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CGN Power Co., Ltd.*

中國廣核電力股份有限公司

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

(Stock Code: 1816)

ANNUAL RESULTS ANNOUNCEMENT FOR THE YEAR ENDED DECEMBER 31, 2022

FINANCIAL HIGHLIGHTS

For the year ended December 31, 2022:

- Operating revenue of the Group was approximately RMB82,822.40 million, representing an increase of 2.66% over 2021.
- Net profit attributable to shareholders of the parent company was approximately RMB9,964.85 million, representing an increase of 2.06% over 2021 (restated).
- Net profit attributable to shareholders of the parent company (excluding the effects of non-recurring gains or losses) was approximately RMB9,769.65 million, representing an increase of 0.08% over 2021 (restated).
- The Board recommended a payment of final cash dividend of RMB0.087 (inclusive of tax) per share.

Note: For details of non-recurring gains or losses, please refer to note 24 to the financial information of this announcement.

The board of directors (the “**Directors**”) (the “**Board**”) of CGN Power Co., Ltd.* (the “**Company**”, “**we**” or “**us**”) hereby announces the consolidated operating results of the Company and its subsidiaries (the “**Group**”) for the year ended December 31, 2022 (the “**Reporting Period**”) together with the comparative figures for the year 2021. The financial data of the Group for the year ended December 31, 2022 shown in this results announcement is based on the audited consolidated financial statements prepared in accordance with the China Accounting Standards for Business Enterprises (“**CASBE**”), the disclosure requirements of the Hong Kong Companies Ordinance (Chapter 622 of the Laws of Hong Kong) (“**Hong Kong Companies Ordinance**”) and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”).

* For identification purpose only

FINANCIAL INFORMATION

The financial information set out below in this announcement is extracted from the Company's 2022 annual report (the "2022 Annual Report"). Such financial information has been reviewed by the audit and risk management committee of the Company (the "Audit and Risk Management Committee"), approved by the Board and agreed by KPMG Huazhen LLP, the external auditor of the Company. The consolidated financial statements of the Company for the year 2022 prepared in accordance with the CASBE has been audited by the external auditor of the Group with unqualified audit opinion being issued.

CONSOLIDATED INCOME STATEMENT

For the year ended December 31, 2022

(Expressed in RMB)

	NOTES	2022 (Audited)	2021 (Audited and restated)
I. Operating revenue	4	82,822,403,586.43	80,678,744,757.95
Less: Operating costs	4	55,280,973,105.26	53,895,340,108.78
Tax and surcharges		806,025,863.88	610,245,628.19
Selling expenses		47,349,032.18	78,994,204.22
Administrative expenses		2,419,767,020.20	2,426,031,547.96
Research and development expenses		1,869,791,343.35	1,753,035,238.82
Finance costs	5	6,592,241,766.41	6,401,428,925.72
Including: Interest expenses		6,465,851,164.62	7,132,079,811.79
Interest income		194,704,466.66	153,714,185.11
Add: Other gains	6	1,450,689,383.51	1,698,945,028.91
Investment income	7	1,677,126,744.30	1,406,776,939.36
Including: Income from investment in associates and joint ventures	7	1,600,355,681.69	1,404,062,934.87
Gains/(losses) from changes in fair value		55,548,413.93	(103,245,506.73)
Losses from credit impairment	8	(128,834,101.51)	(14,595,464.34)
Asset impairment losses	9	(22,401,046.89)	(148,094,089.05)
Gains from disposal of assets		6,229,587.41	78,676.45
II. Operating profit		18,844,614,435.90	18,353,534,688.86
Add: Non-operating income		23,802,356.82	47,254,111.21
Less: Non-operating expenses		169,241,771.62	234,802,982.78
III. Total profit		18,699,175,021.10	18,165,985,817.29
Less: Income tax expenses	10	3,456,424,586.34	2,442,175,526.17

	<i>NOTES</i>	2022 (Audited)	2021 (Audited and restated)
IV. Net profit		15,242,750,434.76	15,723,810,291.12
(I) Classified by continuity of operations			
1. Net profit from continuing operations		15,242,750,434.76	15,723,810,291.12
2. Net profit from discontinued operations		–	–
(II) Classified by ownership			
1. Net profit attributable to shareholders of the parent company		9,964,854,412.04	9,764,174,706.56
2. Non-controlling interests		5,277,896,022.72	5,959,635,584.56
V. Other comprehensive income, net of tax		540,520,768.82	(95,205,907.56)
Other comprehensive income attributable to shareholders of the parent company, net of tax		396,280,716.11	(59,824,641.32)
(I) Other comprehensive income that will not be reclassified to profit or loss		(36,069,692.02)	46,200,282.38
1. Change arising from remeasurement of defined benefit plan		1,716,750.00	1,280,625.00
2. Other comprehensive income that cannot be transferred to profit or loss under the equity method		6,608,160.12	(1,733,428.18)
3. Change in fair value of investment in other equity instruments		(44,394,602.14)	46,653,085.56
(II) Other comprehensive income that may be reclassified to profit or loss		432,350,408.13	(106,024,923.70)
1. Translation differences arising from translation of foreign currency financial statements		432,350,408.13	(106,024,923.70)
Other comprehensive income attributable to non-controlling interests, net of tax		144,240,052.71	(35,381,266.24)
VI. Total comprehensive income		15,783,271,203.58	15,628,604,383.56
Total comprehensive income attributable to shareholders of the parent company		10,361,135,128.15	9,704,350,065.24
Total comprehensive income attributable to non-controlling interests		5,422,136,075.43	5,924,254,318.32
VII. Earnings per share			
(I) Basic earnings per share	<i>11</i>	0.197	0.193
(II) Diluted earnings per share	<i>11</i>	0.197	0.193

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at December 31, 2022

(Expressed in RMB)

	NOTES	December 31, 2022 (Audited)	December 31, 2021 (Audited and restated)
Current assets:			
Cash at bank and in hand		14,840,775,400.46	15,827,729,811.43
Bills receivable	12	3,605,535.11	1,707,261,500.00
Accounts receivable	13	14,937,561,118.67	10,851,815,965.20
Prepayments		17,506,790,909.33	17,372,065,000.89
Other receivables		334,927,504.46	53,320,247.61
Inventories		17,775,458,321.06	15,248,475,732.06
Contract assets		2,860,873,537.43	3,346,751,008.49
Other current assets		2,244,917,768.57	3,558,731,564.77
Total current assets		70,504,910,095.09	67,966,150,830.45
Non-current assets:			
Debt investments		48,917,096.53	37,739,834.23
Long-term equity investments		13,657,597,890.59	12,457,405,017.92
Other investment in equity instruments		569,823,570.13	590,195,970.13
Investment properties		180,474,430.77	204,919,250.54
Fixed assets		232,763,516,089.38	239,781,814,198.65
Construction in progress		68,299,405,441.78	57,561,621,171.27
Right-of-use assets		1,041,919,328.49	1,040,777,428.86
Intangible assets		5,205,320,306.21	5,202,831,122.59
Development costs		5,031,087,404.91	3,575,421,186.66
Goodwill		419,242,673.32	419,242,673.32
Long-term deferred expenses		1,563,607,925.18	1,527,444,432.48
Deferred tax assets		2,407,719,951.15	2,311,931,738.14
Other non-current assets		7,322,023,246.40	7,355,378,268.23
Total non-current assets		338,510,655,354.84	332,066,722,293.02
Total assets		409,015,565,449.93	400,032,873,123.47

	<i>NOTES</i>	December 31, 2022 (Audited)	December 31, 2021 (Audited and restated)
Current liabilities:			
Short-term loans	<i>14</i>	11,930,482,045.91	16,374,993,758.88
Bills payable	<i>15</i>	5,094,227,695.25	3,549,771,587.50
Accounts payable	<i>16</i>	22,967,701,771.92	18,817,580,701.92
Receipts in advance		450,000.00	–
Contract liabilities		2,713,506,296.40	4,124,772,960.60
Employee benefits payable		57,289,658.73	55,849,381.67
Taxes payable		2,099,287,224.92	1,561,020,572.25
Other payables		6,756,582,982.51	4,075,609,945.61
Non-current liabilities due within one year	<i>17</i>	21,370,443,527.73	22,719,658,250.53
Other current liabilities		3,142,463,824.40	6,040,857,546.10
Total current liabilities		76,132,435,027.77	77,320,114,705.06
Non-current liabilities:			
Long-term loans	<i>18</i>	160,074,949,905.97	155,921,820,998.03
Bonds payable	<i>19</i>	4,492,066,733.52	5,988,041,567.89
Lease liabilities		651,291,464.61	692,172,850.27
Long-term employee benefits payable		60,783,521.25	195,433,077.84
Provisions	<i>20</i>	5,959,875,294.10	5,334,823,453.78
Deferred income		2,325,356,501.66	2,361,217,837.38
Deferred tax liabilities		1,388,885,150.91	1,268,951,731.16
Total non-current liabilities		174,953,208,572.02	171,762,461,516.35
Total liabilities		251,085,643,599.79	249,082,576,221.41
Shareholders' equity:			
Share capital	<i>21</i>	50,498,611,100.00	50,498,611,100.00
Capital reserve		10,807,810,823.13	10,790,413,325.63
Other comprehensive income		741,762,782.92	345,482,066.81
Specific reserve		200,139,433.39	249,371,452.84
Surplus reserve		5,740,430,152.70	4,901,787,799.63
Retained earnings		39,038,911,600.23	34,156,472,714.58
Total equity attributable to shareholders of the parent company		107,027,665,892.37	100,942,138,459.49
Non-controlling interests		50,902,255,957.77	50,008,158,442.57
Total shareholders' equity		157,929,921,850.14	150,950,296,902.06
Total liabilities and shareholders' equity		409,015,565,449.93	400,032,873,123.47

NOTES TO THE FINANCIAL INFORMATION

For the year ended December 31, 2022

1. COMPANY OVERVIEW

The Company was established in the People's Republic of China (the "PRC") on March 25, 2014 as a joint stock company with limited liability under the Company Law of the PRC, and its shares have been listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") on December 10, 2014, and listed on the SME Board of the Shenzhen Stock Exchange (the "SZSE") on August 26, 2019.

The parent and the ultimate holding company of the Company is China General Nuclear Power Corporation (中國廣核集團有限公司) ("CGNPC"), a state-owned enterprise in the PRC controlled by the State-Owned Assets Supervision and Administration Commission of the State Council.

The consolidated financial statements are presented in Renminbi ("RMB"), which is also the functional currency of the Company and its principal subsidiaries.

The scope of business of the Group mainly includes: production and supply of electricity and heat generated mainly from nuclear energy, and provision of related professional technical services; disposal of nuclear wastes; organization and implementation of the construction and management of nuclear power plants ("NPP(s)") engineering projects; organization of the operation, repair and related businesses of NPPs; organization of the design development and scientific research for NPPs; and engagement in related investment, import and export businesses.

2. BASIS OF PREPARATION

The Group adopts the CASBE and relevant requirements promulgated by the Ministry of Finance, and discloses relevant financial information in accordance with the Rules on the Preparation and Report of Information Disclosure for Companies Publicly Issuing Securities No. 15 – General Requirements for Financial Reports (Revised in 2014) (《公開發行證券的公司信息披露編報規則第 15 號 – 財務報告的一般規定(2014 修訂)》). In addition, the financial statements also include information disclosure according to the relevant requirements under the Hong Kong Companies Ordinance and the Listing Rules.

3. CHANGES IN SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

Changes in accounting policies and reasons thereof

In 2022, the Group implemented the related requirements and guidelines under the Accounting Standards for Business Enterprises issued by the Ministry of Finance in recent years, which mainly include:

- Requirement of the "Accounting treatment for external sales of the fixed assets before reaching their intended use or the products or by-products produced during the R&D process of a company" (the "Accounting Treatment For Trial Sales") in Interpretation No. 15 of the Accounting Standards for Business Enterprises (Cai Kuai [2021] No. 35) (《企業會計準則解釋第 15 號》(財會[2021]35 號)) ("Interpretation No. 15");
- Requirement of the "Determination of onerous contracts" in Interpretation No. 15;
- Requirement of the "Accounting treatment for income tax effects of dividends related to financial instruments classified as equity instruments of the issuer" in Interpretation No. 16 of the Accounting Standards for Business Enterprises (Cai Kuai [2022] No. 31) (《企業會計準則解釋第 16 號》(財會[2022]31 號)) ("Interpretation No. 16"); and
- Requirement of the "Accounting treatment for the change from cash-settled share-based payments to equity-settled share-based payments of a company" in Interpretation No. 16.

(a) **Requirements of the Accounting Treatment For Trial Sales in Interpretation No. 15**

According to the requirement, the revenues and costs shall be accounted respectively by the Group for external sales of products or by-products produced before fixed assets reaching their intended use (collectively, “**Trial Sales**”) in accordance with the Accounting Standards for Business Enterprises No.14 – Revenue, the Accounting Standards for Business Enterprises No.1 – Inventories and other requirements, and recognized such amounts in profit or loss in the period in which they are incurred. The net amount arising from relevant revenue for Trial Sales offsetting relevant costs for Trial Sales should not be written off against the cost of the fixed assets.

The above requirements were implemented since January 1, 2022, and the Group made retrospective adjustments in accordance with the above requirements for the Trial Sales that occurred between January 1, 2021 and the date of initial implementation.

(i) **Impacts of the changes on the financial statements for the year**

The impacts of the above changes in the accounting policy on each item in the consolidated balance sheet and the balance sheet of the parent company as of December 31, 2022 are summarized as follows:

Unit: RMB

	Increase in the amount of statement items after the adoption of the changes in the accounting policy	
	The Group	The Company
Assets:		
Long-term equity investments	71,179,736.15	4,646,511.42
Shareholders' equity:		
Surplus reserve	464,651.14	464,651.14
Retained earnings	55,931,402.47	4,181,860.28
Non-controlling interests	14,783,682.54	–

The impacts of the above changes in the accounting policy on each item in the consolidated income statement and the income statement of the parent company for 2022 are summarized as follows:

Unit: RMB

	Increase in the amount of statement items after the adoption of the changes in the accounting policy	
	The Group	The Company
Investment income	31,314,458.06	2,044,163.06
Total profit	31,314,458.06	2,044,163.06
Less: Income tax expenses	–	–
Net profit	31,314,458.06	2,044,163.06
Including: Net profit attributable to shareholders of the parent company	24,810,598.51	–
Non-controlling interests	6,503,859.55	–

(ii) **Impacts of the changes on the comparative financial statements**

The impacts of the above changes in the accounting policy on net profit for 2021 and shareholders' equity at the beginning and the end of 2021 are summarized as follows:

Unit: RMB

	The Group		
	Net profit for 2021	Shareholders' equity at the end of 2021	Shareholders' equity at the beginning of 2021
Net profit and shareholders' equity before the adjustment	15,683,945,013.03	150,910,431,623.97	141,630,606,257.91
Impact of the Trial Sales	39,865,278.09	39,865,278.09	–
Net profit and shareholders' equity after adjustment	15,723,810,291.12	150,950,296,902.06	141,630,606,257.91

Unit: RMB

	The Company		
	Net profit for 2021	Shareholders' equity at the end of 2021	Shareholders' equity at the beginning of 2021
Net profit and shareholders' equity before the adjustment	5,549,027,452.63	104,907,181,742.78	103,400,475,840.29
Impact of the Trial Sales	2,602,348.36	2,602,348.36	–
Net profit and shareholders' equity after adjustment	5,551,629,800.99	104,909,784,091.14	103,400,475,840.29

The impacts of the above changes in the accounting policy on each item in the consolidated balance sheet and the balance sheet of the parent company as of December 31, 2021 are summarized as follows:

Unit: RMB

	The Group		
	Before adjustment	Adjusted amount	After adjustment
Assets:			
Long-term equity investments	12,417,539,739.83	39,865,278.09	12,457,405,017.92
Shareholders' equity:			
Surplus reserve	4,901,527,564.79	260,234.84	4,901,787,799.63
Retained earnings	34,125,147,494.32	31,325,220.26	34,156,472,714.58
Non-controlling interests	49,999,878,619.58	8,279,822.99	50,008,158,442.57

Unit: RMB

	The Company		
	Before adjustment	Adjusted amount	After adjustment
Assets:			
Long-term equity investments	82,963,063,207.85	2,602,348.36	82,965,665,556.21
Shareholders' equity:			
Surplus reserve	4,489,836,124.69	260,234.84	4,490,096,359.53
Retained earnings	18,137,039,390.04	2,342,113.52	18,139,381,503.56

The impacts of the above changes in the accounting policy on each item in the consolidated income statement and the income statement of the parent company for 2021 are summarized as follows:

Unit: RMB

	The Group		
	Before adjustment	Adjusted amount	After adjustment
Investment income	1,366,911,661.27	39,865,278.09	1,406,776,939.36
Total profit	18,126,120,539.20	39,865,278.09	18,165,985,817.29
Less: Income tax expenses	2,442,175,526.17	–	2,442,175,526.17
Net profit	15,683,945,013.03	39,865,278.09	15,723,810,291.12
Including: Net profit attributable to shareholders of the parent company	9,732,589,251.46	31,585,455.10	9,764,174,706.56
Non-controlling interests	5,951,355,761.57	8,279,822.99	5,959,635,584.56

Unit: RMB

	The Company		
	Before adjustment	Adjusted amount	After adjustment
Investment income	6,816,999,876.53	2,602,348.36	6,819,602,224.89
Total profit	5,549,027,452.63	2,602,348.36	5,551,629,800.99
Less: Income tax expenses	–	–	–
Net profit	5,549,027,452.63	2,602,348.36	5,551,629,800.99

(iii) The retrospective adjustments to the above changes in the accounting policy did not affect the consolidated balance sheet and the balance sheet of the parent company as of January 1, 2021.

(b) Requirement of the determination of onerous contracts in Interpretation No. 15

According to the requirement, when the Group determines an onerous contract, the estimated cost of executing the contract shall include the incremental cost of executing the contract and the apportioned amount of other costs directly related to executing the contract.

The adoption of such requirement did not have a significant impact on the financial position and operation results of the Group.

(c) Requirement of the accounting treatment for income tax effects of dividends related to financial instruments classified as equity instruments of the issuer

In accordance with Interpretation No. 16, for financial instruments classified as equity instruments (such as perpetual bonds classified as equity instruments) in accordance with the Accounting Standards for Business Enterprises No. 37 – Presentation of Financial Instruments and other requirements, if the relevant dividend expenses are deducted before corporate income tax in accordance with the relevant requirements of the tax policy, the Group, as the issuer, shall recognize the income tax effect related to dividends when recognizing dividends payable. If the profits distributed are derived from previous transactions or events in which profit or loss incurred, the income tax effect of the dividends is accounted for profit or loss for the period. If the profits distributed are derived from transactions or events previously recognized in owners' equity, the income tax effect of the dividends is accounted for under the owners' equity.

The adoption of such requirement did not have a significant impact on the financial position and operation results of the Group.

(d) Requirement of the accounting treatment for the change from cash-settled share-based payments to equity-settled share-based payments of a company

In accordance with Interpretation No. 16, where the Group changes the terms and conditions of a payment agreement from cash-settled share-based payment to equity-settled share-based payment, at the date of change, the Group measures the equity-settled share-based payment at the fair value of the equity instrument granted at that date, in which the acquired services are accounted for capital surplus, and derecognizes the liability recognized for the cash-settled share-based payment at the date of change. The difference is recognized in profit or loss for the period. For changes that extend or shorten the vesting period, the Group applies the above accounting treatment in accordance with the changed vesting period.

The adoption of such requirement did not have a significant impact on the financial position and operation results of the Group.

4. OPERATING REVENUE AND OPERATING COSTS

Unit: RMB

Item	2022		2021	
	Revenue	Cost	Revenue	Cost
From principal operations	82,333,240,527.94	54,862,143,033.92	80,230,834,162.30	53,527,605,258.17
Of which: Sales of electricity	58,104,820,052.83	31,318,491,132.55	58,709,216,824.30	32,676,491,215.59
Construction, installation and design services	22,697,431,207.82	22,490,541,370.22	19,948,726,923.03	19,586,469,639.46
Rendering of services	1,100,304,876.55	771,964,504.35	1,001,516,667.20	763,367,822.84
Sales of goods and others	430,684,390.74	281,146,026.80	571,373,747.77	501,276,580.28
From other operations	489,163,058.49	418,830,071.34	447,910,595.65	367,734,850.61
Total	82,822,403,586.43	55,280,973,105.26	80,678,744,757.95	53,895,340,108.78

5. FINANCE COSTS

Unit: RMB

Item	2022	2021
Interest expenses	7,897,357,283.09	8,531,265,121.62
Less: Capitalized interest expenses	1,785,720,888.05	1,724,717,666.36
Less: Interest income	194,704,466.66	153,714,185.11
Exchange losses/(gains)	297,647,593.82	(608,340,769.85)
Less: Capitalized exchange losses/(gains)	270,889.54	(533,999.40)
Finance costs on the provision for NPP decommissioning	312,365,531.97	287,687,954.27
Interest expenses on the lease liabilities	41,849,237.61	37,844,402.26
Bank charges and others	23,718,364.17	30,870,069.49
Total	6,592,241,766.41	6,401,428,925.72

6. OTHER GAINS

Unit: RMB

Item	2022	Including: amount included in non-recurring gains or losses for the year	2021	Including: amount included in non-recurring gains or losses for 2021
Value-added tax refunds (Note)	1,198,666,468.01	–	1,404,992,858.69	–
Other government grants	226,078,193.21	226,078,193.21	285,563,013.95	285,563,013.95
Others	25,944,722.29	–	8,389,156.27	–
Total	1,450,689,383.51	226,078,193.21	1,698,945,028.91	285,563,013.95

Note: For the value-added tax (“VAT”) refunds received by the Group’s subsidiaries that satisfied the preferential VAT “levy first, refund later” policy, the Group adopted the VAT “levy first, refund later” policy in respect of its sale of electricity generated by Lingdong Nuclear Power Co., Ltd. (嶺東核電有限公司) (“**Lingdong Nuclear**”), Yangjiang Nuclear Power Co., Ltd. (陽江核電有限公司) (“**Yangjiang Nuclear**”), Guangxi Fangchenggang Nuclear Power Co., Ltd. (廣西防城港核電有限公司) (“**Fangchenggang Nuclear**”), Fujian Ningde Nuclear Power Co., Ltd. (福建寧德核電有限公司) (“**Ningde Nuclear**”) and Taishan Nuclear Power Joint Venture Co., Ltd. (台山核電合營有限公司) (“**Taishan Nuclear**”) to grid companies.

7. INVESTMENT INCOME

Unit: RMB

Item	2022	2021 (Restated)
Income from long-term equity investments accounted for using the equity method	1,600,355,681.69	1,404,062,934.87
Investment income from disposal of long-term equity investments	53,572,716.38	–
Investment losses from disposal of derivative financial assets	(14,091,817.31)	–
Investment income from holding other equity instruments	31,856,543.70	15,057,316.99
Others	5,433,619.84	(12,343,312.50)
Total	1,677,126,744.30	1,406,776,939.36

8. LOSSES FROM CREDIT IMPAIRMENT*Unit: RMB*

Item	2022	2021
Bad debts losses of accounts receivable	(133,456,842.07)	(28,558,469.93)
Bad debts gains of other receivables	4,642,217.48	13,963,230.35
Bad debt losses for dividends receivable	(19,476.92)	(224.76)
Total	(128,834,101.51)	(14,595,464.34)

9. ASSET IMPAIRMENT LOSSES*Unit: RMB*

Item	2022	2021
Impairment losses of inventories	(6,628,469.25)	(6,874,892.27)
Reversal of impairment gains of contract assets	1,265,206.72	1,915,118.92
Impairment losses of fixed assets	(17,037,784.36)	(8,903,054.17)
Impairment losses of construction in progress	-	(134,231,261.53)
Total	(22,401,046.89)	(148,094,089.05)

10. INCOME TAX EXPENSES*Unit: RMB*

Item	2022	2021
Current income tax expenses	3,312,369,991.08	2,568,535,124.33
Deferred income tax expenses	31,979,548.30	(79,481,711.61)
Adjustments to income tax of previous years	112,075,046.96	(46,877,886.55)
Total	3,456,424,586.34	2,442,175,526.17

The Company and its subsidiaries are subject to enterprise income tax (“EIT”) at 25%, except for the following subsidiaries which enjoyed certain tax exemption and relief.

Pursuant to the PRC Enterprise Income Tax Law as revised on December 29, 2018, China Nuclear Power Design Co., Ltd. (Shenzhen) (深圳中廣核工程設計有限公司) (“**CGN Design**”), Lingdong Nuclear, Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司), China Nuclear Power (Shenzhen) Radiation Monitoring Technology Co., Ltd. (中廣核(深圳)輻射監測技術有限公司) (“**Radiation Monitoring Company**”), CGN Inspection Technology Co., Ltd. (中廣核檢測技術有限公司) (“**Inspection Company**”), Suzhou Nuclear Power Research Institute (蘇州熱工研究院有限公司) (“**SNPI**”), China Nuclear Power Technology Research Institute (中廣核研究院有限公司) (“**CNPRI**”), Ling’ao Nuclear, China Nuclear Power Engineering Co., Ltd. (中廣核工程有限公司) (“**CGN Engineering**”), Yangjiang Nuclear, Fangchenggang Nuclear, Ningde Nuclear, Taishan Nuclear, China Nuclear Power Operations Co., Ltd. (中廣核核電運營有限公司) (“**CGN Operations**”), Sansha Advanced Energy Co., Ltd. (三沙先進能源有限公司) (“**Sansha Energy**”), Guangdong Daya Bay Nuclear Power Environment Protection Co., Ltd. (廣東大亞灣核電環保有限公司) (“**Environment Protection Company**”), CGN Import & Export Co., Ltd. (中廣核電進出口有限公司) (“**Import & Export Company**”) and Fujian Ninghe Power Sales Co., Ltd. (福建寧核售電有限公司) were entitled to tax reduction and exemption.

Name of company or generating unit	Preferential tax rate applicable for the current year	Preferential tax rate applicable for the previous year	Reason for tax incentives
Yangjiang Unit 3	N/A	12.50%	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Yangjiang Unit 4	12.50%	12.50%	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Yangjiang Unit 5	12.50%	12.50%	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Yangjiang Unit 6	12.50%	Exempted	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Fangchenggang Unit 1 and Unit 2	15%	7.50%	Western development enterprise income tax preferential policy (2016-2030) and tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation (2016-2021)
Ningde Unit 4	N/A	12.50%	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Taishan Unit 1	12.50%	12.50%	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation
Taishan Unit 2	12.50%	Exempted	Operating income tax preferential treatment in relation to investment in public infrastructure projects as supported strategically by the nation

Name of company or generating unit	Preferential tax rate applicable for the current year	Preferential tax rate applicable for the previous year	Reason for tax incentives
Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司)	15%	15%	Preferential tax policy for high-tech enterprises
Ling'ao Nuclear	15%	15%	Preferential tax policy for high-tech enterprises
Lingdong Nuclear	15%	15%	Preferential tax policy for high-tech enterprises
CNPRI	15%	15%	Preferential tax policy for high-tech enterprises
SNPI	15%	15%	Preferential tax policy for high-tech enterprises
Inspection Company	15%	15%	Preferential tax policy for high-tech enterprises
Radiation Monitoring Company	15%	15%	Preferential tax policy for high-tech enterprises
CGN Engineering	15%	15%	Preferential tax policy for high-tech enterprises
CGN Design	15%	15%	Preferential tax policy for high-tech enterprises
CGN Operations	15%	15%	Preferential tax policy for high-tech enterprises
Sansha Energy	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises
Environment Protection Company	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises
Import & Export Company	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises
Fujian Ninghe Power Sales Co., Ltd. (福建寧核售電有限公司)	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises

Note: Pursuant to the PRC Enterprise Income Tax Law and the Announcement of the State Taxation Administration on Matters Concerning the Implementation of Preferential Income Tax Policies for Supporting the Development of Small Profit-making Enterprises and Individual Industrial and Commercial Businesses (Cai Shui [2021] No. 8) (《國家稅務總局關於落實支持小型微利企業和個體工商戶發展所得稅優惠政策有關事項的公告》(財稅[2021]8 號)), for the portion of annual taxable income no more than RMB1.00 million, 12.5% of the amount will be reduced, and the EIT will be at the tax rate of 20%; according to the Announcement of the Ministry of Finance and the State Taxation Administration on Further Implementing the Preferential Income Tax Policies for Small and Micro Enterprises (Cai Shui [2022] No. 13) (《財政部稅務總局關於進一步實施小微企業所得稅優惠政策的公告》(財稅[2022]13 號)), for the portion of annual taxable income exceeding RMB1.00 million but not exceeding RMB3.00 million, 25% of the amount will be reduced, and the EIT will be at the tax rate of 20%.

11. EARNINGS PER SHARE

Basic earnings per share are calculated by dividing the consolidated net profit attributable to shareholders of ordinary shares of the Company by the weighted average number of ordinary shares of the Company in issue.

Unit: RMB

Item	2022	2021 (Restated)
Consolidated net profit attributable to shareholders of ordinary shares of the Company	9,964,854,412.04	9,764,174,706.56
Weighted average number of ordinary shares of the Company in issue	50,498,611,100.00	50,498,611,100.00
Basic earnings per share (RMB/share)	0.197	0.193

In 2022 and 2021, the Group did not have dilutive potential ordinary shares. Therefore, diluted earnings per share equaled to basic earnings per share.

12. BILLS RECEIVABLE

Unit: RMB

Item	December 31, 2022	December 31, 2021
Bank acceptance bills	3,605,535.11	1,707,261,500.00
Total	3,605,535.11	1,707,261,500.00

13. ACCOUNTS RECEIVABLE

Unit: RMB

Item	December 31, 2022	December 31, 2021
Accounts receivable arising from contracts with customers	15,250,386,517.53	11,031,471,818.65
Including: Group 1	13,907,734,857.26	10,519,170,762.40
Group 2	1,268,392,568.47	438,041,964.45
Accounts receivable for which provision for bad debts have been individually made	74,259,091.80	74,259,091.80
Less: Impairment provisions	312,825,398.86	179,655,853.45
Including: Group 1	163,697,613.72	58,554,291.67
Group 2	74,868,693.34	46,842,469.98
Accounts receivable for which provision for bad debts have been individually made	74,259,091.80	74,259,091.80
Carrying value	14,937,561,118.67	10,851,815,965.20

As part of the Group's credit risk management, the Group uses the age of accounts receivable to assess the bad debt loss by grouping of accounts receivable with the same risk characteristics. The credit risk and expected credit loss of each group of accounts receivable are as follows:

Group 1:

Unit: RMB

Aging	December 31, 2022				December 31, 2021			
	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value
Within 1 year	0.30%	12,267,515,735.02	36,802,547.20	12,230,713,187.82	0.30%	9,951,986,452.85	29,855,959.36	9,922,130,493.49
1 to 2 years	5.00%	1,340,991,719.56	67,049,585.98	1,273,942,133.58	5.00%	565,561,343.99	28,278,067.20	537,283,276.79
2 to 3 years	20.00%	299,227,402.68	59,845,480.54	239,381,922.14	20.00%	764,245.56	152,849.11	611,396.45
3 to 4 years	30.00%	-	-	-	30.00%	809,720.00	242,916.00	566,804.00
4 to 5 years	50.00%	-	-	-	50.00%	49,000.00	24,500.00	24,500.00
Total		13,907,734,857.26	163,697,613.72	13,744,037,243.54		10,519,170,762.40	58,554,291.67	10,460,616,470.73

Group 2:*Unit: RMB*

Aging	December 31, 2022				December 31, 2021			
	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value
Within 1 year	0.30%	1,098,602,753.67	3,295,808.25	1,095,306,945.42	0.30%	305,492,421.79	916,477.27	304,575,944.52
1 to 2 years	10.00%	62,107,324.38	6,210,732.44	55,896,591.94	10.00%	37,582,707.48	3,758,270.75	33,824,436.73
2 to 3 years	30.00%	18,458,308.19	5,537,492.46	12,920,815.73	30.00%	43,543,171.22	13,062,951.37	30,480,219.85
3 to 4 years	50.00%	43,450,858.27	21,725,429.14	21,725,429.13	50.00%	41,621,764.56	20,810,882.27	20,810,882.29
4 to 5 years	80.00%	38,370,464.56	30,696,371.65	7,674,092.91	80.00%	7,540,055.40	6,032,044.32	1,508,011.08
More than 5 years	100.00%	7,402,859.40	7,402,859.40	-	100.00%	2,261,844.00	2,261,844.00	-
Total		1,268,392,568.47	74,868,693.34	1,193,523,875.13		438,041,964.45	46,842,469.98	391,199,494.47

Accounts receivable for which provision for bad debts have been individually made:*Unit: RMB*

Aging	December 31, 2022				December 31, 2021			
	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value	Expected credit loss rate	Carrying balance	Bad debt provisions	Carrying value
More than 5 years	100.00%	74,259,091.80	74,259,091.80	-	100.00%	74,259,091.80	74,259,091.80	-
Total		74,259,091.80	74,259,091.80	-		74,259,091.80	74,259,091.80	-

The aging analysis is counted starting from the date when accounts receivable are recognized.

14. SHORT-TERM LOANS*Unit: RMB*

Item	December 31, 2022	December 31, 2021
Credit loans	11,921,386,787.04	14,662,738,508.67
Pledged loans	-	1,700,000,000.00
Short-term loans interest payable	9,095,258.87	12,255,250.21
Total	11,930,482,045.91	16,374,993,758.88

As at December 31, 2022 and December 31, 2021, the Group had no overdue and unsettled short-term loans.

15. BILLS PAYABLE*Unit: RMB*

Item	December 31, 2022	December 31, 2021
Bank acceptance bills	5,094,227,695.25	3,549,771,587.50
Total	5,094,227,695.25	3,549,771,587.50

As at December 31, 2022 and December 31, 2021, the Group had no overdue and unsettled bills payable.

16. ACCOUNTS PAYABLE*Unit: RMB*

Aging	December 31, 2022	December 31, 2021
Within 1 year	15,429,335,596.47	12,859,220,938.43
1 to 2 years	2,667,755,529.73	2,854,214,040.69
2 to 3 years	2,424,836,499.10	2,379,569,517.37
More than 3 years	2,445,774,146.62	724,576,205.43
Total	22,967,701,771.92	18,817,580,701.92

The aging analysis is counted starting from the date when accounts payable are recognized.

17. NON-CURRENT LIABILITIES DUE WITHIN ONE YEAR*Unit: RMB*

Item	December 31, 2022	December 31, 2021
Long-term loans due within one year	16,682,623,230.22	16,950,174,243.56
Long-term loans interest payable	233,861,779.59	306,485,676.11
Bonds payable due within one year	3,996,403,438.97	4,999,104,783.84
Bonds payable interest payable	172,034,716.01	185,604,014.72
Post-employment benefit scheme liabilities due within one year	4,065,909.85	4,356,233.28
Lease liabilities due within one year	281,454,453.09	273,933,299.02
Total	21,370,443,527.73	22,719,658,250.53

18. LONG-TERM LOANS

Unit: RMB

Item	December 31, 2022	December 31, 2021
Credit loans	49,937,703,288.16	28,492,720,834.55
Guaranteed loans ⁽¹⁾	–	3,000,000,000.00
Pledged loans ⁽²⁾	126,587,969,848.03	140,448,785,905.69
Secured loans ⁽³⁾	231,900,000.00	930,488,501.35
Total	176,757,573,136.19	172,871,995,241.59
Less: Long-term loans due within one year	16,682,623,230.22	16,950,174,243.56
Long-term loans due after one year	160,074,949,905.97	155,921,820,998.03

Notes:

- (1) In August 2012, Guangdong Nuclear Power Investment Co., Ltd. (廣東核電投資有限公司) (“GNIC”), a subsidiary of the Company, entered into the “Taiping Asset – CGN Power Project Debt Investment Plan Investment Contract” (《太平資產 – 中廣核核電項目債權投資計劃投資合同》) with Taiping Asset Management Co., Ltd. (太平資產管理有限公司) (“Taiping Asset”) pursuant to which Taiping Asset initiated the establishment of “Taiping Asset – CGN Power Project Debt Investment Plan” with the actual investment proceeds of RMB3 billion. The proceeds were invested in GNIC in the form of debts, and were used in the construction of nuclear power projects of Taishan Nuclear and Yangjiang Nuclear under GNIC. CGNPC provides a full unconditional irrevocable joint and several liability guarantee for all the obligations of GNIC under such contract to Taiping Asset. As at December 31, 2022, the loan had been fully repaid.
- (2) Pledged loans are pledged by the Group with its interests under sales agreements of electricity, insurance contracts and equity interest held. As at December 31, 2022, GNIC, Taishan Nuclear Power Industry Investment Co., Ltd. (台山核電產業投資有限公司) and the Company pledged the equity of Taishan Nuclear to obtain long-term loans, and GNIC, the Company and CGN Nuclear Power Investment Co., Ltd. pledged the equity of Lingdong Nuclear to obtain long-term loans.
- (3) Secured loans are secured by the Company’s subsidiaries Lingdong Nuclear and CGN Engineering with equipment.

The range of annual interest rates of the above loans:

	2022	2021
Range of annual interest rates of the above loans	2.49% - 5.15%	0.21% – 5.30%

19. BONDS PAYABLE

Unit: RMB

Category	December 31, 2022	December 31, 2021
Long-term bonds	–	2,000,000,000.00
Medium-term notes (Note)	8,488,470,172.49	8,987,146,351.73
Total	8,488,470,172.49	10,987,146,351.73
Less: Bonds payable due within one year	3,996,403,438.97	4,999,104,783.84
Bonds payable due after one year	4,492,066,733.52	5,988,041,567.89

Note: The Group issued 20 CGN Power MTN001, 21 CGN Power MTN001, 21 CGN Power MTN002 and 22 CGN Power MTN001 on August 24, 2020, April 12, 2021, June 15, 2021 and February 21, 2022, respectively. These medium-term notes, with nominal values amounting to RMB2,500,000,000.00, RMB2,000,000,000.00, RMB1,500,000,000.00 and RMB2,500,000,000.00, respectively, and a total cost of issuance of RMB24,000,000.00, will become due and payable in August 2023, April 2024, June 2023 and February 2025, respectively.

20. PROVISIONS

Unit: RMB

Item	December 31, 2022	December 31, 2021
Provision for NPP decommissioning ⁽¹⁾	5,372,623,933.88	4,864,931,311.56
Provision for low and medium level radioactive waste disposal ⁽²⁾	587,251,360.22	469,453,033.20
Others	–	439,109.02
Total	5,959,875,294.10	5,334,823,453.78

Notes:

- (1) It is the discounted value of the best estimate of the expected cost of NPPs decommissioning of the Group.
- (2) It is the best estimate of the expected disposal cost of low and medium level radioactive waste generated by NPPs.

21. SHARE CAPITAL

Unit: RMB

	December 31, 2022	December 31, 2021
Restricted shares		
Domestic shares (A shares)	–	29,580,630,375.00
Including: CGNPC	–	29,176,641,375.00
Other domestic shares	–	403,989,000.00
Subtotal	–	29,580,630,375.00
Unrestricted shares		
Domestic shares (A shares)	39,334,986,100.00	9,754,355,725.00
Including: CGNPC	29,176,641,375.00	–
Guangdong Hengjian Investment Holdings Co., Ltd. (廣東恒健投資控股有限公司)	3,428,512,500.00	3,428,512,500.00
Other domestic shares	6,729,832,225.00	6,325,843,225.00
Overseas listed foreign shares (H shares)	11,163,625,000.00	11,163,625,000.00
Including: CGNPC and its subsidiaries	570,235,000.00	528,302,000.00
Other foreign shares	10,593,390,000.00	10,635,323,000.00
Subtotal	50,498,611,100.00	20,917,980,725.00
Total	50,498,611,100.00	50,498,611,100.00

CGNPC has increased its holdings of H shares of the Company since March 26, 2020, and increased its holdings of H shares of the Company during the periods from March 26, 2020 to March 25, 2021 and from April 26, 2021 to April 25, 2022 by 194,286,000 shares and 334,016,000 shares, respectively (the “**Previous Shareholding Increases**”).

On November 1, 2022, CGNPC increased its holdings of H shares of the Company by a total of 10,000,000 shares (the “**Shareholding Increase**”), and planned to continue to increase its holdings of H shares of the Company within 12 months since the Shareholding Increase, and the cumulative increase in shareholding would not exceed 5% of the total number of issued H shares of the Company as of November 1, 2022 (including the shares acquired in the Shareholding Increase). From November 1, 2022 to December 31, 2022, CGNPC increased its holdings of H shares of the Company by 41,933,000 shares in aggregate via the Shenzhen-Hong Kong Stock Connect of the SZSE. As at December 31, 2022, CGNPC and its subsidiaries increased their holdings of H shares of the Company by 570,235,000 shares in aggregate (including those acquired in the Previous Shareholding Increases).

During the year, certain restricted A shares of the Company were available for trading. The unlocked shares included certain shares issued before the initial public offering of A shares of the Company and certain A shares issued in the initial public offering. The lock-up period was 36 months from the date of listing of A shares of the Company. The number of unlocked shares was 29,580,630,375 shares. The unlocked shares became available for trading on August 29, 2022. After the restricted shares becoming available for trading, all the restricted shares at the time of the initial public offering of A shares of the Company were unlocked.

22. DIVIDEND

Subsequent to the end of the Reporting Period, a final dividend of RMB0.087 per share (tax inclusive) to the shareholders of the Company (the “**Shareholders**”) as of the record date of dividend payment in respect of the year ended December 31, 2022 amounting to RMB4,393,379,165.70 in total has been proposed by the Board and is subject to approval by the Shareholders in the 2022 annual general meeting.

During the Reporting Period, a final dividend of RMB0.084 per share (tax inclusive) in respect of the year ended December 31, 2021 was declared to the owners of the Company, which amounted to RMB4,241,883,332.40 in total, and was approved by the Shareholders at the 2021 annual general meeting convened on May 27, 2022. The Company had paid the dividend by July 7, 2022.

23. SHARE-BASED PAYMENT

(1) Overall Share-based Payment

Unit: unit

Item	2022	2021	
	Second Batch	First Batch	Second Batch
Total equity instruments of the Company at the beginning of the year	260,504,100	59,520,024	451,770,832
Total equity instruments granted by the Company during the year	–	–	–
Total equity instruments exercised by the Company during the year	39,837,100	–	180,713,400
Total equity instruments of the Company that have expired during the year	159,642,300	59,520,024	10,553,332
Total equity instruments of the Company at the end of the year	61,024,700	–	260,504,100
The range of exercise prices of outstanding share appreciation rights of the Company at the end of the year and the remaining period of the contracts	HKD1.6440	/	HKD1.7427
	0.95 Year	0 Year	0.95 – 2.95 Years

The Group has set up an H-share Appreciation Rights (“**SAR**”) Scheme (the “**Scheme**”) for core staff who exert significant impact on the Company’s strategic target, including Directors (excluding the non-executive Directors and the independent non-executive Directors), senior management and core technical and management staff of the Company who have exerted direct influence on the overall results and sustainable development of the Company (“**Incentive Recipients**”). The Scheme was approved at the annual general meeting of the Company on June 12, 2015. Supervisors of the Company (the “**Supervisors**”) are not Incentive Recipients.

The initial implementation plan of the SAR was approved by the Board on November 5, 2015. Pursuant to the initial scheme, 256,240,000 units of SAR were granted to Incentive Recipients of the Group (including Liaoning Hongyanhe Nuclear Power Co., Ltd. (遼寧紅沿河核電有限公司) (“**Hongyanhe Nuclear**”)) at the exercise price of HKD3.50 per share. The first grant of the SAR was all expired and lapsed on December 16, 2021.

The second grant of the SAR was approved by the Board on December 14, 2017. Pursuant to the secondary scheme, 568,970,000 units of SAR were granted to Incentive Recipients of the Group (including Hongyanhe Nuclear) at the exercise price of HKD2.09 per share. One third of the total number of SAR are vested and entitled on or after December 16, 2019 (which was expired and lapsed), one third of the total number of SAR are vested and entitled on or after December 15, 2020 and the remaining one third of the total number of SAR are vested and entitled on or after December 15, 2021. However, as some performance indicators did not meet the conditions for exercising the rights, the remaining SAR did not take effect, and the relevant costs and expenses recognized in the previous periods amounting to RMB54,436,365.58 were reversed.

According to the exercise arrangement of the second grant of the incentive scheme, if events such as capitalization of capital reserve, distribution of bonus shares, share subdivision or consolidation, rights issue, secondary offering or dividend distribution occur to the listed company before the exercise of SAR, corresponding adjustment to the exercise price of SAR shall be made. However, under no circumstances shall any adjustment results in the exercise price being lower than the par value of the shares. The adjustments to the exercise price of SAR are as follows:

Date of Board approval	Stock price (HKD/share)	
	Before adjustment	After adjustment
January 8, 2020	2.09	1.9223
May 20, 2020	1.9223	1.8393
April 22, 2021	1.8393	1.7427
May 20, 2022	1.7427	1.6440

Each unit of SAR is notionally linked to one H share and represents the rights conferred on the relevant Incentive Recipients to receive in cash stipulated earnings from the increase in market value of the relevant H share. The SARs will have to be exercised within the specified services periods and the exercise period is three years after the respective vesting dates. In addition, the exercise of SAR is also subject to the performance condition of the Group and Incentive Recipients achieving certain performance targets.

A total of 159,642,300 units under the secondary implementation plan of the SAR expired. A total of 39,837,100 units under the secondary implementation plan of the SAR were exercised during the Reporting Period.

(2) Cash-settled Share-based Payment

Unit: RMB

	2022	2021
Methods for determining fair value of liabilities undertook by the Company and calculated by share or other equity instruments	Black-Scholes options valuation model	Black-Scholes options valuation model
Accumulated liabilities arising from cash-settled share-based payment in liabilities	16,013,521.25	142,778,077.84
Total fees recognized in respect of cash-settled share-based payment during the year	(109,984,779.51)	145,553,899.81

The fair value of share-based payment is measured by using the Black-Scholes Model, and inputs used in the model are as follows:

Item	December 31, 2022	December 31, 2021
Share price (HKD)	1.86	2.37
Expected volatility	28.24%	28.73% – 36.02%
Expected dividend yield	5.306%	4.075%

The second batch of the Scheme:

Item	December 31, 2022	December 31, 2021
Exercise price (HKD)	1.64	1.74
Expected term	0.95 year	0.95 – 2.95 years
Risk-free rate	4.300%	0.273% – 0.860%
Fair value (HKD)	0.29	0.60 – 0.63

The variables and assumptions used in computing the fair value of the SAR are based on the best estimate of the Directors. Changes in variables of specific assumptions may result in changes in the value of the SAR. The expected volatility is determined with reference to the historical volatility of the stock prices of the Group and other listed power generation companies. The expected term used in the model has been adjusted based on the management's best estimates on the restrictions imposed in respect of the non-transferability and behavioral considerations.

24. BREAKDOWN OF NON-RECURRING GAINS OR LOSSES

Unit: RMB

Item	2022	2021
Gains or losses from disposal of non-current assets	59,802,303.79	78,676.45
Government grants recognized in profit or loss for the current period (except for those closely related to the Company's business and for fixed or quantitative purposes in accordance with national uniform standards)	226,078,193.21	285,563,013.95
Except for the effective hedging transactions related to the normal operation of the Company, the gains or losses from changes in fair value arising from holding financial assets and liabilities held for trading, as well as the investment income arising from disposal of financial assets and liabilities held for trading	(14,091,817.31)	–
Other non-operating income and expenses other than the items above, net	(145,439,414.80)	(187,548,871.57)
Other gains or losses items that meet the definition of non-recurring gains or losses	55,548,413.93	(103,245,506.73)
Total	181,897,678.82	(5,152,687.90)
Income tax effect of non-recurring gains or losses	(6,566,459.46)	(19,135,972.12)
Effect of non-recurring gains or losses attributable to non-controlling shareholders	(6,744,180.35)	11,297,047.21
Effect of non-recurring gains or losses attributable to shareholders of the parent company, net	195,208,318.63	2,686,237.01

FINANCE, ASSETS AND INVESTMENTS

Our investment and operational strategies affect our business performance, which in turn translate into the finance data combined in our financial statements.

(I) FINANCIAL PERFORMANCE AND ANALYSIS

Key Financial Indicators

Category	Item	2022	2021 (Restated)
Indicators of profitability	EBITDA margin (%) ⁽¹⁾	43.4	45.7
	Net profit margin (%) ⁽²⁾	18.4	19.5
Indicators of investment returns	Return on equity (excluding non-controlling interests) (%) ⁽³⁾	9.6	10.0
	Return on total assets (%) ⁽⁴⁾	6.2	6.4
Indicators of solvency	Asset-liability ratio (%) ⁽⁵⁾	61.4	62.3
	Debt to equity ratio (%) ⁽⁶⁾	115.5	122.2
	Interest coverage ⁽⁷⁾	3.0	2.9

Notes:

- (1) EBITDA margin = (total profit + interest expenses recognized in profit or loss + depreciation and amortization)/operating revenue * 100%
- (2) Net profit margin = net profit/operating revenue * 100%
- (3) Return on equity (excluding non-controlling interests) = net profit attributable to shareholders of the parent company/average equity attributable to shareholders of the parent company (the arithmetic mean of the opening and closing balances) * 100%
- (4) Return on total assets = (total profit + interest expenses recognized in profit or loss)/average total assets (the arithmetic mean of the opening and closing balances) * 100%
- (5) Asset-liability ratio = total liabilities/total assets * 100%
- (6) Debt to equity ratio = net debt (the total amount of bank and other borrowings – cash and cash equivalents – other deposits over three months)/total shareholders' equity * 100%
- (7) Interest coverage = (total profit + interest expenses recognized in profit or loss)/(interest expenses recognized in profit or loss + interest expenses capitalized)

Financial Results and Analysis

For the year ended December 31,

	2022	2021	Fluctuations	Percentage
	RMB'000	<i>RMB'000</i>	increase/ (decrease)	change
		<i>(Restated)</i>	RMB'000	increase/ (decrease)
				%
Operating revenue	82,822,403.59	80,678,744.76	2,143,658.83	2.7
Operating costs	55,280,973.11	53,895,340.11	1,385,633.00	2.6
Finance costs	6,592,241.77	6,401,428.93	190,812.84	3.0
Other gains ⁽¹⁾	1,450,689.38	1,698,945.03	(248,255.65)	(14.6)
Investment income ⁽²⁾	1,677,126.74	1,406,776.94	270,349.80	19.2
Including: Income from investment in associates and joint ventures	1,600,355.68	1,404,062.93	196,292.75	14.0
Non-recurring gains or losses ⁽³⁾	181,897.68	(5,152.69)	187,050.37	3,630.2
Net profit attributable to shareholders of the parent company	9,964,854.41	9,764,174.71	200,679.70	2.1
Net profit attributable to shareholders of the parent company (excluding the effects of non-recurring gains or losses)	9,769,646.09	9,761,488.47	8,157.62	0.1

Notes:

- (1) The decrease in other gains was primarily due to the progress of the VAT refunds, so the VAT refunds received for the current period was less than the corresponding period of previous year.
- (2) The increase in investment income was primarily due to the increase in investment income from Hongyanhe Nuclear, our associate, as a result of the commencement of commercial operation of Hongyanhe Unit 6 on June 23, 2022 and the investment income from the disposal of equity interest in China Nuclear Power (Beijing) Simulation Technology Corporation Ltd. (中廣核(北京)仿真技術有限公司) (“CNPSTC”).
- (3) The increase in non-recurring gains or losses was primarily due to the change in fair value of the H-share SAR and the investment income from the disposal of equity interest in CNPSTC.

Revenue from Operations

For the year ended December 31,

	2022 <i>RMB'000</i>	2021 <i>RMB'000</i>	Fluctuations increase/ (decrease) <i>RMB'000</i>	Percentage change increase/ (decrease) %
Revenue from principal business operations	82,333,240.53	80,230,834.16	2,102,406.37	2.6
Including: Sales of electricity ⁽¹⁾	58,104,820.05	58,709,216.82	(604,396.77)	(1.0)
Construction, installation and design services ⁽²⁾	22,697,431.21	19,948,726.92	2,748,704.29	13.8
Revenue from other business operations	489,163.06	447,910.60	41,252.46	9.2
Total revenue from business operations	<u>82,822,403.59</u>	<u>80,678,744.76</u>	<u>2,143,658.83</u>	<u>2.7</u>

Notes:

- (1) The decrease in revenue from sales of electricity was primarily due to the year-on-year decrease in on-grid power generation of subsidiaries.
- (2) The increase in revenue from construction, installation and design services was primarily due to the increase in the construction volume of Huizhou Nuclear Power Project and Cangnan Nuclear Power Project of CGN Engineering.

Cost of Operations

For the year ended December 31,

	2022 <i>RMB'000</i>	2021 <i>RMB'000</i>	Fluctuations increase/ (decrease) <i>RMB'000</i>	Percentage change increase/ (decrease) %
Cost of principal business operations	54,862,143.03	53,527,605.26	1,334,537.77	2.5
Including: Cost of sales of electricity	31,318,491.13	32,676,491.22	(1,358,000.09)	(4.2)
Of which: Cost of nuclear fuel	8,362,111.19	8,356,950.47	5,160.72	0.1
Depreciation of fixed assets	9,307,327.97	10,582,867.75	(1,275,539.78)	(12.1)
Provision for spent fuel management ⁽¹⁾	3,280,977.26	2,838,777.74	442,199.52	15.6
Construction, installation and design services ⁽²⁾	22,490,541.37	19,586,469.64	2,904,071.73	14.8
Other costs of business operations	418,830.07	367,734.85	51,095.22	13.9
Total cost of operations	<u>55,280,973.11</u>	<u>53,895,340.11</u>	<u>1,385,633.00</u>	<u>2.6</u>

Notes:

- (1) The increase in provision for spent fuel management was primarily due to the commencement of provision and payment for spent fuel management as Ningde Unit 4, Fangchenggang Unit 2 and Yangjiang Unit 4 had commenced commercial operation for five years in July 2021, October 2021 and March 2022, respectively since the second half of 2021.
- (2) The increase in cost of construction, installation and design services was primarily due to the increase in the construction volume of Huizhou Nuclear Power Project and Cangnan Nuclear Power Project of CGN Engineering.

Financial Position

The bank and other borrowings, receivables, payables, inventories, fixed assets and intangible assets of the Company are shown in the table below. Details of the financial position are set out in the notes to the consolidated financial statements.

	December 31, 2022	December 31, 2021	Fluctuations increase/ (decrease)	Percentage change increase/ (decrease)
	<i>RMB'000</i>	<i>RMB'000</i>	<i>RMB'000</i>	<i>%</i>
Bank and other borrowings ⁽¹⁾	199,967,430.10	205,468,427.55	(5,500,997.45)	(2.7)
Receivables ⁽²⁾	35,643,758.61	33,331,213.72	2,312,544.89	6.9
Payables ⁽³⁾	37,532,468.75	30,567,735.20	6,964,733.55	22.8
Inventories ⁽⁴⁾	17,775,458.32	15,248,475.73	2,526,982.59	16.6
Fixed assets and intangible assets ⁽⁵⁾	237,968,836.40	244,984,645.32	(7,015,808.92)	(2.9)

Notes:

- (1) Bank and other borrowings comprise short-term loans, long-term loans, bonds payable, and long-term loans and bonds payable due within one year.
- (2) Receivables comprise bills receivable, accounts receivable, prepayments, contract assets and other receivables. The increase in receivables was primarily due to the increase in CGN Engineering's accounts receivable for Huizhou Nuclear Power Project and Cangnan Nuclear Power Project.
- (3) Payables comprise bills payable, accounts payable, receipts in advance, contract liabilities and other payables. The increase in payables was primarily due to the increase in accounts payable to suppliers as a result of the increase in the construction volume of Huizhou Nuclear Power Project and Cangnan Nuclear Power Project of CGN Engineering.
- (4) The main reason for the increase in inventories was the year-on-year increase in the amount of nuclear fuel and spare parts of Taishan Nuclear and Yangjiang Nuclear.
- (5) The main reason for the decrease in fixed assets and intangible assets was the decrease in asset value caused by provision for depreciation in fixed assets.

Analysis of Cash Usage

In 2022, the Company continuously implemented robust capital management policy. A healthy cash flow was maintained through lean management with higher capital utilization efficiency. The net cash inflows from operating activities decreased as compared with 2021, mainly due to the increase in provision for spent fuel management, the expiry of the income tax preferential policy and the progress of the VAT refunds. The net cash outflows from investment activities decreased as compared with 2021, mainly due to the decrease in the investment expenditure of Fangchenggang Unit 3 and Unit 4 as compared with the same period of last year and the receipt of cash from disposal of assets. The net cash outflows from financing activities increased as compared with 2021, mainly due to the increase in the amount of repayment of due corporate bonds and external borrowings by the Company as compared with the same period of last year.

For the year ended December 31,

	2022 <i>RMB'000</i>	2021 <i>RMB'000</i>	Fluctuations increase/ (decrease) <i>RMB'000</i>	Percentage change increase/ (decrease) %
Net cash inflows from operating activities	31,368,408.49	34,911,101.29	(3,542,692.80)	(10.1)
Net cash outflows from investment activities	14,379,365.57	14,568,912.98	(189,547.41)	(1.3)
Net cash outflows from financing activities	20,896,395.22	17,490,990.67	3,405,404.55	19.5

(II) ASSETS AND INVESTMENTS

The Group was mainly engaged in the investment in construction of nuclear power generating units, technical improvement in the NPPs in operation, and R&D of technologies related to nuclear power for the year ended December 31, 2022.

INVESTMENT IN FIXED ASSETS

For the year ended December 31, 2022, the Group's investment in fixed assets amounted to approximately RMB13,625.4 million, representing a decrease of RMB2,540.1 million or 15.7% from RMB16,165.5 million in 2021.

INVESTMENTS IN EQUITY

For the year ended December 31, 2022, the Group invested a total of RMB869.7 million in associates, which was mainly attributable to RMB809.7 million to acquire approximately 7.39% equity interest in CGN Industry Investment Fund Phase I Co., Ltd.* (中廣核一期產業投資基金有限公司) and RMB60.0 million to invest in 30% equity interest with respect to the establishment of Huizhou Zhongdong Energy Storage and Power Generation Co., Ltd.* (惠州中洞蓄能發電有限公司).

MAJOR ACQUISITION AND DISPOSAL

On March 17, 2022, CNPRI and Shanghai Engineering Science & Technology Co., Ltd.* (上海中廣核工程科技有限公司) entered into an equity transfer agreement. Pursuant to the equity transfer agreement, CNPRI sold its 75% equity interest in CNPSTC to Shanghai Engineering Science & Technology Co., Ltd.* (上海中廣核工程科技有限公司) based on the transfer price of approximately RMB50.6 million on the appraisal benchmark date. From the completion date of the equity transfer (i.e. March 31, 2022), the Group no longer held any equity interest in CNPSTC, and CNPSTC was no longer a subsidiary of the Group.

Save as disclosed above, the Group had no material acquisition or disposal for the year ended December 31, 2022.

USE OF PROCEEDS

The Company had used all of the proceeds from the global offering of H shares in December 2014 and the proceeds from the initial public offering (A shares) on the Shenzhen Stock Exchange in August 2019. For the year ended December 31, 2022, the Group had no use of proceeds.

External Financing Environment

In 2022, China sustained economic development in spite of pressure, and achieved positive results in the effective coordination of COVID-19 pandemic (the “**pandemic**”) prevention and control and economic and social development, with its gross domestic product (“**GDP**”) reaching RMB121.0 trillion, increased by 3.0% year on year. In 2022, the liquidity in the domestic banking system remained reasonably ample and the market interest rate presented a steady decline. At the same time, the RMB exchange rate fluctuated significantly in both directions, and the fluctuations in exchange rate had to be monitored continuously.

In 2022, the Company comprehensively strengthened the organization, coordination, support and risk monitoring of financing, making full use of various financing channels, promoting debt replacement and bond issuance, ensuring capital security and controlling financing costs, thereby achieving a decrease in the interest rate of its financing. At the same time, the Company continuously monitored foreign currency debt exchange rate risk exposure, exercised control over new debts denominated in foreign currencies, and prevented the risk of exchange rate fluctuations through various measures including forward transactions.

Equity Financing

With reference to the Company’s needs for business development, through equity financing, we consolidated the long-term capital of the Company in a timely manner. The overall capital structure of the Company was optimized according to changes in the external environment. The ability to resist the risk of fluctuations in the external economic and financial environment was consolidated and enhanced, which promoted the sustainable development of the Company’s business. For those projects with high capital expenditure and good earnings forecasts, we will prudently consider the use of equity financing to balance the risks and to enhance shareholders’ value.

Debt Financing

In 2022, we continued to improve diversified ways of financing, reasonable mix of currencies and term structure so as to provide stable and economical source of funding for the business development of the Company. As of December 31, 2022, the Group's total borrowings amounted to approximately RMB199,967.4 million with major debt financing channels including borrowings from banks and other institutions (approximately 94.4%), medium-term notes (approximately 4.2%), ultra short-term financing notes (approximately 1.4%), etc. We maintained a debt structure mainly comprising RMB-denominated and long-term debts, which not only satisfied our operational characteristics of focusing on nuclear power projects, but also effectively prevented liquidity risks and systematic exchange rate risks.

In 2021, the Company registered multi-type debt financing instruments (TDFI) with the National Association of Financial Market Institutional Investors, which included ultra short-term financing notes, short-term financing notes, medium-term notes, perpetual notes, asset-backed notes, green debt financing instruments and targeted debt financing instruments, etc. In 2022, the Company issued ultra short-term financing notes of RMB7,400.0 million and medium-term notes of RMB2,500.0 million under TDFI, which can meet the needs of working capital, debt repayment and capital expenditure of projects, thereby strengthening capital security capabilities and reducing financing costs.

The registration of shelf-offering corporate bonds of the Company with the exchange was approved at 2021 annual general meeting of the Company in 2022. The Company has submitted registration materials to the SZSE. Upon completion of the registration, the Company will commence the issuance when appropriate based on market conditions and its needs.

Debt Risk Management

In recent years, we proactively eliminated our exposure to risk on foreign exchange rate associated with debts denominated in foreign currencies by stages and in batches through various measures including forward transactions, debts replacement and early repayment, and actively changed our financing methods for foreign business contracts to exercise control over new debts denominated in foreign currencies, thereby effectively reducing the impact of major risks in exchange rate. In 2022, the Company adhered to the established strategies and continued to adopt relevant measures to minimize the impact from the fluctuation in RMB exchange rates. Guangdong Nuclear Power Joint Venture Co., Ltd.* (廣東核電合營有限公司) and Taishan Nuclear launched foreign exchange derivatives transactions. As compared with the end of 2021, the Group's total bank borrowings denominated in foreign currencies decreased by approximately RMB568.5 million at the end of the Reporting Period.

To manage liquidity risks, we monitored and maintained our cash and cash equivalents as well as the level of unutilized banking facilities. As of December 31, 2022, we had unutilized general banking line of credit of approximately RMB108,561.7 million, multi-type debt financing instruments of up to RMB14,700.0 million available for public issuance at any time, and cash at bank and in hand of approximately RMB14,840.8 million, which can provide sufficient cash for the operations of the Company and mitigate the effects of fluctuations in cash flows.

Credit Rating

In September 2022, China Chengxin International Credit Rating Co., Ltd.* (中誠信國際信用評級有限責任公司) assessed the credit rating of the Company, and based on the reasons that “the Company’s projects under construction are being put into operation and the operations of nuclear power generating units in operation are stable”, it concluded that “the Company has nuclear power generating units of high quality and significant scale with a huge volume of on-grid power generation, and strong profitability and cash generating ability, while the financial leverage remains at a relatively good level in the industry, maintaining smooth financing channels” and maintained our AAA credit rating with stable outlook.

Contingencies

External Guarantees

The Group confirmed that, for the year ended December 31, 2022, the Group had not provided any external guarantee.

Assets with Restricted Ownership

As of December 31, 2022, the Group’s assets pledged to banks or with restricted ownership due to other reasons amounted to approximately RMB16,894.3 million in carrying value. As of December 31, 2021, the Group’s assets pledged to banks or with restricted ownership due to other reasons amounted to approximately RMB21,340.8 million in carrying value.

As of December 31, 2022 and December 31, 2021, the electricity tariff collection rights of Lingdong Nuclear, Yangjiang Nuclear, Fangchenggang Nuclear, Ningde Nuclear and Taishan Nuclear were pledged to secure the banking facilities and loans from banks to these entities.

Legal Proceedings

For the year ended December 31, 2022, there was no significant litigation against the Group, and the Board was not aware of any pending or threatened litigation against the Group which had or could have a material and adverse effect on the financial conditions or operations of the Group.

Investment Direction

Based on the strategies and business development needs of the Company, the Company will finance the construction of NPPs under construction according to its investment schedules, continue to fund the technological improvement in the NPPs in operation to maintain and enhance operation, make continuous investment in the innovation of technologies, and fund the acquisitions of contingent assets in 2023. The Company will carry out relevant investment activities where appropriate, thereby laying a solid foundation for the Company’s future development.

BUSINESS PERFORMANCE AND OUTLOOK

(I) INDUSTRY OVERVIEW

The 20th National Congress of the Communist Party of China (the “**20th CPC National Congress**”) was successfully held in October 2022. Taking active, safe and orderly steps to develop nuclear energy is a strategic direction specified at the 20th CPC National Congress and also an integral part of the national energy strategy, playing a vital role in optimizing the national energy structure, ensuring energy security, building a new energy system, and supporting the achievement of carbon peaking and carbon neutrality. On March 5, 2022, the State Council proposed the ideas of “taking orderly steps to achieve carbon peaking and carbon neutrality”, “putting into effect the action plan for peaking carbon emissions”, “ensuring energy supply” and “pushing forward the transformation towards low-carbon development” in the Report on the Work of the Government (《政府工作報告》). On December 30, 2022, the National Energy Administration convened the 2023 National Energy Work Conference, at which “making every effort to ensure energy security, firmly promoting green development”, “actively developing nuclear power in a safe and orderly manner”, and “accelerating the establishment of a unified national power market system” were clearly proposed. In 2022, five nuclear power projects, including Lufeng Unit 5 and Unit 6, were approved by the State.

On June 10, 2022, seven departments, including the Ministry of Ecology and Environment, the National Development and Reform Commission (the “**NDRC**”) and the National Energy Administration, jointly issued the Implementation Plan for the Synergy and Efficiency of Pollution Reduction and Carbon Reduction (《減污降碳協同增效實施方案》) to make systematic arrangements to promote the synergy and efficiency of pollution reduction and carbon reduction, while proposing to “coordinate energy safety and green low-carbon development, promote the cleanliness and low carbon of the energy supply system and the electrification of end-use energy consumption”. On July 13, 2022, the Ministry of Housing and Urban-Rural Development and the NDRC issued the Implementation Plan for Carbon Peaking in Urban-Rural Construction (《城鄉建設領域碳達峰實施方案》), which proposed the “comprehensive use of the waste heat produced from combined heat and power generation, industrial activities and nuclear power generation”. On January 13, 2023, the State Council Information Office held a press conference on “ensuring energy supply and a warm winter”, at which, the National Energy Administration stated that a number of nuclear energy heating projects, including Hongyanhe Nuclear, had officially commenced operation for heat supply, which provided a sound environment for mutual success of all parties, and that it would offer active support for the further development of nuclear energy heating and further promote the application of nuclear energy heating under the premise of ensuring safety. We believe that, in light of the national goal of carbon peaking and carbon neutrality, strengthening energy security, and accelerating the construction of a new energy system, the nuclear power industry is still in an important period of strategic opportunities, and the room for development and the market prospects of nuclear power and its comprehensive utilization in China will be more extensive.

According to the statistics from the 2022 National Power Industry Statistics Overview (《2022年全國電力工業統計快報》) issued by the China Electricity Council (the “CEC”), as of December 31, 2022, the installed capacity of nuclear power generating units in operation was 55.53 GW in the PRC (excluding Taiwan region), accounting for 2.2% of the total installed capacity of power generation. The proportion of nuclear power remains small in our national energy structure.

According to the data released by the National Bureau of Statistics on January 18, 2023, the gross domestic product in 2022 increased by 3.0% year on year, and the average growth rate for the past two years was 5.67%. China’s economy sustained steady resumption, while the fundamentals of long-term positive economic growth remained unchanged. In 2022, the national average utilization hours of power generating units was 7,616 hours, representing a year-on-year decrease of 186 hours.

	Ratio of installed capacity by type of energy (%)		Ratio of generation capacity by type of energy (%)		Average utilization hours (hours)	
	2022	2021	2022	2021	2022	2021
Nuclear power	2.2	2.2	4.8	4.9	7,616	7,802
Thermal power	52.0	54.6	65.9	67.4	4,379	4,448
Hydropower	16.1	16.5	15.6	16.0	3,412	3,622
Wind power	14.3	13.8	8.8	7.8	2,221	2,232
Solar power	15.3	12.9	4.9	3.9	1,337	1,281

Note: Data from the 2022 National Power Industry Statistics Overview (《2022年全國電力工業統計快報》) of the CEC. The data on the installed capacity of power generation and the proportion of power generation are on a full consolidated basis. The average utilization hours are the utilization hours of power generation facilities in NPPs of 6,000 kilowatts and above.

On January 18, 2022, the NDRC and the National Energy Administration issued the Guiding Opinions on Accelerating the Construction of a National Unified Electricity Market System (《關於加快建設全國統一電力市場體系的指導意見》). On July 23, 2022, the southern regional electricity market officially started its trial run, becoming the first regional electricity market in China to enter trial operation. With the deepening reforms in the national power system, a unified market system has been gradually explored and established. The share of electricity traded in the market further expanded, and more provinces and regions began the pilot scheme for spot electricity transactions, actively promoting the participation of green power in market transactions. According to statistics of the CEC, the share of electricity traded in the market accounted for 60.8% of national power generation in 2022, representing an increase of 15.4 percentage points year on year.

(II) BUSINESS PERFORMANCE AND ANALYSIS

As at the end of 2022, we managed 26 nuclear power generating units in operation and seven nuclear power generating units under construction (including four units under construction which were entrusted to the Company by the controlling shareholder of the Company for management). On June 23, 2022, Hongyanhe Unit 6 commenced commercial operation. On September 8, 2022, Lufeng Unit 5 officially commenced construction.

As at December 31, 2022, the number and capacity of nuclear power generating units in operation and nuclear power generating units under construction managed by the Company are as follows:

		As at December 31, 2022	As at December 31, 2021	Growth/ (decline) rate
Nuclear power generating units in operation	Number	26	25	4.00%
	Capacity	29,380 MW	28,261 MW	3.96%
Nuclear power generating units under construction	Number	3	3	0.00%
	Capacity	3,560 MW	3,479 MW	2.33%
Nuclear power generating units under construction which were entrusted to the Company by the controlling shareholder for management	Number	4	4	0.00%
	Capacity	4,820 MW	4,820 MW	0.00%

We will introduce and analyze the Company's business performance in 2022 in six aspects, namely safety management, nuclear power generating units in operation, nuclear power generating units under construction, sales of electricity, SCS management (standardization, centralization and specialization) and lean management and comprehensive use of nuclear energy.

Safety Management

Safety is crucial to any company. We highly value safety and always place safety at our top priority. We always adhere to the concept of "Nuclear Safety is Our Overriding Priority" and our basic principles of "Safety First, Quality Foremost, Pursuit of Excellence", and strive to apply them to various stages of the design, construction, operation and decommissioning of the NPPs. We believe that maintaining nuclear power safety is a great responsibility to the State, society, Shareholders, employees and other stakeholders. Only with safety can our units in operation provide the society with stable and reliable power and our units under construction achieve high quality production, and thus we can achieve constant improvement in our overall operating results.

We continued to improve our safety management system and optimize management approach. Based on our experience in nuclear power operation over the years, we have established a mature safety management system. We insisted on launching activities such as “On-site Management”, “Upholding Compliance and Fighting against Non-compliance”, “Precautionary Education on Nuclear Safety” and “Bringing Nuclear Safety Culture into our Teams” so as to continuously enhance the nuclear safety culture awareness among all employees. In 2022, the Company implemented the special inspection on nuclear safety management led by the Chairman and the senior management for the third consecutive year with additional inspections on nuclear power bases under construction to achieve full coverage of core areas such as nuclear power production and engineering construction, effectively promoting the steady improvement of the Company’s safety and quality performance. The Company issued the Management Framework for Nuclear Power Project Construction (《核電工程建設管理大綱》) to improve the system planning in the field of nuclear power project construction; carried out the inspection on the fulfillment of safe production responsibilities, and urged each unit to take up and fully implement the principal responsibility of safe production; further strengthened the safety supervision system of the Company, and improved the safety and quality director stationing mechanism to continuously strengthen the Company’s safety and quality supervision of the projects under construction.

At the same time, we continued to promote safety supervision as well as dynamic and transparent experience feedback. We organized regular emergency drills under different scenarios and ensured effective operation of safety management system. In 2022, we conducted joint drills with Fangchenggang Nuclear, Yangjiang Nuclear and Hongyanhe Nuclear to ensure the emergency response capability of the Group’s nuclear emergency units.

According to the International Nuclear and Radiological Event Scale (《國際核事件分級表》)^{Note} (the “**INES**”) set by the International Atomic Energy Agency (“**IAEA**”), the NPPs we operated and managed had maintained our all-time good safety record of no nuclear event at level 2 or above in 2022.

Note: Nuclear incidents are classified into seven levels in the INES according to their impact on (i) people and the environment, (ii) radiological barriers and control, and (iii) defence-in-depth. Level 1 to Level 3 are termed “incident”, while Level 4 to Level 7 are termed “accidents”. Events below such scale are deviations without safety significance.

For the related activities of safety management, please refer to the 2022 environmental, social and governance report of the Company.

Nuclear Power Generating Units in Operation

In 2022, all nuclear power generating units in operation managed by us maintained safe and stable operation, with a total annual on-grid power generation of 198,374.80 GWh, representing a decrease of 1.38% as compared with 2021.

Name of NPP	On-grid power generation from January to December 2022 (GWh)	On-grid power generation from January to December 2021 (GWh)	Change rate for the corresponding period %
<i>From subsidiaries</i>			
Daya Bay NPP	15,433.91	15,742.98	-1.96
Ling'ao NPP	14,300.03	15,585.09	-8.25
Lingdong NPP	16,398.04	14,682.91	11.68
Yangjiang NPP	49,929.01	49,215.06	1.45
Fangchenggang NPP	16,583.29	17,056.35	-2.77
Ningde NPP	31,406.13	33,154.86	-5.27
Taishan NPP	12,410.94	18,487.18	-32.87
Subsidiaries, total	156,461.35	163,924.42	-4.55
<i>From associates</i>			
Hongyanhe NPP	41,913.45	37,226.43	12.59
Subsidiaries and associates, total	198,374.80	201,150.85	-1.38

Daya Bay NPP: The total duration of the refuelling outage in 2022 was slightly longer as compared with 2021.

Ling'ao NPP: A ten-year outage was conducted in 2022. The total duration of the refuelling outage was longer as compared with 2021.

Lingdong NPP: The total duration of the refuelling outage in 2022 was shorter as compared with 2021.

Yangjiang NPP: The total duration of the refuelling outage in 2022 was basically the same as compared with 2021.

Fangchenggang NPP: The total duration of the refuelling outage in 2022 was basically the same as compared with 2021. The time taken for operations at reduced load or shut down for standby in coordination with the requirements of the power grid was longer than 2021.

Ningde NPP: The duration of the refuelling outage in 2022 was longer as compared with 2021. The time taken for operations at reduced load or shut down for standby in coordination with the requirements of the power grid was longer than 2021.

Taishan NPP: Taishan Unit 1 began shutdown and inspection on July 30, 2021. The unit was connected to the grid for power generation on August 15, 2022. The total duration of the refuelling outage of Taishan NPP in 2022 was longer as compared with 2021.

Hongyanhe NPP: Hongyanhe Unit 5 commenced commercial operation on July 31, 2021. Hongyanhe Unit 6 commenced commercial operation on June 23, 2022.

Operation Performance

Capacity factor, load factor and utilization hours are the three indicators used to evaluate the utilization of nuclear power generating units. They are mainly affected by the effects of refuelling outages for the generating units. Meanwhile, load factor and utilization hours of nuclear power generating units are also affected by load reduction and being put on standby due to transmission line maintenance or as a result of demand and supply conditions in the electricity market.

In 2022, we had 26 nuclear power generating units in operation, with an average capacity factor of 89.74%, an average load factor of 85.45% and average utilization hours of 7,311 hours, as compared with 91.58%, 89.78% and 7,731 hours of the 25 nuclear power generating units in operation in 2021. The details of the operation performance of generating units we operated and managed in 2022 are as follows:

Nuclear Power Generating Unit	Capacity factor (%)		Load factor (%)		Utilization hours (hours)	
	2022	2021	2022	2021	2022	2021
<i>From subsidiaries</i>	88.46	90.57	83.78	87.55	7,339	7,669
Daya Bay Unit 1	91.96	88.92	93.02	90.01	8,148	7,886
Daya Bay Unit 2	93.24	99.98	94.22	101.02	8,254	8,851
Ling'ao Unit 1	82.03	89.67	80.73	89.52	7,070	7,839
Ling'ao Unit 2	91.14	99.98	91.39	98.03	8,003	8,585
Lingdong Unit 1	89.65	83.40	84.35	81.66	7,383	7,147
Lingdong Unit 2	99.77	86.11	98.7	82.34	8,638	7,207
Yangjiang Unit 1	94.41	88.72	92.43	88.51	8,185	7,754
Yangjiang Unit 2	91.78	99.97	91.07	98.07	7,978	8,591
Yangjiang Unit 3	99.99	93.02	100.38	87.39	8,793	7,655
Yangjiang Unit 4	93.07	89.41	87.5	89.15	7,665	7,810
Yangjiang Unit 5	92.72	94.40	92.15	91.62	8,073	8,026
Yangjiang Unit 6	93.56	98.02	93.13	95.31	8,158	8,349
Fangchenggang Unit 1	98.93	92.69	94.88	91.26	8,312	7,995
Fangchenggang Unit 2	93.09	99.99	91.80	99.27	8,042	8,696
Ningde Unit 1	99.99	91.26	94.4	90.06	8,269	7,889
Ningde Unit 2	93.65	88.16	82.48	89.78	7,225	7,864
Ningde Unit 3	92.41	92.90	87.92	90.56	7,702	7,933
Ningde Unit 4	91.16	99.97	86.61	99.58	7,587	8,723
Taishan Unit 1	29.03	55.79	29.0	53.03	2,540	4,645
Taishan Unit 2	57.65	78.96	57.93	75.80	5,074	6,640
<i>From associates</i>	94.00	95.66	82.68	91.48	7,243	8,014
Hongyanhe Unit 1	92.71	92.56	82.84	97.59	7,257	8,549
Hongyanhe Unit 2	99.99	90.70	96.50	88.89	8,453	7,787
Hongyanhe Unit 3	91.81	95.06	78.51	86.32	6,877	7,562
Hongyanhe Unit 4	91.82	99.99	86.98	90.40	7,619	7,919
Hongyanhe Unit 5	87.93	99.99	68.04	99.33	5,960	8,584
Hongyanhe Unit 6	99.76	Under construction	83.69	Under construction	7,331	Under construction
<i>From subsidiaries and associates</i>						
Average	89.74	91.58	85.45	89.78	7,311	7,731

Based on the design of pressurised water reactor NPPs, the nuclear reactor of each unit in operation must be shut down and refuelled after a certain period of time. Taking the safety and economic considerations for NPPs into account, nuclear power operators often make use of the refuelling period to intensively conduct preventive and corrective maintenance, inspection and testing projects as well as various modifications projects, and this is usually referred to as refuelling outage of generating units. At present, the designed refuelling intervals of all our nuclear power generating units are 18 months. According to the technical requirements for the operation of the NPPs, inspection, testing and maintenance for major equipment are required every ten years. Such activities will be conducted during the refuelling period of generating units, and this is usually referred to as ten-year outage of generating units. In addition to the refuelling outage and ten-year outage, the refuelling outage of new generating units conducted in the following year after commencement of operation is usually referred to as initial outage.

During the refuelling outage period, we carry out inspection, maintenance and modifications for equipment with selectivity based on the requirements of nuclear power station preventive maintenance guidelines, in-service inspection guidelines, requirements on regular testing and supervision as well as the experience on the operation of generating units to secure the safety of the units, improve the operating performance of the equipment, and ensure that the units would maintain good operating conditions in the next cycle according to the design requirements.

Refuelling outages intervals of nuclear power generating units are not fixed to every 18 months. On the premise of ensuring the safe operation of the generating units, we usually take local power load fluctuations into account and take the initiative to communicate with local power grid companies to rationalize the refuelling outage plans for generating units. As the requirements for inspection, maintenance and engineering modification projects are different, the duration of each refuelling outage is not identical. More inspection items are required for the initial outage and ten-year outage, resulting in a longer inspection period compared with that of regular refuelling outages. According to the specific operating conditions of each generating unit, we continue to enhance and develop targeted refuelling outage plans, reasonably arrange inspection and maintenance projects, and actively adopt advanced technology to improve the efficiency of inspection and maintenance in order to have good control over the duration of each refuelling outage on the premise of ensuring the quality of safety.

In 2022, we conducted a total of 19 refuelling outages, including an initial outage and a ten-year outage, which were all successfully completed in 2022. The total number of calendar days for the refuelling outages in 2022 was about 655 days.

“Pursuit of Excellence” is one of the basic principles of the Company. In order to discover our inadequacies and make continuous improvements, we continue to implement benchmarking with international peers. When compared with the one year benchmark value of all of the 12 performance indicators for the World Association of Nuclear Operators (“WANO”) peer review, for our nuclear power generating units, the ratio of performance indicators achieving the world’s top 1/4 level (advanced level) and top 1/10 level (excellent level) remained at a relatively high level, leading among industry peers.

The following table indicates the comparison of 26 nuclear power generating units in operation managed by us for 2022 and the one-year benchmark value of the 12 performance indicators for the WANO peer review in 2021:

	2022	2021
Number of units	26	25
Total number of indicators	312	300
Including:		
Number/percentage of indicators ranked top 1/4 (advanced level) in the world	247/79.17%	249/83.00%
Number/percentage of indicators ranked top 1/10 (excellent level) in the world	240/76.92%	241/80.33%

Environmental Performance

We continued to improve radioactive waste management, optimize the control over the discharge process of liquid radioactive waste and gas radioactive waste (the “Discharge”) and strictly complied with emission control standards. In 2022, the radioactive waste management of all 26 generating units in operation managed by us strictly complied with the national laws and regulations, met the standards of the relevant technical specifications and were not subject to any administrative penalty due to environmental issues.

The following table sets forth the emission of the various types of radioactive waste discharged at our NPPs during the period indicated as a percentage of the national standards. The total amounts of radioactive Discharge from our NPPs were far below the applicable national limits.

	Daya Bay Base Area (including Daya Bay NPP, Ling'ao NPP and Lingdong NPP)		Yangjiang NPP		Fangchenggang NPP		Ningde NPP		Taishan NPP		Hongyanhe NPP	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
	Discharged liquid radioactive waste (radionuclides other than tritium and carbon-14) as a percentage of the approved national annual limits	0.22%	0.24%	0.40%	0.39%	0.32%	0.20%	0.31%	0.40%	2.72%	6.24%	0.40%
Discharged gas radioactive waste (inert gases) as a percentage of the approved national annual limits	0.46%	0.46%	0.19%	0.19%	0.41%	0.29%	0.29%	0.27%	2.50%	8.67%	2.89%	1.87%
Solid radioactive waste (m ³)	186.1	166.7	97.8	88.6	64.5	72.2	70.0	63.6	0	0	110.0	92.4
Results of environmental monitoring	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal

Note: The main reasons for changes in the data include: the refuelling outage plan and maintenance project are different for every unit, the annual discharge limit of Taishan NPP is different from other power stations, and there is no comparability between the power stations.

The national regulatory authorities continuously monitored the time used for absorption (the “**Airabsorbed Rates**”) in the periphery of our nuclear power generating units in operation in the PRC. The monitoring data indicated that the Airabsorbed Rates fell within the fluctuation range of local background radiation levels.

Nuclear power is a clean energy source that contributes to energy saving and emission reduction to the society. Our annual on-grid nuclear power generation in effect represented a reduction of approximately 59.81 million tons of standard coal consumption, approximately 164.2543 million tons of CO₂ emissions, approximately 20,000 tons of sulphur dioxide emissions, and approximately 30,200 tons of oxynitride emissions.

Nuclear Power Generating Units under Construction

The construction quality of nuclear power generating units under construction is the foundation for the long-term safe and stable operations of nuclear power generating units after commencement of operation. We meticulously organize project construction in strict compliance with the requirements of relevant laws and regulations as well as various safety, quality and management standards. The quality of all raw materials, equipment and major projects milestones has passed quality inspections by the relevant construction units and national regulatory authorities, only the design standards being met can the next phase of work be commenced. The process subsists until the project completed commissioning and is handed over to the operating personnel. At the same time, we attach importance to learning from experience feedbacks of domestic and foreign construction of nuclear power generating units, and continuously improving of the safety and quality of construction work.

As at December 31, 2022, among seven nuclear power generating units we constructed (including units under construction which were entrusted to the Company by the controlling shareholder of the Company for management), two were in the civil construction phase, four were in the equipment installation phase and one was in the commissioning phase. While the expected time of commencement of operation has been adjusted from the second half of 2022 to the first half of 2023, Fangchenggang Unit 3 reached criticality for the first time on December 27, 2022, and entered the grid connection phase on January 10, 2023. Lufeng Unit 5 officially commenced construction on September 8, 2022. Huizhou Unit 2 completed the dome installation on September 25, 2022, and entered the equipment installation phase. Cangnan Unit 1 completed the dome installation on November 3, 2022, and entered the equipment installation phase.

We controlled, supervised and managed aspects including the safety, quality, progress, investment, technology and environment of our construction projects with high standards and strict requirements, so as to ensure that the projects under construction complied with various regulatory requirements and standards in terms of safety and quality to facilitate long-term safe, stable and economical operation of the units after commencement of commercial operation.

Nuclear Power Generating Units	Civil Construction Phase ⁽¹⁾	Equipment Installation Phase ⁽²⁾	Commissioning Phase ⁽³⁾	Grid Connection Phase ⁽⁴⁾	Expected Time of Commencement of Operation
<i>From subsidiaries</i>					
Fangchenggang Unit 3				✓	First half of 2023
Fangchenggang Unit 4		✓			First half of 2024
Lufeng Unit 5	✓				2027
<i>From companies which were entrusted by the controlling shareholder for management</i>					
Huizhou Unit 1		✓			2025
Huizhou Unit 2		✓			2026
Cangnan Unit 1		✓			2026
Cangnan Unit 2	✓				2027

Notes:

1. “Civil construction” phase refers to the process from the First Concrete Day (“**FCD**”) to the proper dome installation of the main plant of the nuclear reactor.
2. “Equipment installation” phase refers to the process from the installation of nuclear island equipment upon the dome installation of the main plant of the nuclear reactor to the nuclear island main system meeting the conditions to conduct cold function tests.
3. “Commissioning” phase refers to the process of conducting cold function tests for nuclear island main system and commencing joint commissioning for the power plant.
4. “Grid connection” phase refers to the commissioning of generators upon the first grid connection with the power grid, demonstrating that the units are capable for power generation.

The construction process of nuclear power generating units may be affected by various factors including, among others, delivery delays, increase in the cost of key equipment and materials, delay in obtaining regulatory approvals, permits or licenses, unexpected engineering, environmental or geological problems, as well as the implementation of additional China’s regulatory and safety requirements for nuclear safety, so the actual date of commencement of operation may be different from such expected date. We will disclose updated information pursuant to the relevant requirements from time to time.

SALES OF ELECTRICITY

We sell the electricity generated by our NPPs based on electricity sales contracts. In 2022, the on-grid power generation of our subsidiaries was 156,461.35 GWh. CGN Power Sales Co., Ltd. (中廣核電力銷售有限公司), being our subsidiary, recorded actual electricity consumption of agent clients other than the Group of approximately 8,582.62 GWh, and the sales revenue of electricity was approximately RMB58,104.82 million in total, representing 70.16% of our operating revenue for the year.

In 2022, the total electricity consumption in the PRC reached 8,637.2 billion kWh, representing an increase of 3.6% year on year. Due to the different economic development conditions of each province, the supply and demand for electricity in the provinces and regions where our nuclear power generating units are located varied slightly. In 2022, the Company continued to adopt the power sales strategy of “striving for more on-grid power generation quota, striving for better market power generation and power tariff, striving for development and utilization of incremental market and striving for more shares in power transmission across provinces and regions”. With the increase in the proportion of nuclear power generating units participating in market-based transactions in each province and region, the Company actively developed high-quality market users and refined its units in service for greater and full load power generation. The Company basically achieved its power generation plans for the year and the average settling tariff increased year on year, ensuring the overall economic benefits of the Company.

In 2022, our nuclear power generating units in operation achieved a total on-grid power generation of 198,374.80 GWh (including our associates), representing a year-on-year decrease of 1.38%, of which the market-based power generation volume accounted for approximately 55.3% of the total on-grid power generation, representing an increase of approximately 16.2 percentage points as compared with 2021.

Guangdong Province: The electricity consumption in the province in 2022 remained the same as in 2021. According to the “Notice on Doing a Good Job in Electricity Market Annual Transactions in 2022” (《關於做好2022年電力市場年度交易工作的通知》) issued by the Energy Administration of Guangdong Province (廣東省能源局), a total of 10 units of Ling’ao Nuclear, Lingdong Nuclear and Yangjiang Nuclear took 7,500 hours as the benchmark value, and arranged no more than 11.293 billion kWh in total to participate in power market transactions. The on-grid power generation of the nuclear power generating units within the Guangdong Province decreased by 4.61% over the corresponding period of previous year, which was mainly due to the longer total duration of shutdown and inspection as well as refuelling outage of the nuclear power generating units of Taishan Nuclear as compared with 2021.

Fujian Province: The electricity consumption in the province increased by 2.2% in 2022 over the corresponding period of previous year. Four nuclear power generating units of Ningde Nuclear participated in the market-based electricity transactions with their entire on-grid power generation. In 2022, affected by longer duration of operation at reduced load of the nuclear power generating units of Ningde Nuclear over the corresponding period of previous year as a result of a longer total duration of refuelling outage in 2022 as compared with 2021 and increased hydropower generation due to more rainfall in the province, the on-grid power generation of Ningde Nuclear decreased by 5.27% over the corresponding period of 2021.

Guangxi Zhuang Autonomous Region: The electricity consumption in the region decreased by 0.9% in 2022 over the corresponding period of previous year. Fangchenggang Unit 1 and Unit 2 participated in the market-based electricity transactions with their entire on-grid power generation. In 2022, affected by longer duration of operation at reduced load of the nuclear power generating units of Fangchenggang Nuclear over the corresponding period of previous year as a result of increased wind and hydropower generation due to more wind and rainfall in the province in 2022, the on-grid power generation of Fangchenggang Nuclear decreased by 2.77% over the corresponding period of 2021.

Liaoning Province: The electricity consumption in the province decreased by 1.0% in 2022 over the corresponding period of previous year. Hongyanhe Unit 1 to Unit 4 participated in the market-based electricity transactions with their entire on-grid power generation. In 2022, due to the increased number of nuclear power generating units in operation of Hongyanhe Nuclear following the commencement of production of Hongyanhe Unit 5 and Unit 6 in 2021 and 2022, respectively, the on-grid power generation of Hongyanhe Nuclear increased by 12.59% over the corresponding period of 2021.

In 2022, each of our power sales companies made vigorous efforts in penetrating and closely tracking situations of electricity markets in the provinces and regions where they are located at and got involved in market transactions proactively. The actual electricity consumption of our 98 retail agent clients amounted to approximately 12,063.16 GWh (including agent clients other than the Group).

We paid close attention to the on-grid tariffs of operating units. The Company's on-grid tariffs for operating units are classified into Planned Tariffs and Market-based Tariffs. The Planned Tariffs are approved by the relevant government authorities, and the Market-based Tariffs are formed through market-based transactions. On June 16, 2022, Hongyanhe Nuclear received the approval of the on-grid tariff of Hongyanhe Unit 5 and Unit 6. The on-grid tariff for Hongyanhe Units 5 and Unit 6 is RMB0.3749 per kWh (tax inclusive) from the time they are put into commercial operation. The tariff should be adjusted in line with the new policy in case of any adjustment to the national electricity tariff policy. The on-grid tariff of Hongyanhe Unit 5 and Unit 6 is the same as the approved temporary on-grid tariff. In 2022, the Planned Tariffs for the other nuclear power generating units in operation of the Company remained unchanged, and the average Market-based Tariffs of the Company increased as compared with the corresponding period of 2021.

The Planned Tariffs (VAT inclusive) of our nuclear power generating units in operation as at December 31, 2022 are set out in the table below.

Nuclear Power Generating Units	Clients	Planned Tariffs (VAT inclusive) (RMB/kWh)
Daya Bay Unit 1 and Unit 2	Guangdong Power Grid Co., Ltd.	0.4056
Ling'ao Unit 1 and Unit 2	Guangdong Power Grid Co., Ltd.	0.4143
Lingdong Unit 1 and Unit 2	Guangdong Power Grid Co., Ltd.	0.4153
Yangjiang Unit 1 to Unit 6	Guangdong Power Grid Co., Ltd.	0.4153
Fangchenggang Unit 1 and Unit 2	Guangxi Power Grid Co., Ltd.	0.4063
Ningde Unit 1 and Unit 2	Fujian Electric Power Co., Ltd.	0.4153
Ningde Unit 3	Fujian Electric Power Co., Ltd.	0.3916
Ningde Unit 4	Fujian Electric Power Co., Ltd.	0.3590
Taishan Unit 1 and Unit 2	Guangdong Power Grid Co., Ltd.	0.4350
Hongyanhe Unit 1 to Unit 4	Liaoning Electric Power Co., Ltd.	0.3823
Hongyanhe Unit 5 and Unit 6	Liaoning Electric Power Co., Ltd.	0.3749

SCS MANAGEMENT AND LEAN MANAGEMENT

In 2022, we continued to promote SCS management and lean management strategies and maintained sound production safety. For example, we continued to promote the localization strategy of spare parts. The production of the air filters of the nuclear island ventilation system and the spare parts of nuclear-grade metal graphite reinforcement pads have been successfully localized, which reduced supply chain risk and optimized inventory costs. Our proprietary high-sensitivity leak detection device for damaged nuclear fuel components effectively improved the safety of generating units. We concentrated our professional technical force in multi-site plants, and addressed special issues on major equipment such as steam generators and condensers, which reduced the probability of failure of major equipment in multi-site plants.

In 2022, in the face of complex situations such as the varied pandemic prevention and control measures among different provinces and regions as well as the overlapping ten-year outages, we maintained overall stable production safety by strengthening daily production risk management and control, optimizing outages arrangement and maintenance strategy, and increasing the development and application of new technologies and new processes. For example, we continued to promote innovative management measures such as “transparent safety standards” and “quantifiable quality standards”, and the number of occupational safety indicator incidents over 100 outage days decreased by 69.68% year on year. The innovation project of non-rotor pulling generator maintenance robot was successfully applied in the refuelling outage of Ningde Unit 3, which reduced multiple high-risk operations including pulling and pushing the rotor, substantially improved the intrinsic safety of personnel and equipment in generator maintenance, shortened the duration of outages and reduced outage costs.

COMPREHENSIVE USE OF NUCLEAR ENERGY

In addition to focusing on nuclear power generation as its principal business, the Company has also been actively taking an initiative to conduct research on the comprehensive use of nuclear energy, aiming to explore new technologies and new models. The Company strives to diversify its nuclear energy products and develop a complementary and comprehensive approach centered on nuclear energy to support its nuclear power business development, make an effective response to the impact of the market-oriented electricity system reform on the economical efficiency of nuclear power projects, and enhance market competitiveness.

For nuclear energy heating, we have accumulated certain experience at the Hongyanhe Nuclear Power Base, which will be properly promoted and applied in the future. The supporting construction of pumped storage and electrochemical energy storage projects can improve the operational stability of nuclear power generating units, reduce nuclear safety risks, and stabilize trading prices of nuclear power. We actively seek development opportunities for pumped storage projects in the provinces and regions where nuclear power is located. As of December 31, 2022, we have obtained the controlling development rights of two pumped storage projects in Guangdong Province, and participated in another approved pumped storage power station project, the main project of which officially commenced construction on December 23, 2022. At the same time, we are also cooperating with other companies to jointly build a large-scale nuclear storage complementary electrochemical energy storage demonstration project in the Guangdong province.

(III) FUTURE OUTLOOK

In the “14th Five-Year Plan” and in the medium to long run, against the national backdrop of striving to peak carbon dioxide emissions before 2030 and achieving carbon neutrality before 2060, the development of the nuclear power industry is still in an important strategic opportunity period. The Company’s development and operation are subject to a lot of new requirements and new changes. We will adhere to the nuclear safety culture of honesty and transparency and the basic principles of “Safety First, Quality Foremost, Pursuit of Excellence” to explore new ideas, actively plan and respond.

During the “14th Five-Year Plan” period, aiming to achieve the 2035 long-term goals, the Company will pay special attention to production and operation, project construction, technological innovation, operational efficiency, corporate management and other key areas and crucial process with the goal of accelerating its development as a world-class nuclear energy enterprise with international competitiveness. In addition, the Company will strive to strengthen its foundation, expand its competitive edges, remedy its shortcomings, strengthen its weaknesses, as well as facilitate industry development and expansion, thereby achieving fairer, more sustainable and safer development with higher quality and better efficiency.

The year 2023 will be the nexus of the “14th Five-Year Plan” and we plan to carry out the following initiatives:

- 1 We will work further on the construction of safety, quality and environment system, continue to carry out safety standardization and benchmarking, reinforce the safety risk management and control of key projects, improve the intrinsic safety level, strengthen the construction of nuclear safety culture, optimize the management system to avoid human errors, and enhance nuclear safety, industrial safety, equipment and facilities, environmental protection and network information security management, in order to guarantee the safety of nuclear power;

- 2 On the premise of ensuring safety and quality, we will push forward construction of generating units (including entrusted management projects) in high quality as planned, in order to achieve the high quality commercial operation of Fangchenggang Unit 3;
- 3 We will ensure the safe and stable operation of all the generating units in operation. We plan to conduct 19 refuelling outages during the year (including four 10-year outages and one initial outage). We will conduct seven refuelling outages in the first quarter, two in the second quarter, nine in the third quarter, and one in the fourth quarter;
- 4 We will closely follow and analyze the changes in the electricity market situation, enhance the marketing system and mechanism of electricity market, and further strengthen the development of marketing capabilities for electricity market to strive for more on-grid power generation through various channels and initiatives as well as better price differential. According to the “Notice on Doing a Good Job in Electricity Market Annual Transactions in 2023” (《關於做好2023年電力市場年度交易工作的通知》) issued by the Energy Administration of Guangdong Province (廣東省能源局), a total of 10 units of Ling’ao Nuclear, Lingdong Nuclear and Yangjiang Nuclear will continue to take 7,500 hours as the benchmark value, and arrange approximately 19.5 billion kWh in total to participate in power market transactions. We will also pay close attention to the electricity market environment in other provinces and regions, adopt targeted marketing strategies and strengthen exchange of experiences, striving to achieve an average utilization hour of generating units in 2023 not less than the average of the average utilization hour of generating units for the last three years;
- 5 We will promote reliability of fuels and equipment, and improve performance of safety system of power generating units with business growth driven by proprietary innovation and consistent proprietary nuclear power research by measures such as transformation and application of technology innovation results and technical transformation, in order to accelerate the construction of original technology source and facilitate the sustainable development of the Company. We will strengthen the transformation and application of scientific research results to the external market to create greater economic value;
- 6 We will continuously push forward the implementation of SCS management strategy and lean management and strengthen internal resources coordination and cooperation to strengthen our control on construction cost of generating units under construction as well as the continuous control over operation and maintenance cost of generating units in operation; and
- 7 We will closely follow the change of national policy, domestic and international economic and financial environment, adhere to the principle of prudence, identify changes in risks in a timely manner through operation of risk management system, and adjust our existing measures when appropriate to ensure the steady development of the Company.

HUMAN RESOURCES

The total number of employees of the Group was 18,968 (excluding our associates) as of December 31, 2022. The Group implements remuneration policy that is competitive in the industry, and pays commissions and discretionary bonus to its employees with reference to performance of the Group and individual employees. The total cost of the employees for the year ended December 31, 2022 amounted to approximately RMB11,053.8 million (exclusive of our associates).

The Company has established a long-term share incentive scheme to enhance its attractiveness to key talents and create more value for Shareholders. The H-Share Appreciation Rights Scheme was approved at the 2014 annual general meeting held on June 12, 2015. The details of the grant of the SAR are set out in Note 23 to the financial information in this announcement.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

Neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities during the year ended December 31, 2022.

FINAL DIVIDEND AND CLOSURE OF H SHARE REGISTER OF MEMBERS

When considering the dividend distribution ratio in the future, we will take into consideration the business performance of the Company for the year, the future development strategies of the Company and other factors, provided that it shall not be lower than 30% of the net profit attributable to shareholders of the Company for the year. The Board and management of the Company have full confidence in the development prospects of nuclear power and the Company's stable operation, and the Dividend Distribution Plan for the Coming Five Years (2021-2025) (《未來五年(2021年－2025年)股東分紅回報規劃》) of the Company was approved at the 2020 AGM convened on May 26, 2021. On the premise of no major changes in the business, operating results and financial position of the Group, subject to the approval at the general meeting in the relevant year, the Company will maintain a reasonable increase in the dividend distribution ratio from 2021 to 2025 based on the dividend ratio in 2020 (42.25%).

The final dividend for the year ended December 31, 2021 was RMB0.084 (tax inclusive) per share and was paid by the Company on July 7, 2022. The dividend distribution ratio of the Company for 2021 was 43.58% of the net profit attributable to the shareholders of the Company.

The Board has proposed to declare a final cash dividend of RMB0.087 (tax inclusive) per share for the year from January 1, 2022 to December 31, 2022 to our Shareholders as at the record date of dividend payment. The dividend distribution ratio of the final dividend of this year (total dividends/net profit attributable to shareholders of the parent company*100%) was approximately 44.09%, while the dividend ratio for 2020 and 2021 was 42.25% and 43.58% respectively. All dividend in 2022 will be distributed after being approved by our Shareholders at the 2022 annual general meeting of the Company and is expected to be distributed on around July 7, 2023.

The H share register of members of the Company will be closed from June 1, 2023 (Thursday) to June 6, 2023 (Tuesday) (both days inclusive) to determine H share holders' entitlement to the final dividend. In order to qualify for the final dividend as H share holders, all the transfer documents of the Company accompanied by relevant share certificates, must be lodged to Computershare Hong Kong Investor Services Limited, the share registrar for H shares at Shops 1712-1716, 17th Floor, Hopewell Center, 183 Queen's Road East, Wan Chai, Hong Kong ("**H Share Registrar**") no later than 4:30 p.m. on May 31, 2023 (Wednesday). For details of the distribution of the final dividend of the Company, please refer to the relevant circular to be issued by the Company in due course.

EXCHANGE RATE

For the year ended December 31, 2022, the Group has not suffered any major difficulties of or impacts on its operations or liquidity due to exchange rate fluctuations. For the risk of exchange rate fluctuations of the Company, we have been adhering to the principle of prudence, conducting timely debt hedging and risk prevention arrangements to reduce the impact of financial market volatility on the Company's operating costs, expected earnings and cash flow.

SUBSEQUENT EVENT

There was no occurrence of events that had a significant impact on the Group's operation, financial and trading prospects from January 1, 2023 to the date of this announcement.

ANNUAL GENERAL MEETING AND CLOSURE OF H SHARE REGISTER OF MEMBERS

The Company intends to convene the 2022 annual general meeting on May 25, 2023. The H share register of members of the Company will be closed from April 25, 2023 (Tuesday) to May 25, 2023 (Thursday) (both days inclusive) to determine H share holders' entitlement to attend and vote at the annual general meeting. In order to be entitled to attend and vote at the annual general meeting as H share holders, all the transfer documents of the Company accompanied by relevant share certificates, must be lodged to the H Share Registrar no later than 4:30 p.m. on April 24, 2023 (Monday). For the exact date in relation to the closure of share register of members, please refer to the circular of the 2022 annual general meeting to be issued by the Company in due course.

For the matters to be considered and approved at the 2022 annual general meeting and the specific arrangements of the 2022 annual general meeting, please refer to the circular of the 2022 annual general meeting to be issued by the Company in due course at a later date.

COMPLIANCE WITH THE CORPORATE GOVERNANCE CODE

From January 1, 2022 to December 31, 2022, the Company had complied with the all code provisions and all recommended best practices contained in Part 2 of the Corporate Governance Code as set out in Appendix 14 to the Listing Rules (the "**Stock Exchange Code**") except for code provision C.5.7.

Code provision C.5.7 of the Part 2 of the Stock Exchange Code stipulated that, if a substantial shareholder or a director has a conflict of interest in a matter to be considered by the board which the board has determined to be material, the matter should be dealt with by a physical board meeting rather than a written resolution. The Board originally proposed to convene a Board meeting on March 17, 2022 (the "**Meeting**") by way of a physical meeting to consider an issue which involved a material conflict of interest with the substantial shareholders and certain Directors, namely the "Resolution to Consider and Approve the Renewal of the Engineering Services Framework Agreement of CGN Power Co., Ltd. and the Proposed Annual Transaction Cap for the Relevant Years" (the "**Resolution**"). All employees of the Company were required to work from home from March 14, 2022 to March 20, 2022 according to the requirements of the relevant departments of pandemic prevention and control in Shenzhen published on March 13, 2022, and the Company decided to convene the Meeting by way of written resolutions.

The Company has been attaching great importance to corporate governance and took a number of measures to ensure that the Directors were fully informed of the relevant information of the resolutions and collect their opinions and voting results thereon via multiple possible ways. On February 24, 2022, the Company convened a pre-Board meeting special briefing session to report to all independent non-executive Directors on the resolutions, including the Resolution. The independent non-executive Directors fully expressed their opinions on the resolutions. On March 2, 2022, the Company sent a notice of the meeting and the resolution documents to all Directors to provide them with sufficient time to understand the relevant situation of the resolutions. On March 14, 2022, the Company decided to convene the Meeting, relevant Board committee meetings and independent non-executive Directors meeting by way of written resolutions, and then immediately communicated with all Directors to obtain their opinions on the matters to be considered, which were recorded in the meeting minutes and formed the resolutions of relevant meeting.

According to the features of the industry, we have established the nuclear safety committee under the Board, which enables us to enhance the supervision on nuclear safety and management for the Company. The nomination committee of the Board has established the board diversity policy with indicators, set up the standards of the board composition. We set up early schedules for the Board meetings, specialized committee meetings, supervisory board meetings, trainings for Directors and Supervisors and inspection planning throughout the year, reporting the information on operation and production of the Company to the Board in a regular manner.

COMPLIANCE WITH THE MODEL CODE FOR SECURITIES TRANSACTIONS BY DIRECTORS

The Company has formulated and adopted the Code for Securities Transactions by Directors and Specified Individuals, and has adopted the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 to the Listing Rules as the code of conduct regarding securities transactions of the Company by all Directors. According to the specific enquiry made to all Directors, all Directors have confirmed that they have strictly complied with the standards set out in the two codes mentioned above throughout the Reporting Period.

AUDIT AND RISK MANAGEMENT COMMITTEE

The Company has established the Audit and Risk Management Committee in compliance with the requirements of Rule 3.21 of the Listing Rules and the Stock Exchange Code with written terms of reference. The Board has delegated to the Audit and Risk Management Committee with written terms of reference. The Terms of Reference for the Audit and Risk Management Committee under the Board of Directors of CGN Power Co., Ltd. were prepared according to the relevant requirements of the Articles of Association of CGN Power Co., Ltd., the Company Law of the PRC, the Listing Rules, and A Guide for Effective Audit Committees published by the Hong Kong Institute of Certified Public Accountants. The terms of reference are detailed in the Terms of Reference for the Audit and Risk Management Committee under the Board of Directors of CGN Power Co., Ltd. and set out on the websites of the Company, the SZSE and the Stock Exchange. As at the date of this announcement, the Audit and Risk Management Committee comprises one non-executive Director (Mr. Gu Jian) and two independent non-executive Directors (Mr. Yang Jiayi and Mr. Tang Chi Cheung). Mr. Yang Jiayi, who possesses professional accounting qualification, acts as the chairman of the Audit and Risk Management Committee.

The Audit and Risk Management Committee has reviewed the 2022 annual results and the consolidated financial statements for the year ended December 31, 2022 of the Group prepared in accordance with the CASBE.

AUDITORS

KPMG Hauzhen LLP has audited the consolidated financial statements for the year ended December 31, 2022 prepared by the Company in accordance with the CASBE, and issued an unqualified audit opinion.

PUBLICATION OF ANNUAL RESULTS AND ANNUAL REPORT

This results announcement is published on the Stock Exchange's website (<http://www.hkexnews.hk>) and the Company's website (<http://www.cgnp.com.cn>), respectively.

The Company will despatch to the Shareholders in due course the 2022 Annual Report containing all the information required under the Listing Rules, which will also be published on the websites of the Company, the SZSE and the Stock Exchange.

By order of the Board
CGN Power Co., Ltd.*

Yin Engang

Chief Financial Officer, Joint Company Secretary and Board Secretary

The PRC, March 15, 2023

As at the date of this announcement, the Board of the Company comprises Mr. Gao Ligang as an executive Director; Mr. Yang Changli, Mr. Shi Bing, Mr. Feng Jian and Mr. Gu Jian as non-executive Directors; Mr. Li Fuyou, Mr. Yang Jiayi, Mr. Xia Ceming and Mr. Tang Chi Cheung as independent non-executive Directors.