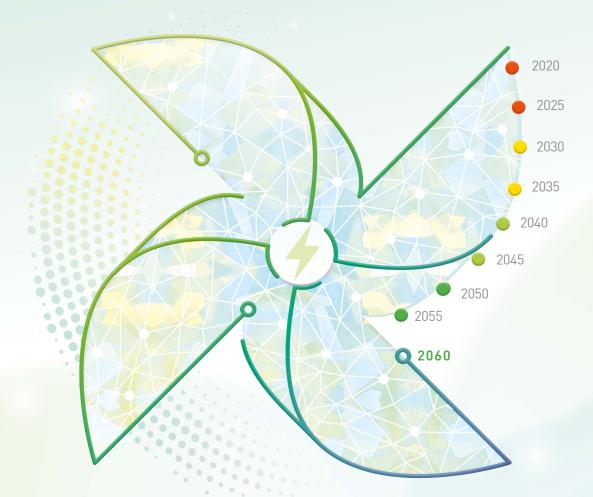


# 2023 INTERIM REPORT



# POWERING A BRIGHTER TOMORROW



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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### **INTERIM RESULTS FOR 2023**

The Board of Directors of Huaneng Power International, Inc. (the "Company") announces the unaudited operating results for the six months ended 30 June 2023 and a comparison with the operating results for the same period of last year. For the six months ended 30 June 2023, the Company and its subsidiaries recorded consolidated operating revenue of RMB126.032 billion, representing an increase of 7.84% compared to the same period of last year. The net profit attributable to equity holders of the Company was RMB6.490 billion, representing an increase of 301.53% compared to the same period of last year. The earnings per share was RMB0.32. The net asset (excluding non-controlling interests and other equity instruments) per share was RMB3.76.

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, the Company closely focused on the annual objectives and tasks, seized the market opportunity, scientifically promoted production and operation, reform and development, and achieved a substantial year-on-year improvement in operating performance, actively fulfilling the responsibility of providing sufficient, reliable and environmentally friendly electricity to the society.

#### 1. Power Generation

In the first half of the year, the Company's total ongrid power generation of the power plants within China on consolidated basis amounted to 211.148 billion kWh, representing an increase of 7.43% over the same period last year. The average utilization hours of the Company's power plants within China were 1,799 hours, representing an increase of 39 hours over the same period last year. The Company's market-based power transaction ratio was 87.68%, representing a decrease of 0.13 percentage point over the same period last year. The increase in the electricity sold by the Company in the first half of 2023 was mainly attributable to (i) the overall increase in power use prompted by economic recovery and extreme heat; (ii) substantial fall in power generation from hydropower units nationwide due to decline in rainfall; (iii) the significant year-overyear increase in power generation from coal-fired units owing to the Company's proper operation of the coal-fired units and timely repair and maintenance to ensure the power supply in this peak season; and (iv) the continuous growth in installed generation capacity from wind power units and photovoltaic units of the Company leading to the greater increase in power generation volume from clean energy units.

#### 2. Cost Control

In the first half of the year, the domestic coal supply maintained at a high level. The imported coal supply increased substantially year-on-year while the demand for coal non-thermal was less than expected. The inventory was at a historical high level, and as a result, the balance of coal supply and demand shifted from tight to loose situation, which brought down the coal price. In the first half of the year, in reaction to the favorable market opportunities presented on the market, the Company analytically adjusted its coal procurement strategy, bolstered its ability in price control and ensuring supply with a well-stocked inventory, and increased imports of coal in times when the coal market was in an over-supply state and the price was favorable to optimize its inventory portfolio, all of which helped achieve efficient fuel cost control. In the first half of the year, the Company purchased 105 million tons of coal, representing an increase of 18.72% year-on-year; accumulated unit price of standard coal charged into the furnace excluding tax is RMB1,137.76 per ton, representing a decrease of 10.49% 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 287.25g/kWh and the house consumption rate of plants was 4.25% with energy consumption indicator maintaining at a good level 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 waste water 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. The Company increased additional 4,051 MW of controlled generation capacity, including 650 MW of coal power controlled generation capacity, 495 MW of combined cycle controlled generation capacity, 409 MW of wind power controlled generation capacity, 2,497 MW of solar energy controlled generation capacity. As of 30 June 2023, the Company's controlled generation capacity was 129,995 MW, and low carbon clean energy (wind power, solar energy, hydropower, combined cycle, biomass power) accounted for 28.02% of the installed capacity.

#### 5. Overseas Businesses

In the first half of the year, Tuas Power Limited (the "Tuas Power") in Singapore, a wholly-owned subsidiary of the Company, contributed to 21.6% of the power generation in Singapore market cumulatively. The pre-tax profit of Singapore business was RMB2.890 billion, representing an increase in pretax profit of RMB2.149 billion over the same period last year. In the first half of the year, Singapore's market electricity price was relatively high. Tuas Power maintained safe and stable operation of its generator units, and actively optimized 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 RMB312 million, representing an increase of RMB57 million compared to the same period last year.

### PROSPECTS FOR THE SECOND HALF OF THE YEAR

In the second half of the year, the Company will continue to focus on the "Fourteenth Five-Year Plan" and the Company's development strategy, vigorously promote green and low-carbon transformation and development, accelerate the optimization and upgrading of coal-fired power structure, continue to deepen business reformation, promote major scientific and technological projects to tackle key problems and apply achievements, further push business performance to a new level, and complete the annual work objectives and tasks with high quality.

In terms of power market, in the second half of the year, it is more likely that the supply and demand of the coal market will remain relatively lenient, and the pressure of price reduction will continue to be transferred to the electricity price side, making it more difficult for the wholesale and retail markets to stabilize prices. The progress of new energy entering into the market is accelerating as the demand for green electricity is increasing. The difference in electricity purchase structure has an increasing impact on the retail market price while the competition for electricity sales is becoming more complicated. The Company will adhere to the principle of maximizing the overall interests, deeply analyze the growth of electricity demand in various regions, actively respond to market changes, do a good job of ensuring supply and stabilizing prices, take advantage of the favorable opportunities of peak summer and peak winter, strive to issue more beneficial electricity, and fully complete the annual work objectives and tasks.

In terms of the coal market, in the second half of the year, the national supply policy will continue, the imported coal policy continues to be lenient, coal supply will still be at a high level, and the fundamental supply and demand situation is likely to continue to be loose. The Company will closely track changes in the coal market, implement the requirements of national policies, strive to improve the performance rate of the long-term contracts, and give full play to the role of ballast of the long-term contracts, grasp the situation of the international coal market, and -----

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do a good job in imported coal, continue to optimize the supply structure, enhance the ability of the unit to maintain the supply of the peak, strengthen the management of inventories, and give full play to the roles of low-storage and high-storage, as well as to take measures to control the cost of coal purchases.

In terms of the capital market, the second quarterly meeting of the Monetary Policy Committee of the People's Bank of China pointed out that the People's Bank of China will precisely and vigorously implement a prudent monetary policy, provide stronger support for the real economy, and maintain a reasonably abundant liquidity. It will continue to increase support for key areas and weak links of the national economy, such as green development and scientific and technological innovation. The Committee will play a role in reforming the effectiveness and guidance of the lending market offer rate, and promote a steady decline in the cost of corporate financing and improve the green financial system with the goal of promoting the realization of carbon peak and carbon neutrality. The Company will focus on improving business performance, strengthening capital operation, further expanding financing channels, and safeguarding the safe supply of energy and the capital needs for green and lowcarbon transformation. We will pay close attention to changes in the capital market, make good use of green financial policies, strive to control financing costs, prevent capital risks and realize cost reduction and efficiency.

### MANAGEMENT'S DISCUSSION AND ANALYSIS

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

#### General

The principal activities of the Company are construction, operation and management of power plants within China. The Company is among the largest listed power companies in China. As of 30 June 2023, the Company had a controlled installed capacity of 129,995 MW, 28.02% of which approximately 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.

For the six months ended 30 June 2023, the operating revenue of the Company amounted to RMB126.032 billion, representing an increase of 7.84% over the same period of last year. The net profit attributable to equity holders of the Company was RMB6.490 billion, representing an increase of 301.53% as compared with the same period of last year. The earnings per share was RMB0.32.

#### A. Operating Results

# 1. Operating results for the first half of 2023

For the second quarter of 2023, the Company's total electricity sold by power plants within the PRC on a consolidated basis amounted to 104.138 billion KWh, representing an increase of 17.24% over the same period last year. For the first half of 2023, the Company's total electricity sold by power plants within the PRC on a consolidated basis amounted to 211.148 billion KWh, representing an increase of 7.43% over the same period last year. For the first half of 2023, the Company's average on-grid electricity settlement price by its power plants within the PRC amounted to RMB515.23 per MWh, representing an increase of 1.89% over the same period last year. For the first half of 2023, the Company's proportion of market-based trading of electricity was 87.68%, representing a decrease of 0.13 percentage point over the same period last year.

The increase in the electricity sold by the Company in the first half of 2023 was mainly attributable to:

(i) the overall increase in power use prompted by economic recovery and extreme heat, (ii) substantial fall in power generation from hydropower units nationwide due to decline in rainfall, (iii) the significant year-over-year increase in power generation from coal-fired units owing to the Company's proper operation of the coal-fired units and timely repair and maintenance to ensure the power supply in this peak season, and (iv) the continuous growth in installed generation capacity from wind power units and photovoltaic units of the Company leading to the greater increase in power generation volume from clean energy units. The volume of electricity sold by the Company's power plants in China during the six months ended 30 June 2023 is listed below (in billion kWh):

	Electricity Sold					
Types of	April to June of	Year-on-Year	January to June of	Year-on-Year		
generation/Region	2023	Change	2023	Change		
Coal-fired	86.481	16.91%	176.016	5.19%		
Combined cycle	5.587	7.60%	12.867	8.71%		
Wind-power	8.695	15.93%	16.777	21.92%		
PV	2.851	72.98%	4.705	72.04%		
Hydro-power	0.263	-18.21%	0.327	-35.83%		
Biomass power	0.261	36.60%	0.455	24.66%		
Heilongjiang Province	2.840	2.05%	5.924	4.22%		
Coal-fired	1.978	-10.07%	4.459	-3.68%		
Wind-power	0.715	46.97%	1.227	41.00%		
PV	0.086	2.62%	0.156	-3.08%		
Biomass power	0.061	367.46%	0.082	251.91%		
Jilin Province	3.110	25.00%	6.175	19.83%		
Coal-fired	1.796	18.03%	3.701	5.81%		
Wind-power	1.137	42.40%	2.146	59.94%		
Hydro-power	0.023	-26.96%	0.024	-23.19%		
PV	0.066	-3.37%	0.127	-6.87%		
Biomass power	0.090	29.05%	0.176	21.12%		
Liaoning Province	3.366	7.13%	7.512	3.78%		
Coal-fired	2.787	-141.67%	6.381	-0.54%		
Wind-power	0.508	35.99%	1.016	41.44%		
Hydro-power	0.005	-38.47%	0.006	-35.18%		
PV	0.066	24.39%	0.110	14.58%		
Inner Mongolia	0.223	11.79%	0.441	12.22%		
Wind-power	0.223	11.79%	0.441	12.22%		
Hebei Province	2.847	9.14%	5.644	-1.26%		
Coal-fired	2.321	1.07%	4.744	-7.74%		
Wind-power	0.168	-4.62%	0.356	2.77%		
PV	0.358	163.10%	0.545	138.62%		

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		Electrici	ity Sold	
Types of	April to June of	Year-on-Year	January to June of	Year-on-Year
generation/Region	2023	Change	2023	Change
Gansu Province	2.882	-18.53%	6.590	-9.71%
Coal-fired	2.149	-23.36%	5.339	-11.72%
Wind-power	0.733	-0.05%	1.251	-0.02%
Ningxia	0.006	-17.47%	0.011	-11.18%
PV	0.006	-17.47%	0.011	-11.18%
Beijing	1.601	4.77%	4.078	3.82%
Coal-fired	-	-	0.406	-30.97%
Combined cycle	1.601	4.77%	3.672	9.95%
Tianjin	1.316	21.60%	2.823	1.88%
Coal-fired	1.237	27.61%	2.355	7.90%
Combined cycle	0.072	-33.14%	0.459	-21.04%
PV	0.007	39.56%	0.010	26.11%
Shanxi Province	1.380	1.53%	4.263	2.63%
Coal-fired	0.917	3.19%	2.222	4.83%
Combined cycle	0.026	149.41%	1.180	-2.33%
Wind-power	0.179	6.66%	0.383	18.22%
PV	0.258	-11.72%	0.478	-4.76%
Shandong Province	17.737	-4.43%	37.908	-4.31%
Coal-fired	16.555	-5.46%	35.705	-5.58%
Wind-power	0.661	4.88%	1.328	17.95%
PV	0.410	32.44%	0.678	41.87%
Biomass power	0.111	2.05%	0.197	0.26%
Henan Province	5.096	-9.47%	10.816	-3.26%
Coal-fired	3.825	-13.28%	8.392	-7.63%
Combined cycle	0.034	10.10%	0.055	-5.60%
Wind-power	1.071	-9.26%	2.049	1.21%
PV	0.166	2,061.98%	0.320	2,474.48%
Jiangsu Province	11.053	25.13%	20.351	11.14%
Coal-fired	8.512	39.42%	15.009	16.03%
Combined cycle	1.042	-26.39%	2.413	-15.02%
Wind-power	1.283	5.40%	2.576	8.14%
PV	0.215	129.22%	0.353	129.71%

	Electricity Sold				
Types of	April to June of	Year-on-Year	January to June of	Year-on-Year	
generation/Region	2023	Change	2023	Change	
Shanghai	4.898	81.88%	9.558	15.23%	
Coal-fired	4.633	81.43%	9.115	15.23%	
Combined cycle	0.254	97.16%	0.420	14.42%	
PV	0.010	0.29%	0.022	33.32%	
Chongqing	3.329	45.52%	7.657	28.34%	
Coal-fired	2.627	53.25%	6.161	28.35%	
Combined cycle	0.547	15.76%	1.249	26.49%	
Wind-power	0.155	53.31%	0.247	38.06%	
PV	0.0003	-	0.0003	-	
Zhejiang Province	7.600	4.34%	15.159	8.24%	
Coal-fired	6.960	4.75%	13.727	4.73%	
Combined cycle	0.172	-48.28%	0.358	-2.82%	
Wind-power	0.398	63.14%	0.952	123.74%	
PV	0.070	10.28%	0.122	17.85%	
Hubei Province	3.177	2.28%	8.012	3.79%	
Coal-fired	2.646	-2.68%	7.151	1.22%	
Wind-power	0.211	6.48%	0.396	11.94%	
Hydro-power	0.090	-8.00%	0.112	-27.91%	
PV	0.231	150.25%	0.353	142.91%	
Hunan Province	2.232	29.43%	5.061	16.42%	
Coal-fired	1.803	27.18%	4.346	15.92%	
Wind-power	0.251	33.08%	0.467	27.40%	
Hydro-power	0.109	13.06%	0.141	-28.84%	
PV	0.069	213.59%	0.108	216.32%	
Jiangxi Province	6.670	19.53%	13.670	6.87%	
Coal-fired	6.144	19.48%	12.754	5.76%	
Wind-power	0.292	5.14%	0.524	7.66%	
PV	0.234	46.11%	0.392	59.83%	

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		Electric	city Sold			
Types of	April to June of	Year-on-Year	January to June of	Year-on-Year		
generation/Region	2023	Change	2023	Change		
Anhui Province	1.896	16.95%	3.781	7.76%		
Coal-fired	1.370	8.15%	2.826	-0.51%		
Wind-power	0.316	6.14%	0.623	7.48%		
Hydro-power	0.015	-50.72%	0.016	-66.61%		
PV	0.195	638.20%	0.316	684.80%		
Fujian Province	4.161	60.91%	7.075	10.55%		
Coal-fired	4.109	59.14%	6.999	9.48%		
PV	0.053	1,125.71%	0.077	910.54%		
Guangdong Province	7.931	24.38%	14.178	11.67%		
Coal-fired	6.716	27.46%	12.143	12.43%		
Combined cycle	1.177	7.27%	1.981	5.34%		
PV	0.038	290.18%	0.054	248.18%		
Guangxi	0.289	90.29%	0.524	50.41%		
Combined cycle	0.088	31.88%	0.154	-8.61%		
Wind-power	0.201	135.87%	0.370	105.61%		
PV	0.0001	-	0.0001	-		
Yunnan Province	4.630	332.18%	7.338	91.07%		
Coal-fired	4.467	357.78%	7.028	97.05%		
Wind-power	0.118	32.78%	0.265	-0.15%		
Hydro-power	-	-100.00%	-	-100.00%		
PV	0.045	-	0.045	-		
Guizhou Province	0.267	29.49%	0.456	18.33%		
Wind-power	0.056	56.95%	0.112	12.32%		
PV	0.211	23.75%	0.344	20.42%		
Hainan Province	3.599	51.23%	6.143	28.29%		
Coal-fired	2.929	28.72%	5.054	10.11%		
Combined cycle	0.572	331,144.36%	0.926	2,421.67%		
Wind-power	0.019	-6.29%	0.049	2.43%		
Hydro-power	0.022	-57.36%	0.029	-52.29%		
PV	0.057	77.23%	0.084	59.15%		
Total	104.138	17.24%	211.148	7.43%		

For the second quarter of 2023, Tuas Power contributed to 22.5% of the power generation volume in Singapore market, representing a decrease of 1.1 percentage points compared to the same period of last year.

For the first half of 2023, Tuas Power contributed to 21.6% of the power generation volume in Singapore market cumulatively, representing a decrease of 1.6 percentage points compared to the same period of 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 2023, the consolidated operating revenue of the Company and its subsidiaries amounted to RMB126.032 billion, representing an increase of 7.84% from RMB116.869 billion for the same period of 2022. The operating revenue from domestic operations of the Company increased by RMB8.625 billion over the same period of last year, mainly due to the increase in electricity sold and average tariff in China. The operating revenue from the operations of the Company in Singapore increased by RMB1.587 billion over the same period of last year, which was mainly attributable to the increase in average tariff in Singapore.

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 2023, the tax and levies on operations of the Company and its subsidiaries were RMB0.734 billion, representing an increase of RMB87 million from RMB0.647 billion for the same period of last year.

#### 2.2 Operating expenses

For the first half of 2023, the consolidated operating expenses of the Company and its subsidiaries were RMB113.248 billion, representing a decrease of 2.85% from the same period last year. The operating expenses in domestic operations of the Company decreased by RMB1.306 billion, or 1.31%, from the same period last year due to the decrease in fuel costs. The operating expenses from the operations in Singapore decreased by RMB0.641 billion, or 4.67%, from the same period last year.

#### 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 2023, fuel costs of the Company and its subsidiaries decreased by 4.01% to RMB77.501 billion due to the decrease in the purchase price of fuel. Fuel costs from domestic operations decreased by RMB3.896 billion. Fuel costs in Singapore increased by RMB0.661 billion from the same period last year.

#### 2.2.2 Depreciation

For the first half of 2023, depreciation expenses of the Company and its subsidiaries amounted to RMB12.609 billion, representing an increase of RMB0.637 billion from the same period last year. The depreciation expenses of the Company's domestic operations increased by RMB0.622 billion from the same period last year. The main reason was the increase in depreciation expense of newly commissioned generators. The depreciation expenses of the Company's operations in Singapore increased by RMB15 million from the same period last year. ----

#### 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 2023, labor costs of the Company and its subsidiaries amounted to RMB7.419 billion, representing an increase of RMB0.685 billion from RMB6.734 billion for the same period last year, mainly due to the increase in social security expenses caused by the higher base, compared to the same period last year.

#### 2.2.4 Maintenance

The maintenance costs of the Company and its subsidiaries for the first half of 2023 amounted to RMB1.708 billion, representing a decrease of RMB68 million from RMB1.776 billion for the same period last year.

#### 2.2.5 Other operating expenses

For the first half of 2023, other operating expenses of the Company and its subsidiaries were RMB14.012 billion, representing a decrease of RMB1.338 billion from RMB15.350 billion, from the same period of last year. The other operating expenses from the Company's domestic operations increased by RMB1.409 billion, from the same period of last year, mainly due to the first appearance of safety funds required by the relevant national regulations, and due to the increase in main-business-related expenditures like R&D expenditure. Other operating expenses of the operations in Singapore decreased by RMB1.373 billion, from the same period of last year, mainly due to the decrease in operating cost of purchasing electricity.

#### 2.3 Financial expenses, net

Financial expenses of the Company and its subsidiaries were RMB4.608 billion for the first half of 2023, representing a decrease of RMB416 million from RMB5.024 billion for the same period last year. Financial expenses for the Company's domestic operation decreased by RMB814 million, mainly due to the decrease in funding costs. Financial expenses for the Company's operations in Singapore increased by RMB105 million.

#### 2.4 Share of profits and losses of associates and joint ventures

For the first half of 2023, the share of profits and losses of associates and joint ventures was RMB0.781 billion, representing an increase of RMB107 million from RMB0.674 billion for the same period last year, mainly due to the increase 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 2023, the Company and its subsidiaries recognized consolidated income tax expenses of RMB1.626 billion, representing an increase of RMB1.986 billion from RMB0.36 billion in negative for the same period last year. The income tax expenses for the Company's domestic operation increased by RMB1.598 billion due to the profitability realized for current period, while a loss occurred for the same period last year.

#### 2.6 Net profit attributable to equity holders of the Company

For the first half of 2023, the net profit attributable to equity holders of the Company was RMB6.490 billion, representing an increase of 301.53% from a net loss of RMB3.220 billion of the same period last year. The profit attributable to equity holders of the Company from its domestic operations was RMB3.983 billion, representing an increase of 201.27%, mainly due to the decrease in the purchase price of coal and the increase in the electricity sold. The net profit attributable to equity holders of the Company from its operations in Singapore was RMB2.389 billion, representing an increase of RMB1.776 billion as compared to RMB0.613 billion 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 RMB118 million, representing an increase of RMB18 million from RMB100 million for the same period last year.

#### 2.7 Comparison of financial positions

As of 30 June 2023, total consolidated assets of the Company and its subsidiaries amounted to RMB525.933 billion, representing an increase of 2.68% from RMB512.222 billion as of 31 December 2022. As of 30 June 2023, total consolidated liabilities of the Company and its subsidiaries were RMB367.166 billion, representing a decrease of 2.58% from RMB376.906 billion as of 31 December 2022. Our asset-liability ratio as of 30 June 2023 was 69.81%.

#### 2.8. Comparison of major financial ratios

	The Company and its subsidiaries	
	30 June         31 Decembra           2023         20	
Ratio of liability to equity holders' equity Current ratio Quick ratio	2.65 0.59 0.50	3.26 0.51 0.43

	First six months of 2023	First six months of 2022
Multiples of interest earned	2.66	0.10

Formula of the financial ratios:

Ratio of liabilities to equity holders' 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 equity holders' equity as of 30 June 2023 decreased as compared to 31 December 2022 due to the increase in equity holders' equity as a result of the profit from operations. The current ratio and quick ratio increased compared to 31 December 2022. The multiples of interest earned increased as a result of turning losses into profits in the first half of this year.

As of 30 June 2023, the net current liabilities of the Company and its subsidiaries were RMB64.446 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 Si Ended 3		
	2023 RMB billion	2022 RMB billion	Change %
Net cash provided by operating activities Net cash used in investing activities Net cash provided by/(used in) financing	13.760 (20.789)	20.088 (15.019)	(31.50) 38.42
activities Currency exchange impact	7.075 (0.279)	(5.469) 0.071	(229.37) (490.25)
Net increase/(decrease) in cash and cash equivalents	(0.233)	(0.328)	(29.18)
Cash and cash equivalents as at the beginning of the period	16.517	15.555	6.19
Cash and cash equivalents as at the end of the period	16.285	15.226	6.95

For the first half of 2023, net cash provided by operating activities of the Company and its subsidiaries was RMB13.760 billion, representing a decrease of 31.50% from the same period last year, mainly for the joint impact of turning losses and increasing profits in operations, decrease in renewable energy subsidies of previous years and value-added tax rebates received, as well as an increase in inventory occupation funds. Net cash used in investing activities was RMB20.789 billion for the first half of 2023, representing an increase of 38.42% from the same period last year, mainly due to the increase in large and medium-sized infrastructure expenditure during current period as compared with that of the same period last year. Financing activities conducted by the Company and its subsidiaries during the first half of 2023 included

debt financing and equity financing. For the first half of 2023, the Company and its subsidiaries borrowed an additional RMB76.383 billion, issued super shortterm bond of RMB44.200 billion, repaid RMB81.717 billion of loans and RMB41.300 billion of super-shortterm bond on maturity, issued RMB27.989 billion of perpetual bond and redeemed RMB11.000 billion of perpetual bond.

As of 30 June 2023, the cash and cash equivalents of the Company and its subsidiaries included RMB in the amount of RMB14.745 billion, SGD equivalent to RMB0.833 billion, US Dollars equivalent to RMB0.144 billion, Pakistan Rupees equivalent to RMB0.562 billion and Japanese Yen equivalent to RMB0.3067 million.

# 2. Capital expenditure and cash resources

#### 2.1 Capital expenditure on infrastructure construction and renovation projects

The actual capital expenditure of the Company and its subsidiaries in the first half of 2023 was RMB20.153 billion, which was mainly used for the construction of infrastructure and renovation, including RMB1.516 billion for Zhejiang Cangnan Offshore Wind-power, RMB1.388 billion for Shantou Offshore Wind-power, RMB0.727 billion for Luohe Yangzhao New Energy, RMB0.649 billion for Fengcheng New Energy, RMB0.606 billion for Jiangsu Yangzhao New Energy, RMB0.584 billion for Zhuanghe Wind-power, RMB0.463 billion for Mengcheng Wind-power, RMB0.435 billion for Huajingchen New Energy, RMB0.409 billion for Qujing Zhanyi, RMB0.373 billion for Unitech Guangmei New Energy, RMB0.369 billion for Hefei Yangzhao New Energy, RMB0.347 billion for Rudong Wind-power, RMB0.329 billion for Hefei Yangyuan New Energy, RMB0.326 billion for Hefei Yangli New Energy, RMB0.320 billion for Qifan New Energy, RMB0.275 billion for Qujing Xuanwei, RMB0.262 billion for Da'an Clean Energy, RMB0.243 billion for Laiwu New Energy, RMB0.243 billion for Qujing Fuyuan, RMB0.243 billion for Diandong Power, RMB0.243 billion for Nanshan Power Plant, RMB0.242 billion for Ranghulu District Clean Energy, RMB0.237 billion for Diandong Yuwang Mining Branch, RMB0.231 billion for Huaneng Libo New Energy, RMB0.231 billion for Ruicheng Co-generation, RMB0.225 billion for Caofeidian District Clean Energy, RMB0.223 billion for Hefei Yangjie New Energy, RMB0.215 billion for Serafu Gao An New Energy, RMB0.212 billion for Lingao photovoltaic Plant, RMB0.209 billion for Xiyang New Energy. Capital construction and renovation expenditures for other projects totaled RMB7.778 billion.

# 2.2 Cash resources and anticipated financing costs

The capital expenditures of the Company 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 2023, the unutilized banking facilities available to the Company and its subsidiaries exceeded RMB300 billion, which are granted by commercial banks such as Bank of China, China Construction Bank and Industrial and Commercial Bank of China.

In 2023, the Company completed the issuances of unsecured super short-term bonds in 14 tranches on 6 January, 16 January, 6 February, 10 February, 22 February, 13 March, 20 March, 11 April, 17 April, 9 May, 11 May, 24 May, 7 Jun and 28 Jun, in the principal amount of RMB2.5 billion, RMB2.5 billion, RMB2.5 billion, RMB2.5 billion, RMB2 billion, RMB3 billion, RMB3.5 billion, RMB5 billion, RMB3.5 billion, RMB4 billion, RMB4 billion, RMB4 billion, RMB5 billion and RMB200 million, with nominal annual interest rates of 1.80%, 2.05%, 1.83%, 1.90%, 2.02%, 2.11%, 2.18%, 2.10%, 2.13%, 1.97%, 1.90%, 1.98%, 1.79% and 2.10%, respectively. Each tranch of the bonds was denominated in RMB, issued at par value, and would successively mature in 33 days, 32 days, 32 days, 33 days, 30 days, 32 days, 30 days, 30 days, 30 days, 21 days, 29 days, 91 days, 34 days, and 50 days from the issuance date.

The Company, through its subsidiary SinoSing Power, issued two tranches of guaranteed corporate bonds of US\$300 million and US\$300 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, respectively. The bonds are guaranteed by Huaneng International.

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As of 30 June 2023, short-term loans of the Company and its subsidiaries were RMB69.038 billion (end of 2022: RMB83.573 billion). Loans from banks were charged at interest rates ranging from 0.79% to 18.01% per annum (end of 2022: 1.24% to 18.01%).

As of 30 June 2023, short-term bonds payable by the Company and its subsidiaries were RMB9.214 billion (end of 2022: RMB6.313 billion).

As of 30 June 2023, the Company and its subsidiaries' long-term loans (including long-term loans due within one year) totaled RMB180.160 billion (end of 2022: RMB170.808 billion), including RMB loans of RMB167.196 billion (end of 2022: RMB154.611 billion), USD loans of USD10.281 billion (end of 2022: USD1.495 billion), EUR loans of EUR4 million (end of 2022: EUR2 million), SGD loans of SGD2.580 billion (end of 2022: SGD1.092 billion), YEN loans of 0.099 billion yen (end of 2022: 2.044 billion yen). Among them, SGD loans are floating rate loans, EUR loans and YEN loans are fixed rate loans, and USD loans include both fixed rate loans and floating rate loans. As of 30 June 2023, the annual interest rate for longterm bank borrowings was 0.35% to 6.19% (end of 2022: 0.75% to 4.95%).

The Company and its subsidiaries will closely monitor any change in the exchange rate and interest rate markets and cautiously 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 the shareholders.

#### 2.3 Other financing requirements

Pursuant to the memorandum and articles of the Company, given the negative realized net profit attributable to the equity holders of the Company and considering the need for future investments in accordance with the Company's transformational development plans and the increased debt-asset ratio of the Company's in year 2022, the board of directors proposed that the Company pay no dividends in year 2022 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 City Energy Group Co., Ltd. ("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, and the Company holds 25% equity interests in each of the two successors. The Company acquired 200 million shares from 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. After the merger, the Company held 991,741,659 shares of Shenzhen Energy, representing 25.02% of its equity interests. These investments brought a net profit attributable to the Company of RMB402 million for the first half year of 2023 under IFRSs. These investments are expected to provide stable returns to the Company.

The Company directly held 60% 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 RMB116 million for the first half year of 2023 under IFRSs. This investment is expected to provide steady returns to the Company.

During the reporting period, the Company did not make any material acquisitions or disposals of any subsidiaries, associates or joint ventures.

### D. Employee Benefits

As of 30 June 2023, the Company and its subsidiaries had 56,160 employees. During the reporting period, there was no change to the Company's compensation plan and training program.

# E. Guarantee for Loans and Restricted Assets

As of 30 June 2023, the Company provided guarantee for long-term loans of Tuas Power in the amount of RMB0.653 billion (end of 2022: RMB3.109 billion). As of 30 June 2023, the Company provided guarantee for long-term loans of RMB618 million (end of 2022: RMB237 million) of the Company's domestic subsidiaries.

As at 30 June 2023, long-term loans of approximately RMB224 million (approximately US\$31 million) (31 December 2022: RMB199 million (approximately US\$29 million)) were guaranteed by Huaneng Shandong Power Generation Co., Ltd. ("Shandong Power").

As of 30 June 2023, long-term loans of approximately RMB6,704 million (end of 2022: RMB6,766 million) were guaranteed by Shandong Power, China Export & Credit Insurance Corporation and Jining Chengtou Holding Group Co., Ltd. ("Jining Chengtou") at the liability ratios of 17.5%, 65.0% and 17.5% respectively (end of 2022: Shandong Power, China Export & Credit Insurance Corporation and Jining Chengtou at the liability ratios of 17.5%, 65.0% and 17.5% respectively).

As of 30 June 2023, long-term loans of approximately RMB1,157 million (end of 2022: RMB1,116 million) were guaranteed by Shandong Power and Jining Chengtou at the liability ratios of 50.0% and 50.0% respectively (end of 2022: Shandong Power and Jining Chengtou at the liability ratios of 50.0% and 50.0% respectively).

As of 30 June 2023, the details of secured loans of the Company and its subsidiaries were as follows:

- 1. As of 30 June 2023, short-term loans of approximately RMB194 million (end of 2022: RMB361 million) of the Company and its subsidiaries, 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 2023, short-term loans of approximately RMB148 million (end of 2022: RMB772 million) of the Company and its subsidiaries were secured by certain property, plant and equipment with net book value of RMB225 million (end of 2022: RMB1.519 billion).
- 3. As of 30 June 2023, long-term loans of approximately RMB3.035 billion (end of 2022: RMB4.633 billion) of the Company and its subsidiaries were secured by certain property, plant and equipment with net book value of RMB4.974 billion (end of 2022: RMB6.984 billion).
- 4. As of 30 June 2023, long-term loans of approximately RMB5.679 billion (end of 2022: RMB4.794 billion) were secured by electricity and heat receivables of the Company and its subsidiaries. Long-term loans of approximately RMB0 million (end of 2022: RMB461 million) were secured by equity interests of the Company and its subsidiaries. Long-term loans of approximately RMB20 million were secured by carbon emission trading rights (end of 2022: RMB50 million). Long-term loans of approximately RMB33 million were secured by franchise (end of 2022: RMB44 million).
- 5. As of 30 June 2023, the restricted bank deposits of the Company and its subsidiaries were RMB583 million (end of 2022: RMB658 million).

As of 30 June 2023, the Company had no material contingent liabilities.

#### F. Risk Factors

#### 1. Risks Relating to Power Sector and the Market

- (1) With the power market-based reforms continue to deepen, the power spot market is fully rolled out, the proportion of market-based trading power continues to improve, the power market competition is more and more intense, and coal prices show a downward trend, thus the downward pressure on electricity prices increased.
- (2) New energy installed capacity is likely to maintain rapid growth, to ensure that the purchase of power continued to decline in size. Participation in market transactions gradually expanding the size of the green power trading price formation mechanism is not yet perfect. There are difficulties in stabilizing earnings of new energy enterprises.
- (3) With the fact that the current auxiliary services market, capacity market and other ancillary market mechanisms need to be perfected, medium-term and long-term, spot trading prices can not fully reflect the value of standby, regulating services, generating units are difficult to obtain due return on investment, the sustainable development of power generation enterprises need to be supported by relevant policies.

The Company will actively promote green transformation, accelerate the proportion of clean energy, and optimize and upgrade the Company's installed capacity structure. We will strengthen policy research, proactively adapt to the development of the power market under the "dual-carbon" goal, continue to promote the standardized operation of the market, adjust pricing strategies in a timely manner, and make every effort to prevent and control business risks. As the state gradually improves the auxiliary services, capacity compensation and price transmission mechanism, it will create favorable conditions for the Company's sound operation and sustainable development.

#### 2. Risks Relating to the Fuel Procurement Market

- (1) With the recovery of the national macroeconomy, social electricity consumption continues to rise. During the peak summer, peak winter and extreme weather and other peak hours of electricity consumption, some areas may appear time power supply tensions. Since thermal power will continue to play the role of energy pockets, local coal supply is still facing greater pressure.
- (2) The national policy of increasing production and maintaining supply continues to be strong, domestic coal production is growing rapidly, the contradiction between coal supply and demand is obviously easing. The coal prices go down, but still remain relatively high in general, and the Company's coal and power enterprises are still under greater operating pressure.
- (3) Low proportion of medium and long term contracts of domestic trade in the coastal region and the imported coal procurement ratio is high. Coal supply is greatly affected by the international market, and there is double pressure to maintain supply and price control.

The Company will closely track changes in the coal market, implement the requirements of national policies, strive to improve the performance rate of the long-term contracts, and give full play to the role of ballast of the long-term contracts, grasp the opportunity of the international coal market, and do a good job in imported coal, continue to optimize the supply structure, enhance the ability of the unit to maintain the supply of the peak, strengthen the management of inventories, and give full play to the roles of low-storage and high-storage, as well as to take measures to control the cost of coal purchases.

#### 3. Risks Relating to the Carbon Market

Notice on the allocation of national carbon emission rights trading quotas in 2021 and 2022 by Ministry of ecology and environment has made clear that carbon emission baseline value shall be lowered, and the end

of 2023 shall be the deadline for performance of national carbon market's second performance cycle. Quota distribution has been sharply tightened, while policies like quota carryover details and voluntary emission reduction mechanism are not in place yet, and there is some indeterminacy of price trend of the carbon market.

The Company will pay close attention to the policy alteration and the price trend of the national carbon market, strengthen carbon transaction management continuously, optimize carbon trading strategies and strive for accomplishing the transaction work of the national carbon market's second performance cycle at a comparatively lower cost on time.

#### 4. Environmental Risks

Based on the status quo and demands of ecological civilization construction, the country has been completing and deepening the environmental protection policies of key regions including but not limited to Beijing-Tianjin-Hebei Region, Yangtze River Economic Belt, Pearl River Delta, putting forward new, more strict requirements in aspects like water body protection and flying dust control, and the cost of environmental protection for grass-roots enterprises is likely to increase.

The Company strictly carries out the national environment policies. The new units of the subsidiary fire coal power station are all equipped with technology-advanced and powerful flue gas purification system, and other coal-fired units in the country have also received ultra-low emission transformation in accordance with the national regulations, all of which have good adaptation to the fluctuations of internal and external factors like weather conditions, fuel guality and electric heating loads and have passed the acceptance check of local environment department. Meanwhile, The Company actively follows up the concerns of the environmental protection department, scientifically selects advanced and applicable technical solutions with a cautious attitude, and actively acts in improving water saving and wastewater treatment systems, building closed facilities in coal yards and improving comprehensive utilization of ash and slag so as to ensure that various environmental risks are timely identified and effectively resolved.

#### 5. Risks Relating to Capital Market

The second quarter meeting of the Monetary Policy Committee of the People's Bank of China has pointed out that the People's Bank of China will precisely and vigorously implement a prudent monetary policy, provide stronger support for the real economy, and maintain a reasonably abundant liquidity. The committee will continue to increase support for key areas and weak links of the national economy, such as green development and scientific and technological innovation. It will play a role in reforming the effectiveness and guidance of the lending market offer rate, and promote a steady decline in the cost of corporate financing and improve the green financial system with the goal of promoting the realization of carbon peak and carbon neutrality.

The Company will focus on improving business performance, strengthening capital operation, further expanding financing channels, and safeguarding the safe supply of energy and the capital needs for green and low-carbon transformation. We will pay close attention to changes in the capital market, make good use of green financial policies, strive to control financing costs, prevent capital risks and realize cost reduction and efficiency.

# SHARE CAPITAL STRUCTURE

As at 30 June 2023, 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. (the "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 (the "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,

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representing 9.91% of the total issued share capital of the Company. Through its controlling subsidiary China Huaneng Finance Corporation Limited, Huaneng Group held 9,994,199 shares, representing 0.06% of the total issued share capital of the Company. Other domestic shareholders held a total of 4,365,929,053 shares, representing 27.81% 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 2023.

# SHAREHOLDINGS OF MAJOR SHAREHOLDERS

The following table summarises the shareholdings of the top ten shareholders of the Company's shares as at 30 June 2023:

Name of Shareholders	Total shareholdings as at end of the reporting period	Percentage of shareholding (%)
Huaneng International Power Development		
Corporation	5,066,662,118	32.28%
HKSCC Nominees Limited*	4,195,613,340	26.73%
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%
Dalian State Owned Capital Management and		
Operation Co., Ltd. **	301,500,000	1.92%
Jiangsu Guoxin Investment Group Limited	258,452,600	1.65%
Liaoning Energy Investment (Group) Limited	244,205,000	1.56%
Hong Kong Securities Clearing Company Limited	212,453,176	1.35%

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

\*\* During the reporting period, the original shareholder of the Company, Dalian Municipal Construction Investment Company Limited (the "Dalian Construction Investment") repurchased 176 million shares which were under pre-agreed securities repurchase transaction with Guotai Junan Securities Co., Ltd. and released the pledge of 33.06 million shares which were under pledge. Thereafter, Dalian Construction Investment transferred all the Company's shares held by Dalian Construction Investment to Dalian State-owned Capital Management and Operation Co., Ltd. for free in May 2023 in accordance with the requirements of the Dalian Municipal Government.

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

As at 30 June 2023, 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, "SFO") were as follows:

Name of shareholder	Class of shares	Number of shares held (share)	Identity	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	3.84%(L)	-	12.84%(L)
Shanghai Wisdomshire Asset	H Shares	378,846,000(L)	Investment manager	2.41%(L)	-	8.06%(L)
Management Co., Ltd.						

Notes:

- (1) The letter "L" denotes a long position.
- (2) As of 30 June 2023, China Huaneng Group Co., Ltd. held 75% direct interests and 25% indirect interests in Huaneng International Power Development Corporation.
- (3) Besides of the 1,555,124,549 domestic shares, China Huaneng Group Co., Ltd. holds 9,994,199 domestic shares through its controlling subsidiary, China Huaneng Finance Corporation Limited.
- (4) China Huaneng Group Co., Ltd. holds 472,000,000 H shares through its wholly-owned subsidiary, China Hua Neng Group Hong Kong Limited, and holds 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 2023, 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.

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### 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 2023.

As at 30 June 2023, 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 2023.

### DISCLOSURE OF MATERIAL EVENTS

The Company held the 32nd meeting of the tenth session of the Board of Directors on 16 June 2023 to consider and approve on the appointment of Mr. Huang Lixin as the President of the Company.

### **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.

During the reporting period, the Company had complied with all the code provisions except for code provisions C.2.1 of the Corporate Governance Code contained in Appendix 14 to the Listing Rules. Pursuant to code provision C.2.1, the role of chairman and the chief executive should be separate and should not be performed by the same individual. The division of responsibilities between the Chairman and the chief executive should be clearly defined and set out in writing. Mr. Zhao Ping, the President and executive Director of the Company, resigned as President, executive Director and from any other positions in the Company due to his age, effective from 26 September 2022. In order to fill the vacancy as soon as possible, the duties of the President of the Company were assumed by Mr. Zhao Keyu, the Chairman of the Company, effective from 26 September 2022. Although deviating from code provisions C.2.1 of the Listing Rules, Mr. Zhao Keyu provided solid and continuous leadership to the Group with his extensive experience and knowledge in management and the support of our management. Moreover, under the supervision of other existing members of the Board, the Board was appropriately structured with balance of power to provide sufficient checks to protect the interests of the Company and its shareholders. As such, the Board is of the view that the deviation from code provision C.2.1 of the Corporate Governance Code was appropriate.

The Company appointed Mr. Huang Lixin as the President on 16 June 2023, details of which are set out in the announcement of the Company published on 16 June 2023. As at the 30 June 2023, the Company is in compliance with code provision C.2.1.

#### (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 decisionmaking powers, supervisory powers and operating powers, to act with honesty and integrity.

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 2023, the Board of Directors and all directors of the Company, with a high sense of responsibility, assessed the situation, scientific research and judgment, careful deployment, joint efforts to attack, leading the management and all employees, and strive to do a good job in reform and development, transformation and upgrading, production and operation, scientific and technological innovation and other work. The Company's production safety is generally stable, and the supply of electricity and heat remains stable, actively fulfilling its corporate responsibility to provide society with sufficient, reliable and environmentally friendly electricity. The Company always adheres to the rule of law and compliant operation. The Company actively paid attention to new changes in regulatory laws and regulations in the country and listing places, effectively implemented new regulatory policies and requirements, continuously strengthened the construction of the Board of Directors, assisted the independent directors in diligently performing their duties, endeavored to protect the legitimate rights and interests of small and medium-sized investors, and promoted the continuous enhancement of the level of corporate governance. We will continue to strengthen risk prevention and control, solidly promote internal control management, carry out information disclosure with high quality, proactively strengthen communication and interaction with investors, continue to promote the construction of the ESG system, and build a win-win corporate culture in harmony with stakeholders.

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:

- 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;
- Reviewing and supervising the training and sustained professional development of the Company's directors and senior management;

- 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 2023, in accordance with relevant regulatory rules and requirements and in conjunction with the Company's actual situation, the Measures on Information Disclosure Management, the Measures on Related Transaction Management, Measures for the Administration of Insiders and the Detailed Rules on the Work of the Information

Disclosure Committee 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 2023, 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:

 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 Financial Management of Infrastructure Construction, 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.

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. The Company has implemented the internal control evaluator "license to work", and made the completion of training and passing the examination as the necessary conditions for reviewing the gualification of the internal control evaluator, which strongly promotes the improvement of the professional quality of the internal control personnel. During the first half of 2023, 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 prohibited 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 enguiry on all the directors, supervisors and senior management of the Company, up to now, all the directors, supervisors and senior management 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 currently comprises of 14 members. Of the members of the tenth session of the board of directors, Mr. Zhao Keyu as the Chairman; Mr. Zhao Keyu as the Executive Director; 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 three meetings during the reporting period, including regular meetings and ad hoc meetings. For details, please see the relevant announcements.

Name	Number of meetings to be attended	Number of meetings attended in person	Number of meetings attended by proxy	Rate of Attendance (%)
Executive Director				
Zhao Keyu	3	3	0	100%
Non-executive Directors				
Huang Jian	3	3	0	100%
Wang Kui	3	2	1	66.66%
Lu Fei	3	3	0	100%
Teng Yu	3	3	0	100%
Mi Dabin	3	2	1	66.66%
Cheng Heng	3	3	0	100%
Li Haifeng	3	3	0	100%
Lin Chong	3	3	0	100%
Independent non-executive				
Directors	2	2	0	1000/
Xu Mengzhou Liu Jizhen	3	3	0	100%
	3	3	0	100% 100%
Xu Haifeng Zhang Xianzhi	3	3	0	100%
Xia Qing	3	3	0	100%

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

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 2022 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 onsite 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 scientific 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 2022 annual general meeting of the Company were Mr. Zhao Keyu (Chairman), Mr. Li Haifeng (Director) and Mr. Xu Haifeng (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. 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 2023 on 20 March 2023, at which the Report of Total Wage Expenses was reviewed and the Company's arrangement for the total wage in 2023 was approved. In the second half of 2023, 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 meeting 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 2023	20 March 2023	Xu Mengzhou, Cheng Heng, Li Haifeng, Liu Jizhen, Xu Haifeng and Zhang Xianzhi	-

#### (g) Nomination of Directors

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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 Nomination 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 attendance of meeting of the Nomination Committee of the 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 Nomination Committee of the Tenth Session of the Board in 2023	15 June 2023	Liu Jizhen, Zhao Keyu, Mi Dabin, Lin Chong, Xu Mengzhou, Zhang Xianzhi and Xia Qing	-

#### (h) Appointment of Auditors

Ernst & Young and Ernst & Young Hua Ming LLP were appointed as the overseas and domestic auditors of the Company for 2023, 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 2023	24 February 2023	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 2023	20 March 2023	Zhang Xianzhi, Xu Mengzhou, Xu Haifeng and Xia Qing	Liu Jizhen
Third meeting of the Audit Committee of the Tenth Session of the Board in 2023	24 April 2023	Zhang Xianzhi, Xu Mengzhou, Liu Jizhen, Xu Haifeng and Xia Qing	-

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#### (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 members of the senior management of the Company holds any shares of the Company.

#### (I) 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:

- reviewing and advising on the Company's longterm 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 six directors, namely, Mr. Zhao Keyu, 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 Nonexecutive 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 10 person times of Directors, Supervisors and senior management attended various professional trainings during the first half of 2023.

The Company conducts introduction by legal counsels specifically to all Independent Non-executive Directors of the Audit Committee of the Company every six months 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 report of 2023 have been reviewed by the Audit Committee of the Company.

### LEGAL PROCEEDINGS

As at 30 June 2023, 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 2023 will be available at the following addresses and websites:

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
Websites 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) 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 26 July 2023

# INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION (UNAUDITED)

#### AS AT 30 JUNE 2023

(Amounts expressed in thousands of RMB)

		As at	As at
	Notes	30 June 2023	31 December 2022
ASSETS			
Non-current assets			
Property, plant and equipment	5	344,037,460	336,126,522
Right-of-use assets		18,242,378	18,998,833
Investments in associates and joint ventures		24,159,890	24,015,630
Investment properties		622,029	632,565
Other equity instrument investments		708,070	708,912
Power generation licences		4,286,048	4,156,846
Mining rights		1,609,672	1,611,486
Deferred income tax assets	18	5,244,735	5,632,709
Derivative financial assets		5,988	3,570
Goodwill	7	14,733,362	14,384,909
Other non-current assets	8	19,519,457	19,227,929
Total non-current assets		433,169,089	425,499,911
Current assets			
Inventories		14,140,057	12,701,908
Other receivables and assets	9	15,732,630	14,076,384
Accounts and notes receivable	10	45,917,632	42,654,332
Contract assets		49,523	68,738
Derivative financial assets		56,555	44,925
Bank balances and cash	23	16,867,876	17,175,575
Total current assets		92,764,273	86,721,862
Total assets		525,933,362	512,221,773

The notes on pages 42 to 105 are an integral part of this unaudited interim condensed consolidated financial information.

# INTERIM CONDENSED CONSOLIDATED STATEMENT **OF FINANCIAL POSITION (UNAUDITED)** AS AT 30 JUNE 2023

(Amounts expressed in thousands of RMB) . ....υυσυπας οι κινιβ)

		As at 30 June	As at 31 December
	Notes	2023	2022
EQUITY AND LIABILITIES			
Equity attributable to equity			
holders of the Company			
Share capital		15,698,093	15,698,093
Other equity instruments	11	79,601,620	62,083,704
Capital surplus		23,880,222	23,710,686
Surplus reserves		8,140,030	8,140,030
Reserve funds		491,255	117,308
Currency translation differences		(458,783)	(602,823)
Retained earnings		11,209,617	6,517,524
		138,562,054	115,664,522
Non-controlling interests		20,204,882	19,651,537
Total equity		158,766,936	135,316,059
Non-current liabilities			
Long-term loans	12	161,303,872	151,677,526
Long-term bonds	13	34,435,716	39,062,047
Lease liabilities		5,278,196	5,622,536
Deferred income tax liabilities	18	2,407,173	2,169,841
Derivative financial liabilities		216,715	245,613
Other non-current liabilities	14	6,314,501	6,794,804
Total non-current liabilities		209,956,173	205,572,367
Current liabilities			
Accounts payable and other liabilities	15	50,931,569	54,472,701
Contract liabilities		635,436	3,348,828
Taxes payable		1,834,442	1,647,373
Dividends payable		614,712	617,576
Derivative financial liabilities		133,331	417,237
Short-term bonds	16	9,214,198	6,312,777
Short-term loans	17	69,037,986	83,573,497
Current portion of long-term loans	12	18,856,492	19,129,989
Current portion of long-term bonds	13	5,376,806	730,336
Current portion of lease liabilities Current portion of other non-current liabilities	14	506,169 69,112	1,009,339 73,694
Total current liabilities	14	157,210,253	171,333,347
Total liabilities		367,166,426	376,905,714
Total equity and liabilities		525,933,362	512,221,773

The notes on pages 42 to 105 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 2023

(Amounts expressed in thousands of RMB, except per share data)

		For the six months	s ended 30 June
	Notes	2023	2022
Operating revenue	4	126,032,267	116,869,062
Tax and levies on operations		(734,310)	(646,671)
		125,297,957	116,222,391
Operating expenses			
Fuel		(77,500,816)	(80,735,805)
Maintenance		(1,707,585)	(1,775,893)
Depreciation	20	(12,609,061)	(11,971,751)
Labour		(7,418,569)	(6,734,482)
Service fees on transmission and			
transformer facilities of HIPDC		(23,974)	(23,974)
Purchase of electricity		(7,782,736)	(9,170,378)
Impairment losses on financial and contract assets		(62,108)	(64,821)
Others	20	(6,142,745)	(6,091,267)
Total operating expenses		(113,247,594)	(116,568,371)
Profit/(loss) from operations		12,050,363	(345,980)
Interest income		210,301	159,635
Financial expenses, net			
Interest expense	20	(4,549,521)	(5,106,270)
Exchange (loss)/gain and bank charges, net		(58,142)	81,945
Total financial expenses, net		(4,607,663)	(5,024,325)
Share of profits and losses of			
associates and joint ventures		780,552	673,538
Other investment income		1,659	2,236
Profit/(loss) before income tax expense		8,435,212	(4,534,896)
Income tax expense	21	(1,626,072)	359,641
Net profit/(loss)		6,809,140	(4,175,255)

## INTERIM CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB, except per share data)

		For the six mont	hs ended 30 June
	Notes	2023	2022
Other comprehensive income/(loss), net of tax			
Items that will not be reclassified to profit or loss:			
Fair value changes of other equity		5 750	E 1 1
instrument investments Share of other comprehensive loss of		5,750	511
joint ventures and associates		(13,437)	(21,939)
Income tax effect		(1,438)	(21,959)
		(1,100)	
Items that may be reclassified subsequently to			
profit or loss:			
Share of other comprehensive income of			
joint ventures and associates		14,289	28,618
Cash flow hedges:			
Effective portion of changes in fair value of			
hedging instruments arising during the period		4,943	1,367,092
Reclassification adjustments for		267.225	
gains/(losses) included in profit or loss Exchange differences on translation of		267,235	(1,244,445)
foreign operations		(276,519)	(160,135)
Income tax effect		(270,319) (46,270)	(100,133)
Other comprehensive loss, net of tax			
-		(45,447)	(51,148)
Total comprehensive income/(loss)		6,763,693	(4,226,403)
Net profit/(loss) attributable to:			
– Equity holders of the Company		6,489,663	(3,220,203)
– Non-controlling interests		319,477	(955,052)
Total comprehensive income/(loss)			
attributable to:			
- Equity holders of the Company		6,863,532	(3,057,567)
- Non-controlling interests		(99,839)	(1,168,836)
Earnings/(losses) per share attributable to			
the ordinary shareholders of the Company			
(expressed in RMB per share) – Basic and diluted	22	0.32	(0.27)
	22	0.32	(0.27)

# INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB)

					( anital surdits	SULPHUS								
					2000	2010								
	Share capital i	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	Total equity
Balance as at 1 January 2022 15,6	15,698,093 4	48,417,977	24,770,682	407,974	349,680	(107,351)	246,517	25,667,502	8,140,030	(1,443,398)	16,846,951	113,327,155	20,509,045	133,836,200
Profit/(loss) for the six months ended 30 June 2022		1,059,926	1	1					1		(4,280,129)	(3,220,203)	(955,052)	(4,175,255)
Unter comprenensive incomeviloss): Fair value changes of other equity instrument investments, net of tax Share of other comprehensive	I	I	I	I	511	I	I	511	I	I	I	511	I	511
(loss)/income of investees – accounted for under the equity method, net of tax Changes in fair value of effective	I	I	I	I	(21,939)	28,618	I	6,679	I	I	I	6,679	I	6,679
portion and reclassification of cash flow hedges, net of tax Currency translation differences	1 1	1 1	1 1	70,539 -	1 1	1 1		70,539 -	1 1	- 84,907	1 1	70,539 84,907	31,258 (245,042)	101,797 (160,135)
Total comprehensive income/(loss) for the six months ended 30 June 2022	I	1,059,926	1	70,539	(21,428)	28,618	I	77,729	I	84,907	(4,280,129)	(3,057,567)	(1,168,836)	(4,226,403)
Distribution of other equity instruments Dividends relating to 2021		(912,341)										(912,341)	_ (437,982)	(912,341) (437,982)
Capital injections from non-controlling interests of subsidiaries	I	I	I	I	I	I	I	I	I	I	I	I	476,539	476,539
Share of other capital reserve of investees accounted for under the equity method	I	I	I	I	I	I	210,028	210,028	I	I	I	210,028	I	210,028
Acquisition of non-controlling interests of subsidiaries Disposal of equity investments at	I	I	I	I	I	I	6,857	6,857	I	I	I	6,857	35,063	41,920
fair value through other comprehensive income Others	1 1	1 1	1 1	1 1	(5,104)	1 1	1 1	(5,104) _	1 1	1 1	5,104 1.016	- 1.016	- (86)	- 086
e as at 30 June 2022	15,698,093	48,565,562	24,770,682	478,513	323,148	(78,733)	463,402	25,957,012	8,140,030	(1,358,491)	12,572,942	109,575,148	19,413,743	128,988,891

### INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB)

	Non- Controlling Interests equity	19,651,537 135,316,059	319,477 6,809,140	- 4,312	- 852	1,243 225,908 (420,559) (276,519)	(99,839) 6,763,693	(29,641) (29,641) - 28,000,000	- (11,000,000)	- (911,441)	687,247 687,247	- (12,431)	(4,422) (4,422)		-         (42,128)           20,204,882         158,766,936
	contr Total int	115,664,522 19,65	6,489,663 31	4,312	852	224,665 144,040 (42)	6,863,532 (9)	- (2' 28,000,000	(11,000,000)	(911,441)	- 68	(12,431)	1	1-1	(42,128) 138,562,054 20,20
	Retained earnings	6,517,524 115	5,060,306	i.	i.	1 1	5,060,306	- 28	- (11	i.	i.	I.	i.	4,312 (373,947)	
	Currency translation differences	(602,823)	1 I	1	1	- 144,040	144,040	1 1	1	1 I	1 I	i.	1	1 1	- (458,783)
	Reserve	117,308	1	1	I			1.1	1	I.	1 I	1 I	1	- 373,947	491,255
	Surplus reserves	8,140,030	1	1	I			1 1	1	1	1	I.	1	1 1	8,140,030
he Company	Subtotal	23,710,686	1	4,312	852	224,665	229,829	1 1	1	1	1	(12,431)	1	(4,312) -	(43,550) 23,880,222
y holders of t	Other capital reserve	(776,145)	1	T	I			1 1	1	1 -	1	(12,431)	1 -	1 1	(43,550) (832,126)
Attributable to equity holders of the Company	Lapital surplus value ssets value Other reserve in other in other in other income	(81,735)	I.	1	14,289	I I	14,289	1 1	1	1	1	I.	1	1.1	- (67,446)
A	Capital Fair value reserve of financial assets at fair value through other comprehensive income	368,078	1	4,312	(13,437)	1 1	(9,125)	1 1	1	1	1	1	1	(4,312) _	354,641
	Hedging reserve	(570,194)	1	1	I	224,665	224,665	1 1	1	1 I	1	1 I	1 -	1 1	
	Share	24,770,682	1	T	T			1.1	1	1	1	i.	1	1 1	24,770,682
	Other equity instruments	62,083,704	1,429,357	1	I	1.1	1,429,357	_ 28,000,000	(11,000,000)	(911,441)	1	i.	1 	1 1	79,601,620
	S hare capital	15,698,093	1 I	1	1		, i	1 1	1	1	1	i.	1	1 1	- 15,698,093
		Balance as at 1 January 2023	Profit for the six months ended 30 June 2023	Unter comprehensive incorrea/loss): Fair value changes of other equity instrument investments, net of tax Share of other comprehensive	(loss/income of investees – accounted for under the equity method, net of tax Changes in fair value of effective	portion and reclassification of cash flow hedges, net of tax Currency translation differences	Total comprehensive income/(loss) for the six months ended 30 June 2023	Dividends relating to 2022 Issue of other equity instruments	Redemption of other equity instruments (Note 11)	Ustribution of other equity instruments (Note 11) Canital injustions from pop-controlling	capturing control in our control in or control in the control of the capital reserve of Share of other capital reserve of	investees accounted for under the equity method Acruisition of non-controlling	interests of subsidiaries Disposal of equity investments at fair	value through other comprehensive income Transfer from retained earnings	Others Balance as at 30 June 2023

to 105 are an integral part of this unaudited interim condensed consolidated financial information. notes on pages 42 The

# INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB)

		For the six month	ns ended 30 June
	Notes	2023	2022
OPERATING ACTIVITIES			
Profit/(loss) before income tax expense		8,435,212	(4,534,896)
Adjustments to reconcile profit/(loss) before			
income tax expense to net cash provided by			
operating activities:			
Depreciation of property, plant and equipment	20	12,222,167	11,507,966
Depreciation of investment property	20	12,212	11,898
Depreciation of right-of-use assets	20	374,682	451,887
Provision for impairment on			
other non-current assets	20	-	1,163
Amortisation of other non-current assets	20	95,137	49,487
Impairment losses on financial and			
contract assets		62,108	64,821
Reversal of provision for inventory obsolescence	20	(17)	(1,423)
Other investment gain		(1,659)	(2,236)
Net gain on disposals of non-current assets	20	(100,607)	(121,204)
Share of profits less losses of			
associates and joint ventures		(780,552)	(673,538)
Interest income		(210,301)	(159,635)
Interest expense	20	4,549,521	5,106,270
Others		(309,857)	(536,307)
Changes in working capital:			
Inventories		(1,442,433)	4,311,316
Other receivables and assets		(592,414)	(337,969)
Accounts and notes receivable		(3,145,659)	5,251,525
Contract assets		(55,794)	9,688
Restricted cash		87,846	86,935
Accounts payable and other liabilities		(3,422,066)	(1,939,095)
Contract liabilities		(2,713,391)	(2,471,827)
Taxes payable		1,143,875	3,892,261
Interest received		210,301	159,635
Income tax expense paid		(658,579)	(39,076)
Net cash provided by operating activities		13,759,732	20,087,646

### INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB)

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	For the six month	hs ended 30 June
Notes	2023	2022
INVESTING ACTIVITIES		
Payment for the purchase of property,		
plant and equipment	(21,289,167)	(14,631,655)
Proceeds from disposal of property,		
plant and equipment, land use		
rights and other non-current assets	136,173	334,074
Payment for the purchase of		
other non-current assets	(7,135)	(4,315)
Cash dividends received	431,492	324,703
Capital injections for investments in		
associates and joint ventures	(25,296)	(1,010,000)
Cash paid for acquiring subsidiaries,		
net of cash paid	-	(40,919)
Proceeds from disposal of other		
equity instrument investments	7,197	-
Others	(42,058)	9,580
Net cash used in investing activities	(20,788,794)	(15,018,532)

	For the six mont	hs ended 30 June
Notes	2023	2022
FINANCING ACTIVITIES		
Issuance of short-term bonds	44,200,000	10,300,000
Repayments of short-term bonds	(41,300,000)	(18,000,000)
Proceeds from new short-term loans	37,556,027	77,968,135
Repayments of short-term loans	(51,990,553)	(80,500,217)
Proceeds from new long-term loans	38,826,682	34,017,380
Repayments of long-term loans	(29,726,335)	(29,863,916)
Issuance of long-term bonds	-	6,899,712
Net proceeds from the issuance of		
other equity instruments	27,989,443	-
Redemption of other equity instruments	(11,000,000)	-
Interest paid	(6,083,303)	(6,237,221)
Net capital injection from non-controlling		
interests of subsidiaries	687,247	476,539
Dividends paid to non-controlling		
interests of subsidiaries	(32,505)	(575,956)
Lease payments	(1,863,746)	(298,660)
Others	(187,920)	345,358
Net cash provided by/(used in) financing activities	7,075,037	(5,468,846)
Effect of foreign exchange rate changes, net	(278,510)	71,367
NET DECREASE IN CASH AND		
CASH EQUIVALENTS	(232,535)	(328,365)
Cash and cash equivalents at beginning of the period	16,517,108	15,554,825
CASH AND CASH EQUIVALENTS AT		
END OF THE PERIOD 23	16,284,573	15,226,460

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

# 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 2023 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 2022, 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 25 July 2023.

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 2022, except for the adoption of the revised IFRSs effective as of 1 January 2023. 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.

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### 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 2022 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 2022 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 2022 are available from the Company's registered office. The auditors have expressed an unqualified opinion on those financial statements in their report dated 21 March 2023.

As at and for the six months ended 30 June 2023, a portion of the Group's funding requirements for capital expenditures was partially satisfied by short-term financing. Consequently, as at 30 June 2023, the Group had net current liabilities of approximately Renminbi Yuan ("RMB") 64,446 million. Taking into consideration of the Group's undrawn available banking facilities exceeded RMB300 billion as at 30 June 2023, 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 2022, except for the adoption of the following revised IFRSs that are applicable to the Group for the first time for the current period's financial information.

Amendments to IAS 1 and	Disclosure of Accounting Policies
IFRS Practice Statement 2	
Amendments to IAS 8	Definition of Accounting Estimates
Amendments to IAS 12	Deferred Tax related to Assets and
	Liabilities arising from a Single Transaction
Amendments to IAS 12	International Tax Reform – Pillar Two Model Rules

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

### 3. PRINCIPAL ACCOUNTING POLICIES (Continued)

The nature and impact of the revised IFRSs that are applicable to the Group are described below:

- (a) Amendments to IAS 1 require entities to disclose their material accounting policy information rather than their significant accounting policies. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. Amendments to IFRS Practice Statement 2 provide nonmandatory guidance on how to apply the concept of materiality to accounting policy disclosures. The Group has applied the amendments since 1 January 2023. The amendments did not have any impact on the Group's interim condensed consolidated financial information but are expected to affect the accounting policy disclosures in the Group's annual consolidated financial statements.
- (b) Amendments to IAS 8 clarify the distinction between changes in accounting estimates and changes in accounting policies. Accounting estimates are defined as monetary amounts in financial statements that are subject to measurement uncertainty. The amendments also clarify how entities use measurement techniques and inputs to develop accounting estimates. The Group has applied the amendments to changes in accounting policies and changes in accounting estimates that occur on or after 1 January 2023. Since the Group's policy of determining accounting estimates aligns with the amendments, the amendments did not have any impact on the financial position or performance of the Group.
- (c) Amendments to IAS 12 Deferred Tax related to Assets and Liabilities arising from a Single Transaction narrow the scope of the initial recognition exception in IAS 12 so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences, such as leases and decommissioning obligations. Therefore, entities are required to recognise a deferred tax asset (provided that sufficient taxable profit is available) and a deferred tax liability for temporary differences arising from these transactions. The Group has applied the amendments on temporary differences related to leases as at 1 January 2022, with no cumulative effect recognised as an adjustment to the balance of retained profits or other component of equity as appropriate at that date. The net allowance of deferred tax assets and liabilities was equal to the amount originally recognised on a net basis and had no effect on the consolidated balance sheet items presented on a net allowance basis. Details of the effect of the amendments on the notes of the financial statements are as follows:

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### 3. PRINCIPAL ACCOUNTING POLICIES (Continued)

The nature and impact of the revised IFRSs that are applicable to the Group are described below: (Continued)

	As at 31 December of 2022	Effect of adoption of Amendments to IAS 12	As at 31 December of 2022 (Restated)
Deferred income tax assets before offsetting	7,261,129	341,641	7,602,770
Deferred income tax liabilities before offsetting	(3,798,261)	(341,641)	(4,139,902)
Offset amount	(1,628,420)	(341,641)	(1,970,061)
Deferred income tax assets after offsetting	5,632,709		5,632,709
Deferred income tax liabilities after offsetting	(2,169,841)		(2,169,841)

(d) Amendments to IAS 12 International Tax Reform – Pillar Two Model Rules introduce a mandatory temporary exception from the recognition and disclosure of deferred taxes arising from the implementation of the Pillar Two model rules published by the Organisation for Economic Co-operation and Development. The amendments also introduce disclosure requirements for the affected entities to help users of the financial statements better understand the entities' exposure to Pillar Two income taxes, including the disclosure of current tax related to Pillar Two income taxes separately in the periods when Pillar Two legislation is effective and the disclosure of known or reasonably estimable information of their exposure to Pillar Two income taxes in periods in which the legislation is enacted or substantively enacted but not yet in effect. Entities are required to disclose the information relating to their exposure to Pillar Two income taxes in annual periods beginning on or after 1 January 2023, but are not required to disclose such information for any interim periods ending on or before 31 December 2023. The Group has applied the amendments retrospectively. After assessment, the amendments did not have any impact to the Group.

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

### 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 2023					
– Sales of power and heat	105,669,024	16,053,896	-	-	121,722,920
– Sales of coal and raw materials	566,558	5,500	-	-	572,058
– Port service	-	-	339,940	(213,138)	126,802
<ul> <li>Transportation service</li> </ul>	-	-	100,561	(60,304)	40,257
– Lease income	47,842	1,038,150	-	-	1,085,992
– Others	1,216,561	1,262,261	16,927	(11,511)	2,484,238
Total	107,499,985	18,359,807	457,428	(284,953)	126,032,267
	PRC power segment	Overseas segment (Note i)	All other segments	Inter-segment revenue	Total
For the six months ended 30 June 2022					
<ul> <li>Sales of power and heat</li> </ul>	96,868,713	14,431,974	_	-	111,300,687
<ul> <li>Sales of power and heat</li> <li>Sales of coal and raw materials</li> </ul>	96,868,713 762,707	14,431,974 5,710	-	-	111,300,687 768,417
			- - 298,789	- - (178,617)	
- Sales of coal and raw materials			– 298,789 109,689	- (178,617) (89,746)	768,417
<ul> <li>Sales of coal and raw materials</li> <li>Port service</li> </ul>				,	768,417 120,172
<ul> <li>Sales of coal and raw materials</li> <li>Port service</li> <li>Transportation service</li> </ul>	762,707	5,710 - -		,	768,417 120,172 19,943

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 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.

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

### 4. REVENUE AND SEGMENT INFORMATION (Continued)

### (b) Segment information (Continued)

			(Unc	ler PRC GAAP)
	PRC power segment	Overseas segment	All other segments	Total
For the six months ended 30 June 2023				
Total revenue	107,499,985	18,359,807	457,428	126,317,220
Intersegment revenue			(284,953)	(284,953)
Revenue from external customers	107,499,985	18,359,807	172,475	126,032,267
Segment results	5,080,978	3,219,503	118,356	8,418,837
Interest income	96,844	112,605	852	210,301
Interest expense	(3,873,134)	(613,195)	(58,656)	(4,544,985)
Impairment loss	(444)	461	-	17
Credit loss	1,303	(63,411)	-	(62,108)
Depreciation and amortisation	(11,856,057)	(353,399)	(128,706)	(12,338,162)
Net gain on disposal of non-current assets	101,443	35	(3)	101,475
Share of profits and losses of				
associates and joint ventures	574,012	-	84,641	658,653
Income tax expense	(1,197,632)	(513,074)	(16,606)	(1,727,312)

#### (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 and losses of				
associates and joint ventures	301,718	-	298,495	600,213
Income tax expense	414,593	(127,508)	(14,475)	272,610

### 4. REVENUE AND SEGMENT INFORMATION (Continued)

### (b) Segment information (Continued)

			(U	nder PRC GAAP)
	PRC power segment	Overseas segment	All other segments	Total
30 June 2023				
Segment assets	453,158,195	44,345,110	10,650,607	508,153,912
Including:				
Additions to non-current assets				
(excluding financial assets and				
deferred income tax assets)	37,567,010	161,127	16,249	37,744,386
Investments in associates	14,994,176	-	5,357,386	20,351,562
Investments in joint ventures	1,212,508	-	1,042,220	2,254,728
Segment liabilities	(336,843,542)	(24,616,473)	(1,930,299)	(363,390,314)

			(U	nder PRC GAAP)
	PRC power segment	Overseas segment	All other segments	Total
31 December 2022				
Segment assets	438,449,391	44,394,771	10,779,389	493,623,551
Including: Additions to non-current assets (excluding financial assets and				
deferred income tax assets)	44,492,820	240,565	53,207	44,786,592
Investments in associates	14,748,090	-	5,320,368	20,068,458
Investments in joint ventures	1,208,183	_	1,145,430	2,353,613
Segment liabilities	(344,746,791)	(27,166,963)	(2,015,618)	(373,929,372)

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### 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	
	2023	2022
Segment results (PRC GAAP)	8,418,837	(4,094,384)
Reconciling items:		
Loss related to the headquarters	(142,029)	(149,949)
Investment income from Huaneng Finance	68,394	68,373
Dividend income of other equity instrument investments	2	_
Impact of IFRSs adjustments*	90,008	(358,936)
Profit/(loss) before income tax expense per unaudited interim		
consolidated statement of comprehensive income	8,435,212	(4,534,896)

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

	As at 30 June 2023	As at 31 December 2022
Total segment assets (PRC GAAP)	508,153,912	493,623,551
Reconciling items:		
Investment in Huaneng Finance	1,444,720	1,476,326
Deferred income tax assets	5,759,718	6,322,055
Prepaid income tax	134,245	124,575
Other equity instrument investments	708,070	708,912
Corporate assets	294,530	350,560
Impact of IFRSs adjustments*	9,438,167	9,615,794
Total assets per unaudited interim condensed consolidated statement of financial position	525,933,362	512,221,773

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### 4. REVENUE AND SEGMENT INFORMATION (Continued)

### (b) Segment information (Continued)

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

	As at 30 June 2023	As at 31 December 2022
Total segment liabilities (PRC GAAP)	(363,390,314)	(373,929,372)
Reconciling items:		
Current income tax liabilities	(764,565)	(331,928)
Deferred income tax liabilities	(1,250,975)	(1,086,765)
Corporate liabilities	(795,685)	(713,863)
Impact of IFRSs adjustments*	(964,887)	(843,786)
Total liabilities per unaudited interim		
consolidated statement of financial position	(367,166,426)	(376,905,714)

#### Other material items:

	Reportable segment total	Headquarters	Share of profits of Huaneng Finance	Impact of IFRSs adjustments*	Total
For the six months ended 30 June 2023					
Total revenue	126,032,267	-	-	-	126,032,267
Interest expense	(4,544,985)	(4,536)	-	-	(4,549,521)
Depreciation and amortisation	(12,338,162)	(19,595)	-	(346,441)	(12,704,198)
Impairment loss	17	-	-	-	17
Credit loss	(62,108)	-	-	-	(62,108)
Share of profits and losses of					
associates and joint ventures	658,653	-	68,394	53,505	780,552
Net gain/(loss) on disposal of					
non-current assets	101,475	-	-	(868)	100,607
Income tax expense	(1,727,312)			101,240	(1,626,072)

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### 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 IFRSs 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)
Depreciation and amortisation	(11,680,662)	(1,633)	-	(338,943)	(12,021,238)
Impairment loss	260	_	-	-	260
Credit loss	(64,821)	-	-	-	(64,821)
Share of profits and losses of					
associates and joint ventures	600,213	_	68,373	4,952	673,538
Net gain/(loss) on disposal of					
non-current assets	121,221	-	-	(17)	121,204
Income tax expense	272,610			87,031	359,641

\* IFRSs 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 month	For the six months ended 30 June		
	2023	2022		
PRC	107,672,460	99,046,762		
Overseas	18,359,807	17,822,300		
Total	126,032,267	116,869,062		

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 2023	As at 31 December 2022
PRC	394,471,623	386,751,134
Overseas	22,990,872	22,586,601
Total	417,462,495	409,337,735

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 2023, the revenue from grid companies under common control of State Grid Corporation of China within the PRC power segment in total accounted for 76% of external revenue (for the six months ended 30 June 2022: 75%). 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			
	2023	3	202	2
	Amount	Proportion	Amount	Proportion
State Grid Shandong Electric Power Company	17,459,000	14%	17,783,677	15%

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### 5. PROPERTY, PLANT AND EQUIPMENT

	As at 30 June 2023	As at 31 December 2022
Balance at the beginning of the period/year	336,126,522	320,819,879
Acquisition Additions Other additions Reclassification to investment properties Disposals/write-off Depreciation charge Impairment charge Other decrease Currency translation differences	_ 19,991,374 86,299 _ (64,894) (12,219,005) _ (61,317) 178,481	1,359,961 39,247,006 176,310 (4,111) (239,341) (23,385,823) (1,823,978) (579,265) 555,884
End of the period/year	344,037,460	336,126,522

As at 30 June 2023, 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 2023, the Group was in the process of applying for the ownership certificate for certain buildings with an aggregate net book value of RMB4,351 million (31 December 2022: RMB4,675 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 2023 and 31 December 2022:

As a	at	30	June	2023
------	----	----	------	------

	Level 1	Level 2	Level 3	Total
<b>Assets</b> Derivatives used for hedging	-	62,543	-	62,543
Other equity instrument investments			708,070	708,070
Total assets		62,543	708,070	770,613
Liabilities				
Derivatives used for hedging		350,046		350,046
Total liabilities		350,046		350,046

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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 2023 and 31 December 2022: *(Continued)* 

#### As at 31 December 2022

	Level 1	Level 2	Level 3	Total
Assets Derivatives used for hedging	-	48,495	-	48,495
Other equity instrument investments			708,912	708,912
Total assets		48,495	708,912	757,407
Liabilities				
Derivatives used for hedging		662,850		662,850
Total liabilities		662,850		662,850

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 2023 and 31 December 2022, there was no instruments included in Level 1.

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.

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### 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 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, and interest rate swaps.

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 2023:

	Valuation technique	Significant unobservable input	Range	Sensitivity of fair value to the input
Unlisted equity investments	Valuation multiples	Average P/B	30 June 2023: 1.30	10% increase/decrease in multiple would result in increase/decrease in fair value by RMB46.23 million.
		Discount for lack of marketability	30 June 2023: 18%	10% increase/decrease in discount for lack of marketability would result in decrease/increase in fair value by RMB10.15 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 2023, 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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### 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 2023	As at 31 December 2022
Other equity instrument investments		
<b>Beginning of the period/year</b> Addition Disposal Fair value changes	708,912 605 (7,197) 5,750	722,205  
End of the period/year	708,070	708,912
Changes in fair value recognised in other comprehensive income for the period/year	4,312	(9,971)

#### (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 RMB180.04 billion and RMB40.15 billion as at 30 June 2023 (31 December 2022: RMB170.52 billion and RMB40.19 billion), respectively. The aggregate book values of these liabilities were approximately RMB180.16 billion and RMB39.81 billion as at 30 June 2023 (31 December 2022: RMB170.81 billion and RMB39.79 billion), respectively.

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### 7. GOODWILL

The movements of goodwill are as follows:

	As at 30 June 2023	As at 31 December 2022
Beginning of the period/year		
Cost	19,325,582	18,290,484
Accumulated impairment losses	(4,940,673)	(4,014,260)
Net book value	14,384,909	14,276,224
Movements:		
Impairment charge for the period/year	-	(897,524)
Currency translation differences	348,453	1,006,209
End of the period/year	14,733,362	14,384,909
Cost	19,684,039	19,325,582
Accumulated impairment losses	(4,950,677)	(4,940,673)
Net book value	14,733,362	14,384,909

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### 8. OTHER NON-CURRENT ASSETS

Details of other non-current assets are as follows:

	As at 30 June 2023	As at 31 December 2022
Finance lease receivables (Note i)	8,537,814	8,682,006
VAT recoverable	5,723,325	5,604,843
Prepayments for pre-construction cost	1,092,592	953,147
Intangible assets	624,446	657,420
Prepaid connection fees	21,934	24,156
Contract assets	1,077,292	1,002,283
Others	2,442,054	2,304,074
Total	19,519,457	19,227,929

Note i: Huaneng Shandong Ruyi (Pakistan) Energy (Private) 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 were accounted for as a finance lease to CPPA-G.

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### 9. OTHER RECEIVABLES AND ASSETS

Other receivables and assets comprised the following:

	As at 30 June 2023	As at 31 December 2022
Prepayments for inventories Prepaid income tax Others	6,577,402 134,245 439,838	6,168,858 124,575 444,918
Subtotal of prepayments	7,151,485	6,738,351
Less: Loss allowances	2,638	2,638
Total prepayments, net	7,148,847	6,735,713
Dividends receivable Receivables from sale of fuel Others	509,850 110,469 2,978,966	288,979 74,458 2,665,686
Subtotal of other receivables	3,599,285	3,029,123
Less: Loss allowances	319,081	295,645
Total other receivables, net	3,280,204	2,733,478
VAT recoverable Finance lease receivables Designated loan to a joint venture Others	3,868,940 877,652 72,113 549,489	3,441,183 761,752 72,814 396,059
Subtotal of other assets	5,368,194	4,671,808
Less: Loss allowances Total other assets, net Gross total	<u>64,615</u> <u>5,303,579</u> 16,118,964	64,615 4,607,193 14,439,282
Net total	15,732,630	14,076,384

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### **10. ACCOUNTS AND NOTES RECEIVABLE**

Accounts and notes receivable comprised the following:

	As at 30 June 2023	As at 31 December 2022
Accounts receivable	44,836,507	39,986,340
Notes receivable	1,203,630	2,792,246
	46,040,137	42,778,586
Less: Loss allowances	122,505	124,254
Total	45,917,632	42,654,332
Analysed into: Accounts receivable		
– At amortised cost	44,836,507	39,986,340
Notes receivable – At amortised cost	1,203,630	2,792,246

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

	As at 30 June 2023	As at 31 December 2022
Within 1 year	44,982,194	42,301,386
Between 1 and 2 years	726,051	241,380
Between 2 and 3 years	134,699	54,471
Over 3 years	197,193	181,349
Total	46,040,137	42,778,586

As at 30 June 2023, the maturity period of the notes receivable ranged from 1 month to 12 months (31 December 2022: from 1 month to 12 months).

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

#### (a) Dividends of ordinary shares

On 20 June 2023, upon the approval from shareholders at the annual general meeting, the Company declared no dividend in 2022 (2021final: nil). As at 30 June 2023, the Company has no dividend to be paid (30 June 2022: the Company has no dividend to be paid).

#### (b) Cumulative distribution of other equity instruments

In 2017, the Company issued two tranches of perpetual corporate bonds with net proceeds of approximately RMB2,500 million (Bond A) and RMB2,500 million (Bond B), respectively. The perpetual corporate bonds are issued at par value with initial distribution rates of 5.05% and 5.17% with a term of 3 years and 5 years respectively. The interest of the perpetual corporate bonds is 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 interest and all deferred interest. 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 years and 5 years respectively. The applicable distribution rate will be reset on the first call date and in 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, and will remain it afterwards. On the first call date of Bond A in September 2020, the Company decided to exercise the callable option. The bond was redeemed in whole on 25 September 2020. On the first call date of Bond B in September 2022, the Company decided to exercise the callable option. The bond was redeemed in whole on 25 September 2022.

In 2018, the Company issued three tranches of Yingda Insurance Financing Plan (the "Yingda plan") with aggregate proceeds of RMB5,000 million. The Yingda plan has no fixed period with an initial distribution rate of 5.79%. The interest of the financing plan is 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 interest and all deferred interest. 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 mentioned above. 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.

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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 2019, the Company issued two tranches of China Life Financing Plan (the "China Life plan") with aggregate proceeds of RMB4,330 million. The China Life plan has no fixed period with an initial distribution rate of 5.05%. The interest 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 interest and all deferred interest. 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 mentioned above. 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 aggregate proceeds of RMB2,670 million. The PICC plan has no fixed period with an initial distribution rate of 5.10%. The interest of the PICC plan is 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 interest and all deferred interest. 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 mentioned above. 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 net proceeds of approximately RMB2,000 million and RMB2,000 million, respectively. The medium-term notes are issued at par value with initial distribution rates of 4.08% and 4.05%. The interest of the medium-term notes is 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 interest and all deferred interest. 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, 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, and will remain it afterwards. On the first call date of above medium-term notes in October 2022, the Company decided to exercise the callable option. The two tranches of medium-term notes were redeemed in whole on 18 October 2022 and 25 October 2022, respectively.

### 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 net proceeds of approximately RMB2,500 million and RMB1,500 million. The medium-term notes are issued at par value with initial distribution rates of 4.15% and 4.53%, respectively. The interest of the medium-term notes is 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 interest. 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 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, and will remain it afterwards. On the first call date of 2019 medium-term notes of RMB2,500 million, the Company decided to exercise the callable option. The bond was redeemed in whole on 5 November 2022.

In March 2020, the Company issued two tranches of perpetual corporate bonds with net proceeds of approximately RMB2,000 million (Bond C) and RMB1,000 million (Bond D), respectively. The perpetual corporate bonds are issued at par value with initial distribution rates of 3.58% and 3.85%. The interest of the perpetual corporate bonds is 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 interest and all deferred interest. 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, and will remain it afterwards. On the first call date of Bond C in March, the Company decided to exercise the callable option. The bond was redeemed in whole on 23 March 2023.

In April 2020, the Company issued medium-term notes with 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 interest of the medium-term notes is 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 interest and all deferred interest. 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, and will remain it afterwards. On the first call date of 2020 medium-term notes of RMB3,000 million in April, the Company decided to exercise the callable option. The bond was redeemed in whole on 13 April 2023.

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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 April 2020, the Company issued China Life Financing Plan ("the China Life plan") with proceeds of RMB3,570 million. The China Life plan has no fixed period with an initial distribution rate of 4.75%. The interest of the China Life plan is 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 interest and all deferred interest. 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 mentioned above. 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 proceeds of RMB930 million. The PICC plan has no fixed period with an initial distribution rate of 4.75%. The interest of the PICC plan is 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 interest and all deferred interest. 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 mentioned above. 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 net proceeds of approximately RMB2,500 million (Bond E). The perpetual corporate bond is issued at par value with an initial distribution rate of 3.09%. The interest of the perpetual corporate bond is 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 interest and all deferred interest. 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, and will remain it afterwards. On the first call date of Bond E, the Company decided to exercise the callable option. The bond was redeemed in whole on 23 April 2023.

### 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 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 interest of the medium-term notes is 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 interest and all deferred interest. 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, and will remain it afterwards. On the first call date of 2020 medium-term notes of RMB3,500 million in June, the Company decided to exercise the callable option. The bond was redeemed in whole on 19 June 2023.

In August 2020 and September 2020, the Company issued two tranches of medium-term notes with net proceeds of approximately RMB2,000 million and RMB1,000 million, respectively. The medium-term notes are issued at par value with initial distribution rates of 3.99% and 4.40%. The interest of the medium-term notes is 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 interest and all deferred interest. 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, 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, and will remain it afterwards.

In August 2020, the Company issued the fourth tranche of the PICC plan with proceeds of RMB3,000 million. The PICC plan has no fixed period with an initial distribution rate of 4.60%. The interest of the PICC plan is 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 interest and all deferred interest. 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 mentioned above. 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.

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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 September 2020, the Company issued a perpetual corporate bond with net proceeds of approximately RMB3,000 million (Bond F). The perpetual corporate bond is issued at par value with an initial distribution rate of 4.38%. The interest of the perpetual corporate bond is 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 interest and all deferred interest. 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, and will remain it afterwards.

In July 2022, the Company issued medium-term notes with net proceeds of approximately RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 2.93%. The interest of the medium-term notes is 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 interest and all deferred interest. 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, and will remain it afterwards.

In September 2022, the Company issued medium-term notes with net proceeds of approximately RMB500 million. The medium-term notes are issued at par value with an initial distribution rate of 2.78%. The interest of the medium-term notes is 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 interest and all deferred interest. 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, and will remain it afterwards.

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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 September 2022, the Company issued the first tranche of the Huaneng Trust Yingfeng No.1 Single Fund Trust ("Huaneng Trust (1st)") with the proceeds of RMB2,500 million. Huaneng Trust (1st) has no fixed period with initial distribution rate of 2.91%. The interest of Huaneng Trust (1st) is recorded as distributions, which is paid annually in arrears in August 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 or liquidation or bankruptcy the Company) occur. The Company has the right to defer current interest and all deferred interest. Huaneng Trust (1st) has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 5th year of issuance, or the payment of the principal may be deferred at each distribution date mentioned above. The applicable distribution rate will be reset during the period from the 6th year after the issuance, to the basis rate plus 300 basis points, and will remain 5.91% afterwards.

In October 2022, the Company issued two medium-term notes with net proceeds of approximately RMB2,000 million and RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 2.78% and 2.72% respectively. The interest of the medium-term notes is 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 interest and all deferred interest. 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 apprivation after the first call date, to the sum of the applicable benchmark interest rate, the initial spread and 300 basis points per annum, and will remain it afterwards.

In October 2022, the Company issued the second tranche of the Huaneng Trust Yingfeng No.1 Single Fund Trust ("Huaneng Trust (2nd)") with the proceeds of RMB3,050 million. Huaneng Trust (2nd) has no fixed period with initial distribution rate of 3.06%. The interest of Huaneng Trust (2nd) is recorded as distributions, which is paid annually in arrears in September 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 or liquidation or bankruptcy the Company) occur. The Company has the right to defer current interest and all deferred interest. Huaneng Trust (2nd) has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 5th year of issuance, or the payment of the principal may be deferred at each distribution date mentioned above. The applicable distribution rate will be reset during the period from the 6th year after the issuance, to the basis rate plus 300 basis points, and will remain 6.06% afterwards.

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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 2022, the Company issued medium-term notes with net proceeds of approximately RMB2,500 million. The medium-term notes are issued at par value with an initial distribution rate of 2.66%. The interest of the medium-term notes is 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 interest and all deferred interest. 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, and will remain it afterwards.

In November 2022, the Company issued the third tranche of the Huaneng Trust Yingfeng No.1 Single Fund Trust ("Huaneng Trust (3rd)") with the proceeds of RMB4,000 million. Huaneng Trust (3rd) has no fixed period with initial distribution rate of 3.11%. The interest of Huaneng Trust (3rd) is recorded as distributions, which is paid annually in arrears in October 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 or liquidation or bankruptcy the Company) occur. The Company has the right to defer current interest and all deferred interest. Huaneng Trust (3rd) has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 5th year of issuance, or the payment of the principal may be deferred at each distribution date mentioned above. The applicable distribution rate will be reset during the period from the 6th year after the issuance, to the basis rate plus 300 basis points, and will remain 6.11% afterwards.

In November 2022, the Company issued the fourth tranche of the Huaneng Trust Yingfeng No.1 Single Fund Trust ("Huaneng Trust (4th)") with the proceeds of RMB4,000 million. Huaneng Trust (4th) has no fixed period with initial distribution rate of 3.11%. The interest of Huaneng Trust (4th) is recorded as distributions, which is paid annually in arrears in October 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 or liquidation or bankruptcy the Company) occur. The Company has the right to defer current interest and all deferred interest. Huaneng Trust (4th) has no fixed maturity date and is callable at the Company's discretion in whole at each distribution date after the 5th year of issuance, or the payment of the principal may be deferred at each distribution date mentioned above. The applicable distribution rate will be reset during the period from the 6th year after the issuance, to the basis rate plus 300 basis points, and will remain 6.11% afterwards.

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

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

In January 2023, the Company issued medium-term notes with net proceeds of approximately RMB3,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.93%. The interest of the medium-term notes is recorded as distributions, which are paid annually in arrears in January 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 interest and all deferred interest. 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, and will remain it afterwards.

In February 2023, the Company issued medium-term notes with net proceeds of approximately RMB3,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.74%. The interest of the medium-term notes is recorded as distributions, which are paid annually in arrears in February 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 interest and all deferred interest. 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, and will remain it afterwards.

In February 2023, the Company issued medium-term notes with net proceeds of approximately RMB3,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.55%. The interest of the medium-term notes is recorded as distributions, which are paid annually in arrears in February 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 interest and all deferred interest. 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, and will remain it afterwards.

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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 February 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,500 million. The medium-term notes are issued at par value with an initial distribution rate of 3.58%. The interest of the medium-term notes is recorded as distributions, which are paid annually in arrears in February 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 interest and all deferred interest. 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, and will remain it afterwards.

In March 2023, the Company issued medium-term notes with net proceeds of approximately RMB3,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.61%. The interest of the medium-term notes is 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 (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 interest and all deferred interest. 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, and will remain it afterwards.

In March 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.38%. The interest of the medium-term notes is 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 (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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

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

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

In March 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,500 million. The medium-term notes are issued at par value with an initial distribution rate of 3.53%. The interest of the medium-term notes is 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 (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 interest and all deferred interest. 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, and will remain it afterwards.

In April 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.23%. The interest of the medium-term notes is 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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

In April 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 3.21%. The interest of the medium-term notes is 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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

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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 April 2023, the Company issued medium-term notes with net proceeds of approximately RMB1,500 million. The medium-term notes are issued at par value with an initial distribution rate of 3.14%. The interest of the medium-term notes is 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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

In June 2023, the Company issued medium-term notes with net proceeds of approximately RMB2,000 million. The medium-term notes are issued at par value with an initial distribution rate of 2.96%. The interest of the medium-term notes is 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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

In June 2023, the Company issued medium-term notes with net proceeds of approximately RMB1,500 million. The medium-term notes are issued at par value with an initial distribution rate of 2.92%. The interest of the medium-term notes is 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 interest and all deferred interest. 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 2 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, and will remain it afterwards.

The perpetual corporate bonds, financing plans and medium-term notes were recorded as other equity instruments in the consolidated financial statements. During the six months ended 30 June 2023, the profit attributable to holders of other equity instruments, based on the applicable distribution rate, was RMB1,429 million (for the six months ended 30 June 2022: RMB1,060 million).

# 12. LONG-TERM LOANS

Long-term loans comprised the following:

	As at 30 June 2023	As at 31 December 2022
Loans from Huaneng Group and its subsidiaries (a) Bank loans and other loans (b)	10,913,809 <u>169,246,555</u> 180,160,364	8,342,593 162,464,922 170,807,515
Less: Current portion of long-term loans Total	18,856,492 161,303,872	19,129,989 151,677,526

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

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

		As at 30 J	une 2023	
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Loans from Huaneng Group Unsecured				
RMB	912,402	1,089	911,313	4.30%
Loans from Huaneng Finance Unsecured				
RMB	8,381,495	933,743	7,447,752	2.05%-4.40%
Loans from Huaneng Hong Kong Asset Management Co., Ltd. ("Hong Kong Asset Management") Unsecured USD	1,380,878	5,235	1,375,643	2.30%-4.90%
Loans from Huaneng Tiancheng Financial Leasing Co., Ltd. ("Tiancheng Financial Leasing")				
Secured				
RMB	239,034	10,441	228,593	3.80%-4.65%
Total	10,913,809	950,508	9,963,301	

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

# 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 Dec	ember 2022	
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Loans from Huaneng Group Unsecured	001 004	471	000 522	
RMB	901,004	471	900,533	3.86%-4.65%
<b>Loans from Huaneng Finance</b> <i>Unsecured</i> RMB	5,504,036	971,959	4,532,077	2.05%-4.40%
Loans from Hong Kong Asset Management Unsecured				
US\$	1,314,306	12,235	1,302,071	3.85%-6.75%
Loans from Tiancheng Financial Leasing				
Secured				
RMB	623,247	18,906	604,341	3.45%-4.65%
Total	8,342,593	1,003,571	7,339,022	

## 12. LONG-TERM LOANS (Continued)

#### (b) Bank loans and other loans

Details of bank loans and other loans are as follows:

		As at 30 J	une 2023	
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Secured	8,528,403	1,252,692	7,275,711	1.49%-4.95%
Unsecured	160,718,152	16,653,292	144,064,860	0.35%-6.19%
Total	169,246,555	17,905,984	151,340,571	

		As at 31 Dec	ember 2022	
	RMB equivalent	Less: Current portion	Non-current portion	Annual interest rate
Secured	9,358,878	1,777,204	7,581,674	2.15%-4.95%
Unsecured	153,106,044	16,349,214	136,756,830	0.75%-4.90%
Total	162,464,922	18,126,418	144,338,504	

As at 30 June 2023, long-term loans of approximately RMB5,679 million (31 December 2022: RMB4,794 million) were secured by future revenue from the electricity business. Long-term loans of approximately RMB0 million (31 December 2022: RMB461 million) were secured by equity interests of a subsidiary of the Company. Long-term loans of approximately RMB20 million (31 December 2022: RMB50 million) were secured by carbon emission trading rights. Long-term loans of approximately RMB33 million (31 December 2022: RMB44 million) were secured by franchise.

As at 30 June 2023, long-term loans of RMB3,035 million (31 December 2022: RMB4,633 million) were secured by certain property, plant and equipment with a net book value amounting to approximately RMB4,974 million (31 December 2022: RMB6,984 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 the relevant assets within the leasing period. As at 30 June 2023, the equipment mentioned above had total carrying amounts of RMB299 million and RMB4,675 million (31 December 2022: RMB1,152 million and RMB5,832 million) respectively, which were recognised in property, plant and equipment.

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### 12. LONG-TERM LOANS (Continued)

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

As at 30 June 2023, long-term loans of approximately RMB0 million (31 December 2022: RMB15 million) were guaranteed by Huaneng Group.

As at 30 June 2023, the Company provided guarantees for long-term loans of approximately RMB653 million (31 December 2022: RMB3,109 million) of the Company's overseas subsidiaries and RMB618 million (31 December 2022: RMB237 million) of the Company's domestic subsidiaries.

As at 30 June 2023, long-term loans of approximately RMB100 million (31 December 2022: RMB107 million) were guaranteed by Enshi Finance Bureau of Hubei Province.

As at 30 June 2023, long-term loans of approximately RMB99 million (31 December 2022: RMB106 million) were guaranteed by Tangyin County Modern Agricultural Investment Co., Ltd.

As at 30 June 2023, long-term loans of approximately RMB224 million (approximately US\$31 million) (31 December 2022: RMB199 million (approximately US\$29 million)) were guaranteed by Huaneng Shandong Power Generation Co., Ltd. ("Shandong Power").

As at 30 June 2023, long-term loans of approximately RMB6,704 million (31 December 2022: RMB6,766 million) were guaranteed by Shandong Power, China Export & Credit Insurance Corporation and Jining Chengtou at the liability ratio of 17.5%, 65.0% and 17.5% respectively (31 December 2022: Shandong Power, China Export & Credit Insurance Corporation and Jining Chengtou at the liability ratios of 17.5%, 65.0% and 17.5% respectively).

As at 30 June 2023, long-term loans of approximately RMB1,157 million (31 December 2022: RMB1,116 million) were guaranteed by Shandong Power and Jining Chengtou Investment Holding Group Co., Ltd. ("Jining Chengtou") at the liability ratios of 50.0% and 50.0% respectively (31 December 2022: Shandong Power and Jining Chengtou at the liability ratios of 50.0% and 50.0% respectively).

# **13. LONG-TERM BONDS**

Long-term bonds comprised the following:

	As at 30 June 2023	As at 31 December 2022
2016 corporate bonds 1st batch (10 years)	1,202,375	1,226,454
2017 medium-term notes 1st batch (5 years)	4,481	8,962
2018 medium-term notes 2nd batch (3 years)	2,790	2,799
2018 corporate bonds 2nd batch (10 years)	5,203,488	5,078,254
2019 corporate bonds 1st batch (10 years)	2,320,416	2,374,962
2019 medium-term notes 1st batch (5 years)	1,553,385	1,524,031
2020 corporate bonds (5 years) - SSPL	2,188,408	2,100,246
2020 corporate bonds (10 years) - SSPL	2,181,241	2,094,973
2021 green medium-term notes 1st batch (3 years)	1,016,043	1,032,499
2021 green medium-term notes 2nd batch (3 years)	2,518,342	2,560,025
2021 corporate bonds 1st batch (3 years)	501,760	510,199
2021 corporate bonds 1st batch (10 years)	1,506,204	1,536,221
2021 corporate bonds 2nd batch (3 years)	501,111	509,499
2021 corporate bonds 2nd batch (10 years)	3,509,146	3,579,184
2021 corporate bonds 3rd batch (10 years)	1,801,972	1,838,173
2021 medium-term notes 1st batch (3 years)	2,051,767	2,022,570
2021 medium-term notes 2nd batch (3 years)	2,036,586	2,006,042
2021 medium-term notes 1st batch (3 years) - Jiangsu	304,510	300,121
2022 medium-term notes 1st batch (10 years)	1,520,248	1,548,175
2022 medium-term notes 2nd batch (3 years)	3,025,277	3,067,588
2022 medium-term notes 3rd batch (10 years)	1,511,388	1,539,040
2022 medium-term notes 1st batch (3 years) - Jiangsu	502,640	510,000
2022 medium-term notes 4th batch (2 years)	300,220	303,765
2022 medium-term notes 6th batch (3 years)	2,039,374	2,014,621
2022 medium-term notes 7th batch (2 years)	509,350	503,980
Subtotal	39,812,522	39,792,383
Less: Current portion of long-term bonds	5,376,806	730,336
Total	34,435,716	39,062,047

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

	Earp	Iccuance	iti n	Initial Distribution	Effartiva	I CCLID	Balance as at 31 December	leenad				Foreign	Foreign Currency Tranclation	Interact	Balance as at
Type of Instruments	Value	Date	Period	Rate	Rate	Amount	2022		Amortisation	Interest	Repayment	Gain	Differences	Payable	2023
2016 corporate bonds 1st batch (10 years)	1,200,000	June 2016	10 years	3.98%	3.98%	1,200,000	1,226,454	a.	4	23,677	(47,760)			2,347	1,202,375
2017 medium-term notes 1st batch (5 years)	5,000,000	July 2017	5 years	4.69%	4.90%	5,000,000	8,962	i.	(4,481)	i.	a A	i.	i.	i.	4,481
2018 medium-term notes 2nd batch (3 years)	2,000,000	July 2018	3 years	4.41%	4.56%	2,000,000	2,799	i.	(6)	i.	a A	i.	i.	i.	2,790
2018 corporate bonds 2nd batch (10 years)	5,000,000	September 2018	10 years	5.05%	5.05%	5,000,000	5,078,254	i.	22	125,212	a A	i.	i.	203,384	5,203,488
2019 corporate bonds 1st batch (10 years)	2,300,000	April 2019	10 years	4.70%	4.70%	2,300,000	2,374,962	i.	4	53,550	(108,100)	i.	i.	20,380	2,320,416
2019 medium-term notes 1st batch (5 years)	1,500,000	July 2019	5 years	3.85%	3.96%	1,500,000	1,524,031	i.	716	28,638	a A	i.	i.	54,902	1,553,385
2020 corporate bonds (5 years) – SSPL	2,108,865	February 2020	5 years	2.25%	2.32%	2,108,865	2,100,246	i.	1,203	23,470	(23,086)	13,070	73,505	17,806	2,188,408
2020 corporate bonds (10 years) – SSPL	2,108,865	February 2020	10 years	2.63%	2.72%	2,108,865	2,094,973	i.	950	27,381	(26,933)	13,070	71,800	20,774	2,181,241
2021 green medium-term notes 1st batch (3 years)	1,000,000	February 2021	3 years	3.45%	3.66%	1,000,000	1,032,499	i.	936	17,108	(34,500)	i.	i.	13,422	1,016,043
2021 green medium-term notes 2nd batch (3 years)	2,500,000	April 2021	3 years	3.35%	3.40%	2,500,000	2,560,025	i.	584	41,483	(83,750)	i.	i.	17,391	2,518,342
2021 corporate bonds 1st batch (3 years)	500,000	May 2021	3 years	3.35%	3.35%	500,000	510,199	i.	2	8,306	(16,750)	i.	i.	1,744	501,760
2021 corporate bonds 1st batch (10 years)	1,500,000	May 2021	10 years	3.97%	3.97%	1,500,000	1,536,221	i.	m	29,530	(59,550)	i.	i.	6,200	1,506,204
2021 corporate bonds 2nd batch (3 years)	500,000	June 2021	3 years	3.33%	3.33%	500,000	509,499	i.	5	8,257	(16,650)	i.	i.	1,095	501,111
2021 corporate bonds 2nd batch (10 years)	3,500,000	June 2021	10 years	3.97%	3.97%	3,500,000	3,579,184	i.	œ	68,904	(138,950)	i.	i.	9,136	3,509,146
2021 corporate bonds 3rd batch (10 years)	1,800,000	June 2021	10 years	3.99%	3.99%	1,800,000	1,838,173	i.	4	35,615	(71,820)	i.	i.	1,968	1,801,972
2021 medium-term notes 1st batch (3 years)	2,000,000	August 2021	3 years	2.99%	3.01%	2,000,000	2,022,570	i.	(457)	29,654	i.	i.	i.	51,936	2,051,767
2021 medium-term notes 2nd batch (3 years)	2,000,000	November 2021	3 years	3.07%	3.07%	2,000,000	2,006,042	i.	96	30,448	i.	i.	i.	36,672	2,036,586
2021 medium-term notes 1st batch (3 years) – Jiangsu	300,000	December 2021	3 years	2.95%	2.95%	300,000	300,121	i.	i.	4,389	i.	i.	i.	4,510	304,510
2022 medium-term notes 1st batch (10 years)	1,500,000	February 2022	10 years	3.74%	3.80%	1,500,000	1,548,175	i.	354	27,819	(56,100)	i.	i.	19,366	1,520,248
2022 medium-term notes 2nd batch (3 years)	3,000,000	March 2022	3 years	2.84%	2.89%	3,000,000	3,067,588	i.	715	42,174	(85,200)	i.	i.	27,702	3,025,277
2022 medium-term notes 3rd batch (10 years)	1,500,000	April 2022	10 years	3.70%	3.76%	1,500,000	1,539,040	i.	355	27,493	(55,500)	i.	i.	10,615	1,511,388
2022 medium-term notes 1st batch (3 years) – Jiangsu	500,000	April 2022	3 years	2.92%	2.92%	500,000	510,000	i.	i.	7,240	(14,600)	i.	i.	2,640	502,640
2022 medium-term notes 4th batch (2 years)	300,000	June 2022	2 years	2.37%	2.40%	300,000	303,765	i.	40	3,525	(7,110)	i.	i.	155	300,220
2022 medium-term notes 6th batch (3 years)	2,000,000	August 2022	3 years	2.40%	2.51%	2,000,000	2,014,621	i.	950	23,803	i.	i.	i.	43, 397	2,039,374
2022 medium-term notes 7th batch (2 years)	500,000	August 2022	2 years	2.14%	2.17%	500,000	503,980	'	64	5,306	'	1	'	9,264	509,350
Total						46,117,730	39,792,383	'	2,071	692,982	(846,359)	26,140	145,305	576,806	39,812,522

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13. LONG-TERM BONDS (Continued)

### **14. OTHER NON-CURRENT LIABILITIES**

	As at 30 June 2023	As at 31 December 2022
Government grants		
– Environmental subsidies (a)	1,001,774	1,062,278
– Other government grants (b)	653,854	780,123
Contract liabilities	2,804,061	2,898,664
Repurchase obligation (c)	1,244,916	1,216,411
Other deferred income	24,809	27,164
Others (d)	654,199	883,858
Subtotal	6,383,613	6,868,498
Current portion of other non-current liabilities	(69,112)	(73,694)
Total	6,314,501	6,794,804

- (a) These primarily represented subsidies for the construction of desulphurisation equipment and other environmental protection projects.
- (b) As at 30 June 2023, among other government grants, there was standby compensation of Huaneng Power International, Inc. Jining Power Plant amounting to RMB293 million (31 December 2022: RMB403 million) with unfulfilled conditions.
- (c) As at 30 June 2023, repurchase obligation to Hong Kong Asset Management amounted to RMB1.245 billion (31 December 2022: RMB1.216 billion).
- (d) As at 30 June 2023, included in others, there were financial liabilities amounting to RMB585 million (31 December 2022: RMB792 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 2023	As at 31 December 2022
Accounts and notes payable	21,202,721	24,367,693
Payables to contractors for construction	20,114,968	21,443,219
Retention payables to contractors	3,567,083	1,773,257
Consideration payables for business acquisition	22,842	22,842
Others	6,023,955	6,865,690
Total	50,931,569	54,472,701

Ageing analysis of accounts and notes payable, based on the invoice date, was as follows:

	As at 30 June 2023	As at 31 December 2022
Within 1 year Between 1 and 2 years Over 2 years	20,481,925 367,635 353,161	23,857,045 368,324 142,324
Total	21,202,721	24,367,693

# 16. SHORT-TERM BONDS

Details of the outstanding short-term bonds as at 30 June 2023 are summarised as follows:

Too of lasts much	Face	Issuance	Maturity	Coupon	lssue	Balance as at 31 December	Issued	latarat	A	Danamant	Balance as at 30 June
Type of Instruments	Value	Date	Maturity	Rate	Amount	2022	Amount	Interest	Amortisation	Repayment	2023
Super short-term bond											
(JiangSu2022 2nd)	300,000	September 2022	180 days	1.66%	300,000	301,555	-	900	-	(302,455)	-
Super short-term bond (2022 14th)	3,000,000	November 2022	61 days	2.09%	3,000,000	3,007,593	-	2,920	(34)	(3,010,479)	-
Super short-term bond (2022 16th)	3,000,000	December 2022	34 days	1.83%	3,000,000	3,003,629	-	1,504	(19)	(3,005,114)	-
Super short-term bond (2023 1st)	2,500,000	January 2023	33 days	1.80%	2,500,000	-	2,500,000	4,068	-	(2,504,068)	-
Super short-term bond (2023 2nd)	2,500,000	January 2023	32 days	2.05%	2,500,000	-	2,500,000	4,493	-	(2,504,493)	-
Super short-term bond (2023 3rd)	2,500,000	February 2023	32 days	1.83%	2,500,000	-	2,500,000	4,011	-	(2,504,011)	-
Super short-term bond (2023 4th)	2,500,000	February 2023	33 days	1.90%	2,500,000	-	2,500,000	4,295	-	(2,504,295)	-
Super short-term bond (2023 5th)	2,000,000	February 2023	30 days	2.02%	2,000,000	-	2,000,000	3,321	-	(2,003,321)	-
Super short-term bond (2023 6th)	3,000,000	March 2023	32 days	2.11%	3,000,000	-	3,000,000	5,534	-	(3,005,534)	-
Super short-term bond (2023 7th)	3,500,000	March 2023	30 days	2.18%	3,500,000	-	3,500,000	6,254	-	(3,506,254)	-
Super short-term bond (2023 8th)	5,000,000	April 2022	30 days	2.10%	5,000,000	-	5,000,000	8,607	-	(5,008,607)	-
Super short-term bond (2023 9th)	3,500,000	April 2023	30 days	2.13%	3,500,000	-	3,500,000	6,111	-	(3,506,111)	-
Super short-term bond (2023 10th)	4,000,000	May 2023	21 days	1.97%	4,000,000	-	4,000,000	4,521	-	(4,004,521)	-
Super short-term bond (2023 11th)	4,000,000	May 2023	29 days	1.90%	4,000,000	-	4,000,000	6,022	-	(4,006,022)	-
Super short-term bond (2023 12th)	4,000,000	May 2023	91 days	1.98%	4,000,000	-	4,000,000	8,223	41	-	4,008,264
Super short-term bond (2023 13th)	5,000,000	June 2023	34 days	1.79%	5,000,000	-	5,000,000	5,869	31	-	5,005,900
Super short-term bond											
(JiangSu2023 1st)	200,000	June 2023	50 days	2.10%	200,000		200,000	34			200,034
Total					50,500,000	6,312,777	44,200,000	76,687	19	(41,375,285)	9,214,198

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## **17. SHORT-TERM LOANS**

Short-term loans are as follows:

	As at 30 J	une 2023	As at 31 Dec	ember 2022
	RMB equivalent	Annual interest rate	RMB equivalent	Annual interest rate
Secured	341,720	1.24%-4.10%	1,132,149	1.24%-3.65%
Unsecured	68,696,266	0.79%-18.01%	82,441,348	1.45%-18.01%
Total	69,037,986		83,573,497	

As at 30 June 2023, short-term loans of RMB194 million (31 December 2022: RMB361 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 2023, short-term loans of RMB148 million (31 December 2022: RMB772 million) were secured by certain equipment with a net book value amounting to approximately RMB225 million (31 December 2022: RMB1,519 million).

As at 30 June 2023, short-term loans of RMB243 million were guaranteed by Shandong Luyi Power International Limited Company (31 December 2022: RMB286 million).

As at 30 June 2023, short-term loans of RMB0 million borrowed from Hong Kong Asset Management (31 December 2022: RMB50 million). Short-term loans borrowed from Huaneng Finance amounted to RMB12,531 million (31 December 2022: RMB15,912 million) with annual interest rates ranging from 2.00% to 4.35% (31 December 2022: from 2.00% to 3.92%). Short-term loans borrowed from Tiancheng Financial Leasing amounted to RMB148 million (31 December 2022: RMB772 million) with annual interest rates ranging from 3.00% to 4.10% (31 December 2022: 3.00% to 3.60%). Short-term loans borrowed from Huaneng Group amounted to RMB300 million (31 December 2022: RMB250 million) with annual interest rates 2.05% to 3.60% (31 December 2022: 2.05%).

# **18. DEFERRED INCOME TAX ASSETS AND LIABILITIES**

The deferred income tax assets and liabilities are as follows:

	As at 30 June 2023	As at 31 December 2022 (Restated)
Deferred income tax assets before offsetting Offset amount	7,133,064 (1,888,329)	7,602,770 (1,970,061)
Deferred income tax assets after offsetting	5,244,735	5,632,709
Deferred income tax liabilities before offsetting Offset amount	(4,295,502) 1,888,329	(4,139,902) 1,970,061
Deferred income tax liabilities after offsetting	(2,407,173)	(2,169,841)
	2,837,562	3,462,868

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

	As at 30 June 2023	As at 31 December 2022
Beginning of the period/year	3,462,868	2,606,993
Business combination	-	16,066
Disposal of other equity instrument investments	1,438	-
(Charged)/credited to profit or loss (Note 21)	(544,525)	723,167
(Charged)/credited to other comprehensive income	(47,708)	196,605
Currency translation differences	(34,511)	(79,963)
End of the period/year	2,837,562	3,462,868

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

As at 30 June 2023, the net current liabilities of the Group amounted to approximately RMB64.446 billion (31 December 2022: RMB84.611 billion), total assets less current liabilities were approximately RMB368.723 billion (31 December 2022: RMB340.888 billion).

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

Profit/(loss) before income tax expense was determined after charging/(crediting) the following:

	For the six months ended 30 June	
	2023	2022
Total interest expense on borrowings	4,880,814	5,573,569
Less: Amounts capitalised in property, plant and equipment	331,293	467,299
Interest expenses charged to unaudited interim consolidated		
statement of comprehensive income	4,549,521	5,106,270
Including: Interest expenses on lease liabilities	148,004	85,437
Depreciation of property, plant and equipment	12,222,167	11,507,966
Depreciation of investment property	12,212	11,898
Depreciation of right-of-use assets	374,682	451,887
	12,609,061	11,971,751
Included in other operating expenses:		
– Operating expense of Ruyi Pakistan Energy	1,444,849	2,795,254
- Other materials expense	825,745	723,085
– Electricity charges	967,656	734,781
- Cost of sales of raw materials	361,760	358,548
– Water charges	265,661	267,881
– Insurance expense	244,721	230,536
<ul> <li>Cleaning, greening and fire protection expense</li> </ul>	155,758	172,649
<ul> <li>Water conservancy fund and disabled security fund</li> </ul>	45,683	36,364
<ul> <li>Test and inspection expense</li> </ul>	81,583	95,964
– Service charge	250,693	201,312
<ul> <li>Auditors' remuneration-audit services</li> </ul>	17,556	20,752
<ul> <li>Other consulting expense</li> </ul>	78,175	65,450
– Transportation expense	91,810	83,681
– Office expense	130,021	124,090
– Minimum lease payments under operating leases, lease		
payments not included in the measurement of lease	72.200	CO 120
liabilities	73,298	60,129
<ul> <li>Service concession construction cost</li> </ul>	3,980	69,575
<ul> <li>Research and development expenditure</li> </ul>	512,847	279,155
<ul> <li>Amortisation of other non-current assets</li> </ul>	95,137	49,487
<ul> <li>Heating pipeline related cost</li> </ul>	98,593	91,377
– Property management expense	57,610	47,607
– Pollutant charge	8,960	10,427

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

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

	For the six mont	hs ended 30 June
	2023	2022
Included in other operating expenses: (Continued)		
<ul> <li>Information technology maintenance expense</li> </ul>	39,995	28,763
– Travel expense	64,881	33,872
– Donations	8,724	14,071
– Business entertainment expense	14,836	11,895
– Penalties	3,471	2,580
<ul> <li>Reversal of provision for inventory provision</li> </ul>	(17)	(1,423)
- Impairment loss of other non-current assets	-	1,163
<ul> <li>Net gain on disposal of non-current assets</li> </ul>	(100,607)	(121,204)
- Gain of Three Supplies and Property Management	-	(76,457)
– Government grants	(719,873)	(820,297)
– Safety funds*	535,816	_
– Others	483,423	500,200
Total	6,142,745	6,091,267

\* In accordance with the "Administrative Measures for the Withdrawal and Use of Safety Funds for Enterprises" (Caizi [2022] No. 136) issued by the Ministry of Finance of the People's Republic of China and the Ministry of Emergency Management of the People's Republic of China on November 21, 2022, the Company and its subsidiaries recorded safety production related expenditures as safety funds.

## 21. INCOME TAX EXPENSE

	For the six mont	For the six months ended 30 June	
	2023	2022	
Current income tax expense Deferred income tax (Note 18)	1,081,547 544,525	467,804 (827,445)	
Total	1,626,072	(359,641)	

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 2023 (for the six months ended 30 June 2022: Nil).

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## 21. INCOME TAX EXPENSE (Continued)

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 2023 and 2022.

The income tax rate applicable to Singapore subsidiaries is 17% (for the six months ended 30 June 2022: 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.

	For the six months e	For the six months ended 30 June	
	2023	2022	
PRC statutory enterprise income tax rate	25.00%	25.00%	
Effect of different tax rates of certain subsidiaries	(10.63%)	14.48%	
Utilisation of previously unrecognised tax losses and			
deductible temporary differences	(3.49%)	3.39%	
Unrecognised deductible temporary differences	0.27%	(0.56%)	
Unrecognised tax losses for the period	7.35%	(37.61%)	
Effect of non-taxable income	(2.29%)	3.74%	
Effect of non-deductible expenses	0.24%	(0.78%)	
Others	2.83%	0.27%	
Effective tax rate	19.28%	7.93%	

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

For the six months ended 30 June 2023, the effective tax rate was proportioned by income tax expense to profit before tax (For the six months ended 30 June 2022: income tax credit to loss before tax).

## 22. EARNINGS/(LOSSES) PER SHARE

The basic earnings/(losses) per share is calculated by dividing the consolidated net profit/(loss) 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	
	2023	2022
Consolidated net profit/(loss) attributable to equity holders of the Company	6 480 662	(3,220,203)
Less: Cumulative distribution of other equity instruments	6,489,663 1,429,357	1,059,926
Consolidated net profit/(loss) attributable to ordinary shareholders of the Company	5,060,306	(4,280,129)
Weighted average number of the Company's outstanding ordinary shares ('000)	15,698,093	15,698,093
Basic and diluted earnings/(losses) per share (RMB)	0.32	(0.27)

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 2023 and 2022.

## 23. BANK BALANCES AND CASH

Bank balances and cash comprised the following:

	As at 30 June 2023	As at 31 December 2022
Total bank balances and cash Less: Restricted cash	16,867,876 583,303	17,175,575 658,467
Cash and cash equivalents as at period/year end	16,284,573	16,517,108

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 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
Zhejiang Canghua Offshore wind power technology Co., Ltd	An associate of the Company
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
Huaneng Chantou (Fuzhou) Heat Power Co., Ltd.	A joint venture of the Company
Zilai renewable resources technology (Nanjing) 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

# 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 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
Huaneng Capital Services Co., Ltd. and its subsidiaries	Subsidiaries of Huaneng Group
Huaneng Shanxi 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

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 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 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	Note i
Other government-related enterprises**	Related parties 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)

- \* 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*, governmentrelated 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").

#### Note i

According to the Reply of the State-owned Assets Supervision and Administration Commission of the State Council on Issues Concerning the Agreement Transfer of State-owned Equity Interests and Relevant Assets of 11 Enterprises, including Yantai Huanghai Thermal Power Co., Ltd. (SASAC Property Right [2009] No.70) issued by Administration Commission of the State Council in February 2009 and the Property Rights Transfer Contract signed between Shandong Power and Shandong Luneng Development Group Co., Ltd., Shandong Power is entitled to 30% of the interests in Huangtai #8 Power Plant. Huangtai #8 Power Plant was acquired by Shandong Power as at 31 December 2022. The transaction with Huangtai #8 Power Plant before the acquisition date was disclosed accordingly.

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.

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

#### (a) Related party balances

#### i. Bank balances and cash in related parties

	As at 30 June 2023	As at 31 December 2022
Deposits in Huaneng Finance		12 006 024
– Savings deposit	12,749,110	12,996,034
Total	12,749,110	12,996,034

For the six months ended 30 June 2023, the annual interest rates for these savings deposits ranged from 0.35% to 3.30% (For the six months ended 30 June 2022: from 0.35% to 3.30%).

- **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 2023 and 2022, no provision was made on receivable balances from these related parties.

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

	As at 30 June 2023	As at 31 December 2022
Due from Huaneng Group	45,018	36,929
Due from HIPDC	4,417	401
Due from associates	48,203	89,798
Due from joint ventures	525,826	371,933
Due from subsidiaries of Huaneng Group	1,566,509	1,652,236
Total	2,189,973	2,151,297

## 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 2023	As at 31 December 2022
Due to Huaneng Group	49,666	16,746
Due to HIPDC	53,024	24,668
Due to associates	125,621	101,057
Due to joint ventures	428,134	141,032
Due to subsidiaries of Huaneng Group (Note)	15,101,261	16,175,270
Total	15,757,706	16,458,773

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 2023, included in long-term loans (including current portion) and short-term loans were loans payable to other government-related enterprises amounting to RMB247.2 billion (31 December 2022: RMB229.0 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.

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 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		
	2023	2022	
HIPDC			
Other purchases	-	2,521	
Huaneng Group			
Other purchases	68	216	
Subsidiaries of Huaneng Group			
Purchase of coal and transportation services	40,446,331	42,404,015	
Technical services and engineering contracting services	751,449	758,736	
Purchase of equipment	158,220	361,336	
Purchase of heat	10,622	35,361	
Other purchases	68,279	153,954	
Joint ventures of the Group			
Purchase of coal and transportation services	291,458	222,662	
Technical services and engineering contracting services	25,876	1,613	
Associates of the Group			
Purchase of equipment	12,412	8,014	
Purchase of coal and transportation services	860,189	82,587	

## 24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

# (b) Related party transactions (Continued)

#### ii. Sale of goods and providing services

	For the six mont	For the six months ended 30 June		
	2023	2022		
Huaneng Group				
Service provided	26,470	31,686		
HIPDC				
Service provided	106	167		
Subsidiaries of Huaneng Group				
Sales of goods and related services	25	988		
Sales of heat	34,447	6,297		
Service provided	58,909	60,826		
Sales of carbon emission reduction				
resources and related services	60,705	-		
Associates of the Group				
Sales of heat	5,902	-		
Sales of goods and related services	1,356	384		
Joint ventures of the Group				
Service provided	45,021	48,910		

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 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	short-term leases of assets for proce	arges for leases and low-value simplified essing	payme include measure the lease	e lease nts not d in the ement of e liability		paid	exper lease l	interest 1se on iability	right-of-u	eased use assets
		2023.1-6	2022.1-6	2023.1-6	2022.1-6	2023.1-6	2022.1-6	2023.1-6	2022.1-6	2023.1-6	2022.1-6
HIPDC	Transmission and transformation facilities	23,974	23,974	-	-	-	-	-	-	-	-
HIPDC	Land	-	-	-	-	432	2,104	223	744	-	-
HIPDC	Office building	3,979	3,979	-	-	-	-	-	-	-	-
Subsidiaries of Huaneng Group	Office building	28,052	27,386	-	-	39,274	19,848	3,562	1,558	205,266	-
Subsidiaries of Huaneng Group	Mechanical equipment	29	-		_	1,117,239	13,679	38,000	23,355	1,330	565,844
Total		56,034	55,339			1,156,945	35,631	41,785	25,657	206,596	565,844

#### (2) Rental income received

#### For the six months ended 30 June

	2023	2022
Huaneng Group Subsidiaries of Huaneng Group	286 4.477	- 3,160
Huangtai #8 Power Plant	-	7,849

## 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		
	2023	2022	
Huaneng Group	(126,220)	(2,392,665)	
Subsidiaries of Huaneng Group	2,374,020	4,792,176	
Joint ventures of the Group	-	(100,000)	

#### (4) Interest expense on loans

	For the six months ended 30 June		
	2023	2022	
Huaneng Group	19,482	31,409	
A joint venture of the Group	-	1,459	
Subsidiaries of Huaneng Group	250,876	336,218	

#### (5) Interest income on loans

	For the six months ended 30 June		
	2023	2022	
Joint ventures of the Group	1,245	1,547	

#### (6) Capital injection from a subsidiary of Huaneng Group

	For the six months ended 30 June		
	2023		
A subsidiary of Huaneng Group	79,451	248,598	

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 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		
	2023	2022	
Associates of the Group Joint ventures of the Group	1,000 24,296	_ 10,000	

#### (8) Entrusted management fee

	For the six months ended 30 June		
	2023	2022	
Huaneng Group	7,370	6,327	

#### (9) Trusteeship management income

For the six months ended 30 June		
2023	2022	
2,613 31,130	2,613	
	2023	

#### (10) Net proceeds received from Huangtai #8 Power Plant

	For the six months ended 30 June		
	2023		
Huangtai #8 Power Plant	-	15,488	

#### Transactions with other government-related enterprises

For the six months ended 30 June 2023 and 2022, 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 2023 and 2022, other collectively significant transactions with governmentrelated enterprises also included a large portion of fuel purchases, property, plant and equipment, construction service and related labour employed.

## 24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

#### (c) Guarantees

	As at 30 June 2023	As at 31 December 2022
Long-term loans guaranteed by – Huaneng Group	-	14,927
Short-term loans guaranteed by – Joint ventures of the Group	243,038	286,378

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

	For the six mont	For the six months ended 30 June		
	2023	2022		
Salaries Pension	2,382 638	2,972 839		
Total	3,020	3,811		

#### (e) Related party commitments

#### i. Capital commitments

	As at 30 June 2023	As at 31 December 2022
Subsidiaries of Huaneng Group	2,491,699	3,230,911

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

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

## 24. RELATED PARTY BALANCES AND TRANSACTIONS (Continued)

#### (e) Related party commitments (Continued)

#### ii. Fuel purchase and transportation commitments

	As at 30 June 2023	As at 31 December 2022
Subsidiaries of Huaneng Group	6,385,404	2,738,965
Joint ventures of the Group	64,204	10,457

For the six months ended 30 June 2023 and 2022, 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	As at
	30 June 2023	31 December 2022
Contracted, but not provided for	48,360,057	52,168,613

# **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:

		As at 30 June 2023		
	Periods	Purchase quantities	Estimated unit costs (RMB)	
A government-related enterprise	2023-2039	2.8 million m³/day*	3.40/m <sup>3</sup>	
A government-related enterprise	2023-2024	81.95 million m³/month*	<b>2.86/m</b> <sup>3</sup>	
	2023-2024	13.01 million m³/month*	<b>3.29/m<sup>3</sup></b>	
	2023-2024	38.90 million m³/month*	2.86/m <sup>3</sup>	
A government-related enterprise	2023-2026	222 million m³/year*	2.60/m <sup>3</sup>	
Other suppliers	2023	136.15-197.31 BBtu**/day	approximately 55,000/BBtu	
	2024-2028	42.4-121.52 BBtu**/day	approximately 45,000/BBtu	
	2029	42.4 BBtu**/day	approximately 35,000/BBtu	

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

# **25. CAPITAL AND OTHER COMMITMENTS** (Continued)

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#### (b) Fuel purchase commitments (Continued)

	As at 31 December 2022		
	Periods	Purchase quantities	Estimated unit costs (RMB)
A government-related enterprise	2023-2039	2.8 million m³/day*	3.45/m³
A government-related enterprise	2023	30.22 million m³/month *	2.97/m <sup>3</sup>
	2023	4.89 million m³/month *	2.89/m³
	2023	32.67 million m³/month *	2.86/m³
A government-related enterprise	2023-2026	222 million m³/year*	4.59/m <sup>3</sup>
Other suppliers	2023	75.61-193.67 BBtu**/day	approximately 54,000/BBtu
	2024-2028	42.4-81.52 BBtu**/day	approximately 65,000/BBtu
	2029	42.4 BBtu**/day	approximately 61,000/BBtu

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

\*\* BBtu: Billion British Thermal Unit

# **26. CONTINGENT LIABILITIES**

Disputes over responsibilities for damage caused by vessel collision over the 400MW Offshore Wind Power Project of Shengdong Rudong Offshore Windpower Co., Ltd. ("Shengdong Rudong")

Shengdong Rudong, a subsidiary of the Company, was in charge of the construction and operation of a 400MW Offshore Wind-power Project. As stipulated by the construction contract signed between Shengdong Rudong and CCCC Third Harbor Engineering Bureau Co., Ltd. ("CCCC Third Harbor Bureau") on 18 April 2019, CCCC Third Harbor Bureau was responsible for the construction of the offshore wind farm and related construction safety management. On 1 August 2019, a vessel chartering contract was signed between CCCC Third Harbor Bureau and Nantong Ocean Water Construction Engineering Co., Ltd. ("Nantong Water Construction"). As stipulated by the contract, Vessel "Wen Qiang 8", which was owned by Nantong Water Construction, would be chartered by CCCC Third Harbor Bureau as the construction operation vessel. During the chartering period, Nantong Water Construction was responsible for the safety of Vessel "Wen Qiang 8" and the security of the personnel on board.

On 22 September 2019, in order to evade typhoon, Vessel "Wen Qiang 8" anchored nearby the #32 wind turbine pile foundation of Shengdong Rudong 400MW Offshore Wind-farm located around Nantong coastal area. Affected by strong wind, violent waves and big tides, the anchor steel cable was broken, leading to dragging-of-anchor of Vessel "Wen Qiang 8", and collision with the pipeline bridge of land-island access of Nantong Gang Yangkou Port. The pipeline bridge, bearing line pipes, and Vessel "WenQiang 8" all suffered damages from this collision accident, constituting a relatively large level of water traffic accident.

The above accident has resulted in three lawsuits in 2020, with the litigation claiming amount being approximately RMB831 million in total. Shengdong Rudong, together with other several entities, were joint defendants. At the end of 2021, the lawsuits were accepted by the court and are pending for judge up to now. Since the lawsuits are still at the stage of evidences exchange and loss identification between the plaintiff and the joint defendants, it is not possible to estimate the financial impact on the Company's financial statements.

# FINANCIAL STATEMENTS RECONCILIATION BETWEEN PRC GAAP AND IFRSs

#### FOR THE SIX MONTHS ENDED 30 JUNE 2023

(Amounts expressed in thousands of RMB unless otherwise stated)

The financial statements, which have been prepared by the Group in conformity with 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/(loss) attributable to equity holders of the Company for the six months ended 30 June		attributabl	ted equity e to equity he Company As at
	2023	2022	30 June 2023	31 December 2022
Consolidated net profit/(loss)/equity attributable to equity holders of the Company under PRC GAAP	6,308,285	(3,008,687)	131,675,397	108,535,478
Impact of IFRSs 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) Difference on depreciation related to borrowing costs capitalised in	(356,935)	(360,300)	5,625,039	5,981,974
previous years (B)	(9,211)	(12,862)	44,540	53,751
Difference on reserve funds (C) Others	431,202 24,952	- 14,226	– (426,522)	(392,700)
Applicable deferred income tax impact of the GAAP differences above (D) Profit/(loss) and equity attributable to	101,240	87,031	3,230,223	3,128,983
non-controlling interests on the adjustments above	(9,870)	60,389	(1,586,623)	(1,642,964)
Consolidated net profit/(loss)/equity attributable to equity holders of the Company under IFRSs	6,489,663	(3,220,203)	138,562,054	115,664,522

#### (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 and impairment 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 IFRSs

FOR THE SIX MONTHS ENDED 30 JUNE 2023 (Amounts expressed in thousands of RMB unless otherwise stated)

### (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) EFFECT OF RESERVE FUNDS

Reserve funds represent safety funds. In accordance with PRC GAAP, appropriation of safety funds is recognized in profit or loss and to reserve funds. In accordance with IFRSs, unutilized safety funds are treated as appropriation from retained earnings to reserve funds and the relevant expenses are recognized in profit or loss only when it is incurred.

#### (D)DEFERRED INCOME TAX IMPACT ON GAAP DIFFERENCES

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

