046,762	87,097,867
Overseas	17,822,300	8,162,818
Total	116,869,062	95,260,685

The geographical location of customers is based on the location at which the electricity was transferred, goods were delivered, and services were provided.

4. REVENUE AND SEGMENT INFORMATION (Continued)

(b) Segment information (Continued)

Geographical information (Under IFRSs): (Continued)

(ii) **Non-current assets (excluding financial assets and deferred income tax assets) are located in the following countries:**

	As at 30 June 2022	As at 31 December 2021 (Restated)
PRC	370,842,256	371,576,714
Overseas	22,271,407	22,087,875
Total	393,113,663	393,664,589

The non-current asset information above is based on the locations of the assets.

The information on sales to major customers of the Group which accounted for 10% or more of external revenue is as follows:

For the six months ended 30 June 2022, the revenue from grid companies under common control of State Grid Corporation of China within the PRC power segment in total accounted for 75% of external revenue (for the six months ended 30 June 2021: 81%). The sales to a subsidiary of State Grid Corporation of China which accounted for 10% or more of external revenue is as follows:

	For the six months ended 30 June			
	2022		2021	
	Amount	Proportion	Amount	Proportion
State Grid Shandong Electric Power Company	17,783,677	15%	13,655,789	14%

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5. PROPERTY, PLANT AND EQUIPMENT

	As at 30 June 2022	As at 31 December 2021 (Restated)
Balance at the end of prior year (audited)	320,589,625	300,171,142
Adoption of IAS 16 amendments	284,433	16,911
Balance at the beginning of the period/year (restated)	320,874,058	300,188,053
Acquisition	277,378	363,518
Additions	11,766,325	42,678,369
Other additions	157,102	99,348
Reclassification to investment properties	(7)	(45,026)
Disposals/write-off	(173,756)	(139,855)
Depreciation charge	(11,641,140)	(21,525,083)
Impairment charge	–	(28,879)
Other decrease	(111,057)	(433,589)
Currency translation differences	122,255	(282,798)
End of the period/year	<u>321,271,158</u>	<u>320,874,058</u>

As at 30 June 2022, certain property, plant and equipment were pledged to a bank as collateral against long-term loans (Note 12) and short-term loans (Note 17).

As at 30 June 2022, the Group was in the process of applying for the ownership certificate for certain buildings with an aggregate net book value of RMB4,946 million (31 December 2021: RMB5,145 million). Management is of the opinion that the Group is entitled to lawfully and validly occupy and use the above-mentioned buildings.

6. FINANCIAL INSTRUMENTS

(a) Fair value measurements

The table below analyses financial instruments carried at fair value, by the valuation method. The different levels have been defined as follows:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3 – Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The following table presents the assets and liabilities of the Group that are measured at fair value at 30 June 2022 and 31 December 2021:

As at 30 June 2022

	Level 1	Level 2	Level 3	Total
Assets				
Derivatives used for hedging	–	824,338	–	824,338
Other equity instrument investments	–	–	722,205	722,205
Total assets	–	824,338	722,205	1,546,543
Liabilities				
Derivatives used for hedging	–	42,027	–	42,027
Total liabilities	–	42,027	–	42,027

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6. FINANCIAL INSTRUMENTS (Continued)

(a) Fair value measurements (Continued)

The following table presents the assets and liabilities of the Group that are measured at fair value at 30 June 2022 and 31 December 2021: (Continued)

As at 31 December 2021

	Level 1	Level 2	Level 3	Total
Assets				
Accounts receivable at fair value through other comprehensive income	–	277,781	–	277,781
Derivatives used for hedging	–	722,211	–	722,211
Other equity instrument investments	6,865	–	722,205	729,070
Total assets	6,865	999,992	722,205	1,729,062
Liabilities				
Derivatives used for hedging	–	140,357	–	140,357
Total liabilities	–	140,357	–	140,357

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in Level 1. As at 30 June 2022, there was no instruments included in Level 1. As at 31 December 2021, instruments included in Level 1 were equity instruments in listed securities designated as financial assets measured at fair value through other comprehensive income.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximise the use of relevant observable inputs and minimise the use of unobservable inputs. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

6. FINANCIAL INSTRUMENTS (Continued)

(a) Fair value measurements (Continued)

Specific valuation techniques used to value financial instruments include:

- The forward exchange contracts and fuel oil swaps are both valued using quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- The fair values of accounts receivable at fair value through other comprehensive income were measured using the discounted cash flow model. The model incorporates various market observable inputs including the annualised yields of similar securitisation products and interest rate curves. The carrying amounts of accounts receivable are the same as their fair values.
- The material other equity instrument investments in unlisted securities are valued using a market-base valuation technique based on assumptions that are not supported by an observable market price or rate. The Group determines comparable public companies based on industry, size, leverage and strategy and calculates an appropriate price multiple, such as price to book ("P/B") multiple, for each comparable company identified.

Instruments included in Level 2 comprise forward exchange contracts, fuel oil swaps, interest rate swaps and accounts receivable at fair value through other comprehensive income.

Instruments included in Level 3 comprise other equity instrument investments.

Set out below is a summary of significant unobservable inputs to the valuation of financial instruments together with a quantitative sensitivity analysis as at 30 June 2022:

	Valuation technique	Significant unobservable input	Range	Sensitivity of fair value to the input
Unlisted equity investments	Valuation multiples	Average P/B	30 June 2022: 1.14 to 1.25	10% increase/decrease in multiple would result in increase/decrease in fair value by RMB45.86 million.
		Discount for lack of marketability	30 June 2022: 22.00% to 24.00%	10% increase/decrease in discount for lack of marketability would result in decrease/increase in fair value by RMB12.93 million.

The discount for lack of marketability represents the amounts of premiums and discounts determined by the Group that market participants would take into account.

During the six months ended 30 June 2022, there were no transfers of financial instruments between Level 1 and Level 2, or transfers into or out of Level 3.

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Huaneng Power International, Inc.

6. FINANCIAL INSTRUMENTS (Continued)

(a) Fair value measurements (Continued)

The movements during the period in the balance of the Level 3 fair value measurements are as follows:

	As at 30 June 2022	As at 31 December 2021
Other equity instrument investments		
Beginning of the period/year	722,205	658,284
Addition	–	111,313
Disposal	–	(382)
Fair value changes	–	(47,010)
End of the period/year	722,205	722,205
Changes in fair value recognised in other comprehensive income for the period/year	–	(35,258)

(b) Fair value disclosures

The carrying values less provision for doubtful accounts of accounts receivable, other receivables and assets, accounts payable and other liabilities, short-term bonds and short-term loans approximated their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments.

The estimated fair values of long-term loans and long-term bonds (both including current maturities) were approximately RMB157.84 billion and RMB43.99 billion as at 30 June 2022 (31 December 2021: RMB153.82 billion and RMB36.79 billion), respectively. The aggregate book values of these liabilities were approximately RMB158.81 billion and RMB43.65 billion as at 30 June 2022 (31 December 2021: RMB154.07 billion and RMB36.57 billion), respectively.

7. GOODWILL

The movements of goodwill are as follows:

	As at 30 June 2022	As at 31 December 2021
Beginning of the period/year		
Cost	18,290,484	18,765,535
Accumulated impairment losses	(4,014,260)	(4,027,519)
Net book value	<u>14,276,224</u>	<u>14,738,016</u>
Movements:		
Currency translation differences	214,349	(461,792)
End of the period/year	<u>14,490,573</u>	<u>14,276,224</u>
Cost	18,510,988	18,290,484
Accumulated impairment losses	(4,020,415)	(4,014,260)
Net book value	<u>14,490,573</u>	<u>14,276,224</u>

8. OTHER NON-CURRENT ASSETS

Details of other non-current assets are as follows:

	As at 30 June 2022	As at 31 December 2021
Finance lease receivables (Note i)	8,731,055	8,664,550
VAT recoverable	4,946,746	6,213,495
Prepayments for pre-construction cost	624,746	479,138
Intangible assets	585,893	632,639
Prepaid connection fees	26,377	28,598
Contract assets	919,455	837,559
Others	2,022,931	2,200,026
Total	<u>17,857,203</u>	<u>19,056,005</u>

Note i: Huaneng Shandong Ruyi (Pakistan) Energy (Private) Co., Ltd. ("Ruyi Pakistan Energy") entered into a power purchase agreement with CPPA-G to sell all of the electricity produced with a regulated tariff mechanism approved by the National Electric Power Regulatory Authority. In accordance with the power purchase agreement and tariff mechanism, almost all the risks and rewards in relation to the power assets were in substance transferred to CPPA-G and therefore the power assets were accounted for as a finance lease to CPPA-G.

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Huaneng Power International, Inc.

9. OTHER RECEIVABLES AND ASSETS

Other receivables and assets comprised the following:

	As at 30 June 2022	As at 31 December 2021
Prepayments for inventories	4,220,598	4,002,491
Prepaid income tax	350,790	695,156
Others	467,768	436,411
Subtotal prepayments	5,039,156	5,134,058
Less: Loss allowances	4,638	2,638
Total prepayments, net	5,034,518	5,131,420
Dividends receivable	522,129	206,539
Receivables from sale of fuel	174,643	179,712
Others (Note i)	4,767,037	3,362,070
Subtotal other receivables	5,463,809	3,748,321
Less: Loss allowances	275,483	220,826
Total other receivables, net	5,188,326	3,527,495
VAT recoverable	2,915,410	5,109,848
Finance lease receivables	635,156	550,594
Designated loan to a joint venture	75,091	75,100
Others	–	369,090
Subtotal other assets	3,625,657	6,104,632
Less: Loss allowance	64,615	64,615
Total other assets, net	3,561,042	6,040,017
Gross total	14,128,622	14,987,011
Net total	13,783,886	14,698,932

Note i: Included in others were advances amounting to RMB447 million as at 30 June 2022 (31 December 2021: RMB462 million) which were due from Huangtai #8 Power Plant. For the six months ended 30 June 2022, the Group received total repayments amounting to RMB15 million (for the year ended 31 December 2021: paid total advances amounting to RMB240 million). According to an acquisition plan, Shandong Power paid an advance payment amounting to RMB1 billion to Shuifa Fengyuan Energy Co. Ltd. in March 2022. Due to the dispute on acquisition consideration, this acquisition was terminated, and the advance payment has not been repaid as of 30 June 2022.

10. ACCOUNTS AND NOTES RECEIVABLE

Accounts and notes receivable comprised the following:

	As at 30 June 2022	As at 31 December 2021
Accounts receivable	34,426,196	40,274,603
Notes receivable	4,229,422	3,743,482
	38,655,618	44,018,085
Less: Loss allowance	135,976	140,088
Total	38,519,642	43,877,997
Analysed into:		
Accounts receivable		
– At amortised cost	34,426,196	39,996,822
– At fair value through other comprehensive income	–	277,781
Notes receivable		
– At amortised cost	4,229,422	3,743,482

During the period ended 30 June 2022, the Group recognised no loss on the date of transfer of the accounts receivable (for the year ended 31 December 2021: RMB41,482 thousand).

Ageing analysis of accounts receivable and notes receivable was as follows:

	As at 30 June 2022	As at 31 December 2021
Within 1 year	37,945,860	43,683,311
Between 1 and 2 years	381,999	114,471
Between 2 and 3 years	105,904	59,241
Over 3 years	221,855	161,062
Total	38,655,618	44,018,085

As at 30 June 2022, the maturity period of the notes receivable ranged from 1 month to 6 months (31 December 2021: from 1 month to 12 months).

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Huaneng Power International, Inc.

11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS

(a) Dividends of ordinary shares

On 28 June 2022, upon the approval from shareholders at the annual general meeting, the Company declared no dividend in 2021 (2020 final: RMB0.180 per ordinary share, totalling approximately RMB2,826 million). As at 30 June 2022, the Company has no dividend to be paid (30 June 2021: the Company has not paid the dividend).

(b) Cumulative distribution of other equity instruments

In 2017, the Company issued two tranches of perpetual corporate bonds with the net proceeds of approximately RMB2,500 million and RMB2,500 million, respectively. The perpetual corporate bonds are issued at par value with an initial distribution rate of 5.05% and 5.17%, respectively. The interests of the perpetual corporate bonds are recorded as distributions, which are paid annually in arrears in September in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (e.g. distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The perpetual corporate bonds have no fixed maturity date and are callable at the Company's discretion in whole in August 2020 and 2022 respectively, and the payment of the principal may be deferred for each renewal period to 3 and 5 years respectively. The applicable distribution rate will be reset on the first call date and each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum. On the first call date of the bond with renewal period of 3 years in September 2020, the Company decided to exercise the callable option. The bond was redeemed in whole on 25 September 2020.

In 2018, the Company issued three tranches of Yingda Insurance Financing Plan (the "Yingda plan") with the aggregate proceeds of RMB5,000 million. The Yingda plan has no fixed period with an initial distribution rate of 5.79%. The interests of the financing plan are recorded as distributions, which are paid annually in arrears in June and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (e.g. distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The Yingda plan has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 8th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 9th to the 11th years after the issuance, the period from the 11th to the 13th years after the issuance and the 13th year onwards after the issuance, to the higher of the initial distribution rate plus 300 basis points and the 10-year treasury bond yield in the 9th year after the issuance plus 600 basis points, the higher of the initial distribution rate plus 600 basis points and the 10-year treasury bond yield in the 11th year after the issuance plus 900 basis points and the higher of the initial distribution rate plus 900 basis points and the 10-year treasury bond yield in the 13th year after the issuance plus 1,200 basis points, respectively. As at 24 November 2021, the Company signed a supplement agreement with regard to amending the clause of the applicable distribution rate. The applicable distribution rate will be reset during the period from the 9th year after the issuance, to the basis rate plus 300 basis points, and will remain 8.79% afterwards.

11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS *(Continued)*

(b) Cumulative distribution of other equity instruments *(Continued)*

In 2019, the Company issued two tranches of China Life Financing Plan (the “China Life plan”) with the aggregate proceeds of RMB4,330 million. The China Life plan has no fixed period with an initial distribution rate of 5.05%. The interests of the China Life plan are recorded as distributions, which are paid annually in arrears in March, June, September and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The China Life plan has no fixed maturity date and is callable at the Company’s discretion in whole at each distribution date after the 8th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 9th year after the issuance, to the basis rate plus 300 basis points, and will remain 8.05% afterwards.

In 2019, the Company issued two tranches of PICC Financing Plan (the “PICC plan”) with the aggregate proceeds of RMB2,670 million. The PICC plan has no fixed period with an initial distribution rate of 5.10%. The interests of the PICC plan are recorded as distributions, which are paid annually in arrears in March, June, September and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The PICC plan has no fixed maturity date and is callable at the Company’s discretion in whole at each distribution date after 10th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 11th year after the issuance, to the basis rate plus 300 basis points, and will remain 8.10% afterwards.

In October 2019, the Company issued two tranches of medium-term notes with the net proceeds of approximately RMB2,000 million and RMB2,000 million, respectively. The medium-term notes are issued at par value with an initial distribution rate of 4.08% and 4.05%, respectively. The interests of the medium-term notes are recorded as distributions, which are paid annually in arrears in October in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The medium-term notes have no fixed maturity date and are callable at the Company’s discretion at a specific time, and the payment of the principal may be deferred for each renewal period to 3 years, respectively. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

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11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS *(Continued)*

(b) Cumulative distribution of other equity instruments *(Continued)*

In November 2019, the Company issued two tranches of medium-term notes with the net proceeds of approximately RMB2,500 million and RMB1,500 million. The medium-term notes are issued at par value with an initial distribution rate of 4.15% and 4.53%, respectively. The interests of the medium-term notes are recorded as distributions, which are paid annually in arrears in November in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The medium-term notes have no fixed maturity date and are callable at the Company's discretion at a specific time, and the payment of the principal may be deferred for each renewal period to 3 and 5 years respectively. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

In March 2020, the Company issued two tranches of perpetual corporate bonds with the net proceeds of approximately RMB2,000 million and RMB1,000 million, respectively. The perpetual corporate bonds are issued at par value with an initial distribution rate of 3.58% and 3.85%, respectively. The interests of the perpetual corporate bonds are recorded as distributions, which are paid annually in arrears in March in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (e.g. distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The perpetual corporate bonds have no fixed maturity date and are callable at the Company's discretion in whole in February 2023 and 2025 respectively, and the payment of the principal may be deferred for each renewal period to 3 and 5 years respectively. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

In April 2020, the Company issued medium-term notes with the net proceeds of approximately RMB3,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.18%. The interests of the medium-term notes are recorded as distributions, which are paid annually in arrears in April in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The medium-term notes have no fixed maturity date and are callable at the Company's discretion at specific time, and the payment of the principal may be deferred for each renewal period to 3 years. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS *(Continued)*

(b) Cumulative distribution of other equity instruments *(Continued)*

In April 2020, the Company issued the China Life plan with the proceeds of RMB3,570 million. The China Life plan has no fixed period with an initial distribution rate of 4.75%. The interests of the China Life plan are recorded as distributions, which are paid annually in arrears in March, June, September and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The China Life plan has no fixed maturity date and are callable at the Company's discretion in whole at each distribution date after the 8th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 9th year after the issuance, to the basis rate plus 300 basis points, and will remain 7.75% afterwards.

In April 2020, the Company issued the third tranche of the "PICC plan" with the proceeds of RMB930 million. The PICC plan has no fixed period with an initial distribution rate of 4.75%. The interests of the PICC plan are recorded as distributions, which are paid annually in arrears in March, June, September and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The PICC plan has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 10th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 11th year after the issuance, to the basis rate plus 300 basis points, and will remain 7.75% afterwards.

In April 2020, the Company issued a perpetual corporate bond with the net proceeds of approximately RMB2,500 million. The perpetual corporate bond is issued at par value with an initial distribution rate of 3.09%. The interests of the perpetual corporate bond are recorded as distributions, which are paid annually in arrears in April in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (e.g. distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The perpetual corporate bond has no fixed maturity date and is callable at the Company's discretion in whole in March 2023, or the payment of the principal may be deferred for each renewal period to 3 years. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

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11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS *(Continued)*

(b) Cumulative distribution of other equity instruments *(Continued)*

In June 2020, the Company issued medium-term notes with the net proceeds of approximately RMB3,500 million. The medium-term notes are issued at par value with an initial distribution rate of 3.60%. The interests of the medium-term notes are recorded as distributions, which are paid annually in arrears in June in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The medium-term notes have no fixed maturity date and are callable at the Company's discretion at a specific time, and the payment of the principal may be deferred for each renewal period to 3 years. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

In August 2020 and September 2020, the Company issued two tranches of medium-term notes with the net proceeds of approximately RMB2,000 million and RMB1,000 million, respectively. The medium-term notes are issued at par value with an initial distribution rate of 3.99% and 4.40%, respectively. The interests of the medium-term notes are recorded as distributions, which are paid annually in arrears in August and September in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The company has the right to defer current interests and all deferred interests. The medium-term notes have no fixed maturity date and are callable at the Company's discretion at a specific time, and the payment of the principal may be deferred for each renewal period to 3 years, respectively. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

In August 2020, the Company issued the fourth tranche of the "PICC plan" with the proceeds of RMB3,000 million. The PICC plan has no fixed period with an initial distribution rate of 4.60%. The interests of the PICC plan are recorded as distributions, which are paid annually in arrears in March, June, September and December in each year and may be deferred at the discretion of the Company unless compulsory payment events (distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The PICC plan has no fixed maturity date and are callable at the Company's discretion in whole at each distribution date after the 10th year of issuance, or the payment of the principal may be deferred at each distribution date aforementioned. The applicable distribution rate will be reset during the period from the 11th year after the issuance, to the basis rate plus 300 basis points, and will remain 7.60% afterwards.

11. DIVIDENDS OF ORDINARY SHARES AND CUMULATIVE DISTRIBUTION OF OTHER EQUITY INSTRUMENTS *(Continued)*

(b) Cumulative distribution of other equity instruments *(Continued)*

In September 2020, the Company issued a perpetual corporate bond with the net proceeds of approximately RMB3,000 million. The perpetual corporate bond is issued at par value with an initial distribution rate of 4.38%. The interests of the perpetual corporate bond are recorded as distributions, which are paid annually in arrears in September in each year and may be deferred at the discretion of the Company unless compulsory distribution payment events (e.g. distributions to ordinary shareholders of the Company or reduction of the registered capital of the Company) occur. The Company has the right to defer current interests and all deferred interests. The perpetual corporate bond has no fixed maturity date and is callable at the Company's discretion in whole in August 2023, and the payment of the principal may be deferred for each renewal period to 3 years. The applicable distribution rate will be reset on the first call date and for each renewal period after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum.

The perpetual corporate bonds, financing plans and medium-term notes were recorded as equity in the consolidated financial statements. During the six months ended 30 June 2022, the profit attributable to holders of other equity instruments, based on the applicable distribution rate, was RMB1,060 million (for the six months ended 30 June 2021: RMB1,060 million).

12. LONG-TERM LOANS

Long-term loans comprised the following:

	As at 30 June 2022	As at 31 December 2021
Loans from Huaneng Group and its subsidiaries (a)	7,555,630	9,483,974
Bank loans and other loans (b)	151,254,593	144,587,541
	158,810,223	154,071,515
Less: Current portion of long-term loans	14,371,332	17,213,799
Total	144,438,891	136,857,716

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12. LONG-TERM LOANS (Continued)

(a) Loans from Huaneng Group and its subsidiaries

Details of loans from Huaneng Group and its subsidiaries are as follows:

	As at 30 June 2022			
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Loans from Huaneng Group				
<i>Unsecured</i>				
RMB	<u>940,698</u>	<u>641,833</u>	<u>298,865</u>	2.85%-4.75%
Loans from Huaneng Finance				
<i>Unsecured</i>				
RMB	<u>4,762,598</u>	<u>536,467</u>	<u>4,226,131</u>	3.00%-4.67%
Loans from Huaneng Hong Kong Asset Management Co., Ltd. ("Hong Kong Asset Management")				
<i>Unsecured</i>				
US\$	<u>1,275,359</u>	<u>1,275,359</u>	<u>–</u>	2.30%-4.90%
Loans from Huaneng Tiancheng Financial Leasing Co., Ltd. ("Tiancheng Financial Leasing")				
<i>Secured</i>				
RMB	<u>576,975</u>	<u>8,840</u>	<u>568,135</u>	3.80%-4.65%
Total	<u>7,555,630</u>	<u>2,462,499</u>	<u>5,093,131</u>	

12. LONG-TERM LOANS (Continued)

(a) Loans from Huaneng Group and its subsidiaries (Continued)

Details of loans from Huaneng Group and its subsidiaries are as follows: (Continued)

	As at 31 December 2021			
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Loans from Huaneng Group				
<i>Unsecured</i>				
RMB	<u>2,042,822</u>	<u>667,695</u>	<u>1,375,127</u>	3.85%-4.75%
Loans from Huaneng Finance				
<i>Unsecured</i>				
RMB	<u>5,633,745</u>	<u>451,494</u>	<u>5,182,251</u>	3.00%-4.51%
Loans from Hong Kong Asset Management				
<i>Unsecured</i>				
US\$	<u>1,196,425</u>	<u>430</u>	<u>1,195,995</u>	2.30%-4.90%
Loans from Tiancheng Financial Leasing				
<i>Secured</i>				
RMB	<u>610,982</u>	<u>83,801</u>	<u>527,181</u>	3.80%-5.20%
Total	<u>9,483,974</u>	<u>1,203,420</u>	<u>8,280,554</u>	

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Huaneng Power International, Inc.

12. LONG-TERM LOANS (Continued)

(b) Bank loans and other loans

Details of bank loans and other loans are as follows:

As at 30 June 2022				
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Secured	10,258,109	1,670,559	8,587,550	2.15%-4.98%
Unsecured	140,996,484	10,238,274	130,758,210	0.75%-5.46%
Total	151,254,593	11,908,833	139,345,760	

As at 31 December 2021				
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Secured	11,334,757	1,771,929	9,562,828	1.42%-4.98%
Unsecured	133,252,784	14,238,450	119,014,334	0.75%-4.90%
Total	144,587,541	16,010,379	128,577,162	

As at 30 June 2022, long-term loans of approximately RMB4,420 million were secured by future revenue from the electricity business (31 December 2021: RMB4,516 million). Long-term loans of approximately RMB2,013 million (31 December 2021: RMB2,814 million) were secured by equity interests of a subsidiary of the Company. Long-term loans of approximately RMB50 million were secured by carbon emission trading rights (31 December 2021: RMB20 million).

As at 30 June 2022, long-term loans of RMB4,352 million (31 December 2021: RMB4,595 million) were secured by certain property, plant and equipment with a net book value amounting to approximately RMB5,103 million (31 December 2021: RMB4,969 million).

Certain subsidiaries of the Group had sales and leaseback agreements with Tiancheng Financial Leasing and other financial leasing companies. According to the agreements, these subsidiaries have an option to buy back the equipment at a nominal price (RMB1) when the lease term expires. The substance of the transaction was to obtain financing secured by relevant assets within the leasing period. As at 30 June 2022, the equipment mentioned above had total carrying amounts of RMB716 million and RMB4,387 million (31 December 2021: RMB858 million and RMB4,111 million) pledged to Tiancheng Financial Leasing and other financial leasing companies, respectively, which were recognised in property, plant and equipment while the long-term borrowings were RMB577 million and RMB3,775 million (31 December 2021: RMB611 million and RMB3,984 million) from Tiancheng Financial Leasing and other financial leasing companies, respectively.

12. LONG-TERM LOANS *(Continued)*

(b) Bank loans and other loans *(Continued)*

As at 30 June 2022, long-term loans of approximately RMB28 million (31 December 2021: RMB44 million) were guaranteed by Huaneng Group.

As at 30 June 2022, the Company provided guarantees for long-term loans of approximately RMB6,392 million (31 December 2021: RMB6,257 million) of the Company's overseas subsidiaries.

As at 30 June 2022, long-term loans of approximately RMB538 million (31 December 2021: RMB1,178 million) were guaranteed by other subsidiaries of the Company and Yangguang Jiedi Investment Co., Ltd. Among the long-term loans guaranteed by Yangguang Jiedi Investment Co., Ltd. were RMB21 million (31 December 2021: RMB47 million).

As at 30 June 2022, long-term loans of approximately RMB103 million (31 December 2021: RMB120 million) were guaranteed by Enshi Finance Bureau of Hubei Province.

As at 30 June 2022, long-term loans of approximately RMB201 million (31 December 2021: RMB176 million) were guaranteed by Huaneng Shandong Power Generation Co., Ltd. ("Shandong Power").

As at 30 June 2022, long-term loans of approximately RMB6,653 million (31 December 2021: RMB6,794 million) were guaranteed by Shandong Power, China Export & Credit Insurance Corporation ("China Export Corporation") and Jining Chengtou Holding Group Co., Ltd. ("Jining Chengtou") at the liability ratios of 17.5%, 65.0% and 17.5% respectively (31 December 2021: Shandong Power, China Export Corporation and Jining Chengtou at the liability ratios of 17.5%, 65.0% and 17.5% respectively).

As at 30 June 2022, long-term loans of approximately RMB1,075 million (31 December 2021: RMB1,020 million) were guaranteed by Shandong Power and Jining Chengtou at the liability ratios of 50% and 50% respectively (31 December 2021: Shandong Power and Jining Chengtou at the liability ratios of 50% and 50% respectively).

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13. LONG-TERM BONDS

Long-term bonds comprised the following:

	As at 30 June 2022	As at 31 December 2021
2016 corporate bonds 1st batch (5 years)	9	9
2016 corporate bonds 1st batch (10 years)	1,202,370	1,226,442
2017 medium-term notes 1st batch (5 years)	5,236,124	5,114,928
2018 medium-term notes 2nd batch (3 years)	2,799	2,799
2018 corporate bonds 2nd batch (10 years)	5,203,458	5,078,224
2019 corporate bonds 1st batch (10 years)	2,320,458	2,374,948
2019 corporate bonds 2nd batch (3 years)	1,034,773	1,017,160
2019 medium-term notes 1st batch (3 years)	516,851	507,807
2019 medium-term notes 1st batch (5 years)	1,551,941	1,522,587
2020 corporate bonds (5 years) – SSPL	1,995,737	1,920,795
2020 corporate bonds (10 years) – SSPL	1,987,066	1,915,197
2021 green medium-term notes 1st batch (3 years)	1,014,156	1,030,612
2021 green medium-term notes 2nd batch (3 years)	2,517,683	2,559,318
2021 corporate bonds 1st batch (3 years)	501,750	510,189
2021 corporate bonds 1st batch (10 years)	1,506,195	1,536,212
2021 corporate bonds 2nd batch (3 years)	501,101	509,489
2021 corporate bonds 2nd batch (10 years)	3,509,125	3,579,163
2021 corporate bonds 3rd batch (10 years)	1,801,961	1,838,162
2021 medium-term notes 1st batch (3 years)	2,051,730	2,022,070
2021 medium-term notes 2nd batch (3 years)	2,036,580	2,006,225
2021 medium-term notes 1st batch (3 years) – Jiangsu	304,573	300,123
2022 medium-term notes 1st batch (10 years)	1,519,534	–
2022 medium-term notes 2nd batch (3 years)	3,025,318	–
2022 medium-term notes 3rd batch (15 years)	1,510,702	–
2022 medium-term notes 1st batch (3 years) – Jiangsu	502,640	–
2022 medium-term notes 4th batch (3 years)	300,157	–
Subtotal	43,654,791	36,572,459
Less: Current portion of long-term bonds	7,276,398	7,175,540
Total	36,378,393	29,396,919

13. LONG-TERM BONDS (Continued)

Details of the outstanding corporate bonds, medium-term notes and debt financing instrument of the Group as at 30 June 2022 are summarised as follows:

Type of Instruments	Face Value	Issuance Date	Initial Period	Initial Distribution Rate	Effective Rate	Issue Price	Balance as at		Issued Amount	Amortisation	Repayment	Foreign		Interest Payable	Balance as at 30 June 2022
							31 December 2021	2021				Exchange Gain	Currency Translation Differences		
2016 corporate bonds 1st batch (5 years)	3,000,000	June 2016	5 years	3.48%	3.48%	3,000,000	-	9	-	-	-	-	-	9	
2016 corporate bonds 1st batch (10 years)	1,200,000	June 2016	10 years	3.98%	3.98%	1,200,000	1,266,442	-	5	-	-	23,683	47,760	1,202,370	
2017 medium-term notes 1st batch (5 years)	5,000,000	July 2017	5 years	4.69%	4.90%	5,000,000	5,114,928	-	4,910	-	-	116,286	-	5,236,124	
2018 medium-term notes 2nd batch (3 years)	2,000,000	July 2018	3 years	4.41%	4.56%	2,000,000	2,799	-	-	-	-	-	-	2,799	
2018 corporate bonds 2nd batch (10 years)	5,000,000	September 2018	10 years	5.05%	5.05%	5,000,000	5,078,224	-	21	-	-	125,213	-	5,203,458	
2019 corporate bonds 1st batch (10 years)	2,300,000	April 2019	10 years	4.70%	4.70%	2,300,000	2,374,948	-	4	-	-	53,606	108,100	2,320,458	
2019 corporate bonds 2nd batch (3 years)	1,000,000	July 2019	3 years	3.55%	3.55%	1,000,000	1,017,160	-	10	-	-	17,603	-	1,034,773	
2019 medium-term notes 1st batch (3 years)	500,000	July 2019	3 years	3.55%	3.65%	500,000	507,807	-	242	-	-	8,802	-	516,851	
2019 medium-term notes 1st batch (5 years)	1,500,000	July 2019	5 years	3.85%	3.96%	1,500,000	1,522,587	-	716	-	-	28,638	-	1,551,941	
2020 corporate bonds (5 years) - SPL	2,108,865	February 2020	5 years	2.25%	2.32%	2,108,865	1,920,795	48,856	-	-	6,630	(5,074)	22,027	1,995,737	
2020 corporate bonds (10 years) - SPL	2,108,865	February 2020	10 years	2.63%	2.72%	2,108,865	1,915,197	48,856	-	-	6,630	(12,068)	25,698	1,987,066	
2021 green medium-term notes 1st batch (3 years)	1,000,000	February 2021	3 years	3.45%	3.66%	1,000,000	1,030,612	-	936	-	-	17,108	34,500	1,014,156	
2021 green medium-term notes 2nd batch (3 years)	2,500,000	April 2021	3 years	3.35%	3.40%	2,500,000	2,559,318	-	585	-	-	41,530	83,750	2,517,683	
2021 corporate bonds 1st batch (3 years)	500,000	May 2021	3 years	3.35%	3.35%	500,000	510,189	-	5	-	-	8,306	16,750	501,750	
2021 corporate bonds 1st batch (10 years)	1,500,000	May 2021	10 years	3.97%	3.97%	1,500,000	1,536,212	-	3	-	-	29,530	59,550	1,506,195	
2021 corporate bonds 2nd batch (3 years)	500,000	June 2021	3 years	3.33%	3.33%	500,000	509,489	-	5	-	-	8,257	16,650	501,101	
2021 corporate bonds 2nd batch (10 years)	3,500,000	June 2021	10 years	3.97%	3.97%	3,500,000	3,579,163	-	7	-	-	68,905	138,950	3,509,125	
2021 corporate bonds 3rd batch (10 years)	1,800,000	June 2021	10 years	3.99%	3.99%	1,800,000	1,838,162	-	4	-	-	35,615	71,820	1,801,961	
2021 medium-term notes 1st batch (3 years)	2,000,000	August 2021	3 years	2.99%	3.01%	2,000,000	2,022,070	-	6	-	-	29,654	-	2,051,730	
2021 medium-term notes 2nd batch (3 years)	2,000,000	November 2021	3 years	3.07%	3.07%	2,000,000	2,006,225	-	(92)	-	-	30,447	-	2,036,580	
2021 medium-term notes 1st batch (3 years)-Jiangsu	300,000	December 2021	3 years	2.95%	2.95%	300,000	300,123	-	-	-	-	4,450	-	304,573	
2022 medium-term notes 1st batch (10 years)	1,500,000	February 2022	10 years	3.74%	3.80%	1,500,000	-	1,500,000	168	-	-	19,366	-	1,519,534	
2022 medium-term notes 2nd batch (3 years)	3,000,000	March 2022	3 years	2.84%	2.89%	3,000,000	-	3,000,000	(2,459)	-	-	27,777	-	3,025,318	
2022 medium-term notes 3rd batch (15 years)	1,500,000	April 2022	15 years	3.70%	3.74%	1,500,000	-	1,500,000	58	-	-	10,644	-	1,510,702	
2022 medium-term notes 1st batch (3 years)-Jiangsu	500,000	April 2022	3 years	2.92%	2.92%	500,000	-	500,000	-	-	-	2,640	-	502,640	
2022 medium-term notes 4th batch (3 years)	300,000	June 2022	3 years	2.37%	2.91%	300,000	-	300,000	2	-	-	155	-	300,157	
Total						48,117,730	36,572,459	6,899,712	5,136	-	13,260	(17,142)	806,921	625,555	43,654,791

13. LONG-TERM BONDS (Continued)

Details of the outstanding corporate bonds, medium-term notes and debt financing instrument of the Group as at 31 December 2021 are summarised as follows:

Type of Instruments	Face Value	Issuance Date	Initial Period	Initial Distribution Rate	Effective Rate	Issue Price	Balance as at 31 December 2020	Issued Amount	Amortisation	Interest	Repayment	Foreign Exchange Gain	Foreign Currency Transition Differences	Interest Payable	Balance as at 31 December 2021
2016 corporate bonds 1st batch (5 years)	3,000,000	June 2016	5 years	3.48%	3.48%	3,000,000	3,057,912	-	(125)	46,622	(3,104,400)	-	-	-	9
2016 corporate bonds 1st batch (10 years)	1,200,000	June 2016	10 years	3.98%	3.98%	1,200,000	1,226,429	-	12	47,761	(47,760)	-	-	26,432	1,226,442
2017 medium-term notes 1st batch (5 years)	5,000,000	July 2017	5 years	4.69%	4.90%	5,000,000	5,113,989	-	939	234,500	(234,500)	-	-	111,147	5,114,928
2018 corporate bonds 2nd batch (3 years)	1,500,000	April 2018	3 years	4.90%	4.90%	1,500,000	1,554,843	-	(70)	18,727	(1,573,500)	-	-	-	-
2018 medium-term notes 1st batch (3 years)	3,000,000	May 2018	3 years	4.80%	4.91%	3,000,000	3,095,285	-	977	47,738	(3,144,000)	-	-	-	-
2018 medium-term notes 2nd batch (3 years)	2,000,000	July 2018	3 years	4.41%	4.56%	2,000,000	2,043,397	-	1,448	46,154	(2,088,200)	-	-	-	2,799
2018 debt financing instrument 1st batch (3 years)	2,500,000	July 2018	3 years	4.68%	4.81%	2,500,000	2,549,443	-	1,524	66,033	(2,617,000)	-	-	-	-
2018 corporate bonds 2nd batch (10 years)	5,000,000	September 2018	10 years	5.05%	5.05%	5,000,000	5,078,194	-	30	252,500	(252,500)	-	-	78,171	5,078,224
2019 corporate bonds 1st batch (10 years)	2,300,000	April 2019	10 years	4.70%	4.70%	2,300,000	2,374,934	-	14	108,100	(108,100)	-	-	74,930	2,374,948
2019 corporate bonds 2nd batch (3 years)	1,000,000	July 2019	3 years	3.55%	3.55%	1,000,000	1,017,142	-	17	35,501	(35,500)	-	-	17,118	1,017,160
2019 medium-term notes 1st batch (3 years)	500,000	July 2019	3 years	3.55%	3.65%	500,000	507,320	-	488	17,749	(17,750)	-	-	8,073	507,807
2019 medium-term notes 1st batch (5 years)	1,500,000	July 2019	5 years	3.85%	3.96%	1,500,000	1,521,142	-	1,445	57,750	(57,750)	-	-	26,264	1,522,587
2020 corporate bonds (5 years) – SSPL	2,108,865	February 2020	5 years	2.25%	2.32%	2,108,865	1,963,164	40,197	2,092	42,354	(42,728)	8,520	(92,804)	16,011	1,920,795
2020 corporate bonds (10 years) – SSPL	2,108,865	February 2020	10 years	2.63%	2.72%	2,108,865	1,957,722	40,196	1,643	49,415	(49,849)	8,520	(92,450)	18,679	1,915,197
2021 green medium-term notes 1st batch (3 years)	1,000,000	February 2021	3 years	3.45%	3.66%	1,000,000	-	1,000,000	(202)	30,814	-	-	-	30,814	1,030,612
2021 green medium-term notes 1st batch (3 years)	2,500,000	April 2021	3 years	3.35%	3.40%	2,500,000	-	2,500,000	(340)	59,658	-	-	-	59,658	2,559,318
2021 corporate bonds 1st batch (3 years)	500,000	May 2021	3 years	3.35%	3.35%	500,000	-	500,000	2	10,187	-	-	-	10,188	510,189
2021 corporate bonds 1st batch (10 years)	1,500,000	May 2021	10 years	3.97%	3.97%	1,500,000	-	1,500,000	(8)	36,220	-	-	-	36,219	1,536,212
2021 corporate bonds 2nd batch (3 years)	500,000	June 2021	3 years	3.33%	3.33%	500,000	-	500,000	1	9,488	-	-	-	9,488	509,489
2021 corporate bonds 2nd batch (10 years)	3,500,000	June 2021	10 years	3.97%	3.97%	3,500,000	-	3,500,000	(19)	79,182	-	-	-	79,182	3,579,163
2021 corporate bonds 3rd batch (10 years)	1,800,000	June 2021	10 years	3.99%	3.99%	1,800,000	-	1,800,000	(10)	38,172	-	-	-	38,173	1,838,162
2021 medium-term notes 1st batch (3 years)	2,000,000	August 2021	3 years	2.99%	3.01%	2,000,000	-	2,000,000	(211)	22,281	-	-	-	22,282	2,022,070
2021 medium-term notes 2nd batch (3 years)	2,000,000	November 2021	3 years	3.07%	3.07%	2,000,000	-	2,000,000	1	6,224	-	-	-	6,224	2,006,225
2021 medium-term notes 1st batch (3 years) – Jiangsu	300,000	December 2021	3 years	2.95%	2.95%	300,000	-	300,000	-	123	-	-	-	123	300,123
Total						48,317,730	33,060,916	15,680,393	9,648	1,363,253	(13,373,537)	17,940	(185,254)	669,176	36,572,459

14. OTHER NON-CURRENT LIABILITIES

	As at 30 June 2022	As at 31 December 2021
Government grants		
– Environmental subsidies (a)	1,078,856	1,103,425
– Other government grants (b)	878,729	1,089,689
Contract liabilities	2,946,385	2,894,543
Other deferred income	29,985	33,432
Others (c)	890,468	969,900
Subtotal	5,824,423	6,090,989
Current portion of other non-current liabilities	(66,796)	(68,972)
Total	5,757,627	6,022,017

- (a) These primarily represented subsidies for the construction of desulphurisation equipment and other environmental protection projects.
- (b) As at 30 June 2022, among other government grants, there was standby compensation of Huaneng Power International, Inc. Jining Power Plant amounting to RMB646 million (31 December 2021: RMB793 million) with unfulfilled conditions.
- (c) As at 30 June 2022, included in others, there were financial liabilities amounting to RMB803 million (31 December 2021: RMB887 million), which were comprised of mining right payables, guarantee deposits, poverty relief payables, etc.

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15. ACCOUNTS PAYABLE AND OTHER LIABILITIES

Accounts payable and other liabilities comprised:

	As at 30 June 2022	As at 31 December 2021
Accounts and notes payable	24,639,374	25,774,238
Payables to contractors for construction	16,595,854	19,922,953
Retention payables to contractors	2,983,096	1,795,819
Consideration payables for business acquisition	22,842	22,842
Others	6,889,885	7,093,701
Total	51,131,051	54,609,553

Ageing analysis of accounts and notes payable was as follows:

	As at 30 June 2022	As at 31 December 2021
Within 1 year	23,982,599	25,271,613
Between 1 and 2 years	469,091	373,752
Over 2 years	187,684	128,873
Total	24,639,374	25,774,238

16. SHORT-TERM BONDS

Details of the outstanding short-term bonds as at 30 June 2022 are summarised as follows:

Type of Instruments	Face Value	Issuance Date	Maturity	Coupon Rate	Issue Price	Balance as at 31 December 2021	Issued Amount	Interest	Amortisation	Repayment	Balance as at 30 June 2022
Super short-term bond (2021 16th)	5,000,000	November 2021	98 days	2.38%	5,000,000	5,018,932	-	13,367	44	(5,032,277)	66
Super short-term bond (2021 17th)	3,000,000	December 2021	29 days	2.22%	3,000,000	3,003,542	-	2,007	(6)	(3,005,474)	69
Super short-term bond (JiangSu2021 1st)	200,000	December 2021	270 days	2.60%	200,000	200,043	-	2,615	-	-	202,658
Super short-term bond (2021 18th)	2,000,000	January 2022	58 days	2.10%	2,000,000	-	2,000,000	6,674	152	(2,006,674)	152
Super short-term bond (2022 1st)	2,000,000	January 2022	46 days	2.08%	2,000,000	-	2,000,000	5,243	140	(2,005,243)	140
Super short-term bond (JiangSu2022 1st)	300,000	January 2022	180 days	2.32%	300,000	-	300,000	2,975	-	-	302,975
Super short-term bond (2022 2nd)	2,000,000	February 2022	41 days	2.00%	2,000,000	-	2,000,000	4,493	74	(2,004,493)	74
Super short-term bond (2022 3rd)	2,000,000	February 2022	32 days	2.00%	2,000,000	-	2,000,000	3,507	53	(2,003,507)	53
Super short-term bond (2022 4th)	2,000,000	March 2022	90 days	2.00%	2,000,000	-	2,000,000	9,863	47	(2,009,862)	48
Total					18,500,000	8,222,517	10,300,000	50,744	504	(18,067,530)	506,235

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17. SHORT-TERM LOANS

Short-term loans are as follows:

	As at 30 June 2022		As at 31 December 2021	
	RMB equivalent	Annual interest rate	RMB equivalent	Annual interest rate
Secured	1,012,701	2.40%-5.95%	1,215,699	2.30%-4.96%
Unsecured	88,331,243	1.63%-14.79%	90,681,026	2.00%-11.35%
Total	89,343,944		91,896,725	

As at 30 June 2022, short-term loans of RMB747 million (31 December 2021: RMB829 million) represented the notes receivable that were discounted with recourse. As these notes receivable had not yet matured, the proceeds received were recorded as short-term loans.

As at 30 June 2022, short-term loans of RMB265 million (31 December 2021: RMB387 million) were secured by certain equipment with a net book value amounting to approximately RMB375 million (31 December 2021: RMB475 million).

As at 30 June 2022, short-term loans of RMB134 million were guaranteed by Shandong Luyi Power International Limited Company (31 December 2021: RMB148 million).

As at 30 June 2022, short-term loans borrowed from Huaneng Finance amounted to RMB15,036 million (31 December 2021: RMB9,432 million) with annual interest rates ranging from 2.05% to 3.70% (31 December 2021: from 2.90% to 4.10%). Short-term loans borrowed from Tiancheng Financial Leasing amounted to RMB265 million (31 December 2021: RMB387 million) with annual interest rates ranging from 3.75% to 4.24% (31 December 2021: from 3.75% to 4.24%). Short-term loans borrowed from Huaneng Group amounted to RMB1,001 million (31 December 2021: RMB2,294 million) with annual interest rate of 3.00% (31 December 2021: 3.58%). Short-term loans borrowed from Hong Kong Asset Management amounted to RMB50 million (31 December 2021: nil) with an annual interest rate of 3.30% (31 December 2021: nil).

18. DEFERRED INCOME TAX ASSETS AND LIABILITIES

The deferred income tax assets and liabilities are as follows:

	As at 30 June 2022	As at 31 December 2021
Deferred income tax assets before offsetting	7,189,762	6,301,920
Offset amount	(1,613,471)	(1,394,839)
Deferred income tax assets after offsetting	5,576,291	4,907,081
Deferred income tax liabilities before offsetting	(3,770,148)	(3,694,927)
Offset amount	1,613,471	1,394,839
Deferred income tax liabilities after offsetting	(2,156,677)	(2,300,088)
	3,419,614	2,606,993

The gross movement on the deferred income tax accounts is as follows:

	As at 30 June 2022	As at 31 December 2021
Beginning of the period/year	2,606,993	(303,132)
Business combination	23,786	–
Credited to profit or loss (Note 21)	827,445	2,969,675
Charged to other comprehensive income	(19,996)	(91,641)
Currency translation differences	(18,614)	32,091
End of the period/year	3,419,614	2,606,993

19. ADDITIONAL FINANCIAL INFORMATION ON UNAUDITED INTERIM CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 June 2022, the net current liabilities of the Group amounted to approximately RMB85,762 million (31 December 2021: RMB93,927 million). On the same date, total assets less current liabilities were approximately RMB323,065 million (31 December 2021 (restated): RMB314,705 million).

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20. (LOSS)/PROFIT BEFORE INCOME TAX EXPENSE

(Loss)/profit before income tax expense was determined after charging/(crediting) the following:

	For the six months ended 30 June	
	2022	2021 (Restated)
Total interest expense on borrowings	5,573,569	4,834,840
Less: Amounts capitalised in property, plant and equipment	467,299	575,880
Interest expenses charged to unaudited interim consolidated statement of comprehensive income	5,106,270	4,258,960
Including: Interest expenses on lease liabilities	85,437	106,339
Depreciation of property, plant and equipment	11,519,864	10,750,687
Depreciation of right-of-use assets	451,887	344,248
	11,971,751	11,094,935
Included in other operating expenses:		
– Operating expense of Ruyi Pakistan Energy	2,795,254	1,808,230
– Other materials expense	723,085	595,559
– Electricity charges	734,781	534,761
– Cost of sales of raw materials	358,548	182,821
– Water charges	267,881	286,478
– Insurance expense	230,536	198,855
– Cleaning, greening and fire protection expense	172,649	171,007
– Purchase of the power generation quota	–	115,531
– Water conservancy fund and disabled security fund	36,364	42,316
– Test and inspection expense	95,964	101,482
– Service charge	201,312	195,275
– Auditors' remuneration-audit services	20,752	20,786
– Other consulting expense	65,450	71,345
– Transportation allowance	83,681	87,475
– Office expense	124,090	88,254
– Minimum lease payments under operating leases, lease payments not included in the measurement of lease liabilities	60,129	56,017
– Service concession construction cost	69,575	90,872
– Research and development expenditure	279,155	121,546
– Amortisation of other non-current assets	49,487	66,726
– Heating pipeline related cost	91,377	98,204
– Property management expense	47,607	45,201
– Pollutant charge	10,427	49,219

20. (LOSS)/PROFIT BEFORE INCOME TAX EXPENSE (Continued)

(Loss)/profit before income tax expense was determined after charging/(crediting) the following: (Continued)

	For the six months ended 30 June	
	2022	2021 (Restated)
Included in other operating expenses: (Continued)		
– Information technology maintenance expense	28,763	52,914
– Travel expense	33,872	49,730
– Donations	14,071	12,307
– Business entertainment expense	11,895	17,362
– Recognition/(reversal) of loss allowance for receivables	64,821	(3,326)
– Penalties	2,580	1,841
– Reversal of provision for inventory obsolescence	(1,423)	(969)
– Impairment loss of other non-current assets	1,163	1,720
– Net gain on disposal of non-current assets	(121,204)	(177,331)
– Gain of Three Supplies and Property Management	(76,457)	(20,192)
– Government grants	(820,297)	(463,313)
– Others	500,200	716,687
Total	6,156,088	5,215,390

21. INCOME TAX EXPENSE

	For the six months ended 30 June	
	2022	2021
Current income tax expense	467,804	1,327,158
Deferred income tax (Note 18)	(827,445)	(270,444)
Total	(359,641)	1,056,714

No Hong Kong profits tax has been provided as there were no estimated assessable profits in Hong Kong for the six months ended 30 June 2022 (for the six months ended 30 June 2021: Nil).

The Company and its PRC branches and subsidiaries are subject to income tax at 25%, except for certain PRC branches and subsidiaries that are tax exempted or taxed at preferential tax rates, as determined in accordance with the relevant PRC income tax rules and regulations for the six months ended 30 June 2022 and 2021.

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Huaneng Power International, Inc.

21. INCOME TAX EXPENSE (Continued)

The income tax rate applicable to Singapore subsidiaries is 17% (for the six months ended 30 June 2021: 17%). The Company's overseas subsidiary in Pakistan engaged in the power generation business is entitled to an income tax exemption according to Pakistani 2015 Fiscal Act. Another subsidiary located in Pakistan is engaged in the provision of maintenance services. Before 1 July 2019, the subsidiary's tax liability would be calculated as the amount which is the highest of (i) normal tax at the rate of 29% of taxable income; (ii) Alternative Corporate Tax (ACT) at the rate of 17% of accounting profit; and (iii) minimum tax deductible at 8% of the revenue. If the income tax calculated is above the normal tax at the rate of 29%, it would be carried forward to subsequent years for settlement against the liabilities of the following years. The carryforward period is 5 years in the case of minimum tax and 10 years in the case of ACT. However, from 1 July 2019, if the minimum tax liability is above the normal tax calculated, it cannot be carried forward to subsequent years.

The reconciliation of the effective income tax rate from the statutory income tax rate is as follows:

	For the six months ended 30 June	
	2022	2021
PRC statutory enterprise income tax rate	25.00%	25.00%
Effect of different tax rates of certain subsidiaries	14.48%	(11.33%)
Utilisation of previously unrecognised tax losses and deductible temporary differences	3.39%	(2.10%)
Unrecognised deductible temporary differences	(0.56%)	0.09%
Unrecognised tax losses for the period	(37.61%)	9.41%
Effect of non-taxable income	3.74%	(3.85%)
Effect of non-deductible expenses	(0.78%)	0.49%
Others	0.27%	(0.23%)
Effective tax rate	7.93%	17.48%

For the six months ended 30 June 2022, the effective tax rate was proportioned by income tax credit to loss before tax (For the six months ended 30 June 2021: income tax expense to profit before tax).

22. (LOSSES)/EARNINGS PER SHARE

The basic (losses)/earnings per share is calculated by dividing the consolidated net (loss)/profit attributable to the equity holders of the Company excluding cumulative distribution of other equity instruments by the weighted average number of the Company's outstanding ordinary shares during the period.

	For the six months ended 30 June	
	2022	2021 (Restated)
Consolidated net (loss)/profit attributable to equity holders of the Company	(3,220,203)	4,186,861
Less: Cumulative distribution of other equity instruments	1,059,926	1,059,926
Consolidated net (loss)/profit attributable to ordinary shareholders of the Company	(4,280,129)	3,126,935
Weighted average number of the Company's outstanding ordinary shares ('000)	15,698,093	15,698,093
Basic and diluted (losses)/earnings per share (RMB)	(0.27)	0.20

There was no dilutive effect on earnings per share since the Company had no dilutive potential ordinary shares for the six months ended 30 June 2022 and 2021.

23. BANK BALANCES AND CASH

Bank balances and cash comprised the following:

	As at 30 June 2022	As at 31 December 2021
Total bank balances and cash	15,582,951	16,350,332
Less: Restricted cash	356,491	795,507
Cash and cash equivalents as at period/year end	15,226,460	15,554,825

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24. RELATED PARTY BALANCES AND TRANSACTIONS

The related parties of the Group that had transactions with the Group are as follows:

Names of related parties	Nature of relationship
Huaneng Group	Ultimate parent company
HIPDC	Parent company
Huaneng (Tianjin) Coal Gasification Power Generation Co., Ltd.	An associate of the Company and also a subsidiary of Huaneng Group
Tiancheng Financial Leasing	An associate of the Company and also a subsidiary of Huaneng Group
Huaneng Supply Chain Platform Technology Co., Ltd. and its subsidiaries	Associates of the Company and also subsidiaries of Huaneng Group
Shanghai Leading Energy Shipping Ltd.	An associate of the Company and also a subsidiary of Huaneng Group
Huaneng Shidao Bay Nuclear Power Development Co., Ltd.	An associate of the Company and also a subsidiary of Huaneng Group
Huaneng Group Fuel Company and its subsidiaries	Associates of the Company and also subsidiaries of Huaneng Group
Huaneng Finance	An associate of the Company and also a subsidiary of Huaneng Group
Suzhou Sugao Renewables Service Co., Ltd.	An associate of the Company
Shanxi Lu'an Group Zuoquan Wulihou Coal Industry Co., Ltd.	An associate of the Company

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

The related parties of the Group that had transactions with the Group are as follows: (Continued)

Names of related parties	Nature of relationship
Huaneng Yingkou Port Limited Liability Company	A joint venture of the Company
Luyi Power	A joint venture of the Company
Shanghai Time Shipping Co., Ltd.	A joint venture of the Company
Jiangsu Nantong Power Co., Ltd.	A joint venture of the Company
Jining Huayuan Thermal Power Co., Ltd.	A joint venture of the Company
Yantai Gangneng Bulk Cargo Terminal Co., Ltd.	A joint venture of the Company
North United Power Corporation and its subsidiaries	Subsidiaries of Huaneng Group
Beijing Changping Huaneng Training Center	A subsidiary of Huaneng Group
Huaneng Hulunbuir Energy Development Company Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Tendering Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Ningxia Energy Company Ltd.	A subsidiary of Huaneng Group
Huaneng Renewables Corporation Limited and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Nuclear Power Development Company Ltd.	A subsidiary of Huaneng Group
Huaneng Lancangjiang Hydropower Co., Inc. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Coal Business Sector Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Gansu Energy Development Company Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Baishan Coal Gangue Power Generation Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Carbon Assets Management Company Limited	A subsidiary of Huaneng Group
Huaneng Property Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Energy & Communications Holdings Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Tibet Yarlung Zangbo River Hydropower Development & Investment Company Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Green Coal Generation Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Inner Mongolia East Energy Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group

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24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

The related parties of the Group that had transactions with the Group are as follows: (Continued)

Names of related parties	Nature of relationship
Huaneng Capital Services Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Shaanxi Power Generation Limited and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Group Technology Innovation Center	A subsidiary of Huaneng Group
Alltrust Insurance Co., Ltd.	A subsidiary of Huaneng Group
Xi'an Thermal Power Research Institute Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Great Wall Securities Co., Ltd. ("Great Wall Securities")	A subsidiary of Huaneng Group
Huaneng Group Clean Energy Technology Research Institute Co., Ltd.	A subsidiary of Huaneng Group
China Hua Neng Group Hong Kong Limited	A subsidiary of Huaneng Group
Huaneng Hainan Industry Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Integrated Industries Management Co., Ltd.	A subsidiary of Huaneng Group
Hebei Hanfeng Power Generation Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Sichuan Energy Development Co., Ltd.	A subsidiary of Huaneng Group
Huaneng (Dalian) Energy Heating Co., Ltd.	A subsidiary of Huaneng Group
Huaneng Caofeidian Port Co., Ltd.	A subsidiary of Huaneng Group
Huangtai #8 Power Plant	An investee with 30% equity interests
Other government-related enterprises**	Related parties of the Company

* Transactions with subsidiaries of Huaneng Group which are also associates of the Group are presented as transactions with subsidiaries of Huaneng Group in notes 24(a), 24(b) and 24(c).

** Huaneng Group is a state-owned enterprise. In accordance with the revised IAS 24 Related Party Disclosures, government-related enterprises, other than entities under Huaneng Group, over which the PRC government has control, joint control or significant influence, are also considered as related parties of the Group ("other government-related enterprises").

The majority of the business activities of the Group are conducted with other government-related enterprises. For the purpose of the related party transaction disclosure, the Group has established procedures to determine, to the extent possible, the identification of the ownership structure of its customers and suppliers as to whether they are government-related enterprises. However, many government-related enterprises have a multi-layered corporate structure and the ownership structures change over time as a result of transfers and privatisation programs. Nevertheless, management believes that all material related party transactions have been adequately disclosed.

In addition to the related party information shown elsewhere in this unaudited interim financial information, the following is a summary of significant related party transactions entered into in the ordinary course of business between the Group and its related parties during the period and significant balances arising from related party transactions as at the end of the period.

All transactions with related parties were conducted at prices and on terms mutually agreed by the parties involved, and are based on normal commercial terms and with reference to the prevailing local market conditions.

24. RELATED PARTY BALANCES AND TRANSACTIONS

(Continued)

(a) Related party balances

i. Bank balances and cash in related parties

	As at 30 June 2022	As at 31 December 2021
Deposits in Huaneng Finance		
– Savings deposit	11,948,961	13,372,802
Total	11,948,961	13,372,802

For the six months ended 30 June 2022, the annual interest rates for these savings deposits ranged from 0.35% to 3.30% (For the six months ended 30 June 2021: from 0.35% to 1.49%).

- ii. As described in notes 12 and 17, certain loans of the Group were borrowed from Huaneng Group, Huaneng Finance, Tiancheng Financial Leasing and Hong Kong Asset Management.
- iii. Except for those disclosed in notes 12 and 17, the majority of the balances with Huaneng Group, HIPDC, subsidiaries of Huaneng Group, associates, joint ventures and other related parties are unsecured and repayable within one year. As at and for the six months ended 30 June 2022 and 2021, no provision was made on receivable balances from these parties.

Accounts receivable, other receivables and assets and other non-current assets comprised the following balances due from related parties:

	As at 30 June 2022	As at 31 December 2021
Due from Huaneng Group	91,704	53,838
Due from HIPDC	478	301
Due from associates	183,561	97,796
Due from joint ventures	291,059	301,181
Due from subsidiaries of Huaneng Group	915,149	916,107
Due from Huangtai #8 Power Plant	931,913	896,118
Total	2,413,864	2,265,341

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24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(a) Related party balances (Continued)

iv. Accounts payable and other liabilities, lease liabilities and other non-current liabilities comprised the following balances due to related parties:

	As at 30 June 2022	As at 31 December 2021
Due to Huaneng Group	339,865	99,824
Due to HIPDC	23,834	14,096
Due to associates	–	3,616
Due to joint ventures	109,235	144,887
Due to subsidiaries of Huaneng Group (Note)	16,742,079	18,693,797
Total	17,215,013	18,956,220

Note: The balances with subsidiaries of Huaneng Group mainly represent payables related to fuel procurement, construction services, lease, and other business transactions.

v. As at 30 June 2022, included in long-term loans (including current portion) and short-term loans were loans payable to other government-related enterprises amounting to RMB223.6 billion (31 December 2021: RMB224.9 billion).

The balances with government-related enterprises also included substantially all the accounts receivable due from domestic power plants of government-related power grid companies, the bank deposits placed with government-related financial institutions as well as accounts payable and other payables arising from the purchases of coal and property, plant and equipment, construction service and related labour service provided by other government-related enterprises. Except for bank deposits, these balances are unsecured, and the majority of the balances are receivable/repayable within one year.

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(b) Related party transactions

i. Procurement of goods and receiving services

	For the six months ended 30 June	
	2022	2021
HIPDC		
Other purchases	2,521	–
Huaneng Group		
Technical services and engineering contracting services	–	62
Other purchases	216	–
Subsidiaries of Huaneng Group		
Purchase of coal and transportation services	42,404,015	25,988,827
Technical services and engineering contracting services	758,736	761,639
Purchase of equipment	361,336	349,254
Purchase of heat	35,361	27,416
Other purchases	153,954	26,820
Joint ventures of the Group		
Purchase of coal and transportation services	222,662	203,605
Technical services and engineering contracting services	1,613	–
Associates of the Group		
Purchase of equipment	8,014	–
Purchase of coal and transportation services	82,587	9,920

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FOR THE SIX MONTHS ENDED 30 JUNE 2022
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24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(b) Related party transactions (Continued)

ii. Sale of goods and providing services

	For the six months ended 30 June	
	2022	2021
Huaneng Group		
Service provided	31,686	31,427
HIPDC		
Service provided	167	365
Subsidiaries of Huaneng Group		
Sales of heat	6,297	–
Other sales	988	7,714
Service provided	60,826	61,811
Associates of the Group		
Other sales	384	2,960
Joint ventures of the Group		
Service provided	33,708	40,995
Other sales	15,202	29,313

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(b) Related party transactions (Continued)

iii. Other related party transactions

(1) Rental charge paid

Lessor name	Types of leased assets	Rental charges for short-term leases and leases of low-value assets for simplified processing		Variable lease payments not included in the measurement of the lease liability		Rent paid		Assume interest expense on lease liability		Increased right-of-use assets	
		2022.1-6	2021.1-6	2022.1-6	2021.1-6	2022.1-6	2021.1-6	2022.1-6	2021.1-6	2022.1-6	2021.1-6
HIPDC	Transmission and transformation facilities	23,974	47,947	-	-	-	-	-	-	-	-
HIPDC	Land	-	-	-	-	2,104	66	744	490	-	-
HIPDC	Office building	3,979	2,786	-	-	-	-	-	-	-	-
Subsidiaries of Huaneng Group	Office building	27,386	29,799	-	-	19,848	10,045	1,557	884	-	-
Subsidiaries of Huaneng Group	Mechanical equipment	-	-	-	-	13,679	732,980	23,355	31,872	565,844	-
Total		55,339	80,532	-	-	35,631	743,091	25,656	33,246	565,844	-

(2) Rental income received

	For the six months ended 30 June	
	2022	2021
Subsidiaries of Huaneng Group	3,160	1,299
Huangtai #8 Power Plant	7,849	9,087

NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL INFORMATION

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Huaneng Power International, Inc.

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(b) Related party transactions (Continued)

iii. Other related party transactions (Continued)

(3) Net Loans (paid to)/received from

	For the six months ended 30 June	
	2022	2021
Joint ventures of the Company	(100,000)	–
Subsidiaries of Huaneng Group	4,792,176	1,727,465
Huaneng Group	(2,392,665)	230,000

(4) Interest expense on loans

	For the six months ended 30 June	
	2022	2021
Huaneng Group	31,409	26,950
A joint venture of the Group	1,459	2,187
Subsidiaries of Huaneng Group	336,218	264,376

(5) Interest income on loans

	For the six months ended 30 June	
	2022	2021
Joint ventures of the Group	1,547	3,347

(6) Capital injection from a subsidiary of Huaneng Group

	For the six months ended 30 June	
	2022	2021
A subsidiary of Huaneng Group	248,598	209,946

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(b) Related party transactions (Continued)

iii. Other related party transactions (Continued)

(7) Capital injection to

	For the six months ended 30 June	
	2022	2021
Associates of the Group	–	119,100
Joint ventures of the Group	10,000	60,000

(8) Entrusted management fee

	For the six months ended 30 June	
	2022	2021
Huaneng Group	6,327	7,370

(9) Trusteeship management income

	For the six months ended 30 June	
	2022	2021
Huaneng Group	2,613	2,613
Huangtai #8 Power Plant	–	981

(10) Net proceeds received from an investee with 30% equity interests

	For the six months ended 30 June	
	2022	2021
Huangtai #8 Power Plant	15,488	26,354

Transactions with other government-related enterprises

For the six months ended 30 June 2022 and 2021, the Group sold substantially all their products to local government-related power grid companies. Please refer to note 4(b) for details of information about sales to major power grid companies.

For the six months ended 30 June 2022 and 2021, other collectively significant transactions with government-related enterprises also included a large portion of fuel purchases, property, plant and equipment, construction service and related labour employed.

NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL INFORMATION

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(Amounts expressed in thousands of RMB unless otherwise stated)

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Huaneng Power International, Inc.

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(c) Guarantees

	As at 30 June 2022	As at 31 December 2021
Long-term loans guaranteed by – Huaneng Group	28,185	43,555
Short-term loans guaranteed by – Joint ventures of the Group	134,226	148,256

(d) Pre-tax benefits and social insurance of key management personnel

	For the six months ended 30 June	
	2022	2021
Salaries	2,972	3,329
Pension	839	780
Total	3,811	4,109

(e) Related party commitments

i. Capital commitments

	As at 30 June 2022	As at 31 December 2021
Subsidiaries of Huaneng Group	1,938,370	1,044,526

Capital commitments mainly relate to the construction of new power projects, certain ancillary facilities and renovation projects for existing power plants.

24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

(e) Related party commitments (Continued)

ii. Fuel purchase and transportation commitments

	As at 30 June 2022	As at 31 December 2021
Subsidiaries of Huaneng Group	7,546,779	5,149,896
Joint ventures of the Group	270,710	16,921
Associates of the Group	6,490	–

For the six months ended 30 June 2022 and 2021, the Group purchased part of fuel from government-related suppliers. Please refer to note 25(b) for details of information about fuel purchase from government-related suppliers.

25. CAPITAL AND OTHER COMMITMENTS

(a) Capital commitments

Capital commitments mainly relate to the construction of new power projects, certain ancillary facilities and renovation projects for existing power plants. Details of such commitments are as follows:

	As at 30 June 2022	As at 31 December 2021
Contracted, but not provided for	30,517,569	25,770,547

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25. CAPITAL AND OTHER COMMITMENTS *(Continued)*

(b) Fuel purchase commitments

The Group has entered into various long-term fuel supply agreements with various suppliers in securing fuel supply for various periods. All the agreements require minimum, maximum or forecasted volume purchases and are subject to certain termination provisions. Related purchase commitments are as follows:

	Periods	As at 30 June 2022	
		Purchase quantities	Estimated unit costs (RMB)
A government-related enterprise	2022-2039	2.8 million m ³ /day*	2.74/m ³
A government-related enterprise	2022-2023	429 million m ³ /year*	2.73/m ³
	2022-2023	541 million m ³ /year*	3.12/m ³
	2022-2023	372 million m ³ /year*	2.73/m ³
A government-related enterprise	2022-2026	222 million m ³ /year*	2.43/m ³
Other suppliers	2022	199.02-249.0 BBtu**/day	approximately 97,000/BBtu
	2023	190.11-196.77 BBtu**/day	approximately 90,000/BBtu
	2024-2028	60.7-174.52 BBtu**/day	approximately 107,000/BBtu
	2029	42.4 BBtu**/day	approximately 73,000/BBtu

25. CAPITAL AND OTHER COMMITMENTS (Continued)

(b) Fuel purchase commitments (Continued)

	Periods	As at 31 December 2021	
		Purchase quantities	Estimated unit costs (RMB)
A government-related enterprise	2022-2039	2.8 million m ³ /day*	2.12/m ³
A government-related enterprise	2022-2023	518 million m ³ /year*	2.67/m ³
	2022-2023	541 million m ³ /year*	2.49/m ³
	2022-2023	459 million m ³ /year*	2.65/m ³
A government-related enterprise	2022-2026	222 million m ³ /year*	2.49/m ³
Other suppliers			
	2022	199.02-249.02 BBtu**/day	approximately 66,000/BBtu
	2023	233.11-239.77 BBtu**/day	approximately 64,000/BBtu
	2024-2028	42.4-239.02 BBtu**/day	approximately 70,000/BBtu
	2029	42.4 BBtu**/day	approximately 46,000/BBtu

* The quantities represent the maximum volume, whereas others represent the minimum or forecasted volume if not specified.

** BBtu: Billion British Thermal Unit

FINANCIAL STATEMENTS RECONCILIATION BETWEEN PRC GAAP AND IFRSs

FOR THE SIX MONTHS ENDED 30 JUNE 2022
(Amounts expressed in thousands of RMB unless otherwise stated)

98 The financial statements, which have been prepared by the Group in conformity with Accounting Standards for Business Enterprises (“PRC GAAP”), differ in certain respects from those of IFRSs. The major impact of adjustments for IFRSs, on the consolidated net profit and equity attributable to equity holders of the Company, is summarised as follows:

	Consolidated net profit attributable to equity holders of the Company for the six months ended 30 June		Total equity attributable to equity holders of the Company	
	2022	2021 (Restated)	As at 30 June 2022	As at 31 December 2021 (Restated)
Consolidated net profit/equity attributable to equity holders of the Company under PRC GAAP	(3,008,687)	4,450,457	102,069,276	105,588,451
Impact of IFRS adjustments:				
Differences in accounting treatment on business combinations under common control and depreciation, amortisation, disposal and impairment of assets acquired in business combinations under common control (A)	(360,300)	(405,574)	6,719,079	7,079,379
Difference on depreciation related to borrowing costs capitalised in previous years (B)	(12,862)	(13,508)	62,963	75,825
Others	14,226	(36,871)	(402,721)	(394,630)
Applicable deferred income tax impact of the GAAP differences above (C)	87,031	98,069	2,992,466	2,905,435
Profit/equity attributable to non-controlling interests on the adjustments above	60,389	94,288	(1,812,395)	(1,873,785)
Consolidated net profit/equity attributable to equity holders of the Company under IFRSs	(3,220,203)	4,186,861	109,628,668	113,380,675

(A) DIFFERENCES IN THE ACCOUNTING TREATMENT ON BUSINESS COMBINATIONS UNDER COMMON CONTROL AND DEPRECIATION, AMORTISATION, DISPOSAL AND IMPAIRMENT UNDER COMMON CONTROL

Huaneng Group is the parent company of HIPDC, which in turn is also the ultimate parent of the Company. The Company has carried out a series of acquisitions from Huaneng Group and HIPDC in recent years. As the acquired power companies and plants and the Company were under common control of Huaneng Group before and after the acquisitions, such acquisitions were regarded as business combinations under common control.

In accordance with PRC GAAP, for business combinations under common control, the assets and liabilities acquired in business combinations are measured at the carrying amounts of the acquirees in the consolidated financial statements of the ultimate controlling party on the acquisition date. The difference between the carrying amounts of the net assets acquired and the consideration paid is adjusted to the equity account of the acquirer. The operating results for all periods presented are retrospectively restated as if the current structure and operations resulting from the acquisition had been in existence since the beginning of the earliest year presented, with financial data of previously separate entities consolidated. The cash consideration paid by the Company is treated as an equity transaction in the year of acquisition. The subsequent adjustment of contingent consideration after the acquisition date is also accounted for as an equity transaction.

For business combinations occurred prior to 1 January 2007, in accordance with the previous PRC GAAP, when equity interests acquired were less than 100%, the assets and liabilities of the acquirees were measured at their carrying amounts. The excess of the consideration over the proportionate share of the carrying amounts of the net assets acquired was recorded as an equity investment difference and amortised on a straight-line basis for not more than 10 years. When acquiring the entire equity, the entire assets and liabilities are accounted for in a manner similar to purchase accounting. Goodwill arising from such transactions was amortised over the estimated useful lives on a straight-line basis. On 1 January 2007, in accordance with PRC GAAP, the unamortised equity investment differences and goodwill arising from business combinations under common control were written off against undistributed profits.

Under IFRSs, the Company and its subsidiaries have adopted the purchase method to account for the acquisitions above. The assets and liabilities acquired in acquisitions were recorded at fair value by the acquirer. The excess of the acquisition cost over the proportionate share of fair value of net identifiable assets acquired was recorded as goodwill. Goodwill is not amortised but is tested annually for impairment and carried at cost less accumulated impairment losses. The operating results of the acquirees are consolidated in the operating results of the Company and its subsidiaries from the acquisition dates onwards. The contingent consideration not classified as equity is measured at fair value at each reporting date with the changes in fair value recognised in profit or loss, if such changes are not measurement period adjustments.

As mentioned above, the differences in the accounting treatment under PRC GAAP and IFRSs on business combinations under common control affect both equity and profit. Meanwhile, due to different measurement bases of the assets acquired, depreciation and amortisation in the period subsequent to the acquisition will be affected which will also affect the equity and profit or loss upon subsequent disposals of such investments. Such differences will be gradually eliminated following subsequent depreciation, amortisation and disposal of the related assets.

FINANCIAL STATEMENTS RECONCILIATION BETWEEN PRC GAAP AND IFRS_s

FOR THE SIX MONTHS ENDED 30 JUNE 2022
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(B) EFFECT OF DEPRECIATION ON THE CAPITALISATION OF BORROWING COSTS IN PREVIOUS YEARS

In previous years, under the previous PRC GAAP, the scope of capitalisation of borrowing costs was limited to specific borrowings, and thus, borrowing costs arising from general borrowings were not capitalised. In accordance with IFRSs, the Company and its subsidiaries capitalised borrowing costs on general borrowings used for the purpose of obtaining qualifying assets in addition to the capitalisation of borrowing costs on specific borrowings. From 1 January 2007 onwards, the Company and its subsidiaries adopted PRC GAAP No. 17 prospectively. The current adjustments represent the related depreciation on capitalised borrowing costs included in the cost of the related assets under IFRSs in previous years.

(C) DEFERRED INCOME TAX IMPACT ON GAAP DIFFERENCES

This represents related deferred income tax impact on the GAAP differences above where applicable.





華能國際電力股份有限公司

Huaneng Power International, Inc.