



中國廣核電力股份有限公司
CGN Power Co., Ltd.*

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

Stock Code: 1816

*For identification purpose only

Clean Energy for Better Life

2022 Annual Report



Contents

Business at a Glance for the Year

2022 Major Events	1
Key Data for 2022	2
Business Model	7
Chairman's Statement	8
President's Review	12
Shareholder Value	17

Finance, Assets and Investment

Financial Performance and Analysis	22
Assets and Investment	26

Business Performance and Outlook

Industry Overview	30
Business Performance and Analysis	33
Future Outlook	44

Capitals

Production Capital	48
Intellectual Capital	51
Human Capital	55
Financial Capital	66
Environmental Capital	72
Social and Relationship Capital	74

Corporate Governance

Board of Directors, Supervisory Committee and Senior Management	80
Corporate Governance Report	87
Directors' Report	122
Audit and Risk Management Committee Report	139
Remuneration Committee Report	141
Nomination Committee Report	143
Nuclear Safety Committee Report	145
Supervisory Committee Report	147
Risk Management Report	152

Financial Report

Audit Report	164
Consolidated Balance Sheet	168
Balance Sheet of the Parent Company	170
Consolidated Income Statement	172
Income Statement of Parent Company	174
Consolidated Cash Flow Statement	175
Cash Flow Statement of the Parent Company	177
Consolidated Statement of Changes in Shareholders' Equity	178
Statement of Changes in Shareholders' Equity of Parent Company	179
Notes to the Financial Statements	180
Company Information	318

This 2022 Annual Report ("Annual Report") is the ninth annual report of CGN Power Co., Ltd. ("CGN Power", the "Company", "we" or "us") since its listing. We continue to adopt the International Integrated Reporting Framework published by the International Integrated Reporting Council ("IIRC", website: www.theiirc.org) in December 2013 as the major guideline for this Annual Report. In preparing this report, we have also followed the "Environmental, Social and Governance Reporting Guide" of The Stock Exchange of Hong Kong Limited ("Hong Kong Stock Exchange") as amended in December 2021 and referred to other relevant documents and guidelines such as "The Standards for Contents and Formats of Information Disclosure by Companies Publicly Offering Securities No. 2 – Contents and Formats of Annual Reports (Revision 2021)" of China Securities Regulatory Commission (the "CSRC") as published on June 28, 2021.

For continuous improvement of the quality of annual reports, we welcome valuable advice on the contents and formats of this Annual Report. Please give us feedback by filling out the feedback form at the end of this Annual Report.

Unless otherwise defined in this Annual Report, the terms used in this Annual Report shall have the same meanings as those defined in the 2021 Annual Report of the Company dated April 7, 2022. This Annual Report has been prepared in Chinese and English respectively. In case of discrepancy, the Chinese version shall prevail.

For 2022, we continue to publish the Environmental, Social and Governance Report (the "ESG Report") separately to report to the community, the public, shareholders and all relevant parties on more environmental, social and governance practices in 2022. For details, please refer to the 2022 Environmental, Social and Governance Report (the "2022 ESG Report") published on the websites of the Hong Kong Stock Exchange (www.hkexnews.hk) and our website at www.cgnp.com.cn on March 15, 2023.

Business at a Glance for the Year

CGN Power Co., Ltd. was established on March 25, 2014, listed on the Main Board of the Hong Kong Stock Exchange on December 10, 2014, and listed on the Shenzhen Stock Exchange (“SZSE”) on August 26, 2019.

CGN Power is the sole platform for nuclear power generation of China General Nuclear Power Corporation (中國廣核集團有限公司) (“CGNPC”). We build, operate and manage nuclear power plants (“NPP(s)”), sell electricity generated by these NPPs, and organize to develop the design and research & development (“R&D”) of NPPs.

Based on our principle of “Safety First, Quality Foremost, Pursuit of Excellence” and our work style focusing on “Strict Compliance, Prudent Decision-making, Detail-oriented and Fact-based Approach”, we are committed to nuclear power-based electricity supply and services, to create the best benefits for our customers, shareholders, employees and society, and strive to become a world-class nuclear power supplier and service provider with international competitiveness.

2022 MAJOR EVENTS



UNITS IN OPERATION:

On June 23, 2022, Hongyanhe Unit 6 commenced commercial operation.



APPROVED PROJECTS:

On April 20, 2022, Lufeng Unit 5 and Unit 6 were approved.



UNITS UNDER CONSTRUCTION:

On September 8, 2022,
Lufeng Unit 5 officially commenced construction.

On September 25, 2022,
Huizhou Unit 2^{Note} entered the equipment installation phase.

On November 3, 2022,
Cangnan Unit 1^{Note} entered the equipment installation phase.

On December 27, 2022,
Fangchenggang Unit 3 reached initial criticality.

Note: The nuclear power generating units under construction managed by the Group as entrusted by the controlling shareholder.

Business at a Glance for the Year

KEY DATA FOR 2022

ON-GRID POWER GENERATION:

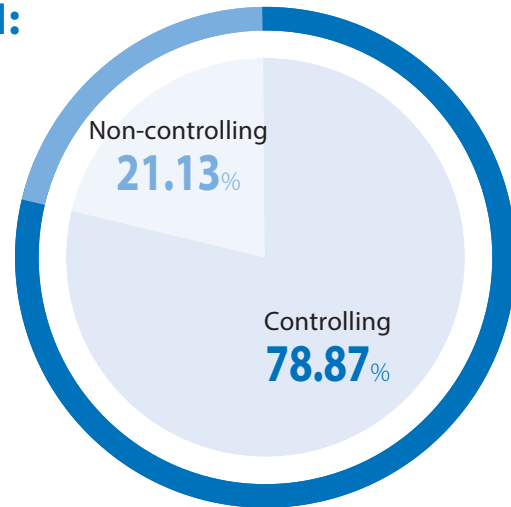
198,374.80 Gwh

EMISSION REDUCTION CONTRIBUTION:

Reduction of standard coal consumption of approximately

16,425.43 ten thousand tons

CO₂ emission for on-grid power generation (including our associates) in 2022



26 GENERATING UNITS IN OPERATION

with an installed capacity of

29,380 MW

7 GENERATING UNITS UNDER CONSTRUCTION^{NOTE}

with an installed capacity of

8,380 MW



Note: Including generating units managed by the Company as entrusted by the controlling shareholder.





REVENUE

RMB

82,822.40 million

↑ **increasing from**
2021 by **2.66%**

DIVIDEND

Dividend per Share RMB

0.087 (tax inclusive)



EARNINGS BEFORE INTEREST, TAX, DEPRECIATION AND AMORTIZATION (EBITDA)

RMB

35,909.97 million

↓ **decreasing from** 2021
(restated) by **2.51%**

EARNINGS BEFORE INTEREST, TAX, DEPRECIATION AND AMORTIZATION (EBITDA)

(excluding the effect of non-
recurring gains or losses)

RMB

35,728.08 million

↓ **decreasing from** 2021
(restated) by **3.02%**



NET PROFIT ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT COMPANY

RMB

9,964.85 million

↑ **increasing from** 2021
(restated) by **2.06%**

NET PROFIT ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT COMPANY

(excluding the effect of non-
recurring gains or losses)

RMB

9,769.65 million

↑ **increasing from** 2021
(restated) by **0.08%**

Note: For the details of non-recurring gains or losses, please refer to the notes to the financial statements in this report.

Business at a Glance for the Year

Financial Highlights

Highlights of consolidated income statement

	2022	Year ended December 31,			
		2021 Restated*	2020	2019	2018
Operating revenue	82,822,403,586.43	80,678,744,757.95	70,584,710,557.13	60,875,176,254.90	50,827,919,184.43
Operating costs	55,280,973,105.26	53,895,340,108.78	44,419,291,782.18	35,471,460,119.46	28,503,854,609.56
Total profit	18,699,175,021.10	18,165,985,817.29	16,850,121,476.21	16,555,095,116.02	14,899,475,758.39
Net profit	15,242,750,434.76	15,723,810,291.12	14,875,636,682.69	14,785,240,122.64	13,681,677,330.13
Net profit attributable to shareholders of the parent company	9,964,854,412.04	9,764,174,706.56	9,562,307,621.17	9,465,700,355.79	8,702,632,650.82
Non-controlling interests	5,277,896,022.72	5,959,635,584.56	5,313,329,061.52	5,319,539,766.85	4,979,044,679.31

Highlights of consolidated balance sheet

	2022	December 31,			
		2021 Restated*	2020	2019	2018
Total current assets	70,504,910,095.09	67,966,150,830.45	63,244,274,437.70	61,923,383,290.30	55,387,916,293.85
Total non-current assets	338,510,655,354.84	332,066,722,293.02	328,654,099,048.03	326,051,851,236.49	313,167,754,066.43
Total assets	409,015,565,449.93	400,032,873,123.47	391,898,373,485.73	387,975,234,526.79	368,555,670,360.28
Total current liabilities	76,132,435,027.77	77,320,114,705.06	77,152,753,519.13	67,017,899,711.71	60,625,091,431.14
Total non-current liabilities	174,953,208,572.02	171,762,461,516.35	173,115,013,708.69	185,663,467,323.62	194,804,928,821.93
Total liabilities	251,085,643,599.79	249,082,576,221.41	250,267,767,227.82	252,681,367,035.33	255,430,020,253.07
Total equity attributable to shareholders of the parent company	107,027,665,892.37	100,942,138,459.49	95,273,274,106.93	89,801,976,064.25	71,114,915,512.70
Non-controlling interests	50,902,255,957.77	50,008,158,442.57	46,357,332,150.98	45,491,891,427.21	42,010,734,594.51
Total shareholders' equity	157,929,921,850.14	150,950,296,902.06	141,630,606,257.91	135,293,867,491.46	113,125,650,107.21
Total liabilities and shareholders' equity	409,015,565,449.93	400,032,873,123.47	391,898,373,485.73	387,975,234,526.79	368,555,670,360.28

*: In 2022, the Group has implemented the relevant requirements and guidelines of the Accounting Standards for Business Enterprises promulgated by the Ministry of Finance in recent years, which mainly includes: 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" and "Determination of onerous contracts" 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)); and requirement of the "Accounting treatment for income tax effects of dividends related to financial instruments classified as equity instruments of the issuer" and "Accounting treatment for the change from cash-settled share-based payments to equity-settled share-based payments of a company" 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)). For details, please refer to Note (III) 31 to the financial statements.

Major Subsidiaries and Affiliated Companies as at December 31, 2022

1	75%	<p>Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司) (“GNPJVC”)</p> <p>GNPJVC is a Sino-foreign joint venture company established in the PRC on January 26, 1985 with 75% of its equity interests held by Guangdong Nuclear Power Investment Co., Ltd. (“GNIC”) and the remaining 25% by Hong Kong Nuclear Investment Co., Ltd. (香港核電投資有限公司) (“HKNIC”). GNPJVC owns Daya Bay NPP.</p>
2	100%	<p>Ling’ao Nuclear Power Co., Ltd. (嶺澳核電有限公司) (“Ling’ao Nuclear”)</p> <p>Ling’ao Nuclear is a limited liability company established in the PRC on October 4, 1995 with 70% and 30% of its equity interests held by the Company and GNIC, respectively. Ling’ao Nuclear owns Ling’ao NPP.</p>
3	93.88%	<p>Lingdong Nuclear Power Co., Ltd. (嶺東核電有限公司) (“Lingdong Nuclear”)</p> <p>Lingdong Nuclear is a limited liability company established in the PRC on September 15, 2004 with 25%, 30% and 45% of its equity interests held by the Company, GNIC and CGN Nuclear Power Investment Co., Ltd. (中廣核核電投資有限公司) (“CGN Investment”), respectively. Lingdong Nuclear owns Lingdong NPP.</p>
4	61.72%	<p>Yangjiang Nuclear Power Co., Ltd. (陽江核電有限公司) (“Yangjiang Nuclear”)</p> <p>Yangjiang Nuclear is a limited liability company established in the PRC on February 23, 2005 with 34%, 25% and 7% of its equity interests held by the Company, GNIC and CGN Industry Investment Fund Phase I Co., Ltd. (中廣核一期產業投資基金有限公司) (“CGN Fund Phase I”), respectively, and the remaining 17% and 17% by Guangdong Energy Group Co., Ltd. and CLP Nuclear Power (Yangjiang) Limited, respectively. Yangjiang Nuclear owns Yangjiang NPP.</p>
5	33.76%	<p>Fujian Ningde Nuclear Power Co., Ltd. (福建寧德核電有限公司) (“Ningde Nuclear”)</p> <p>Ningde Nuclear is a limited liability company established in the PRC on March 23, 2006 with 46% of its equity interests held by CGN Ningde Investment Co., Ltd. (中廣核寧核投資有限公司) and the remaining 44% and 10% by Datang International Power Generation Co., Ltd. (大唐國際發電股份有限公司) and Fujian Funeng Co., Ltd. (福建福能股份有限公司), respectively. Ningde Nuclear owns Ningde NPP.</p>
6	38.88%	<p>Liaoning Hongyanhe Nuclear Power Co., Ltd. (遼寧紅沿河核電有限公司) (“Hongyanhe Nuclear”)</p> <p>Hongyanhe Nuclear is a limited liability company established in the PRC on August 28, 2006 with 45% of its equity interests held by CGN Investment, and the remaining 45% and 10% by CPI Investment Nuclear Power Co., Ltd. (中電投核電有限公司) and Dalian State-owned Capital Management and Operation Co., Ltd. (大連市國有資本管理運營有限公司), respectively. Hongyanhe Nuclear owns Hongyanhe NPP. Hongyanhe Nuclear is an associate of the Company.</p>

Business at a Glance for the Year

7 **51%** **Taishan Nuclear Power Joint Venture Co., Ltd. (台山核電合營有限公司) (“Taishan Nuclear”)**
Taishan Nuclear is a limited liability company established in the PRC on July 5, 2007 with 12.5% of its equity interests held by the Company, 10% by GNIC, 47.5% by Taishan Nuclear Power Industry Investment Co., Ltd. (台山核電產業投資有限公司), and the remaining 30% by EDF International and its subsidiary EDF (China) Holding Ltd. Taishan Nuclear owns Taishan NPP.

8 **100%** **CGN Lufeng Nuclear Power Co., Ltd. (中廣核陸豐核電有限公司) (“Lufeng Nuclear”)**
Lufeng Nuclear is a limited liability company established in the PRC on February 20, 2008 and a wholly-owned subsidiary of the Company.

9 **36.6%** **Guangxi Fangchenggang Nuclear Power Co., Ltd. (廣西防城港核電有限公司) (“Fangchenggang Nuclear”)**
Fangchenggang Nuclear is a limited liability company established in the PRC on September 3, 2008 with 61% and 39% of its equity interests held by Guangxi Fangchenggang CGN Nuclear Power Industry Investment Co., Ltd. (廣西防城港中廣核核電產業投資有限公司) and Guangxi Guang Tou Energy Co., Ltd. (廣西廣投能源有限公司), respectively. Fangchenggang Nuclear owns Fangchenggang NPP.

10 **100%** **Suzhou Nuclear Power Research Institute (蘇州熱工研究院有限公司) (“SNPI”)**
SNPI was established in the PRC on May 13, 1978 and converted into a limited liability company on July 7, 2003. SNPI is a wholly-owned subsidiary of the Company.

11 **100%** **China Nuclear Power Engineering Co., Ltd. (中廣核工程有限公司) (“CGN Engineering”)**
CGN Engineering is a limited liability company established in the PRC on November 11, 1997 and a wholly-owned subsidiary of the Company.

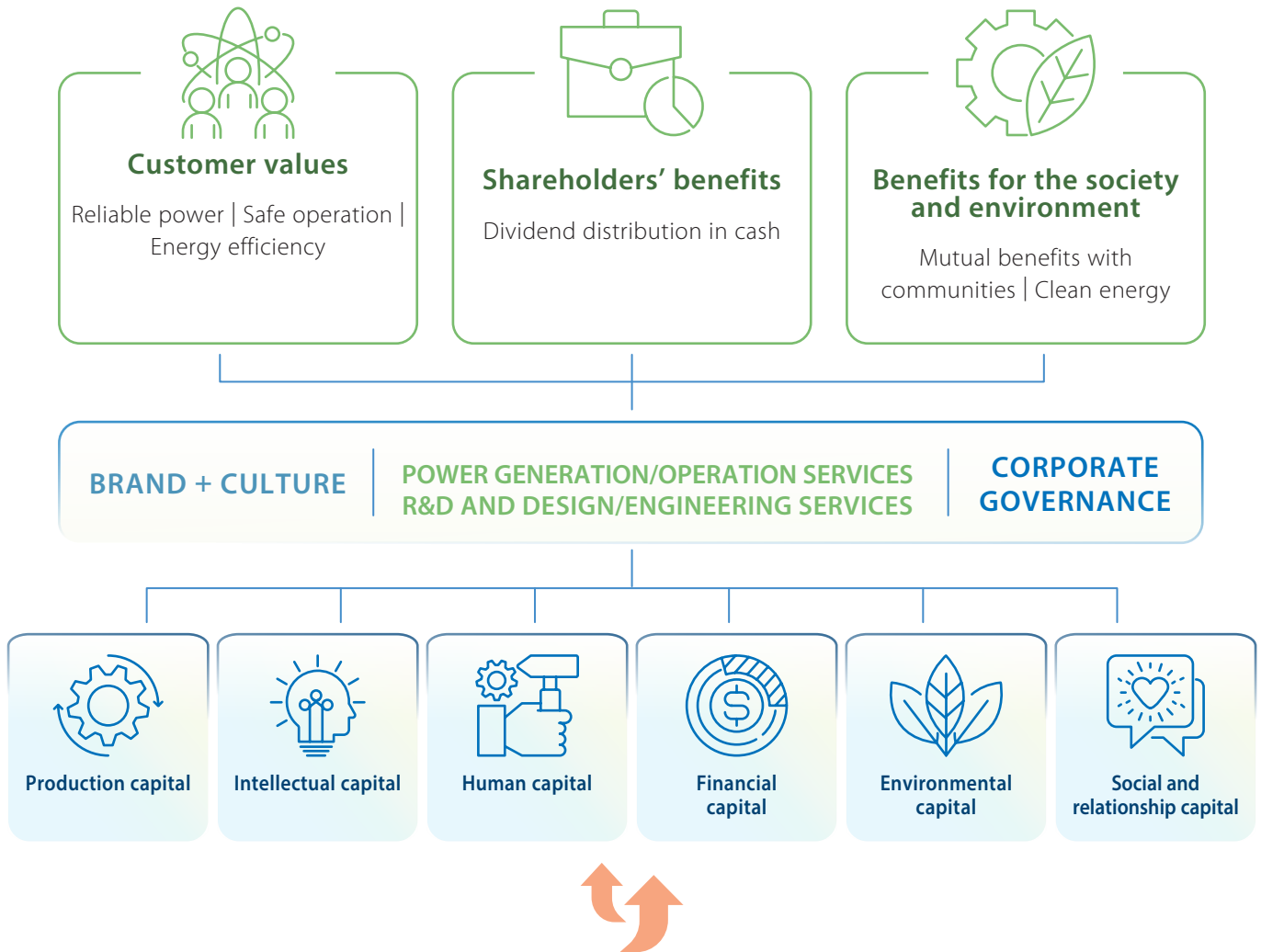
12 **87.5%** **Daya Bay Nuclear Power Operations and Management Co., Ltd. (大亞灣核電運營管理有限責任公司) (“DNMC”)**
DNMC is a limited liability company established in the PRC on March 12, 2003 with 87.5% of its equity interests held by GNIC and the remaining 12.5% by CLP Nuclear Power Operations & Management (China) Limited (中電核電運營(中國)有限公司), respectively.

13 **100%** **China Nuclear Power Technology Research Institute Co., Ltd. (中廣核研究院有限公司) (“CNPRI”)**
CNPRI is a limited liability company established in the PRC on November 8, 2006 and a wholly-owned subsidiary of the Company.

14 **100%** **China Nuclear Power Operations Co., Ltd. (中廣核核電運營有限公司) (“CGN Operations”)**
CGN Operations is a limited liability company established in the PRC on August 3, 2012 and a wholly-owned subsidiary of the Company.

Business Model

The core business of the Company focuses on nuclear power-based electricity supply and services. Through years of NPP construction and operation management, we have accumulated capital in areas such as production capital, intellectual capital, human capital, financial capital, environmental capital and social and relationship capital. Through continuous investment in various forms of capital, we have created the best benefits for our customers, shareholders, employees and the society.



Strategies

- ensure the safe and stable operation of all the generating units in operation at a high level, achieve high quality production of units under construction;
- adapt to the electricity market reform, formulate policies in respect to the specific conditions of each province, and strengthen marketing;
- reduce costs, enhance efficiency, and improve profitability;
- reinforce technology R&D, and strengthen sustainable development capabilities; and
- care for the environment, strengthen governance, and seek mutual development with the society.

Chairman's Statement

**Commit To Our
Goals And Make
Courageous Strides**



Yang Changli
Chairman

Dear shareholders,

2022 was a very important year. The 20th National Congress of the Chinese Communist Party (the “**20th CPC National Congress**”) was successfully held, which outlined the grand vision of building a modern socialist country in all respects. The novel coronavirus pandemic (the “**COVID-19**” or “**pandemic**”) remained volatile. While the evolution of the unprecedented changes in a hundred years has been accelerating, China coordinated pandemic control and economic development and reinforced its new strategy for energy security. With the comprehensive establishment of a clean, low-carbon, safe and efficient energy supply system, the establishment of a unified national power market system has been accelerated, and the trading volume in the power market hit a record high. In the face of the complex and volatile external environment, upholding our work style of “Strict Compliance, Prudent Decision-making, Detail-oriented and Fact-based Approach”,

we concentrated our efforts to assure nuclear safety, and thus maintained sound operations and further improved operating results. This is attributable to the long-term and unremitting efforts of all employees and the trust and full support of our shareholders, customers, partners, national ministries and local governments and other related parties. On behalf of the Board, I would like to express my sincere gratitude to our shareholders and all those who support the development of the Company.

For 2022, the Group recorded revenue of approximately RMB82,822 million, representing an increase of 2.66% over that of 2021, and net profit attributable to shareholders of the parent company of approximately RMB9,965 million, representing an increase of 2.06% over that of 2021 (restated). The Board recommended a payment of a dividend of RMB0.087 (tax inclusive) per share for the year, representing an increase of 3.6% as compared with 2021.



Chairman's Statement

We pay attention to cash dividends and shareholder returns, and have maintained an increase in the dividend amount and dividend ratio every year since our listing. Pursuant to the dividend distribution plan for the coming five years (2021-2025) of the Company approved at the general meeting, we propose a dividend ratio of 44.09% this year, achieving an increase for two consecutive years as compared to the dividend ratios of 43.58% for 2021 and 42.25% for 2020.

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. Promoting the high-quality development of nuclear energy is of great strategic significance for optimizing the national energy structure, ensuring energy supply security, building a new energy system, and supporting the achievement of the national goals of "achieving peak carbon dioxide emissions" and "carbon neutrality" (the "Dual Carbon Goals").

As such, we have firm confidence in the development prospects of nuclear energy as a stable, efficient and clean energy in the process of green and low-carbon transformation of the energy structure. In light of the strategic opportunity for the development of the nuclear energy industry, we believe that our earlier efforts and experience have created reliable first-mover advantages for the Company's future development and accumulated promising vitality.

In 2022, as China approved new nuclear power projects at a faster pace, five nuclear power projects, including our Lufeng Unit 5 and Unit 6, were approved. We will carefully complete the preliminary preparation and related filing work of our projects, enhance the confidence of the country and the society in nuclear energy with safe and stable operation performance, and promote the early approval of more new nuclear power projects. We further reinforced and improved our nuclear power operation capabilities to ensure the safe and stable operation of our nuclear power units in operation. We also fully utilized the advantages of base load power supply to fulfill our responsibilities as a nuclear power company in addressing the power demand of society. Meanwhile, we also actively explored the room to improve the benefits of comprehensive use of nuclear energy. Upon official commencement of operation of the nuclear heating demonstration project at the Hongyanhe Nuclear Power Base, we took our first step in the comprehensive use of nuclear energy.

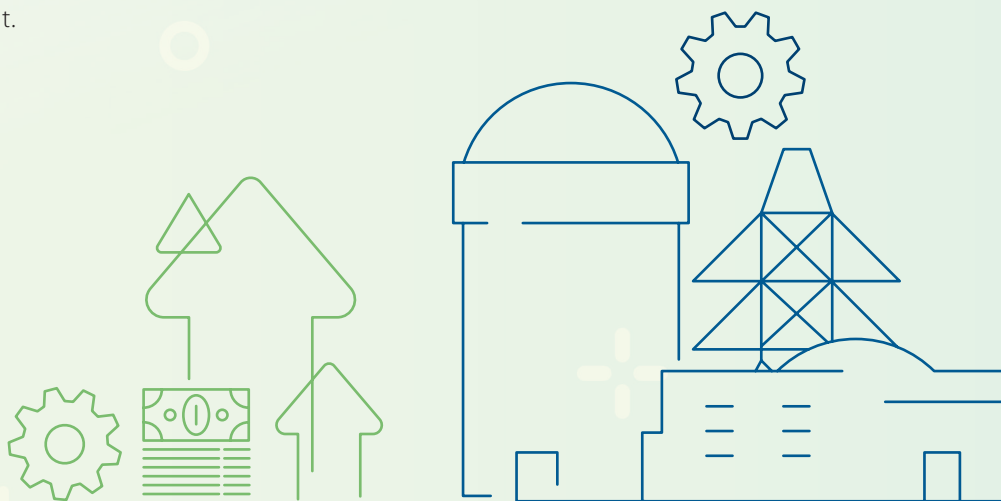
We firmly pushed ahead the construction of our nuclear power projects under construction with high standards, and achieved the high-quality commissioning of Hongyanhe Unit 6. As the first HPR1000 reactor of the Company, Fangchenggang Unit 3 has completed its first grid connection on January 10, 2023, and is currently at a critical moment when it is about to commence operation. We will complete various tests in an orderly manner to ensure the high-quality commissioning of our power generating units. In the meantime, we will also make efforts to reflect on the feedback from our experience so as to lay a solid foundation for the future mass construction of HPR1000 reactors and the safe and stable operation of our power generating units.

We attach great importance to technology R&D and the transformation and application of R&D outcomes, and continue to strengthen investment in technology R&D. Regarding the Guangdong-Hong Kong-Macao Greater Bay Area as our base, we have built the South China Atomic Energy Science and Technology Innovation Center (中國南方原子能科學與技術創新中心) which focuses on nuclear energy advanced technologies and technological innovations, and deployed three R&D bases with each in Shenzhen, Yangjiang and Zhongshan to give full play to the advantages of these regions, attract top scientific research personnel and technological innovation talents, and build a solid foundation for the our long-term development.

Despite the increasing complexity of the global political and economic environment at present, the fundamentals of long-term positive economic growth remain unchanged in China, and the energy revolution with the theme of safety and low carbon is also unfolding in unprecedented ways and speed. In response to the opportunities and development challenges arising from such an era, we must firmly adhere to our original aspiration and determination to develop nuclear energy and safeguard nuclear safety. Aiming at excellent performance as always, we are committed to our goals and make courageous strides to become a world-class nuclear energy enterprise with high-quality development at a faster pace and create long-term value for the society, shareholders and employees.

Yang Changli
Chairman

March 15, 2023



President's Review

**Determined To
Ascend To The Best
And Forge Ahead**



Gao Ligang

President

In 2022, we further put our work style focusing on “Strict Compliance, Prudent Decision-making, Detail-oriented and Fact-based Approach” into practice and rose to changes and challenges in the external environment in an active and orderly manner, in order to ensure the stability of our business operations and provide safe and reliable power supply for the society. During the year, the power demand and supply may run tight during the peak period in certain regions of the PRC. We seized the opportunity and accomplished our annual operation target well. I hereby present a summary of the key work and performance of the Company for the year and outline the major plans for the next year. The detailed analysis of the Company’s business is set forth in the relevant sections of this Annual Report.

Safety Management

Ensuring the absolute safety of nuclear power is the responsibility of nuclear power companies. We always adhere to the concept of “Nuclear Safety is Paramount” and the basic principles of “Safety First, Quality Foremost, Pursuit of Excellence”, and implemented these concepts and principles in every specific work step of the project construction, production and operation of NPPs.

Under the unified leadership of the State, we continue to accumulate experience in pandemic prevention and control, and improve measures for precise prevention and control, so as to ensure the safe and stable operation of our nuclear power generating units and the orderly construction of our nuclear power generating units under construction while effectively safeguarding our employees as well as the employees of our contractors.

In 2022, the chairman and senior management of the Company respectively led inspection teams to carry out special inspections on production safety at each nuclear power base for the third consecutive year to strengthen safety management on a systematic basis, with a completion rate of over 99% for special campaigns, achieving a successful conclusion of the three-year campaign for production safety rectification. To implement the Action Plan for Safety and Quality Improvement in the Nuclear Power Industry (2022-2025) 《核電行業安全質量提升行動計劃(2022-2025)》 of the PRC, we formulated dozens of improvement measures and implemented them one by one, with a completion rate of 100% for such plan in 2022. We formulated and implemented the Management Framework for Nuclear Power Project Construction 《核電工程建設管理大綱》 to improve our stratified nuclear power project construction quality control system, give full play to the advantages of specialization, and achieve efficient coordination.

In 2022, our safety management system operated effectively and we maintained our safety indicators at a sound level. No level 2 or above event under the International Nuclear and Radiological Event Scale 《國際核事件分級表》 (“INES”) set by the International Atomic Energy Agency (“IAEA”) occurred in all units in operation.

Safety management is a never-ending journey. At no time does it allow for satisfaction or negligence. We must remain vigilant and in awe at all times, and guard nuclear safety with a highly responsible attitude towards the country and society.

President's Review

Operation Management

We firmly believe that we will be able to respond to various changes and challenges in external environment in a composed manner only if we keep on examining and challenging ourselves while constantly improving our management and core competitiveness. In 2022, the electricity consumption in the PRC increased by 3.6% year on year, with certain regions experiencing power supply tensions during the peak period. All operating nuclear power generating units that we managed maintained safe and stable operation, demonstrating the effectiveness of lean management. In pursuit of greater or full load power generation, we strive to provide safe, reliable and economical clean power for the society.

Among various performance indicators, "Capacity Factor" best reflects the unit's operation and maintenance performance. In 2022, the average capacity factor of the 26 nuclear power units in operation of the Company reached about 90%, achieving worldwide advanced level for five consecutive years. The average utilization hours of nuclear power units throughout the year were 7,311 hours. Excluding Taishan Unit 1, the average utilization hours of the remaining 25 nuclear power units would reach 7,510 hours (average utilization hours for the latest three years was 7,451 hours).

Affected by the COVID-19 outbreak, the refuelling outage work at our NPPs faced big challenges. We planned ahead, organized carefully, and improved contingency plans. All 19 refuelling outages planned for the year were successfully completed. Both the outage period and outage quality met expected targets.

Project Construction

Adopting our HPR1000 technology, Lufeng Unit 5 and Unit 6 were approved by the State in April 2022, and Lufeng Unit 5 officially commenced construction in September.

The repeated COVID-19 outbreaks have continued to affect the construction resources of our NPP projects to a certain extent. We strengthened the communication and coordination regarding the resources in the upstream and downstream of the industrial chain in a targeted approach, and optimized construction organization, in order to ensure that project quality and progress are always under control. In late June 2022, Hongyanhe Unit 6 commenced operation with high quality, marking the successful conclusion of our mass construction of nuclear power units adopting CPR1000 and ACPR1000 technology. Affected by the pandemic, the commissioning and related technical review and verification work of Fangchenggang Unit 3 before its grid connection was slightly delayed. After objective evaluation, we adjusted the construction plan of Fangchenggang Unit 3 in time. Fangchenggang Unit 3 has completed its first grid connection in early January 2023, and various preparatory work for testing before commercial operation is underway orderly.

Technology R&D

We continue to strengthen our efforts and investment in technology R&D and innovation with an aim to reserve core technologies for the long-term development of the Company while solving key problems encountered in project construction, production and operation processes through technological innovation, which improve the safety and economic efficiency of nuclear power.

As such, we have built the South China Atomic Energy Science and Technology Innovation Center (中國南方原子能科學與技術創新中心) and deployed three R&D bases with each in Shenzhen, Yangjiang and Zhongshan to promote technological innovation, thereby consolidating our reserve of core technologies.

In 2022, the number of patents we have applied for reached 1,387, of which 854 obtained patent authorization. In particular, two of our invention patents were awarded the 23rd China Patent Silver Award issued by the China National Intellectual Property Administration, and six of our invention patents were awarded the Excellence Award. The introduction and application of these scientific research results are explained in detail in the section headed “Intellectual Capital” of this Annual Report and our 2022 ESG Report.



President's Review

“Tightening our Belts”

In 2022, we strengthened the implementation of our “tightening our belts” campaign. Under the premise of ensuring safe production, the Company strictly controlled various non-essential and non-urgent expenses. While controlling risks, we seized market opportunities in increasing our direct financing in the bond market and restructuring the interest rates of our existing debts, which achieved an appropriate reduction in finance costs.

Future Outlook

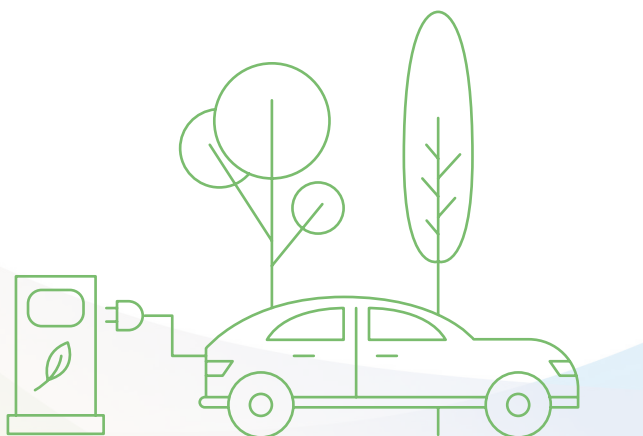
In 2023, China's overall economic operations are expected to stage a comeback. According to the China Electricity Council (the “CEC”) forecast, the electricity consumption in the PRC is expected to increase by around 6% under normal weather conditions. The PRC will generally experience a tight balance between demand and supply in power generation. Demand and supply of power will be tight in certain time periods and regions. Ensuring the stable operation of all nuclear power generating units in operation remains our most important task. Fangchenggang Unit 3 will commence commercial operation in the first half of 2023. We will pull out all the stops to ensure the high-quality commissioning of our new nuclear power generating units while striving to facilitate the progress of obtaining approvals for new nuclear power projects.

In 2023, we will have 10 nuclear power generating units participating in market trading in Guangdong Province, and electricity traded in the market will exceed 19.5 billion kWh. We actively planned and developed customers through various channels, and have completed the signing of annual trading electricity sales contracts by the end of 2022. We are currently actively participating in monthly bidding and spot trading in the province. In other provinces and regions, the on-grid power generation of the two nuclear power generating units of Fangchenggang Nuclear and the four nuclear power generating units of Ningde Nuclear will all participate in market trading, and the proportion of electricity traded in the market to on-grid power generation of the six nuclear power generating units of Hongyanhe Nuclear in 2023 will slightly increase as compared with 2022. In addition to enhancing marketing capabilities, we will also continue to optimize the operation and maintenance costs of nuclear power generating units through lean management and continue to improve the economic benefits of nuclear power by optimizing project construction costs through technological innovation.

2023 will be a critical nexus to implement the “14th Five-Year Plan”. Driven by the goal of becoming a world-class nuclear energy enterprise, we are determined to ascend to the best and forge ahead, and continue to work hard to achieve high-quality development of the Company with all our partners.

Gao Ligang
President

March 15, 2023



Shareholder Value

The Board, the management and employees of the Company are responsible for and obliged to create value for the shareholders. As such, the Company will continue to maintain stable operational development and steady growth, while it will take an active and transparent approach with integrity, stay in close contact with its shareholders and safeguard the shareholders' trust and confidence on the Company with rewards to them.

As at December 31, 2022, CGN Power had 256,309 registered shareholders (including 253,020 holders of A shares and 3,289 holders of H shares), but the actual number of investors would be much greater if one takes into account individuals and institutions holding equity interests in the Company indirectly through intermediaries such as nominees, investment funds, the Hong Kong Central Clearing and Settlement System (CCASS), the Shanghai-Hong Kong Stock Connect, and the Shenzhen-Hong Kong Stock Connect.

Dividend distribution

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 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 by shareholders 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.

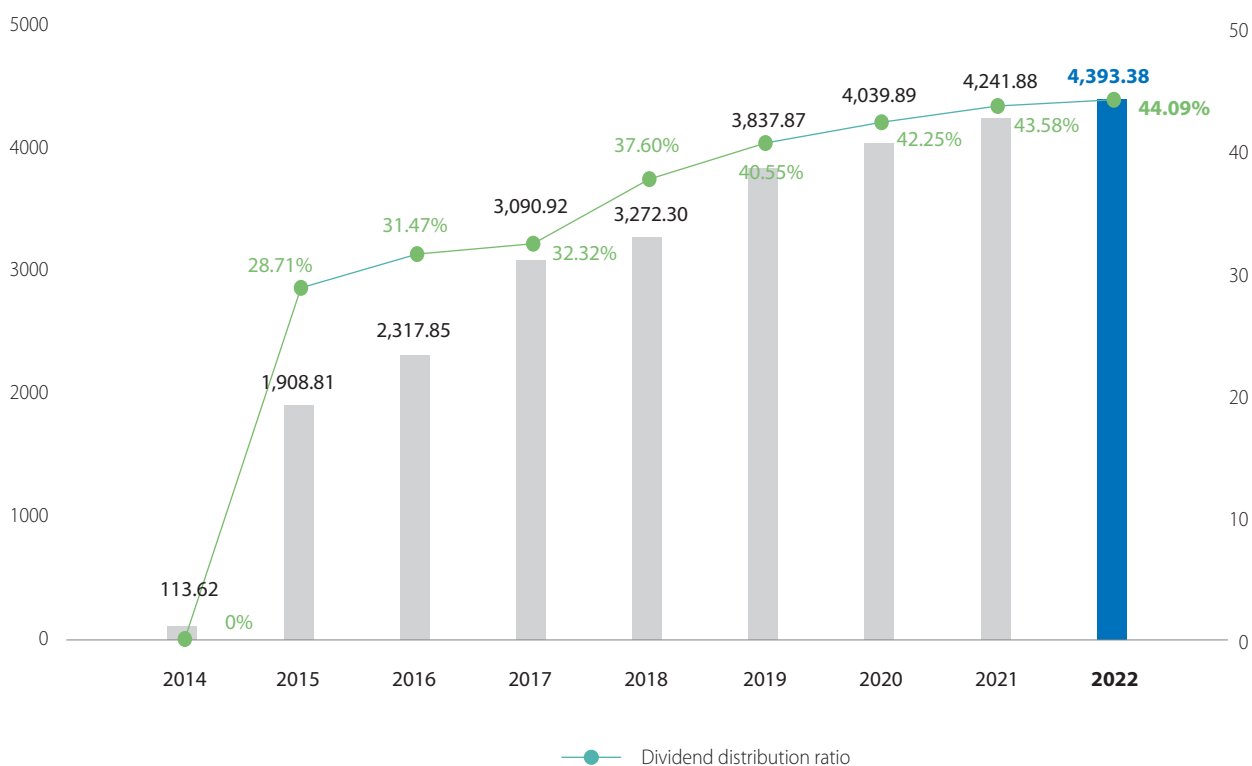
The Board has proposed to declare a final cash dividend of RMB0.087 (tax inclusive) per share for the year from January 1, 2022 to December 31, 2022 to our shareholders as at the record date of dividend payment. The dividend distribution ratio of the final dividend of this year (total dividends/net profit attributable to shareholders of the parent company*100%) was approximately 44.09%. 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.

Shareholder Value

Dividend distribution per year since the listing

Year	Dividend per share (Unit: RMB (tax inclusive))	Total dividends (Unit: RMB million)	Dividend distribution ratio
2014	0.0025	113.62	–
2015	0.042	1,908.81	28.71%
2016	0.051	2,317.85	31.47%
2017	0.068	3,090.92	32.32%
2018	0.072	3,272.30	37.60%
2019	0.076	3,837.87	40.55%
2020	0.080	4,039.89	42.25%
2021	0.084	4,241.88	43.58%
2022	0.087	4,393.38	44.09%

Unit: RMB million



Shareholders' Diary 2023



January

- Announcement of 2022 fourth quarter operation briefings
- 2022 fourth quarter operation teleconference



March

- Announcement of 2022 A share annual report and H share annual results announcement
- 2022 annual results promotion
- Publication of 2022 ESG Report



May

- 2022 annual general meeting



August

- Announcement of 2023 A share interim report and H share interim results announcement
- Announcement of 2023 H shares interim report
- 2023 interim results promotion



November

- Participation in an online group reception day for investors of listed companies



February

- 2023 first EGM



April

- Announcement of 2023 first quarter operation briefings
- Announcement of 2023 A share first quarterly report
- 2023 first quarter operation teleconference



July

- Announcement of 2023 second quarter operation briefings
- 2023 second quarter operation teleconference
- Distribution of 2022 final dividend



October

- Announcement of 2023 A share third quarterly report
- 2023 third quarter operation teleconference

Note: Any changes to the above dates will be announced on the website of the Company.



FINANCE, ASSETS AND INVESTMENT

22 Financial Performance and Analysis

26 Assets and Investment





Financial Performance and Analysis

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

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 RMB'000	2021 RMB'000 <i>(Restated)</i>	Fluctuations increase/ (decrease) RMB'000	Percentage change 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 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.



Financial Performance and Analysis

REVENUE FROM OPERATIONS

	For the year ended December 31,			
	2022 RMB'000	2021 RMB'000	Fluctuations increase/ (decrease) RMB'000	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	82,822,403.59	80,678,744.76	2,143,658.83	2.7

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 RMB'000	2021 RMB'000	Fluctuations increase/ (decrease) RMB'000	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	55,280,973.11	53,895,340.11	1,385,633.00	2.6

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 RMB'000	December 31, 2021 RMB'000	Fluctuations increase/ (decrease) RMB'000	Percentage change increase/ (decrease) %
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 RMB'000	2021 RMB'000	Fluctuations increase/ (decrease) RMB'000	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

Assets and Investment

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.

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

-
- 30 Industry Overview
 - 33 Business Performance and Analysis
 - 44 Future Outlook



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, and will still be in the long-run, 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
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年全国电力工业统计快报》 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.

Industry Overview

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.

Business Performance and Analysis

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.

Business Performance and Analysis

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

Business Performance and Analysis

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.

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.





The mission of refueling outage



Refueling

The NPP must replace part of the nuclear fuel at the end of fuel life



Testing

In-service inspection and regular testing of equipment are conducted according to regulatory requirements



Modification

Modification to the system or equipment conducted during refueling outage to eliminate and solve the defects in design or installation of power generating units, ageing of equipment and to perform technical updates



Maintenance

Preventive and corrective maintenance conducted to enhance the operation capability for the next fuel cycle



Refueling outage

A cycle for nuclear power generating unit refueling outage (18 months))



Initial outage

The initial nuclear power generating unit refueling outage (in general 12 months)



10-year outage

Conducted every 10 years after the initial outage



To ensure that the nuclear power generating units maintain good operating conditions in the next cycle according to the design requirements

“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.

Business Performance and Analysis

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		
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%	0.26%
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.

Business Performance and Analysis

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.

Business Performance and Analysis

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.

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.



CAPITALS

- 48 Production Capital
- 51 Intellectual Capital
- 55 Human Capital
- 66 Financial Capital
- 72 Environmental Capital
- 74 Social and Relationship Capital





Production Capital



Our production capital is mainly the nuclear power units we manage (including those in operation and under construction), as well as the ongoing optimized management strategies. With these capitals, we continue to provide customers with stable and reliable power.



Nuclear Power units in operation:

26 units



Nuclear power units under construction^{Note:}

3 units



Nuclear power units proposed to be constructed (approved):

1 unit

Note: Excluding Huizhou Unit 1 and Unit 2 and Cangnan Unit 1 and Unit 2 managed by the Company as entrusted by the controlling shareholder of the Company. Huizhou Nuclear Power Project and Cangnan Nuclear Power Project use HPR1000 technology.

1 Unit 1 and Unit 2 of Daya Bay NPP:

Located in Shenzhen City of Guangdong Province, Daya Bay NPP has two nuclear power generating units in operation, both of which have a single-unit installed capacity of 984MW and use M310 technology. Daya Bay NPP is a large commercial PWR NPP that was built in the PRC by utilizing foreign Investment, advanced technology and management experience. Unit 1 commenced commercial operation on February 1, 1994 and is the first commercial nuclear power unit that commenced commercial operation in the PRC.

Unit 1 and Unit 2 of Ling'ao NPP:

Located in Shenzhen City of Guangdong Province, Ling'ao NPP is adjacent to Daya Bay NPP. It has two nuclear power generating units in operation, both of which have a single-unit installed capacity of 990MW and use M310 technology. Ling'ao NPP is the second large-scale commercial NPP built in Guangdong Province following Daya Bay NPP. Leveraging our experience gained in the construction of Daya Bay NPP, Ling'ao NPP met international standards for NPP operation design and construction with fully localized project management, construction and installation, commissioning and operations preparation, and partially localized design and equipment manufacturing.

Unit 1 and Unit 2 of Lingdong NPP:

Located in Shenzhen City of Guangdong Province, Lingdong NPP is adjacent to Daya Bay NPP and Ling'ao NPP. It has two nuclear power generating units in operation, which have a single-unit installed capacity of 1,087MW and use CPR1000 technology. Lingdong NPP is the third large-scale commercial NPP built in Guangdong Province following Daya Bay NPP and Ling'ao NPP. It is a demonstration project for the PRC's domestically developed and modified CPR1000 gigawatt-level nuclear power technology, and is also the PRC's first gigawatt-level NPP designed, manufactured, constructed and operated in reliance upon the PRC's domestic service providers and equipment suppliers.

2 Unit 1 to Unit 6 of Yangjiang NPP:

Located in Yangjiang City of Guangdong Province, Yangjiang NPP has six nuclear power generating units in operation with a single-unit installed capacity of 1,086MW. Unit 1 to Unit 4 of Yangjiang NPP use CPR1000 series technology, and Unit 5 and Unit 6 use ACPR1000 technology. Yangjiang NPP is a key energy development project under the PRC's 11th Five-Year Plan, represents a major milestone in the development of nuclear power in the PRC in scale, series and standardization, and plays an important role in the localization of nuclear power equipment production.

3 Unit 1 to Unit 4 of Ningde NPP:

Located in Ningde City of Fujian Province, Ningde NPP has four nuclear power generating units in operation, which have a single-unit installed capacity of 1,089MW and use CPR1000 technology. Ningde NPP is the first NPP that commenced commercial operation in Fujian Province of the PRC.

4 Unit 1 to Unit 6 of Hongyanhe NPP:

Located in Dalian City of Liaoning Province, Hongyanhe NPP has six nuclear power generating units with a single-unit installed capacity of 1,119MW. Unit 1 to Unit 4 of Hongyanhe NPP use CPR1000 technology, while Unit 5 and Unit 6 use ACPR1000 technology. Hongyanhe NPP is the first NPP that commenced commercial operation in Northeast PRC.

5 Unit 1 to Unit 4 of Fangchenggang NPP:

Located in Fangchenggang City in Guangxi Zhuang Autonomous Region, Fangchenggang Phase I includes Unit 1 and Unit 2 which are in operation with a single-unit installed capacity of 1,086MW. Unit 1 and Unit 2 use CPR1000 technology. Fangchenggang Phase II includes Unit 3 and Unit 4 which are still under construction with a single-unit installed capacity of 1,180MW. Unit 3 and Unit 4 use HPR1000 technology. Fangchenggang NPP is the first NPP in western PRC.

6 Unit 1 and Unit 2 of Taishan NPP:

Located in Taishan City of Guangdong Province, Taishan NPP has two nuclear power generating units in operation with a single-unit installed capacity of 1,750MW. Both nuclear power generating units use EPR technology. Taishan NPP was invested and constructed by a Sino-French joint venture and adopts the third-generation nuclear power technology of EPR.

7 Unit 5 and Unit 6 of Lufeng NPP:

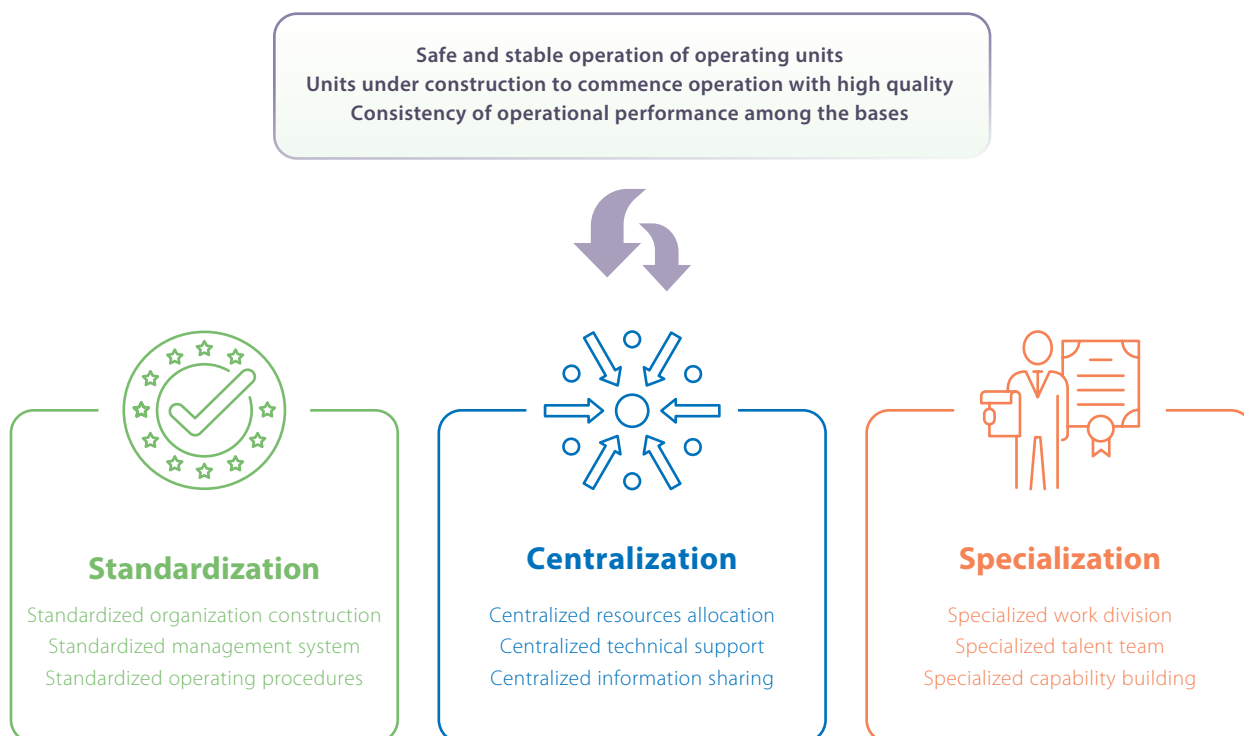
Located in Lufeng City in Guangdong Province, Lufeng Unit 5 is still under construction, while Lufeng Unit 6 is approved and pending for official commencement of construction. Both units have a single-unit installed capacity of 1,200MW and use HPR1000 technology.

Management Strategy

Since the Daya Bay NPP commenced commercial operation, the number of nuclear power generating units in operation and under construction managed by the Company gradually increased. The number of nuclear power bases increased from 1 to multiple bases across different provinces, and the applied nuclear power technology advanced from second-generation to third-generation, which increased the management scope and management difficulty of the Company. We continue to optimize our management strategies as always. We continued to promote nuclear power safety and leadership building. We carried out multi-layered safety supervision and evaluation, deepened the SCS management, established risk classification and rectified potential hazards, and constantly reinforced the production safety risk management in our multi-site plants, which enabled the Company to adapt to changes of internal and external situations, thereby promoting our ongoing improvement in operational level and performance in the process of growing business scale.

SCS Management

To maintain the safe and stable operation of all operating units, ensure commencement of commercial operation of units under construction with high quality and achieve good operational performance of all bases, the Company has implemented SCS management on all nuclear power bases.



Production Capital

For standardization, we established the OPST (Organization, Procedure and process, Knowledge and skill and System tools) management model for key operating areas, which are unified organization and management system, unified skill standards and procedure and process system, unified job qualification and authorization training system, and unified operation management tools.

For centralization, we continuously enhanced economy of power generating units and maximized overall value through centralized management such as by means of optimized resources allocation, effective operation of centralized platform and information sharing. We have established a centralized tendering center, and continued to facilitate standardization and informationization construction in respect of tender management, spare parts management and other aspects. We have enhanced our management efficiency by making full use of big data, gradually expanded the centralized procurement scope of spare parts and common materials, implemented resources allocation, improved our bargaining power for centralized procurement, optimized procurement channels, and achieved huge cost effectiveness.

For specialization, the Company owns specialized companies including CGN Operations, CNPRI, SNPI and CGN Engineering, thus offering specialized services for NPPs in respect of refuelling outage, engineering modification, equipment management, spare parts management as well as design and construction of NPPs. In addition, based on the production, operation and management features of NPPs, we pooled superior resources of NPPs and specialized companies to establish peer groups (the “PG Groups”) with 22 functions. Each PG Group comprises specialized technical managers from the Company, each NPP and specialized companies. The PG Groups focus on inter-organization coordination and management in respect of aspects including communication and exchanges, problem-driven approach and capability cultivation. They provide targeted solutions to common technical problems of NPPs with the help of our professional team, promote the application of new tools, new technologies and good practice, enhance professional capabilities in various areas as well as continuously facilitate each NPP to pursue excellence.



Intellectual Capital



Strong technical foundation and technical R&D capabilities are among the core resources for our sustainable development. We always focus on technical R&D that improves our business performance to enhance our competitiveness and growth.

Selection and Development of Nuclear Technologies

We focus on the development of PWR technology. Since the construction of Daya Bay NPP in 1980s, we have persisted in the path of **“Introduction, Digestion, Assimilation and Innovation”** (“**引進、消化、吸收、創新**”), and have consistently improved our technology.

On the foundation of the M310 reactor technology used by Daya Bay NPP, we implemented a series of major technological improvements (including 16 safety technology improvements) to create the advanced second-generation CPR1000 nuclear power technology with our own brand. In reference to the latest international safety standards and feedbacks of the latest experience, we have successively implemented 28 and 31 safety technical improvements to develop and create the ACPR1000 technology which has the major features of third-generation nuclear power technology.

We researched and developed the proprietary intellectual property rights of the third-generation nuclear power technology HPR1000. HPR1000 is a gigawatt-level third-generation nuclear power technology with proprietary intellectual property rights developed on the basis of experience, technology and talents from the PRC's NPP design, construction, operation and development for more than three decades. On the basis of the demonstration project and under the premise of ensuring safety, we continued to promote design optimization and technical improvement with the objectives of improving the economical efficiency, advancement and self-reliance level of HPR1000, which has laid the foundation for enhancing the competitiveness of HPR1000.

Meanwhile, we strengthen nuclear technological innovation, continue to track the latest development of fourth-generation reactor technology at home and abroad, and actively participate in the R&D of related technologies to maintain competitiveness and lay the foundation for the sustainable development of the Group.

Intellectual Capital

Independent R&D Platform

We have developed R&D platform of the Company. We own one national engineering and technology center, one national key laboratory and five national R&D centers, and have established a number of large laboratories of advanced level within the industry.

In 2022, we faced the cutting-edge technologies in the world, focused on nuclear energy advanced technologies and technological innovations such as the fourth-generation reactor type and advanced nuclear fuel, and regarded the Guangdong-Hong Kong-Macao Greater Bay Area as our base. We have built the South China Atomic Energy Science and Technology Innovation Center (中國南方原子能科學與技術創新中心), and deployed three R&D bases with each in Shenzhen, Yangjiang and Zhongshan. Our aim is to give full play to the advantages of being at the forefront of reform and opening up, attract top scientific research personnel and technological innovation talents, accelerate R&D of key technologies and technological innovation, and continuously consolidate our technical strength.

The establishment of independent R&D platform will help shorten the transformation cycle of scientific and technological achievements, improve the maturity, matching and engineering level of existing scientific and technological achievements, accelerate the reform of our production technology, promote the upgrading of technology, and provide us with basic technical support for enhancement of R&D capacity. As at the end of 2022, we had more than 4,700 R&D staff.



Five national energy R&D centers:

National Energy NPP Nuclear Graded Equipment R&D Center

National Energy Marine NPP Technology R&D Center

National Energy Advanced Nuclear Fuel R&D (Experiment) Center

National Energy NPP Operation and Life Management R&D Center

National Energy Nuclear Power Engineering Construction Technology R&D (Experimental) Center

Three bases of South China Atomic Energy Science and Technology Innovation Center (Under Construction) with each in Shenzhen, Yangjiang and Zhongshan

One national engineering and technology center

National NPP Safety and Reliability Engineering Technology R&D Center

One national key laboratory

State Key Laboratory of Nuclear Safety Monitoring Technology and Equipment



R&D of Key Technologies

Relying on our own R&D platforms, we continue to study and solve key technical issues in the construction and operation of NPPs, and continuously improve the safety, reliability and economy of units. We have also promoted part of the key technologies to markets outside of the Group, thus increasing our business opportunities.

We have successfully developed a number of technical innovations, and we will select some of our important achievements every year to introduce in our annual report. We continue to introduce some of the major technologies recently applied as follows.

Name of technology/ equipment	Summary of technology	Benefits
Hydrostatic shaft seal assembly of main pump	This product is a key component of main pump, and is mainly used for the shaft seal of main pump in NPPs. Under normal operation and accident conditions, the radioactive primary circuit water flowing through the main pump can be sealed and controlled to avoid leakage.	Enhanced economical efficiency and safety
	This product reaches the international advanced level of similar products.	
	This product has been installed and applied in Hongyanhe Unit 6 and has achieved stable operation.	
Primary circuit water filter cartridge	This product is mainly used to filter the particle impurities in the auxiliary system of the primary circuit of the NPPs, capture the radioactive hot particles in the system, and reduce the radioactive source items.	Enhanced economical efficiency and safety
	This product reaches the international advanced level of similar products in terms of performance.	
	This product has been applied in Hongyanhe, Ningde, Daya Bay and other NPPs with sound performance.	

Intellectual Capital

Intellectual Property Rights

Technical improvements and innovations can enhance the operational and safety performance of NPPs, and at the same time we also pay attention to acquire intellectual property rights accordingly during the course of technical R&D. We believe that owning these intellectual property rights will strengthen our competitiveness.

Statistics of our intellectual property rights from 2014 to 2022

Year	Patent (Item)						Authorship Registration (Item)	
	Patent Application			Patent Licensing			Software	Others
	Invention	Utility Model	Design	Invention	Utility Model	Design		
2014	292	198	0	54	249	1	51	4
2015	285	229	0	101	241	0	107	2
2016	458	272	2	239	234	6	128	22
2017	437	413	3	269	267	1	140	25
2018	600	443	3	229	424	2	138	9
2019	644	461	5	297	440	7	155	22
2020	746	453	8	344	439	6	112	4
2021	795	476	11	352	529	12	177	8
2022	914	472	1	339	513	2	154	10
Total	5,171	3,417	33	2,224	3,336	37	1,162	106

In 2022, 2 invention patents, namely the “PWR Nuclear Power Plant Reactor Primary Circuit Vacuum Exhaust Device and System” (壓水堆核電站反應堆一回路抽真空排氣裝置和系統) of CNPRI and “Expansion Method of Spent Fuel Pool in Mega-Kilowatt Nuclear Power Plant” (百萬千瓦級核電廠乏燃料水池擴容方法) of DNMC, won the 23rd China Patent Silver Award issued by the China National Intellectual Property Administration, and six patents, namely the “Nuclear Power Plant Fatigue Monitoring System and Method” (一種核電廠疲勞監測系統及方法), “Nuclear Power Plant Waste Solidification Treatment System and Method” (一種核電廠廢物固化處理系統及方法) and “Nuclear Power Plant DCS Debugging System and Method” (一種核電站DCS調試系統和方法) of CGN Engineering, the “Positioning Installation Device and Positioning Installation System for High-level Release Valves” (高放閥門的定位安裝裝置以及定位安裝系統) and “Fuel Assembly Framework Repair System and Method” (燃料組件骨架修復系統及方法) of CGN Operations, and the “Non-destructive Testing Robot Machine Testing Method for Nuclear Reactor Pressure Vessel” (核反應堆壓力容器無損檢測機器人機器檢測方法) of CGN Inspection Technology Co., Ltd. (中廣核檢測技術有限公司), won the 23rd China Patent Excellence Award issued by the China National Intellectual Property Administration.

Human Capital

Having a team of sufficiently competent and experienced employees is the most valuable treasure of the Company. We always pay attention to the reasonable use and maintenance of human capital, and continuously improve the development and management system of human resources, thus cultivating a talented team with excellent management and technical personnel.

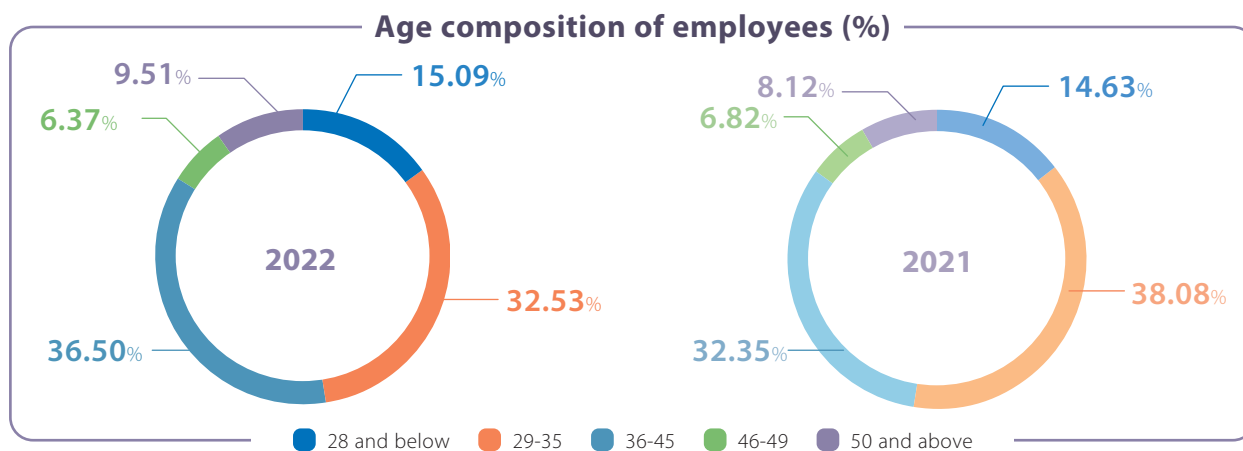
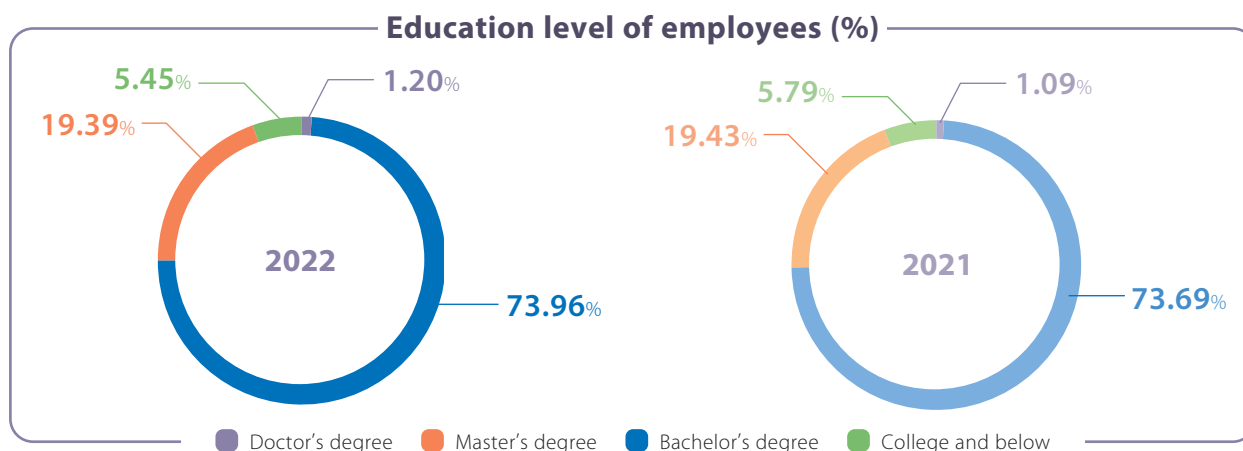
Talent Force

As at the end of 2022, we had 18,968 employees (excluding associates).

Employee Structure

Composition of employees in terms of profession

Profession	Number of employees	
	2022	2021
Operation and management employees	1,728	1,471
Business function employees	1,229	1,129
On-site operation and support employees	2,115	2,011
Other technicians	13,896	13,637
Total	18,968	18,248



Human Capital

Recruitment of Talents

To meet the needs of the Company's business development, safeguard a reasonable structure of our talent force and make adequate talents available, the Company has formulated a human resources plan to recruit talents through a combination of on-campus recruitment and general hiring.

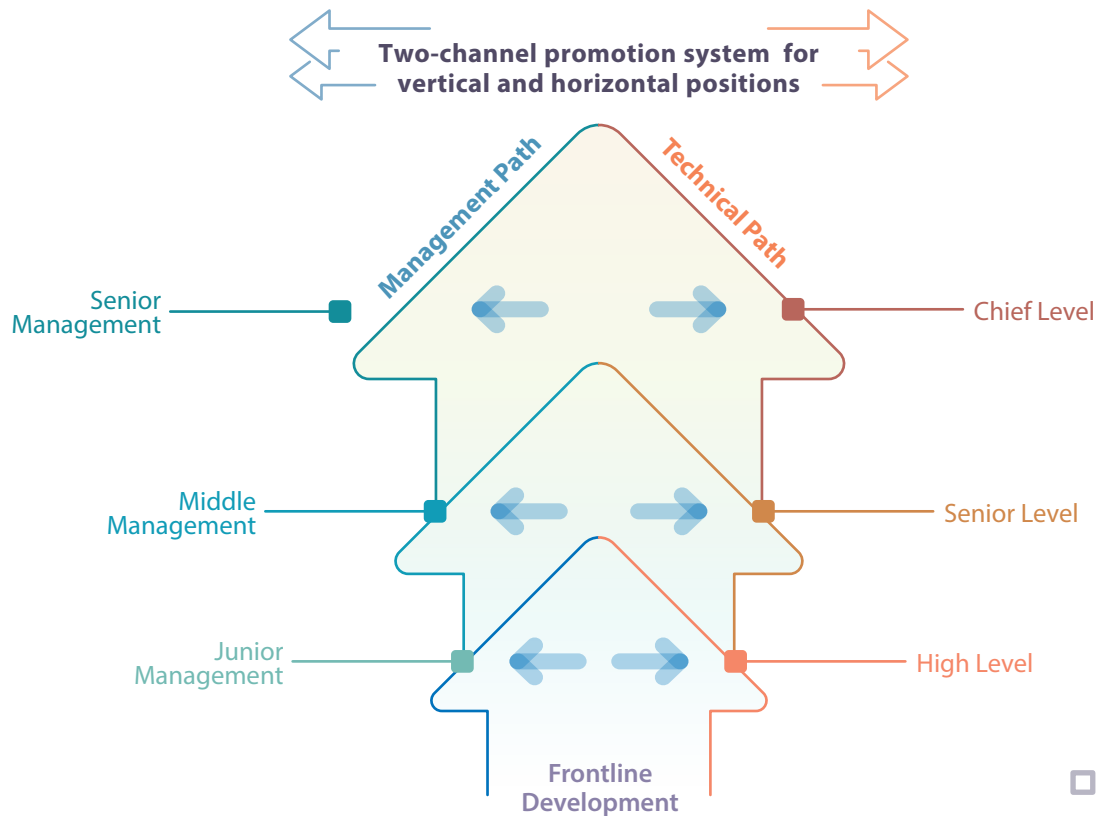
Considering from the perspectives of the echelon formation and talent cultivation, our recruitment of talents is focused on on-campus recruitment. In 2022, the Company recruited 1,648 outstanding graduates through on-campus recruitment and 28 persons through general hiring. In 2022, the Company also recruited 6 high-level talents, and established long-term cooperation with 3 academicians and university teams to further build an excellent scientific research team.

Personnel Management Development Paths

We respect the contribution made by every employee, pay attention to the career development of employees, and encourage employees to develop individual career development plan under the guidance and assistance of the Company. We offer two career development paths for management and professional skills, and have established mechanisms for conversion between the two paths such that employees can achieve their own career development through the two paths according to their competence, potential and characters.

Internal Market

The Company encourages employees to concentrate on their own responsibilities to master the business skills, becoming experienced professionals. At the same time, by incorporating the development strategies of the Company and personal development goals of employees, we continually improve the internal market-oriented employment mechanism and facilitate the reasonable and orderly flow of talents, thereby enhancing our allocation efficiency of human resources, realizing appreciation in human capital as well as offering more development opportunities for employees.



Appraisal System

The Company is committed to fostering a high performance organization. We pay attention to performance and achievement of employees and the organizations to ensure the overall operational objectives of the Company are achieved. Through devising individual performance plans, we put the Company and our organization's goals into the work plans for employees at all levels, and carry out communication, counseling and follow-up during the course of the implementation of the plan. We mainly evaluate employees' work performance according to the performance plan, and the evaluation results will be used for payment of bonuses, remuneration adjustment, term assessment and personal development, etc., creating strong connection between personal development and development of the organization. Every employee can contribute to the attainment of the organization's goals and achieve personal development therefrom.

Personnel Training

With the stable development of our businesses, the Company emphasizes ongoing enhancement of the working skills of our employees. The Company always adheres to the core principle of "cultivate people and not just train people" and implements the basic requirements of "entire staff training, authorized employment and life-long learning". By learning from the advanced international experience of others during personnel training, combined with our cultivating characteristics, we have developed our personnel training system as well as a standardized and efficient training management system. We have a group of experienced and qualified teaching staff, comprehensive curriculum and large-scale training facilities, and actively promote standardized and regulated personnel training for nuclear power operations, which effectively meets the needs of personnel training for the stable development of the Company.

To match with the business development of the Company, we regularly renew the personnel training scheme. We had prepared our talent succession plan 2022 in accordance with the medium and long-term planning needs for talents and the feedback on training experiences. We continuously promote open selection of talented young managers. A number of young managers has taken new leadership positions. In order to consolidate and enhance qualities and skills of management staff and employees at all levels, we organize trainings continuously. In 2022, the average number of training hours per employee of the Group reached 139.5 hours, mainly attributable to the strengthened training on hot business topics related to the goal of "achieving peak carbon emissions and carbon neutrality" during the year in order to deepen the understanding by all employees in such regard.



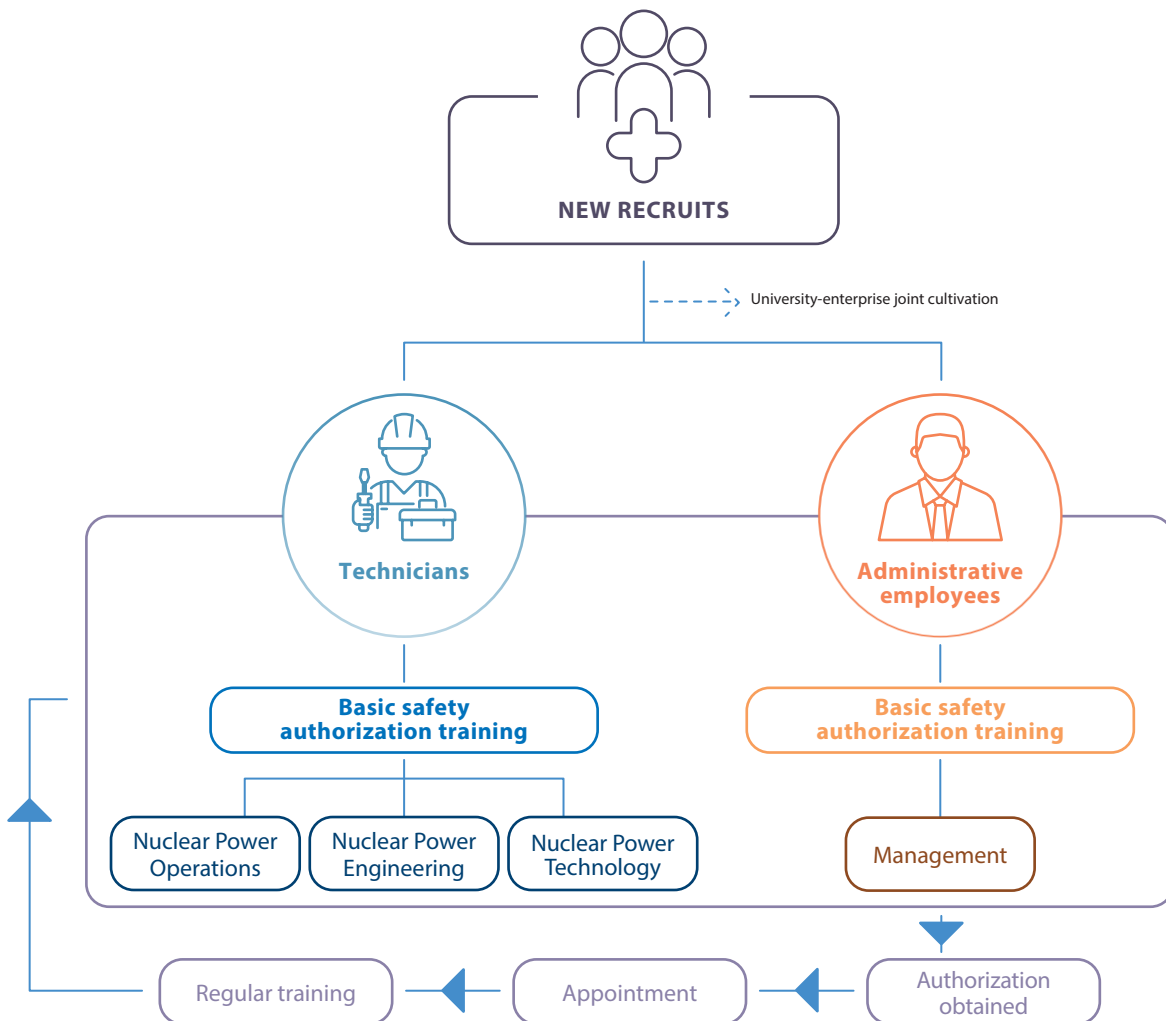
Human Capital

Personnel Training System

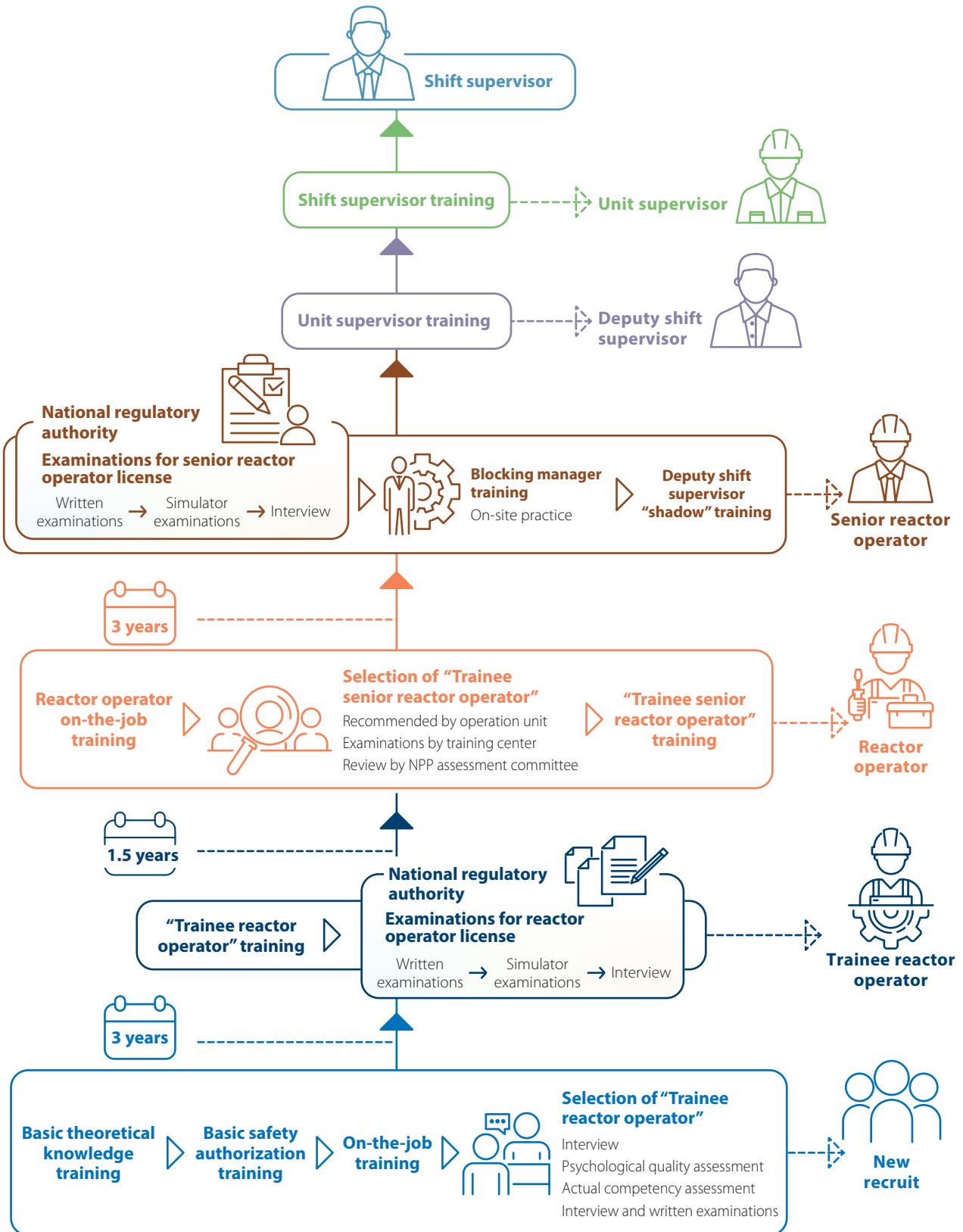
The Company entered into personnel training cooperation agreements with a number of universities in the PRC, pursuant to which some of the new employees study specialization courses on nuclear power during their university education. Based on the division of nuclear power operations, nuclear power engineering, nuclear power technology and management, the Company has formed the training system for all employees with “training, assessment, authorization, appointment” as the basic process.

Nuclear power reactor operators are the key technical staff in NPPs. According to the relevant requirements of the Regulations of the People’s Republic of China on the Safety Supervision and Administration of Civil Nuclear Facilities (《中華人民共和國民用核設施安全監督管理條例》), operators should hold a “Reactor Operator License”, shift supervisors should hold a “Senior Reactor Operator License”, while the qualification of reactor operators and senior reactor operators is recognized through systematic assessment of abilities which are supervised and licensed by the national regulatory authority.

We set a position of safety technical advisor (“STA”) in our NPPs. They are responsible for safety supervision of plants and conduct independent assessment and supervision on nuclear safety of daily operation of units. Same as the shift supervisors, STA is required to hold “Senior Reactor Operator License”. In addition, an STA shall have a deep understanding of the regulations on nuclear safety, standards of designing NPPs, analysis methods of nuclear safety and other aspects.



The diagram below shows our training process for reactor operators.



Note: Licensed reactor operators are qualified to operate nuclear facilities' control systems, and licensed senior reactor operators are qualified to operate, guide or supervise the operation on nuclear facilities' control systems.

Human Capital

With reference to the construction progress of third-generation nuclear generating units, we strengthened the nurturing of reactor operators, construction personnel and operation and maintenance personnel required for the third-generation nuclear power technology, such as HPR1000, EPR, and AP1000. For example, Taishan Nuclear has established and continued to improve the EPR operator training system. There are currently 34 EPR operators, 71 senior operators, 14 learning operators, and 4 learning senior operators. Through the simulator retraining mechanism and the special task to improve the EPR operation ability, we achieved the continuous skill improvement of the EPR license personnel. In 2022, the specialty improvement in anti-downtime capacity, the special research on the anti-load shedding capacity, and the special research on the operation capacity of the ventilation system were conducted. In 2022, Taishan Nuclear completed the construction of a comprehensive skills training system to meet the needs of training on-site personnel in terms of code of conduct, covering operation, maintenance, technology, safety and other majors, and involving common facilities such as machinery, electrical, instrument control, services, and safety protection. Supporting, training courses were also developed. We continuously improved the training and authorization system and the simulator retraining mechanism for key positions in the operation of HPR1000 which continuously improved the skills of HPR1000 licensed personnel. Relying on the core competency training plan for key positions with maintenance techniques of HPR1000, the first batch of 85 technical leaders has been trained. According to the requirements of the design and planning of the maintenance techniques course system and supporting facilities of HPR1000 (2021-2022), we completed the development of all courses, and the course system has obtained national copyright registration.

Training Resources

As there are many major operating risks relating to nuclear power units in operation, we have prepared corresponding training equipment to equip employees with proficient operational skills before they operate on-site equipment. For example, to cultivate reactor operators, we have the 1:1 simulator with the main control room of the NPPs. For different purposes, our main simulators include full-scope simulators, principle simulators, function simulators, post-accident analysis simulators and severe accident analysis simulators.

As at the end of 2022, the numbers of simulators of all nuclear power bases were as follows:

	Full-scope Simulators (set)	Principle Simulators (set)	Function Simulators (set)	Post-accident Analysis Simulators (set)	Severe Accident Analysis Simulators (set)
Daya Bay Nuclear Power Base	4	2	1	1	1
Yangjiang Nuclear Power Base	3	0	0	0	1
Taishan Nuclear Power Base	1	0	0	1	0
Fangchenggang Nuclear Power Base	2	0	0	0	1
Ningde Nuclear Power Base	3	0	1	1	1
Hongyanhe Nuclear Power Base	3	0	1	1	1



For maintenance technique training, we have 146 skill training rooms (including the refuelling training facilities) with a total area of about 96,700 square meters, covering all maintenance areas and skills, which can carry out 529 skills training sessions. In particular, the Nuclear Fuel Operation Training Center is the only training and qualification examination certification center in the PRC for nuclear fuel operators which simulates real situations. In 2022, 145 fuel operators were trained, including 31 fuel operators from domestic counterparts.

The Company develops and improves corresponding curriculum and enhances the courses based on post training programs. As at the end of 2022, we had a total of more than 15,000 courses, adopting forms including face-to-face training, online training, mobile-app training and courses in other forms to meet the Company's business development needs at the current stage.

We attach great importance to employees sharing their accumulated experience and have, for many years, established a system where key employees act as part-time instructors to enrich our training resources. Currently, we have 214 full-time instructors and over 2,800 part-time instructors. Management participates in tutoring to share their knowledge and experience has become a regular requirement for training management. Therefore, it is no longer included in the statistics of training hours.

Forms of Training

Our trainings include face-to-face training, online training, face-to-face and web-based mixed training, as well as conducting staff skill competitions in various major fields. Based on the direction of scientization, standardization and professionalization, we continuously innovate competition format, raising competition levels and widening technology communication channels among employees. In 2022, we organized and participated in one national professional skills competition and two staff professional skills competitions in Guangdong Province. Over 250 competitions at the base level were conducted with over 8,000 participants from various companies. Through a wide range of skill competitions, the training forms were enriched and a strong learning atmosphere had been created, which enhanced the overall quality of our staff.

Achievement of Talent Cultivation

Relevant qualification of employees provides firm support and professional assurance on the Company's strategic development and business expansion.

With reference to our man-power allocation of reactor operators in NPPs, the reactor operators holding valid licenses of the Company can fulfill personnel requirement for managing dozens of nuclear power generating units at the same time. As at December 31, 2022, the Group (including affiliates) had 499 reactor operators and 961 senior reactor operators holding valid licenses. The ability and qualification requirements of HPR1000 reactor operators are different from those of other nuclear power technologies. These operators need to obtain a separate license. The Company trained 71 reactor operators and 52 senior reactor operators for HPR1000 reactors, which can meet the personnel requirements of operating 2 HPR1000 nuclear power generating units at the same time. 56 and 70 employees of the Group (including affiliates) obtained licenses for reactor operators and senior reactor operators in 2022, respectively.



Human Capital

As at December 31, 2022, a total of 1,686 employees obtained or maintained registered qualifications in respect of construction projects, including 10 registered First Class Architects; 4 registered Second Class Architects; 13 pressure conduit design examiners; 95 registered utility engineers; 38 registered first class structure engineers; 70 registered electrical engineers; 114 registered consultant engineers; 18 pressure vessel design examiners; 135 special operation qualification holders; 347 registered supervising engineers; 103 registered equipment supervising engineers; 217 registered nuclear safety engineers; 401 registered first class constructors; and 121 registered cost engineers. In addition to the main businesses, the Company had the ability to integrate and carry out other engineering project management and general contracting services.

In addition, at the end of 2022, 144 employees of the Group (including associates) participated in the training for fuel operators and passed certification examination to obtain the qualification for fuel operators.

In 2022, we achieved great honors in talent cultivation. Wang Wenkui from the production line won the honorary title of “National Technical Expert”, Li Qinglei from the production line was awarded the title of “National Youth Expert”, and Wang Jiantao and Wang Yan from the production line were awarded the title of “Nanyue Technical Expert”. These honors were not only rewarding individuals, but also affirming our years of efforts in talent cultivation. These professional talents provided strong support for the safe and stable operation of our nuclear power generating units.

Remuneration System

Remuneration as returns to employees for their performance of duties and creation of values is the most fundamental reflection of their value. We use employees’ duties, capacities and performance as the basic standards to assess their value.

Pursuant to the national laws and regulations and in light of the industry characteristics, the Company has established a competitive and ongoing strategy-driven remuneration management system to specify the concept of creating value and stimulate employees’ potential. The remuneration system is mainly in the form of a position-based wage system, under which the Company implements the “remuneration changes with position” policy and determines employees’ remuneration level based on their duties and capabilities (skills) in the principle of “remuneration based on duties and capabilities, remuneration based on performance, and adjustment based on capabilities and performance”. The Company has also established a performance-linked remuneration system under which the performance bonus is adjusted based on the performance of employees, for example, those who fail the evaluation on safety, quality and environmental protection would not receive any individual performance bonus for the year. Total staff costs for the year ended December 31, 2022 amounted to approximately RMB11,053.8 million (excluding associates).

In order to provide incentives to key talents and create more value for our shareholders, the H-Shares Appreciation Rights (the “SAR”) Scheme (the “Scheme”) was approved at the 2014 annual general meeting. The Scheme was conducted in three grants with each grant taking effect in three tranches. The first grant of the SAR was approved by the Board on November 5, 2015. Since the price of H shares was yet to meet the exercise condition, all of the three tranches of SAR for the first grant expired and lapsed.

The second grant of the SAR of the Company was approved by the Board on December 14, 2017. In particular, the first and second tranches of SAR for the second grant have taken effect since December 16, 2019 and December 15, 2020, respectively, with the exercise conditions being met, while the third tranche of SAR did not take effect as some performance indicators did not meet the exercise conditions.

The second exercise plan of the Second Grant of the share appreciation rights incentive scheme of the Company was considered and approved at the fourth meeting of the third session of the Board convened by the Company on January 13, 2021. At the seventeenth meeting of the third session of the Board convened on May 20, 2022, it was decided that the exercise price should be adjusted pursuant to the calculation rules specified in the Second Grant of the share appreciation rights incentive scheme, and the exercise price is changed to HK\$1.6440 per share from HK\$1.7427 per share. As at December 31, 2022, the Incentive Recipients under the first tranche (which was expired and lapsed on December 14, 2022) and the second tranche of the Second Grant of the appreciation rights incentive scheme exercised certain SARs. For details, please refer to Note 11 to the financial statements of this report.

For retired/redesigned Directors and senior management, the specific arrangements for the exercise are implemented in accordance with the SAR Agreement. Since the Scheme does not involve the grant of any new share or share option over other new securities to be issued by the Company (or any of its subsidiaries), it does not fall within the ambit of, and is not subject to, the regulations of Chapter 17 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the “**Listing Rules**”). Please refer to Note 11 to the financial statements of this report for details of the first and second grant of the SAR.

The Company highly values the protection of employees’ rights and interests, and has brought social security (with 100% coverage), supplemental medical insurance and enterprise annuity for employees. We attach high importance to the health of our employees and organize annual health check-up for employees. In addition, according to the national laws and the practical conditions of the Company, we have vacation management policies that allow employees to have paid leave. The Company also encourages employees to reasonably arrange their vacations for work-life balance.



Human Capital

Occupational Health Management

We attach high importance to the occupational safety and health of our employees. By strictly adhering to the provisions of occupational safety and health of the state, the Company has established a comprehensive occupational safety and health protection system, set up specific organizations in all NPPs to take charge of occupational safety and health management, and obtained the latest certification of the ISO45001 occupational health and safety management system.



Publicity, training and warning

(1) Undertake occupational hazard publicity and training; and (2) post warning signs and on-site test results at relevant workplaces.



Identification and management of occupational hazards

(1) Identify and evaluate occupational hazards in various types of work processes; (2) undertake classified and graded management of the risks of exposures and hazards; and (3) adopt a series of measures and means such as technologies, management and physical protection.



Full participation and proactive prevention

The Company emphasizes on the full participation and proactive prevention regarding occupational hazards and focuses on continuous control and improvement of occupational health management level. We actively carry out occupational hazard monitoring: (1) conduct on-site independent monitoring and evaluation of occupational health and safety risks through daily work processes, and take timely control measures; and (2) the premises with occupational health hazards are equipped with protective equipment such as ear protectors, protective suits, protective shoes, and the working time limit is specified according to occupational hazard assessment.



Professional inspection by external organizations

(1) Engage external professional organizations to undertake occupational health inspections and assessment of adaptability to work on employees in certain positions, and establish personal health monitoring files; and (2) conduct individual and group health analysis.



In addition to physical health, the mental health of employees is equally important. We continued to implement the “Employee Assistance Program” to protect the mental health of employees by inviting professionals to provide professional services such as 7×24 hours of psychological consultation and counseling. In 2022, a total of 1,722 person head participated in the “Employee Assistance Program”.

Due to contractors’ direct participation in a large number of construction and operation activities of NPPs, we assume the responsibilities of ensuring employees’ occupational health and safety not only with our Company’s own employees, but also employees of contractors and other persons who have normal access to NPPs to carry out the relevant activities. The maximum individual radiation dose rate of workers entering control zone of each NPP operated and managed by us (including employees, contractors and other persons) is far lower than the management target value of NPP and also far lower than the limit of national laws and regulations. For details of maximum individual radiation dose rate of NPPs, please refer to the 2022 ESG Report published by the Company.

In addition to the management measures mentioned above, we pay extra attention to all the safety events in the work process. We thoroughly investigate all events and conduct root cause analysis, conduct feedback among our NPPs to raise the safety awareness of staff and contractors, and adopt a series of measures to enhance safety management and avoid recurrence of such events. We continuously strive to lower the rate of industrial accidents. In 2022, the Company maintained good performance of occupational safety and health. All NPP staff were able to complete the relevant work safely and efficiently in accordance with the procedures. For details of the performance in relation to occupational safety and health issues as well as mental health of employees, please refer to the 2022 ESG Report published by the Company.



Financial Capital



Our capital needs mainly come from the capital expenditure for construction of NPPs and facilities, payments of debts and interests and operating expenditure in nuclear power projects in operation. The sources of capital include cash generated from operating activities, shareholders' cash investment, bank borrowings and bond issuance.

External Financing Environment

In 2022, China sustained economic development in spite of pressure, and achieved positive results in the effective coordination of 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.

Financing Patterns

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. 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

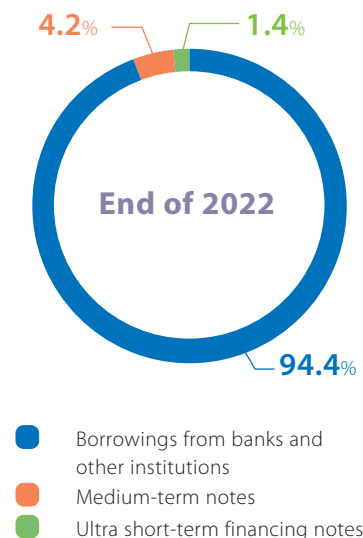
With reference to the Company's needs for business development, through equity financing, we consolidated the long-term capital of the Company in a timely manner. The overall capital structure of the Company was optimized according to changes in the external environment. The ability to resist the risk 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

We strive to maintain diversified types of debt financing to establish a financing model with a mixture of short, medium and long-term funds, a combination of direct financing and indirect financing, and the coexistence of various channels to provide a sound and economic source of funding for the Company. In the course of debt financing, we always follow the balance of cost and safety principle. We seek to obtain competitive financing cost, but minimizing cost of financing is not the only goal as it would otherwise impair financing safety and the service quality we receive.

Diversified Financing Types

Diversified financing types can avoid reliance on a single financing channel and enable us to have adequate options for different types of capital requirements. In view of our large-scale long-term investments and according to our matching assets and liabilities principle, our debt financing instruments are dominated by long-term bank borrowings, as supplemented by short-term bank borrowings and debt financing as well as borrowings from other financial institutions. The major debt financing types of the Group include borrowings from banks and other institutions (accounting for approximately 94.4%), medium-term notes (accounting for approximately 4.2%), ultra short-term financing notes (accounting for approximately 1.4%), etc. Compared with the end of 2021, as at the end of the reporting period, the total borrowings of the Group decreased by approximately RMB5,501.0 million, mainly due to the increase in cash flow from operating activities after the commercial operation of the Company's nuclear power generating unit, and the gradual repayment of long-term bank loans.



Borrowings from Banks and Other Institutions

We mainly use long-term bank loans to meet the long-term and stable funding needs of nuclear power investment projects. Reasonable loan terms and repayment schedule are set to match our long-term cash flow, reduce refinancing risk and ensure the safety of our overall debt. We also use short-term bank borrowings to bridge the shortfall in working capital. In 2022, we seized the opportunity to carry out the interest rate restructuring of our long-term bank loans, which effectively reduced our financing costs.

Debt Financing

The Company is a legal entity incorporated in the PRC and is qualified for the domestic public offering of debentures. 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. The issuance of debt financing instruments can meet the needs of working capital, debt repayment and capital expenditure of projects. 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.

The registration of shelf-offering corporate bonds of the Company with the exchange was approved at the 2021 annual general meeting of the Company in May 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.

The Group's outstanding debentures as at December 31, 2022, and the Group's repaid debentures in 2022 were as follows:

Corporate bonds

The Company had one corporate bond with face value of RMB2,000.0 million transferred from the controlling shareholder CGNPC (with a term of 15 years), which was used for the construction of Lingdong NPP and was repaid upon maturity in December 2022.

Financial Capital

Medium-term notes

Issuance in the past three years (not yet due for repayment)

Date of issuance	Financing amount (RMB million)	Term (years)	Use of proceeds
August 2020	2,500.0	3	Repayment of borrowings from financial institutions for subsidiaries
April 2021	2,000.0	3	Repayment of borrowings from financial institutions for subsidiaries
June 2021	1,500.0	2	Repayment of borrowings from financial institutions for subsidiaries
February 2022	2,500.0	3	Repayment of borrowings from financial institutions for subsidiaries

Repayment upon maturity this year

Date of repayment	Repayment amount (RMB million)	Date of issuance	Term (years)
January 2022	1,500.0	January 2019	3
July 2022	1,500.0	July 2019	3

Ultra short-term financing notes

Issuance in the past three years (not yet due for repayment)

Date of issuance	Financing amount (RMB million)	Term (days)	Use of proceeds
June 2022	1,000.0	252	Repayment of bonds upon maturity
November 2022	1,800.0	270	Repayment of bonds upon maturity and repayment of borrowings from financial institutions for subsidiaries

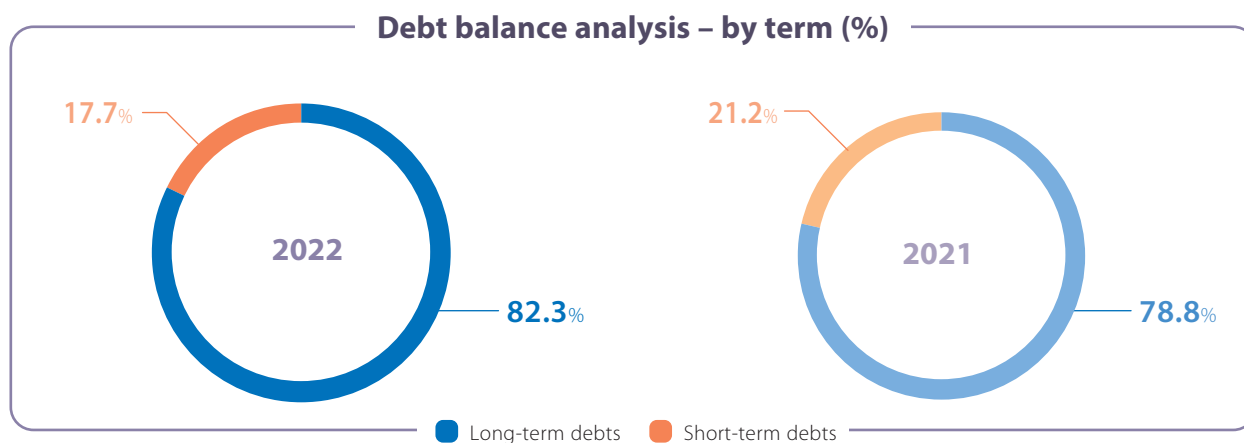
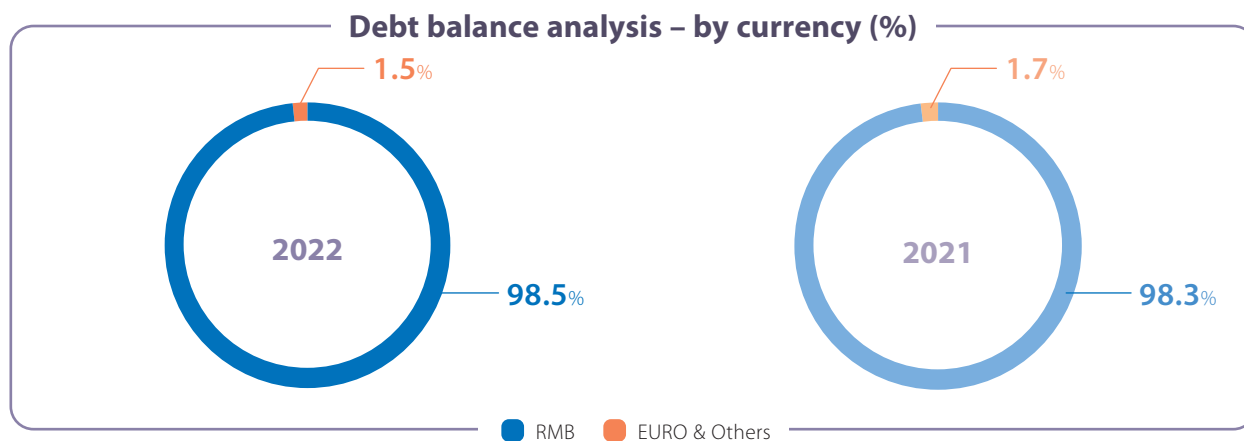
Repayment upon maturity this year

Date of repayment	Repayment amount (RMB million)	Date of issuance	Term (days)
January 2022	1,000.0	June 2021	220
January 2022	1,200.0	September 2021	120
March 2022	2,000.0	July 2021	248
April 2022	1,000.0	January 2022	90
April 2022	1,000.0	December 2021	120
July 2022	1,000.0	March 2022	120
August 2022	1,600.0	April 2022	120
November 2022	1,000.0	June 2022	149

Reasonable Currency and Term Structure

Since the revenue and procurement cost of the Company are mainly denominated in RMB, we maintain a RMB oriented debt structure, which not only matches our operational characteristics, but also effectively prevents liquidity risks and systematic exchange rate risks of the Company. As at December 31, 2022, the proportion of borrowings that were denominated in RMB amounted to approximately 98.5%, whilst the borrowings denominated in foreign currency amounted to approximately 1.5%. Borrowings denominated in foreign currency are primarily used to procure equipment and spare parts from overseas markets as well as related services.

The construction and operation of nuclear power projects have relatively long cycles, therefore our debts mainly comprise long-term debts. Meanwhile, to meet the requirements of the Company's liquidity management, we also intend to gradually repay the project debts with the revenue generated from our projects in the future through matching the decentralized and orderly repayment schedules with long-term cash flow from the Company's nuclear power projects. In 2022, the Company adjusted term structure of debts based on market conditions and the risk aversion capability of the Company, and balanced the financing risks and return. As at December 31, 2022, the proportion of the Group's short-term debts accounted for approximately 17.7% of total debts, whilst long-term debts accounted for approximately 82.3%.

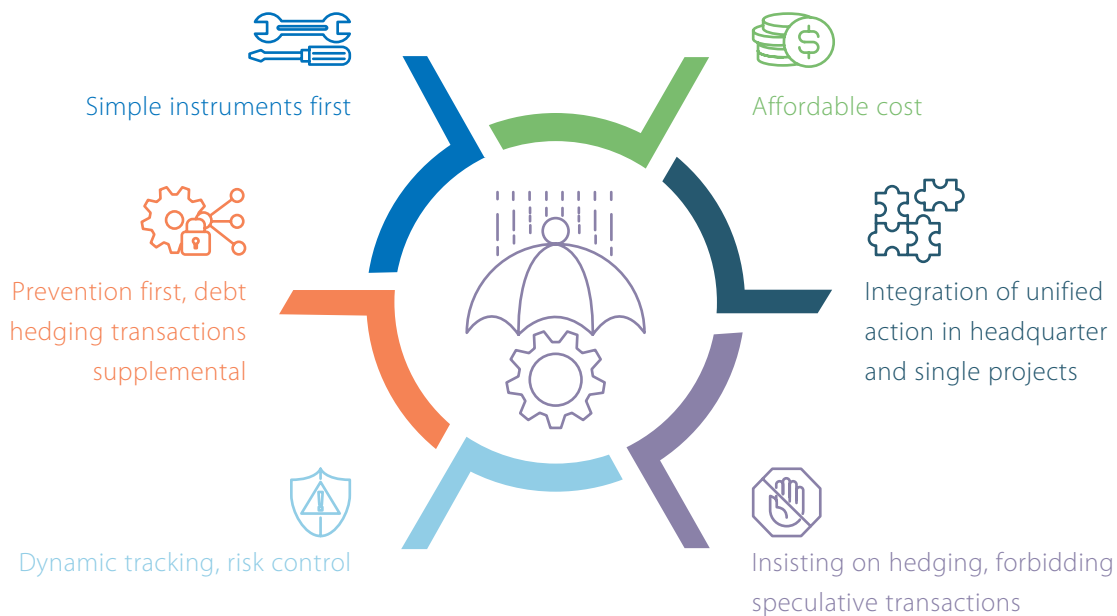


Financial Capital

Debt Risk Management

Effective response to foreign exchange rate and interest rate risks

We always uphold a prudent approach to carry out debt hedging and risk prevention arrangements under a well-established debt risk management system. Our objective of debt risk management is cost control instead of profit, and adhere to the principle of hedging and prohibiting speculative transactions. All the hedging transactions shall be on the basis of factual debt cash flow or guaranteed payment of commercial contracts, while simple instruments shall be mainly applied for hedging financial risk only.



Exposure of foreign currency debts as at the end of the reporting period was mainly the Euro export credit of Taishan Nuclear. We proactively eliminated our exposure to risk on foreign exchange rate associated with debts denominated in foreign currencies by stages and in batches through forward transactions, and actively changed our financing methods for foreign business contracts to exercise control over new debts denominated in foreign currencies, thereby effectively reduced the impact of major risks in exchange rate. During the reporting period, Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司) carried out forward foreign exchange settlement for approximately RMB564.0 million, and Taishan Nuclear carried out forward foreign exchange purchases to lock in exchange rate risk exposure of approximately EUR118.0 million in advance, achieving the goal of exchange rate risk preservation. Compared with the end of 2021, the total amount of borrowings denominated in foreign currency of the Group at the end of the reporting period decreased by approximately RMB568.5 million. In 2023, the Company will continue to closely monitor the market and actively adopt measures to minimize the impact of foreign currency exchange rate fluctuations.

In 2022, the Company leveraged the monetary easing policy in the market, and continued to promote lean management. Through making full use of internal capital of the Group, repayment in advance, loan swaps, interest rate restructuring and other means, the Company was able to improve capital utilization efficiency and further reduce its financing costs.

Limited Recourse or Non-Recourse Financing Methods

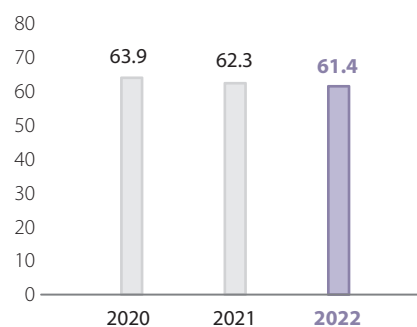
For nuclear power project financing, we usually arrange the nuclear power project company as the financing subject. In principle, we do not provide guarantee for project companies. We strictly control certain guarantees, such as warranty, security and pledge, in the financing process, and do not permit our subsidiaries and associates to provide guarantees in any form to external entities or individuals without approval. Subsidiaries and associates are also not allowed to provide guarantees for each other.

Nuclear power project companies raise debt funds by limited recourse or non-recourse financing methods. They mainly repay the principal amount and interest with sales income or other income generated from such projects. Creditors have no recourse rights or limited recourse rights to project shareholders.

Proper Financial Leverage

We attach high importance to our financial leverage and shall continue to undertake its optimization. On the one hand, we achieve good shareholder returns through the proper financial leverage, and on the other hand, we avoid excessive debt financing in the course of business expansion that may hurt our financial health. As at December 31, 2022, the Group's asset-liability ratio was 61.4%, lower than that of 2021, which was mainly because the Company's owners' equity increased and total liabilities decreased as the Company's accumulated profit increased.

Asset-liability ratio (%)



Adequate Liquidity

To manage liquidity risks, we monitor and maintain our cash as well as the level of banking facilities to ensure that such amounts can provide sufficient cash support for our operation while avoiding having excessive idle funds.

As of December 31, 2022, we had unutilized general banking line of credit of approximately RMB108,561.7 million, issuance amount of 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.

Maintaining a Good 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.

Environmental Capital



Our commitment to social responsibility is to continue to provide safe, reliable, clean and economical electricity for the society and to strive for a bluer sky and clearer water, which has also been the cornerstone for our sustainable development. The Company attaches great importance to the harmony between nuclear power operations and the natural environment, and always adheres to a highly responsible attitude to the environment and maintains the healthy, stable and sustainable development of the Company.

We hereby describe the policies and mechanisms of the Group with respect to the management of radioactive wastes and environmental monitoring. For more details regarding the environmental management of the Group, please refer to 2022 ESG Report published by the Company.

Radioactive Waste Management

NPPs generate gaseous, liquid and solid wastes (“**Three Wastes**”) while generating electric power, among which, some wastes are radioactive and require proper management and safe disposal to protect the public and the environment. There are strict and specific regulations and requirements in all countries in respect of the disposal of radioactive wastes from NPPs and the control of the discharge of them to the environment. High-level radioactive wastes from NPPs are mainly spent fuels which are used fuel assembly removed from the reactor. Such spent fuels must be reprocessed in accordance with the national unified planning. Radioactive waste management as described herein mainly refers to low to medium level radioactive waste management.

The Company has established a comprehensive mechanism for radioactive waste treatment, which has integrated into the complete production and operation procedures of NPPs. We have adopted the guiding principle of “minimizing waste” and “optimizing radioactive protection” for radioactive waste treatment, strictly complied with national laws, regulations and standards, and strived to minimize waste produced. In respect of emission standard, we have proactively implemented radioactive waste management and adopted the highest standards. Hence, our emission is much lower than the emission standard as permitted by the state. The treatment facilities of radioactive Three Wastes are operating well. Please refer to the section headed “Business Performance and Analysis” of this Annual Report for details of the amounts and percentages of radioactive waste of our NPPs in 2022.



Environmental Monitoring

All of our nuclear power bases have established strict environmental monitoring system and environment routing inspection record system according to the requirements of the national regulatory authority, so as to monitor and analyze the environmental media of air, water, soil, land species and marine organisms within a radius of ten kilometers of our NPPs on an ongoing basis, and to assess the environmental standard within NPP and surrounding regions and reduce the impact of NPP operation on the surrounding environment.

In addition to self-monitoring of NPPs, national regulatory authorities and third-party external organizations will also monitor the environment of NPPs.

The national regulatory authority implements the “dual-track system” monitoring on gaseous and liquid effluents as well as the external environment in the periphery of NPPs. Such monitoring shall be carried out by the operators of NPPs and the radiation environment monitoring agencies under the ecological and environmental authorities of the provinces in which NPPs are located, respectively.

According to the long-term tracking and monitoring by the external institutions such as the Hong Kong Observatory, the monitoring results of each of our NPPs in service since its operation show that environmental radioactivity in the surrounding area has not changed compared with the background data before the NPPs commenced commercial operations, and the biological population of land and sea in these regions has not changed either, so there was no adverse impact on the environment. According to the ongoing monitoring by the national regulatory authority, the air-absorbed dose rates of environment around NPPs in operation stay within the fluctuation range of local natural background radiation level.



Social and Relationship Capital



The construction and operation of NPPs have a very extensive effect. The understanding, trust and support from the society, the public, shareholders and other stakeholders are critical to the Company to ensure our sustainable development.

We herein briefly describe the policies and practices of the Group with respect to the society and the public. Our communication with shareholders and investors are set out in the section headed "Corporate Governance" of this Annual Report. Please refer to the 2022 ESG Report published by the Company regarding the exchange between the Company, the society, the public, and other cooperation partners as well as other matters.

Proactive Disclosure of Information

Each of the nuclear power bases managed by us has established its public information platform on nuclear and radiation safety. The information made available to the public includes monthly operating data, such as capacity factor, radiation protection, industrial safety, Level 1 fire risk incidents, Three Wastes control and monitoring of the environment, and operational events. Any operational event occurring after fuelling of a nuclear power unit must be published on such public information platform within two natural days (excluding the occurring day of the event) from the date on which such event is defined. In 2022, the nuclear power bases disclosed all the relevant information as required within the specified time.

Each of the nuclear power bases managed by us has established its own websites and social media platforms such as the official WeChat account for proactively delivering the operational information of various nuclear power bases. The Company arranges regular press conferences, interviews and site visits by invitation, theme activities and distribution of publications to provide NPPs' related information to the main industry regulatory departments and the media, and takes public inquiries through hotlines, facsimile and e-mail. In 2022, the Group convened five media communications and press conferences.

Transparent Public Communication

We adhere to transparent communication, and constantly explore the open and transparent communication mechanisms. We actively promote nuclear power knowledge in cities, schools and communities to help the public understand all aspects of nuclear power in order to enhance the public confidence in nuclear power.



Participating in exhibitions

In 2022, we participated in major domestic exhibitions including China Nuclear Energy High Quality Development Conference & Shenzhen International Nuclear Energy Industry Innovation Expo, the 24th China Hi-Tech Fair and the 19th China-ASEAN Expo.



China Nuclear Energy High Quality Development Conference & Shenzhen International Nuclear Energy Industry Innovation Expo



The 24th China Hi-tech Fair



Reaching the campus

We proactively launch the campaign on promoting the knowledge of nuclear power in campus. In 2022, we conducted campus activities in 115 schools across China, with more than 30,000 students learning about nuclear power.



"Show You the World" volunteer teaching activity



A public welfare lecture on making good use of natural energy



Public Open Day

In 2022, we launched the tenth session of the "8·7 Public Open Day" campaign under the theme of "Green development to achieve peak carbon emissions and carbon neutrality" for a period of four months. While the nuclear power bases of the Group were open to the public, more than 100 clean energy knowledge introduction activities in various forms were carried out by recruiting clean energy knowledge introduction volunteers to visit nearby communities, surrounding campuses, provincial and municipal science and technology museums as well as key villages, and nearly 5,000 knowledge introduction volunteers participated. "CGN Clean Energy Knowledge Introduction for Thousands of People" and "CGN 8·7 Public Open Day", hashtags initiated by the official CGN microblog, were viewed for 110 million times and 200 million times, respectively.



"8·7 Public Open Day" in 2022

Social and Relationship Capital

Win-win Community Development

We uphold the vision of “boosting the economy and benefiting the people there in which we conduct a construction project”. We actively promote community development and at the same time, we achieve our corporate development plan by building a harmonic relationship with the surroundings. We actively respond to the national strategy of rural revitalization. We continue to initiate rural revitalization works in Guangxi Zhuang Autonomous Region, Guangdong Province, Fujian Province and other regions, and constantly improve the livelihood of local residents by developing characteristic industries so as to strengthen and amplify our outcomes of poverty alleviation.

In October 2022, Daya Bay NPP was included in the “Industrial Smart Manufacturing • Nuclear Energy Ecological Journey” tourist route of Shenzhen, becoming one of the important nodes of the “Technology + Tourism” quality route introduced by the Shenzhen Municipal Culture, Radio, Television, Tourism and Sports Bureau. The organic combination of technology and nature at Daya Bay NPP provides tourists with a friendly experience integrating science, fun and experience, and at the same time supports local economic development.

Ningde Nuclear and Yujing Village in Fuding City, Ningde City, Fujian Province established a mutual supportive relationship to jointly promote rural revitalization. In May 2022, Ningde Nuclear carried out themed activities on disaster prevention and alleviation in Xiamen Township, a township near its power station, and introduced knowledge about disaster prevention and alleviation to the public in simple terms through knowledge introduction lectures, practical operations, and equipment explanations. In the second half of 2022, Ningde Nuclear joined hands with Yujing Village, Xiamen Township to launch tea promotion activities to promote rural revitalization with practical actions.



In November 2022, Taishan Nuclear, in cooperation with relevant units, carried out free repair and free clinic activities to repair electric fans, induction cookers, rice cookers, notebooks, washing machines and other daily household appliances for residents in surrounding communities free of charge, educated the villagers about the correct use and maintenance methods, and introduced the knowledge of using electricity safely, mitigating the safety risk of the use of electricity.

In November 2022, Fangchenggang Nuclear donated RMB700,000 to Guangxi Xieli Fuzhu Foundation, which was used for the education development of Beibuwan Senior High School in Fangchenggang City. Fangchenggang Nuclear also established “one-on-one” supportive relationship with a number of students in need in Guangpo Town, and carried out various activities such as course counseling and granting of scholarships.

Dedicated to social welfare

We actively participate in social and charitable activities, assist vulnerable groups in the society, and continuously serve the community.

We encourage and support employees to systematize and regularize charitable activities. In 2022, we had nearly 12,000 employee volunteers and nearly 12,000 persons participating in public service activities for a total of over 40,000 hours.

Since the COVID-19 outbreak, in production and office areas such as Daya Bay Nuclear Power Base and Yangjiang Nuclear Power Base, CGN “Anti-pandemic’ Youth Force” has actively cooperated with the pandemic prevention departments of various companies, and arranged batches of volunteers to carry out regular tasks such as standing by, nucleic acid testing, information registration, delivery of supplies and order maintenance at the production and office premises according to the “pandemic prevention roster” of each company every day, contributing to the pandemic prevention and control, and the safe and stable operation of generating units of the Company.



An icon depicting a person in a suit holding a folder, standing next to a stack of coins, a magnifying glass, and a document with a flowchart, symbolizing corporate governance and financial oversight.

CORPORATE GOVERNANCE

80	Board of Directors, Supervisory Committee and Senior Management
87	Corporate Governance Report
122	Directors' Report
139	Audit and Risk Management Committee Report
141	Remuneration Committee Report
143	Nomination Committee Report
145	Nuclear Safety Committee Report
147	Supervisory Committee Report
152	Risk Management Report



Board of Directors, Supervisory Committee and Senior Management

As at the date of this Annual Report, the biographies of our Directors, Supervisors and senior management are as follows:

Board of Directors

Mr. Yang Changli

Chairman, Non-executive Director, Chairman of the Nuclear Safety Committee of the Board



Mr. Yang Changli (楊長利), born in 1964, has served as the chairman of the Company and the chairman of the Nuclear Safety Committee of the Board since May 2020. He has a master's degree and is a senior engineer (researcher-level). Mr. Yang Changli has over 30 years of experience in areas including nuclear power, nuclear fuel, R&D of technology as well as safety and quality management. He served as a member of the party leadership group and the deputy general manager of China National Nuclear Corporation ("CNNC") from July 2006 to January 2020; and the deputy secretary of the party committee and a director of CGNPC from January 2020 to February 2020. From February 2020 to July 2020, he served as the deputy secretary of the party committee, a director and the general manager of CGNPC. He served as the secretary of the party committee, chairman and the general manager of CGNPC from July 2020 to July 2021. He has served as the secretary of the party committee and the chairman of CGNPC since July 2021.

Mr. Gao Ligang

Executive Director and President



Mr. Gao Ligang (高立剛), born in 1965, was appointed as an executive Director and the President of the Company in March 2014. He has a master's degree and is a senior engineer (researcher-level). Mr. Gao is entitled to special allowance of the State Council. Mr. Gao Ligang has more than 30 years of experience in the nuclear power industry. He worked successively as the chairman of the board of directors and the general manager of Yangjiang Nuclear from December 2007 to October 2013. He also served as the general manager of Guangdong Taishan Nuclear Co., Ltd. (now called Taishan Nuclear) from December 2007 to October 2011, and served as the chairman of the board of directors of Taishan Nuclear from December 2007 to February 2019. Mr. Gao also served as the deputy general manager of CGNPC from April 2011 to March 2014, and the chairman of General Nuclear System Limited (通用核能系統有限公司) from June 2016 to September 2021. He has served as the deputy secretary of the party committee, a director and the general manager of CGNPC since July 2021.

Mr. Shi Bing

Non-executive Director



Mr. Shi Bing (施兵), born in 1967, was appointed as a non-executive Director of the Company in March 2014. He has a master's degree and is a senior accountant as well as a Chinese Certified Public Accountant. Mr. Shi Bing has more than 25 years of experience in finance, accounting, auditing, capital operation, market development and management in large nuclear power enterprises. Since January 2008, Mr. Shi has successively served as the deputy chief financial officer while concurrently serving as the general manager of the finance department, deputy general manager while concurrently serving as deputy chief financial officer, deputy general manager while concurrently serving as chief financial officer, and deputy general manager of CGNPC. Mr. Shi is currently the deputy general manager of CGNPC.

Non-executive Director | **Mr. Feng Jian**

Mr. Feng Jian (馮堅), born in 1967, has served as a non-executive Director of the Company since February 2023. He holds a postgraduate degree and is an accountant. Mr. Feng Jian has extensive experience in corporate management, financial management, investment management and other areas. From October 2012 to August 2021, he successively served as the deputy general manager and vice chairman of Guangdong Hengjian Hezi Medical Industry Co., Ltd. (廣東恒健核子醫療產業有限公司), the executive director and general manager of Zhuhai Hengqin Hengtaian Investment Co., Ltd. (珠海市橫琴恒泰安投資有限公司), the executive director of Guangdong Hengtaian Investment Co., Ltd. (廣東恒泰安投資有限公司), the chairman of Guangdong Agricultural Supply Side Structural Reform Funds Management Co., Ltd. (廣東省農業供給側結構性改革基金管理有限公司). He has served as the deputy general manager of Guangdong Hengjian Investment Holding Co., Ltd. (廣東恒健投資控股有限公司) since August 2021 and the supervisor of China Southern Power Grid Company Limited (中國南方電網有限責任公司) since November 2022.

Non-executive Director | **Mr. Gu Jian**

Mr. Gu Jian (顧健), born in 1963, has served as a non-executive Director of the Company since August 2020. He holds a master's degree and is a senior engineer (researcher-level). Mr. Gu Jian has over 35 years of experience in nuclear power engineering, operation and management. He respectively served as an assistant to general manager and deputy general manager of Fujian Fuqing Nuclear Power Co., Ltd. (福建福清核電有限公司) ("Fuqing Nuclear") from November 2005 to January 2016 and deputy general manager and general manager of CNNC Guodian Zhangzhou Energy Co., Ltd. (中核國電漳州能源有限公司) from January 2016 to September 2018. He also served as the deputy general manager of China Nuclear Power Co., Ltd. (中國核能電力股份有限公司), a nuclear power generation company listed on the Shanghai Stock Exchange (stock code: 601985) from September 2018 to July 2021 and has served as a director of Fuqing Nuclear since September 2021.

Independent non-executive Director, Chairman of the Nomination
Committee of the Board | **Mr. Li Fuyou**

Mr. Li Fuyou (李馥友), born in 1955, has served as an independent non-executive Director of the Company and the chairman of the Nomination Committee of the Board since August 2020. He holds a bachelor's degree and is a senior engineer (professor-level) and received a special government allowance from the State Council. Mr. Li Fuyou has extensive experience in energy, coal and safety management, and served as a vice president of China Coal Energy Company Limited (中國中煤能源股份有限公司), a company listed on the Hong Kong Stock Exchange (stock code: 1898) and Shanghai Stock Exchange (stock code: 601898) from August 2006 to September 2010, the chairman and the deputy secretary of the party committee of Shanghai Energy Company Limited (上海能源股份有限公司), a company listed on the Shanghai Stock Exchange (stock code: 600508) and the chairman of Datun Coal and Electricity (Group) Co., Ltd. (大屯煤電(集團)有限公司) from March 2009 to September 2010, and a member of the standing committee of the party committee and deputy general manager of China National Coal Group Corporation from September 2010 to July 2016.



Board of Directors, Supervisory Committee and Senior Management

Mr. Yang Jiayi

Independent non-executive Director, Chairman of the Audit and Risk Management Committee of the Board



Mr. Yang Jiayi (楊家義), born in 1958, has served as an independent non-executive Director of the Company and a chairman of the Audit and Risk Management Committee of the Board since August 2020. He is a master's degree holder, senior engineer (professor-level), senior accountant and Chinese Certified Public Accountant. Mr. Yang Jiayi has extensive experience in the fields of financial accounting, auditing, investment and financing management. He was the chief accountant of China Energy Conservation Investment Co., Ltd. (中國節能投資公司) from December 2003 to May 2010 and the chief accountant of China Energy Conservation and Environmental Protection Group (中國節能環保集團公司) from May 2010 to December 2014. From December 2014 to May 2018, Mr. Yang Jiayi was a member of the standing committee of the party committee and the chief accountant of China Energy Conservation and Environmental Protection Group (中國節能環保集團公司). Mr. Yang Jiayi served as an independent director of China XD Electric Co., Ltd. (中國西電電氣股份有限公司) (a company listed on the Shanghai Stock Exchange, stock code: 601179) from January 2020 to December 2021, and has served as a director of China Electrical Equipment Group Co., Ltd. (中國電氣裝備集團有限公司) since May 2022.

Mr. Xia Ceming

Independent non-executive Director, Chairman of the Remuneration Committee of the Board



Mr. Xia Ceming (夏策明), born in 1957, has served as an independent non-executive Director of the Company and a chairman of the Remuneration Committee of the Board since August 2020. He holds a master's degree and is an engineer. Mr. Xia Ceming has extensive experience in fields including operation and control of national macroeconomic policy and enterprise operation, management and supervision. He worked at the board of supervisors of a key large state-owned enterprise under the State Council from December 2002 to December 2017, during which he served as a full-time supervisor at the division level, a full-time supervisor at the deputy bureau level (deputy director) and a full-time supervisor at the bureau level (director). He has served as a director of China Nonferrous Metal Mining (Group) Co., Ltd. (中國有色礦業集團有限公司) since April 2018.

Mr. Tang Chi Cheung

Independent non-executive Director



Mr. Tang Chi Cheung (鄧志祥), born in 1958, has served as an independent non-executive Director of the Company since May 2021. He has a master's degree, and is a member of Chartered Accountants in Australia & New Zealand. Mr. Tang Chi Cheung has more than 25 years of experience in nuclear power management, finance and audit. He served as the deputy general manager of Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司) from May 2006 to October 2013, the senior director of nuclear power business of CLP Holdings Limited (中電控股有限公司) and the managing director of HKNIC from November 2013 to October 2018, and the executive director of China Nuclear Energy Association from March 2015 to October 2018.



Supervisory Committee

Non-employee representative Supervisor

Ms. Pang Xiaowen

Ms. Pang Xiaowen (龐曉雯), born in 1979, has served as a non-employee representative Supervisor of the Company since May 2022. She holds a bachelor's degree and is a senior accountant and a senior economist. Ms. Pang Xiaowen has extensive experience in corporate financial management, equity investment management, corporate governance and other aspects. Since April 2014, she served as the deputy director of the finance office (presiding over the work) of Hainan Nuclear Power Co. Ltd. (海南核電有限公司), the deputy general manager of Guangdong Hengjian Asset Management Co., Ltd. (廣東恒健資產管理公司), and deputy head of the asset management department and the deputy head of the corporate management department (presiding over the work) of Guangdong Hengjian Investment Holdings Co., Ltd. (廣東恒健投資控股有限公司). She has served as a director of Guangdong Hengfu Financial Leasing Co., Ltd. (廣東恒孚融資租賃有限公司) since May 2018, the head of the operations management department of Guangdong Hengjian Investment Holdings Co., Ltd. (廣東恒健投資控股有限公司) since November 2019, a director of Guangzhou Asset Management Co., Ltd. (廣州資產管理有限公司) since January 2020, and a director of SkyCo International Financial Leasing Co., Ltd. (天合國際融資租賃有限公司) since March 2022.



Non-employee representative Supervisor

Mr. Zhang Baishan

Mr. Zhang Baishan (張柏山), born in 1971, has served as a non-employee representative Supervisor of the Company since August 2020. He holds a bachelor's degree and is a senior accountant (researcher-level). Mr. Zhang Baishan has more than 30 years of experience in finance, cost budget and financial information technology. From January 2013 to November 2019, he served as the chief accountant of Fuqing Nuclear. Since December 2017, he has served as chairman of the supervisory committee of Fujian Sanming Nuclear Power Co., Ltd. (福建三明核電有限公司). He served as chairman of the supervisory committee of CNNC Xiapu Nuclear Power Co., Ltd. (中核霞浦核電有限公司) from August 2018 to September 2022, the chief accountant of Hainan Nuclear Power Co. (海南核電有限公司) from December 2019 to September 2022, and chairman of the supervisory committee of Huaneng Hainan Changjiang Nuclear Power Co., Ltd. (華能海南昌江核電有限公司) from August 2020 to December 2022. He has served as the chief accountant of CNNC Xiapu Nuclear Power Co., Ltd. since September 2022.



Board of Directors, Supervisory Committee and Senior Management

Ms. Zhu Hui

Employee representative Supervisor



Ms. Zhu Hui (朱慧), born in 1971, was appointed as an employee representative Supervisor of the Company in March 2019. She has a master's degree and is a senior accountant. Ms. Zhu Hui has more than 25 years of experience in financial management. She served as the deputy director of financial sharing center (presiding over the work) of CGNPC from August 2011 to May 2014, as deputy director (presiding over the work) and director of financial sharing center of the Company from May 2014 to August 2018. She has served as the head of the internal audit department of the Company since August 2018. She served as a supervisor of CGNPC Uranium Resources Co., Ltd. from October 2018 to May 2021, and has served as a supervisor of CGN Capital Holdings Co., Ltd. from October 2018 to July 2022.

Mr. Wang Hongxin

Employee representative Supervisor



Mr. Wang Hongxin (王宏新), born in 1963, was appointed as an employee representative of the Company in June 2015. He has a master's degree and is a librarian (associate researcher level) and an accountant. Mr. Wang Hongxin also has a Chinese law practice qualification certificate, corporate legal counsel practice qualification certificate and corporate lawyer practice qualification certificate. Mr. Wang Hongxin has more than 25 years of experience in the nuclear power industry. Mr. Wang served as a full-time director of the governance and business department of CGNPC from January 2011 to July 2011; served as a full-time director and an assistant to general manager of the legal affairs department of CGNPC from July 2011 to May 2014; served as the deputy general manager of the legal affairs department of the Company from May 2014 to February 2016; served as the deputy director of the Supervisory Department of the Company (presiding over the work) from September 2015 to July 2017. He was also a director of CGN New Energy Holdings Co., Ltd. (中國廣核新能源控股有限公司) ("CGN New Energy") (a company listed on the Hong Kong Stock Exchange, stock code: 1811) from July 2017 to June 2018. He has served as supervisor of Hongyanhe Nuclear since November 2018. From July 2017 to December 2018, he was the deputy general manager of the corporate legal affairs department of the Company (presiding over the work), and served as general manager of the legal affairs department of the Company from December 2018 to November 2021. He has served as a supervisor of CGN Wind Energy Co., Ltd. (中廣核風電有限公司) from March 2020 to April 2022, a director of CGN New Energy since December 2021, a director of Lufeng Nuclear since November 2021, a director of Taishan Nuclear since December 2021, a director of Shanghai Engineering Science & Technology Co., Ltd (上海中廣核工程科技有限公司) since January 2022, a director of CGN Wind Energy Co., Ltd. since April 2022, and a director of CGN Capital Holdings Co., Ltd. since December 2022.



Senior Management

Executive Director and President

Mr. Gao Ligang

The biography of Mr. Gao Ligang is set out on Page 80 of this Annual Report.



Chief Financial Officer, Joint Company Secretary and Board Secretary

Mr. Yin Engang

Mr. Yin Engang (尹恩刚), born in 1968, was appointed as the chief financial officer of the Company in October 2017, and has served as the secretary of the Board and a joint company secretary of the Company since August 2020. He has a master's degree and is a senior accountant. Mr. Yin Engang has over 20 years of experience in finance and auditing. He served as the chief financial officer of CGNPC Industry Investment Fund Management Co., Ltd. from July 2008 to March 2014, served as the general manager of the finance department of CGNPC from March 2014 to October 2017, served as a director of CGN Mining Company Limited (中廣核礦業有限公司) (a company listed on the Hong Kong Stock Exchange, stock code: 1164) from June 2014 to June 2016, and served as a director of CGN New Energy from March 2015 to January 2018. He served as the chairman of the board of directors of GNIC from October 2020 to August 2022.



Vice President

Mr. Qin Yuxin

Mr. Qin Yuxin (秦余新), born in 1972, has served as a Vice President of the Company since April 2021. He has a master's degree and is a senior engineer (researcher-level). Mr. Qin Yuxin has more than 20 years of experience in the nuclear power industry. Mr. Qin served as an assistant to the general manager of the nuclear power operation department of the Company and an assistant to general manager of CGN Operations from November 2014 to May 2016, as an assistant to general manager of CGN Operations from May 2016 to June 2016, as the deputy general manager of CGN Operations from June 2016 to May 2018, and as the general manager of CGN Operations from May 2018 to December 2020. He has served as the chairman of CGN Operations since December 2020.



Board of Directors, Supervisory Committee and Senior Management



Mr. Zhou Jianping | Vice president

Mr. Zhou Jianping (周建平), born in 1972, has served as a Vice President of the Company since January 2023. He holds a bachelor's degree and is a senior engineer (researcher-level). Mr. Zhou Jianping has more than 25 years of experience in the nuclear power industry. From June 2014 to July 2018, he successively served as an assistant to the general manager and the deputy general manager of Fangchenggang Nuclear. He served as the general manager of the Safety and Quality Assurance Department of the Company from July 2018 to March 2019, the secretary of the party committee and the general manager of Fangchenggang Nuclear from March 2019 to December 2020, and the secretary of the party committee and the chairman of Fangchenggang Nuclear from December 2020 to February 2022. During his time as the secretary of the party committee and the chairman of Fangchenggang Nuclear from February 2022 to April 2022, he also served as the general manager of the Safety, Quality and Environmental Department of the Company. He has served as the general manager of the Safety, Quality and Environmental Department of the Company since April 2022.



Mr. Liu Haijun | Vice president

Mr. Liu Haijun (劉海軍), born in 1973, has served as a Vice President of the Company since January 2023. He holds a master's degree and is a senior engineer. Mr. Liu Haijun has more than 25 years of experience in the nuclear power industry. He served as an assistant to the general manager of Taishan Nuclear from May 2009 to December 2015. He also served as the general counsel of Taishan Nuclear from June 2011 to December 2012. He served as the deputy general manager of Taishan Nuclear from December 2015 to December 2020, a director of NNB Generation Company (HPC) Limited ("HPC Genco") from November 2019 to September 2021, the secretary of the party committee, a director and the general manager of Taishan Nuclear from December 2020 to December 2021, and the secretary of the party committee, the chairman and the general manager of Taishan Nuclear from December 2021 to May 2022. From July 2021 to May 2022, he served as the chairman and the general manager of Taishan Nuclear Power Industry Investment Co., Ltd. (台山核電產業投資有限公司), as well as an executive director and the general manager of CGN Taishan No. 2 Nuclear Power Co., Ltd. (中廣核台山第二核電有限公司). Since May 2022, he has served as the secretary of the party committee and the chairman of Taishan Nuclear, as well as the chairman of Taishan Nuclear Power Industry Investment Co., Ltd. He has served as the general manager of the Nuclear Management Department of the Company since February 2023.

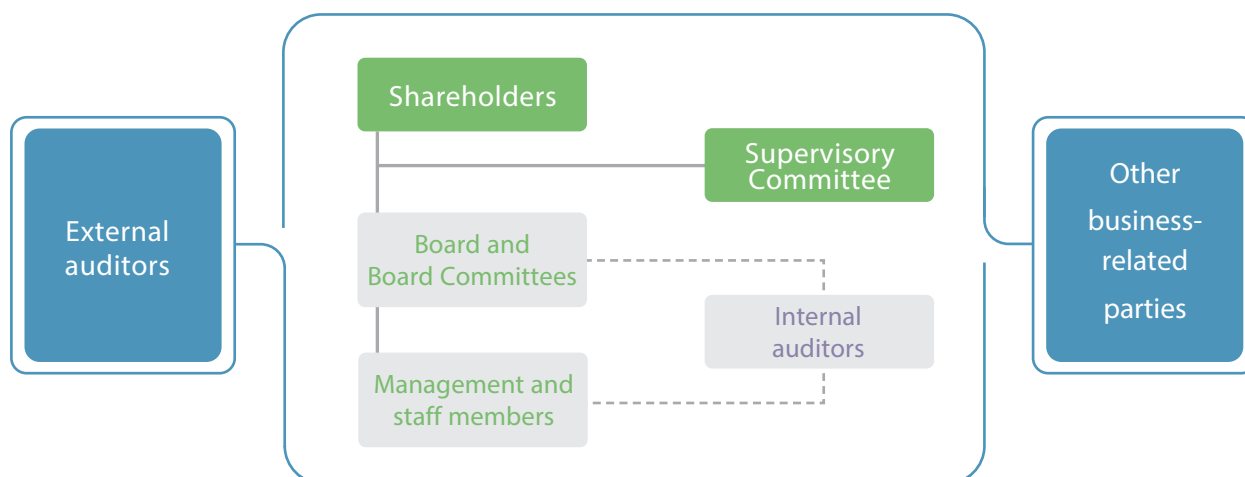


Corporate Governance Report

Corporate Governance Framework

The corporate governance framework of CGN Power is designed to safeguard the interests of shareholders and it involves all the key participants in the corporate governance practices of the Company, reflecting the ways in which they relate to each other and their roles and functions in corporate governance.

Our internal governance structure comprises mainly our shareholders, the Board and the Board Committees, the Supervisory Committee, our internal auditors and our management and staff. External auditors conduct independent review and assessment on the governance of the Company to help us continuously optimize our internal governance. Meanwhile, the interactions between the Company and other business-related parties, including customers, business partners, social environment and regulators, also reflect the effectiveness of our corporate governance. We are therefore fully aware of our significant corporate and social responsibilities as a public company and we need to constantly follow the best corporate governance practices.



Brief Introduction to the Corporate Governance Code of CGN Power

The Company strives to maintain a high level of corporate governance to ensure the realization of the Company's strategy, to protect the interests of shareholders and to enhance enterprise value. The Corporate Governance Code as set out in Appendix 14 to the Listing Rules (the "Hong Kong Stock Exchange Code") sets out the principles of good corporate governance and two levels of recommendations:

With respect to code provisions

companies shall duly comply with, or give reasonable explanations for any deviations from the code provisions.

With respect to recommended best practices

for guidance only and companies are encouraged to comply with, or give explanations for any deviations from the recommended best practices.

Corporate Governance Report

In accordance with the Listing Rules, the Hong Kong Stock Exchange Code and the Code of Corporate Governance of Listed Companies of the CSRC and based on the corporate governance framework of the Company, the Board has formulated the Corporate Governance Code of CGN Power Co., Ltd. (the “**Corporate Governance Code of the Company**”) as the corporate governance guidelines of the Company to explain the systems, procedures and measures we adopted to ensure our corporate governance standards meet the expectations of our shareholders and other stakeholders. The Code was reviewed and approved at the fifth meeting of the first session of the Board of Directors on November 18, 2014 and its fourth revision was completed in August 2022.

The Corporate Governance Code of the Company

The Corporate Governance Code of the Company is in compliance with all code provisions of the Hong Kong Stock Exchange Code, and exceeds the recommended best practices in the Hong Kong Stock Exchange Code in the following aspects.

- Our procedures for convening general meetings (such as the notice period for convening a general meeting) are subject to the stricter requirements of PRC laws and regulations.
- As to the requirements on independent non-executive Directors (such as their terms of reappointment and the maximum number of companies in which they could concurrently assume the role of independent non-executive directors), we will abide by more stringent PRC laws and regulations.
- We have entered into service contracts with our Directors as well as our Supervisors, which define their respective rights, obligations and responsibilities, particularly the duties of independent non-executive Directors and executive Directors. The service contracts with our Directors and Supervisors do not contain any provisions under which the Company is not allowed to terminate such contracts within one year without compensation (except for statutory compensation).
- The Company discloses in the annual report the controlling shareholder's compliance with the undertakings contained in the deed of non-competition.
- According to the authorization of the Board and the working rules of the special committees, the special committees of the Board consider and review the relevant issues and express their opinions and recommendations, and continuously enhance the decision-making support to the Board of Directors. In the meantime, the special committees of the Board prepare their respective annual work reports and make relevant disclosure in the annual report, so as to further enhance the standardization and transparency of corporate governance.

Corporate Governance Practices

The Company conducts a self-assessment on corporate governance every year with the aim of reviewing the implementation of the Corporate Governance Code of the Company and locating discrepancies, while summarizing the Company's good corporate practices.

Code provision C.5.7 of the Part 2 of the Hong Kong Stock Exchange Code and Rule 4.(10) of Section 2 of Chapter 2 of the Corporate Governance Code of the Company 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. As of the end of 2022, except for the aforesaid provisions, the Company has complied with all the other code provisions of the Hong Kong Stock Exchange Code, the recommended best practices and the Corporate Governance Code of the Company.

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**"). The Company actually convened the Meeting by way of written resolutions. The main reasons are as follows.

- 1** 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 expressed their opinion 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.
- 2** On March 13, 2022, Shenzhen announced the requirements for the prevention and control of COVID-19, and all employees of the Company were required to work from home from March 14, 2022 to March 20, 2022. Having fully consulted all Directors and sought the consent of the Chairman, 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 one-on-one 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.

Corporate Governance Report

Based on the analysis on the rather developed as well as newly implemented practices in respect of corporate governance, we believe that the Company mainly carried out the following sound practices in this aspect throughout 2022:

1 The Company planned ahead and prepared contingency plans to deal with additional pandemic control requirements and smoothly organized the meetings of the Board and Board committees related to annual results, meetings of the Supervisory Committee, result announcement conferences and general meetings. The contingency plans thoroughly considered various possible scenarios and communicated fully with stock exchanges and lawyers, striving to take the initiative in the midst of uncertainty. When the extreme scenarios in the contingency plans emerged, the Company responded in an orderly manner and successfully convened the meetings related to annual results with all staff working at home, ensuring that the Company's operations were legal and compliant and the annual results were announced on time to protect the interests of investors. In preparing for the annual general meeting, the Company continued to make concrete and detailed contingency plans, and formulated plans to hold meetings at different times, in different locations and in the absence of different personnel, so as to ensure the smooth convening of the annual general meeting.

2 As a forerunner, the Company tried to explore and establish a system to support the duty performance of independent non-executive directors of state-owned listed companies. In order to fully implement the "Two Consistencies", explore the establishment of a support system for the duty performance of independent non-executive directors of state-owned listed companies, and help independent non-executive directors perform their duties efficiently, the Company has established a system of pre-Board meeting briefing session, and prepared a three-year plan for the on-site inspections and training of Directors, which comprehensively improved the pertinence and effectiveness of support for independent non-executive Directors in performing their duties.

The Company has also specifically formulated the Evaluation Measures for the Duty Performance of Independent Directors (Trial), which integrates the regulatory rules of listed companies and state-owned central enterprises and makes reference to the practices of financial and other industries, clarifying the purpose, evaluation subject, evaluation method, evaluation content and application of evaluation results of independent non-executive Directors' duty performance evaluation. By regulating the duty performance of independent non-executive Directors, it further enhances the efficiency of independent Directors in performing their duties, thereby promoting the improvement of the Company's corporate governance and better protecting the interests of minority shareholders. The measures have been approved at the 2023 first extraordinary general meeting.

3 The Company actively explored new ways to proactively communicate with investors under the pandemic. For the first time, the Company participated in the SZSE's "Visiting Listed Companies" event, where analysts and investors visited the exhibition hall at the Company's headquarters and had interactive exchanges with the Company's executives. The Company's website was improved and optimized, with additional sections such as general meetings and chairman's statement, providing more channels for investors to gain a deeper understanding of the Company.

We will persist in the corporate governance practices established in the previous years and recognized by the Board or the general meeting, mainly including:

1 Further strengthen the support for the Board on duty performance.

- (1) In order to facilitate the Directors' prompt and easy access to relevant information on duty performance, the Company has formulated the Handbook on Duty Performance of Directors of CGN Power (updated in 2020), providing Directors with reference for the rules and guidelines of duty performance.
- (2) The expenses incurred by Directors for seeking independent professional advisers have been included in the annual budget of the Company.
- (3) Adhering to the working principle of "enhancing the scope of protection and striving for optimal protection conditions", the Company has extended the insurance coverage for Directors to major affiliates, and the policy limit upon renewal maintained at a relatively high level. Upon listing of A shares, the responsibilities of directors of A shares are also covered.
- (4) The management organizes extraordinary meetings on the issues that the Board is concerned about for individual reporting, and responds to the concerns of the Directors.
- (5) The documents provided to the Directors for review include, in addition to the resolution documents, the basis and process of discussion, and the professional opinions from third-party intermediaries, so as to provide a sufficient basis for the Directors to consider.
- (6) In order to help all Directors familiarize with and get hold of the Company's operation, the latest business report is given on the regular Board meeting of the Company.

2 Strengthen proactive communication with shareholders and strive to protect investors' rights.

- (1) We regularly analyze our shareholder structure, consider capital market conditions and company dynamics, and visit long-term investors on our own initiative. The Company highly values making timely and accurate responses through irm.cninfo.com.cn, capital market hotline and emails from the Company to inform shareholders the sound operation and stable growth of the Company and manifest the long-term value of the Company.
- (2) Roadshows, reverse roadshows, result announcement conferences and teleconferences are organized to proactively report our business operations to the shareholders, analysts, financial media and other parties. By further broadening our communication channels with shareholders, their better understanding of business operations of the Company could be attained.
- (3) The Company invited analysts from investment banks to conduct training sessions for Directors, Supervisors and senior management in respect of corporate value management, hot spots in the capital market as well as capital operations, with a view to deepening their understanding of insights into the capital market and strengthening their awareness of the importance of protecting rights of the shareholders.

3 The Company has formulated its Code for Securities Transactions by Directors and Specific Persons. In accordance with the A share regulatory rules, it is amended to setting up rules on basic principles for securities transaction, approval procedures and others. The confirmation for disclosure of interests by Directors, Supervisors and senior management was signed at the Board meetings for annual and interim results, respectively.

Corporate Governance Report

Overview of Regulatory Documents on Governance and Key Rules and Regulations

To further regulate corporate operation and improve governance, we had done the fourth revision on the Corporate Governance Code of the Company. The revision was mainly based on the Listing Rules as revised by the Hong Kong Stock Exchange in December 2021, the Rules for the Shareholders' Meetings of Listed Companies and the Rules for the Independent Directors of Listed Companies as revised by the CSRC in January 2022, the Rules Governing the Listing of Stocks on Shenzhen Stock Exchange as revised by the SZSE in January 2022 and other rules, with the addition of sound practices of the Company in governance.

In accordance with the requirements of the Measures for the Administration of Information Disclosure by Listed Companies (Revised in 2021), the Provisions on the Registration and Management System of Insiders Who Have Access to Insider Information of Listed Companies (Formulated in 2021), the Rules Governing the Listing of Stocks on Shenzhen Stock Exchange (Revised in 2022), the Self-regulatory Guidelines for the Companies Listed on the Shenzhen Stock Exchange No. 1 – Standardized Operation of the Companies Listed on the Main Board, the Self-regulatory Guidelines for the Companies Listed on the Shenzhen Stock Exchange No. 7: Transactions and Related Party Transactions, as well as other regulations and rules, and taking into account the actual situation of the Company, we revised the Management Measures on Inside Information and Insiders of CGN Power Co., Ltd., the Management Rules on Investor Relations of CGN Power Co., Ltd. and the Management Rules on Related Party Transactions of CGN Power Co., Ltd.

As at the end of 2022, our regulatory documents on governance and key rules and regulations mainly consist of:

- Articles of Association of CGN Power Co., Ltd.* (the "Articles of Association")
- Procedural Rules of General Meeting of CGN Power Co., Ltd.*
- Procedural Rules of the Board of Directors of CGN Power Co., Ltd.* (the "Procedural Rules of Board of Directors")
- Procedural Rules of the Supervisory Committee of CGN Power Co., Ltd.*
- Provisions on the Corporate Governance Authorization of CGN Power Co., Ltd. (the "Provisions on the Corporate Governance Authorization")
- Terms of Reference for the Audit and Risk Management Committee under the Board of Directors of CGN Power Co., Ltd.*
- Terms of Reference for the Remuneration Committee under the Board of Directors of CGN Power Co., Ltd.*
- Terms of Reference for the Nomination Committee under the Board of Directors of CGN Power Co., Ltd.*
- Terms of Reference for the Nuclear Safety Committee under the Board of Directors of CGN Power Co., Ltd.*

- Board Diversity Policy of CGN Power Co., Ltd.* (the “**Board Diversity Policy of the Company**”)
- Management Rules on Information Disclosure of CGN Power Co., Ltd.*
- Management Measures on Inside Information and Insiders of CGN Power Co., Ltd.
- Management Rules on Investor Relations of CGN Power Co., Ltd.*
- Management Rules on Related Party Transactions of CGN Power Co., Ltd.
- Management Rules on Comprehensive Risk Management of CGN Power Co., Ltd.
- Management Rules on Internal Auditing of CGN Power Co., Ltd.
- Internal Control Manual of CGN Power Co., Ltd. (First Edition)
- Director Nomination Policy of CGN Power Co., Ltd.*
- Corporate Governance Code of CGN Power Co., Ltd.* (the “**Corporate Governance Code of the Company**”)
- Shareholder Communication Policy of CGN Power Co., Ltd.* (the “**Shareholder Communication Policy**”)
- Terms of Reference for Independent Directors of CGN Power Co., Ltd.
- Terms of Reference for Secretary of the Board of Directors of CGN Power Co., Ltd.
- Management Measures on Guarantees of CGN Power Co., Ltd.*
- Management Rules on Investments of CGN Power Co., Ltd.
- Code for Securities Transactions by Directors and Specific Persons of CGN Power Co., Ltd.* (the “**Code for Securities Transactions by Directors and Specific Persons**”)
- Management Rules on Fundraising Proceeds of CGN Power Co., Ltd.*
- Management Rules on Capital Flows to and from Related Parties of CGN Power Co., Ltd.

* Already disclosed at the website of the Hong Kong Stock Exchange or the website of the SZSE or the website of the Company.

Corporate Governance Report

Major amendments to the Articles of Association

In 2022, there was no amendment to the Articles of Association.

Compliance with Domestic Regulatory Requirements

In 2022, the corporate governance practices of the Company were in compliance with the laws and regulations of the PRC, the relevant regulatory requirements of the CSRC and the Hong Kong Stock Exchange, and will continue to comply with the updated laws and regulations. None of the Company, the Directors, Supervisors or senior management was subject to any administrative penalty, notice of criticism or reprimand.

Relationship with Controlling Shareholder

Independence from Controlling Shareholder

The Company has an independent and complete business system and is able to operate independently. We are independent from our controlling shareholder in respect of our business, employees, assets, organizations and finance, etc.

As at the date of this report, among nine Directors of the Company, two non-executive Directors hold positions in CGNPC. Gao Ligang, an executive Director and President, has been the general manager of CGNPC since July 2021. None of other members of the senior management of the Company holds positions in CGNPC.

While maintaining our independent and complete business system and independent operating ability, we will continue to regulate our connected transactions and reduce potential horizontal competition to maximize shareholders' interests. For instance, if the Company enters into connected transactions with CGN Group, three Directors Yang Changli, Gao Ligang and Shi Bing will abstain from voting.

Horizontal competition with Controlling Shareholder

We entered into a Custodian Management Framework Agreement with CGNPC on April 28, 2014 and renewed the agreement on November 30, 2021, pursuant to which the Group will provide certain custodian services and will represent CGNPC in exercising certain management rights or powers over the custodian target companies.

As at December 31, 2022, the target companies under custody included: Xianning Nuclear Power Co., Ltd. (咸寧核電有限公司), Hubei Nuclear Power Co., Ltd. (湖北核電有限公司), Huizhou Nuclear, Cangnan Nuclear, Lingwan Nuclear Power Co., Ltd. (嶺灣核電有限公司), Anhui Wuhu Nuclear Power Co., Ltd. (安徽蕪湖核電有限公司), CGN Shaoguan Nuclear Power Co., Ltd. (中廣核韶關核電有限公司), CGN Jilin Nuclear Power Co., Ltd. (中廣核吉林核電有限公司), CGN Taishan No. 2 Nuclear Power Co., Ltd. (中廣核台山第二核電有限公司), CGN Hebei Nuclear Power Co., Ltd. (中廣核河北核電有限公司), CGN Zhanjiang Nuclear Power Co., Ltd. (中廣核湛江核電有限公司), etc.



In order to limit potential competition between CGNPC and its subsidiaries (our Company excluded, and CGNPC's associates included for purposes of the connected transactions) ("CGN Group") and the Group, we and CGNPC have entered into a non-competition deed, pursuant to which CGNPC has given certain non-competition undertakings to the Company (for itself and for the benefits of other members of the Group), to the effect that it would not, and it would procure that its associates and connected persons (other than any members of the Group) do not and would not, directly or indirectly, whether on its own account or in conjunction with or on behalf of any person, firm or company among other things, carry on, participate, be interested or engaged in or acquire or hold (in each case whether as a shareholder, director, partner, agent, employee or otherwise be involved, whether for profit, reward or otherwise), any restricted business (other than the disclosed retained business of CGN Group in the Prospectus) during the agreed restricted period. Only the independent non-executive Directors may participate in deciding whether or not to accept any new business opportunity. In addition, in order to avoid potential competition between CGN Group and the Group for certain nuclear power projects retained by the former, we have obtained the right to acquire and the preemptive right regarding the retained business to better protect the interests of the Group.

In the progress of A Share Offering of the Company, CGNPC further made an undertaking to avoid horizontal competition, including, but not limited to, to procure, at its best efforts, investees of CGNPC not to, whether at present or in the future, engage or participate in any business or activity that has or might cause direct or indirect competition with principal operations of the Company and its controlling subsidiaries, to treat the Group as the sole platform for final integration of nuclear power generation business of CGNPC, as well as to transfer the domestic retained nuclear power business of CGNPC to the Company upon the fulfillment of specific conditions.

In 2022, the Company did not receive any new business opportunity notice from CGNPC.

The independent non-executive Directors will closely monitor the performance of CGNPC under the non-competition deed and the undertaking to avoid horizontal competition, and the management of the Company will report to the Board on the relevant matters as and when appropriate on an ongoing basis. CGNPC confirmed that no breach of non-competition deed and undertaking to avoid horizontal competition has been found during the reporting period.

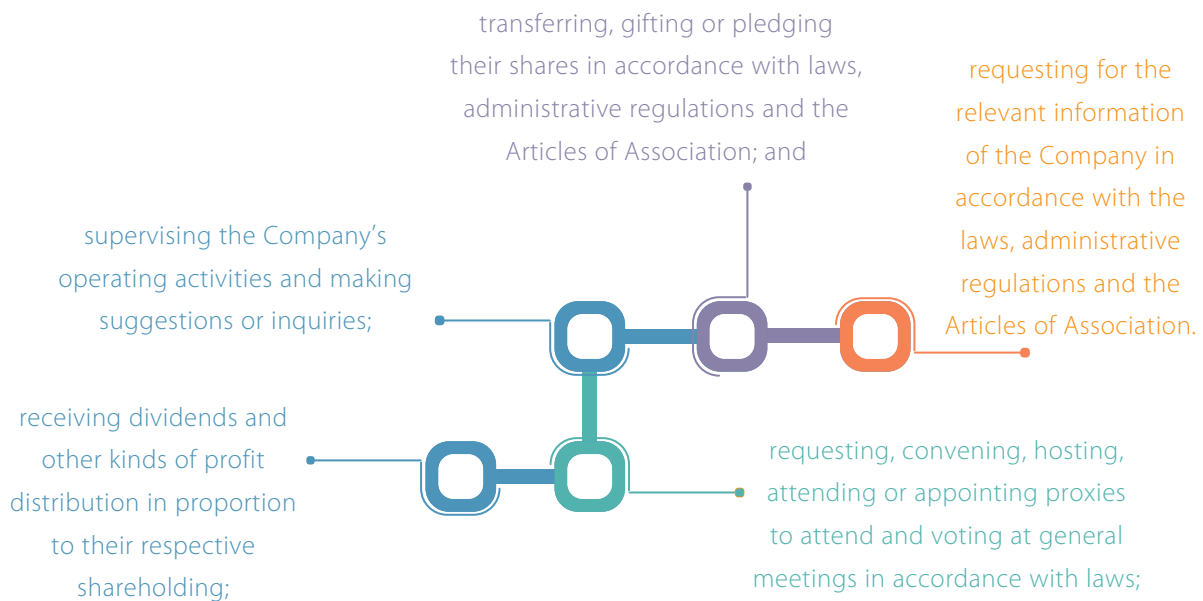


Corporate Governance Report

Shareholders

Shareholders' Rights

Shareholders' rights are based on certain laws and regulations, such as the Company Law of the PRC, the Hong Kong Companies Ordinance and the Listing Rules. Detailed descriptions on major rights of the shareholders are set out in the Corporate Governance Code of the Company, which mainly include:



To protect shareholders' interests and rights, the Company will submit separate resolutions in respect of all matters (including the election of a specific Director or Supervisor) at general meetings of the Company.

All resolutions tendered at the general meetings will be subject to voting by way of poll in accordance with the Listing Rules. The poll results will be published timely on the websites of the Company, the Hong Kong Stock Exchange and the SZSE after the general meetings.



Convening Extraordinary General Meetings and Submission of Proposals

According to the Articles of Association, shareholders who individually or jointly hold 10% or more of the voting shares of the Company may request for the convening of an extraordinary general meeting (“EGM”). The relevant request may be proposed in writing to the Board requesting the Board to convene an EGM to deal with the matters specified in the request. In the event that the Board agrees to convene an EGM or class meeting, the notice of convening an EGM or class meeting shall be issued within five days from the passing of the relevant resolution of the Board. Any amendment to the proposal made in the notice requires approval of the shareholders concerned.

According to the Articles of Association, shareholders who individually or jointly hold more than 3% of the shares of the Company may submit a proposal to the Board in writing ten days before the date of the general meeting. The Board shall notify other shareholders within two days of receiving the proposal and include it for consideration at the general meeting. The written proposal shall be addressed to the Board at the Company’s headquarters in the PRC.

Further details about the procedures for shareholders to convene and put forward proposals at any general meeting are available on the Company’s website.

Enquiries to the Board

Shareholders who intend to put forward their enquiries about the Company to the Board could email their enquiries to the email address: IR@cgnpc.com.cn.



Corporate Governance Report

Shareholdings

Total number of registered shareholders

Unit: accounts

	As at December 31, 2021	As at December 31, 2022
Total number of registered shareholders	290,043	256,309
Registered holders of H shares	3,369	3,289
Holders of A shares	286,674	253,020

Shareholder structure

Nature of shares	Shareholders	Number of shares held (shares)	Approximate
			percentage of the Company's total issued shares (%)
A shares	CGNPC	29,176,641,375	57.78
	Hengjian Investment	3,428,512,500	6.79
	CNNC	1,679,971,125	3.32
	Other holders of A shares	5,049,861,100	10.00
H shares	BlackRock, Inc.	673,008,059	1.33
	China Life Insurance Company Limited	666,006,000	1.32
	CGNPC	570,235,000	1.13
	Other holders of H shares	9,254,375,941	18.33

Note: The data above is relevant as at December 31, 2022.

As at the date of this Annual Report, our minimum public float meets the requirements of the Listing Rules.

General Meetings

Pursuant to the Articles of Association, general meetings are divided into annual general meeting (“AGM”) and EGM. General meetings shall be convened by the Board. AGM is held once every year and within six months from the end of the preceding accounting year.

In 2022, we held the 2021 AGM/the 2022 first H shareholders’ class meeting/the 2022 first A shareholders’ class meeting.

2021 AGM	
Date	May 27, 2022
Location	Shenzhen CGN Building
Attendance	Total number of shares with voting rights represented by the shareholders attending the AGM in person or by proxy was 39,260,239,785 shares, representing approximately 77.7% of the total number of shares.
Resolutions considered and approved	<p>Ordinary resolutions:</p> <p>The report of the Board of Directors for the year ended December 31, 2021</p> <p>The report of the Supervisory Committee for the year ended December 31, 2021</p> <p>The annual report of the Company for the year 2021</p> <p>The audited financial report for the year ended December 31, 2021</p> <p>The profit distribution plan for the year ended December 31, 2021</p> <p>The investment plan and capital expenditure budget for the year 2022</p> <p>The re-appointment of KPMG Huazhen LLP as the financial report auditor of the Company for the year 2022 until the end of the next annual general meeting of the Company, and to authorize the Board to determine its remuneration</p> <p>The re-appointment of Pan-China Certified Public Accountants LLP as the internal control auditor of the Company for the year 2022 until the end of the next annual general meeting of the Company, and to authorize the Board to determine its remuneration</p> <p>The appointment of non-employee representative Supervisor</p> <p>The remuneration of Directors and Supervisors for the year 2022</p> <p>The continuing connected transactions – revision of annual cap, the 2023-2025 Engineering Services Framework Agreement and the proposed annual caps thereunder</p>
	<p>Special resolutions:</p> <p>The application for registration of shelf-offering corporate bonds with the exchange</p> <p>The grant of the general mandate to the Board of Directors for allotting, issuing and dealing with additional A Shares and/or H Shares during the relevant period</p> <p>The grant of the general mandate to the Board of Directors for repurchasing A Shares and/or H Shares of the Company during the relevant period</p>

Corporate Governance Report

2022 first H shareholders' class meeting	Date	May 27, 2022
	Location	Shenzhen CGN Building
	Attendance	Total number of H shares with voting rights represented by the holders of H shares attending the H shareholders' class meeting in person or by proxy was 4,930,552,084 shares, representing approximately 44.2% of the total number of H shares.
	Resolutions considered and approved	Special resolution: The grant of the general mandate to the Board of Directors for repurchasing A Shares and/or H Shares of the Company during the relevant period
2022 first A shareholders' class meeting	Date	May 27, 2022
	Location	Shenzhen CGN Building
	Attendance	Total number of A shares with voting rights represented by the holders of A shares attending the A shareholders' class meeting in person or by proxy was 34,847,675,701 shares, representing approximately 88.6% of the total number of A shares.
	Resolutions considered and approved	Special resolution: The grant of the general mandate to the Board of Directors for repurchasing A Shares and/or H Shares of the Company during the relevant period

We are serious about the organization and convening of each general meeting. All Directors, Supervisors and senior management members attend the general meetings to the best of their abilities and answer questions of the shareholders with the presence of witnessing lawyer(s). The external auditors of the Company also attended the AGM, and replied to questions about audit practices, preparation and contents of the auditors' report, accounting policies and independence of auditors. The 2022 AGM is expected to be held in May 2023.

Communication with Shareholders and Investors

Investor relations have always been regarded as highly important by the Company, the Board and our management. The Company has established the Investor Relations Management System of CGN Power Co., Ltd., the Information Disclosure Management System of CGN Power Co., Ltd. and other systems to regulate the activities of investor relations through these systems.

The Company continues to help our shareholders understand the Company in a timely and comprehensive manner through various communication channels. The Company established the Shareholders Communication Policy to maintain continuous and effective communication with shareholders. The Company's latest Shareholders Communication Policy was updated on January 13, 2021 and is available on the Company's website. The Company has complied with the Shareholders Communication Policy, which ensures that the Company communicates to its shareholders in an effective and timely manner, and maintains a continuous communication between the Board and shareholders. At present, no further amendment is required. In 2022, we optimized the Company's website and added columns such as General Meetings and Chairman's Statement to facilitate investors' access to information and in-depth understanding of the Company. Meanwhile, we highly value the views and feedback of shareholders and investors. We earnestly consider the advice and comments of shareholders and investors on the Company's development strategy, operation and other aspects and provide feedback to the Board, the management and relevant departments of the Company through briefings, special reports and other means, in order to achieve the alignment between the Company's business development and shareholder value and to protect the interests of the shareholders, thereby achieving effective and smooth two-way communication.

Communication Activities with Shareholders and Investors

Main channels of communication with shareholders and investors and the communication activities in 2022:

- Regular report: Annual report, interim report, quarterly report, quarterly operation briefings and ESG report of the Company are published in a timely manner.
- General meeting: the 2021 AGM/the 2022 first H shareholders' class meeting/the 2022 first A shareholders' class meeting were held in Shenzhen, Guangdong Province, China on May 27, 2022.
- Results announcement conference: The 2021 annual results announcement conference was held in Shenzhen on March 18, 2022; the 2022 interim results announcement conference was held on August 25, 2022.
- Results roadshow: The Company organized annual results roadshow in March 2022 and interim results roadshow in August 2022.
- Research activities: We arranged interviews between the management and the investors and analysts from time to time to listen to their opinions and suggestions and respond to their concerns.
- Analyst teleconference: The Company organizes teleconference for analysts and investors to facilitate detailed communication with the capital market after publishing quarterly operations, quarterly reports or in case of internal and external material matters. The Company held quarterly operation teleconferences in January and July 2022 and quarterly report teleconferences in April and October 2022.
- Online communication: In November 2022, the Company participated in an online group reception day for investors of Shenzhen listed companies.
- Daily communication: Timely response to the concerns of shareholders and investors on the IRM platform, investor hotline, and IR mailbox.
- Company website (www.cgnp.com.cn): The Company publishes information and materials relevant to investors in the Chairman's Statement and Investor Relations columns.

Corporate Governance Report

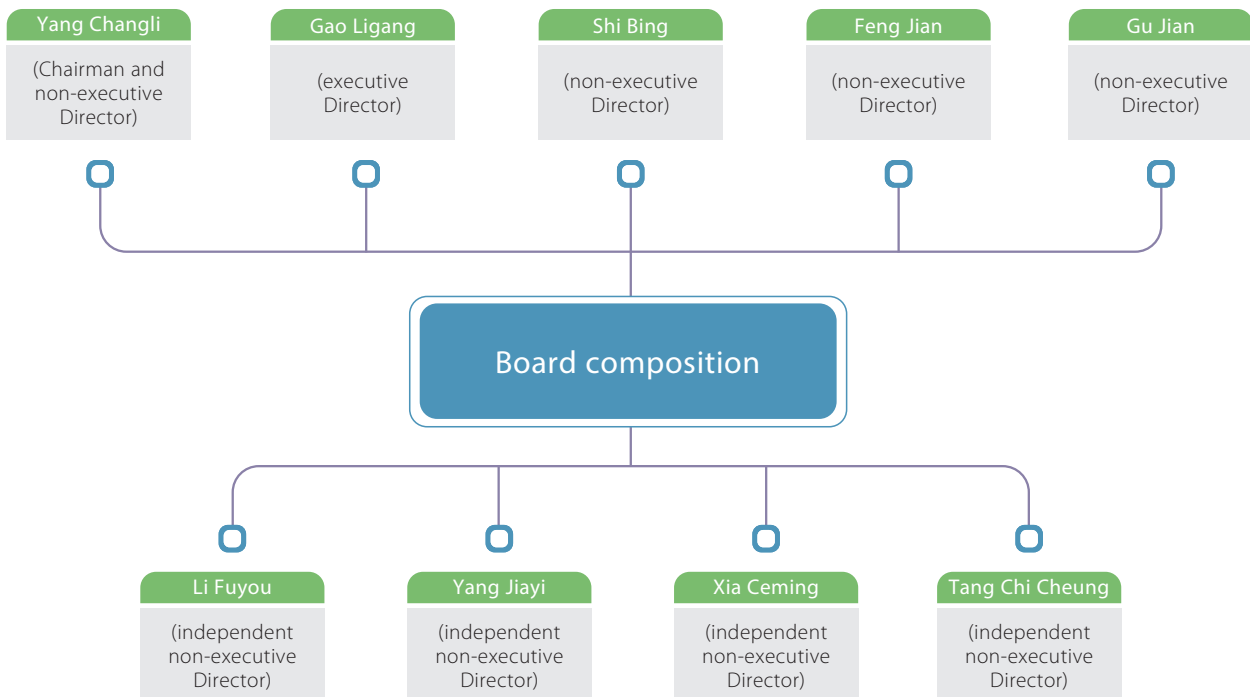
Board of Directors

Composition of the Board of Directors

We fully recognize the benefits of diversity in Board members to the development of the Company, and the Company is committed to establishing a board with members with a diverse background. The Board formulated the Board Diversity Policy and delegated the task of reviewing the policy regularly to the Nomination Committee.

Differentiation and diversity in many aspects, such as professional skills, industry experience, ages and qualifications, are reflected in the composition of the members of this session of the Board. The members of this session of the Board possess over 20 years of extensive experiences in the electricity industry management, financial and accounting management, audit, macro economy, safety management, as well as supervision and management of state-owned enterprises respectively. They fully understand their duties, rights and responsibilities and are capable of performing their duties in a faithful, honest and diligent manner.

Pursuant to the Articles of Association, the Board of the Company comprises ten Directors. As of the date of this report, the Company has 9 current Directors. Mr. Wang Hongjun resigned from his position as a non-executive Director of the Company on December 23, 2022. Mr. Jiang Dajin resigned from his position as an executive Director of the Company on December 28, 2022. Mr. Feng Jian was appointed as a non-executive Director of the Company on the 2023 First EGM convened on February 10, 2023. Except for Mr. Gao Ligang, being an executive Director and the President of the Company, all the remaining Directors are non-executive Directors who are independent of our management, including four independent non-executive Directors. Each of the independent non-executive Directors has confirmed that he is independent of the Company, thereby contributing to critical review and monitoring of management process.



(as at the date of this report)

The Board has at all times complied with the requirements under Rules 3.10(1) and 3.10(2) of the Listing Rules for the year 2022 that at least three independent non-executive Directors have been appointed. Among them, at least one independent non-executive Director must have appropriate professional qualification or professional knowledge of accounting or professional knowledge related to financial management.

Each of the independent non-executive Directors has confirmed his independence according to Rule 3.13 of the Listing Rules, and all of them are considered as independent parties by the Company.

The Company has established a mechanism to ensure independent views and input are available to the Board, and conducted an annual review of the implementation and effectiveness of such mechanism. The Board maintains a balanced composition of executive Directors, non-executive Directors and independent non-executive Directors, with a majority of non-executive Directors (including independent non-executive Directors) and no less than one-third of independent non-executive Directors to ensure the independence of the Board. The Company has established various channels for the independent non-executive Directors to express their opinion, and secure sufficient time for Board meetings and Board Committee meetings to ensure that the Directors have sufficient time and channels to express their consideration and opinion. The management of the Company seeks independent professional advisors to provide consultation services for Directors requiring such services, which are included in the budget to provide funding.

Since provisions of the Hong Kong Stock Exchange Code require Directors to disclose the number and nature of positions held in listed companies or entities and other material commitments, and their identities and duration of employment with the issuer, therefore, the Directors have agreed to disclose their relevant information timely to the Company.

Please refer to “Board of Directors, Supervisory Committee and Senior Management” set out on page 80 to 86 of this Annual Report for the biographical details of all Directors. Except for those disclosed in such section, no other information relating to the relationship between Directors and Supervisors and other Directors, Supervisors and senior management shall be disclosed according to the Hong Kong Stock Exchange Code.

The Board has set out the Procedural Rules of Board of Directors, which specify the terms of reference of the Board and procedures for the Board meetings, etc., and also set out special arrangements for voting on resolutions regarding major related party transactions and contracts. Directors shall not vote on any contract, transaction, arrangement or proposal in which he/she or any of his/her associates is materially interested, nor shall he/she be counted in the quorum. Where the number of the Directors who can vote on this matter is less than three, such issue shall be submitted to a general meeting for voting. In addition, the independent non-executive Directors shall provide independent opinions in accordance with laws and regulations and the Listing Rules. The Company will strictly review each resolution proposed at the Board meetings to find out whether there is any conflict of interest that requires Directors to abstain from voting and remind all Directors for confirmation before meetings. For example, Mr. Yang Changli, Mr. Gao Ligang and Mr. Shi Bing, all being Directors, have refrained from voting when we considered and approved the resolution “continuing connected transactions – revision of annual cap, the 2023-2025 Engineering Services Framework Agreement and the proposed annual caps thereunder”.

Duties of the Board

As the operating decision-making body of the Company, the Board performs its duties in accordance with the provisions set out in the Articles of Association. The Board is responsible for overall leadership of the Group, supervision on the Group’s strategic decisions and supervision on business and performance. The Board reports its work to the general meeting, implements the resolutions resolved at the general meeting and is accountable to the general meeting. The Board has delegated the powers and responsibilities for daily management and operation of the Group to the senior management of the Group.

All Directors of the Company are aware of their joint responsibility for the Company’s operations, business and development, and perform their duties in accordance with the provisions of the service contract and the Corporate Governance Code of the Company. All Directors must ensure that they have complied with the applicable laws and regulations, and devote sufficient time and efforts to handle the affairs of the Company, to act with integrity, prudence and skills and to assume their respective responsibilities.

Corporate Governance Report

The major responsibilities of the Board include:

- formulating strategic guideline of the Company;
- developing working targets of the management;
- evaluating the performance of the management;
- ensuring the Company implements a prudent and effective regulatory framework to evaluate and manage risks;
- performing the function of corporate governance for the Company or arranging for one or more committees to perform related duties; and
- authorizing the special committees to perform relevant detailed responsibilities in accordance with the requirements of the Procedural Rules of Board of Directors and the terms of reference of the special committees.

To facilitate the Directors' access to the support for duty performance, the Company, pursuant to the Listing Rules and the Articles of Association, compiled the Handbook on Duty Performance of Directors of CGN Power in November 2018, providing Directors with reference for the rules and guidelines of duty performance. The handbook was amended for the first time according to regulatory requirements in August 2020.

The main corporate governance duties of the Board include:

- developing and reviewing the policies and practices regarding the corporate governance of the Company;
- reviewing and monitoring the training and continuous professional development of the Directors and senior management;
- reviewing and monitoring the Company's policies and practices on compliance with legal and regulatory requirements;
- developing, reviewing and monitoring the rules regarding code of conduct applicable to employees and Directors; and
- reviewing the Company's compliance with the Corporate Governance Code of the Company and the Hong Kong Stock Exchange Code and the disclosure in the Corporate Governance Report.

Delegation by the Board

The Board retains the power to decide on all material matters pertaining to the Company, including: approval and supervision on all policy matters, overall strategies and budgets, internal control and risk management system, material transactions (in particular those possibly involving a conflict of interests), financial information and other major financial and operation matters. The Directors may seek independent professional advice in performing their duties at the Company's expense and are encouraged to consult with the Company's senior management independently. The daily management, administration and operation of the Company are delegated to the senior management. The delegated functions and responsibilities will be reviewed by the Board on a regular basis.

Board Committees

The Board established four committees with specific terms of reference, namely the Audit and Risk Management Committee, the Remuneration Committee, the Nomination Committee and the Nuclear Safety Committee. The specialized committees shall conduct study on specific matters and furnish advice and recommendations thereon as a reference for the Board in its decision-making.

Audit and Risk Management Committee

Please refer to the "Audit and Risk Management Committee Report" set out on page 139 of this Annual Report for details of the Audit and Risk Management Committee, including its composition and annual work summary.

The duties and responsibilities of the committee mainly include:

- To provide advice on the appointment, reappointment, removal and remuneration of the independent auditors, and to review the independence of the auditing agency appointed by the issuer and to give opinions on its independence;
- To review and monitor the independence and objectivity of the independent auditors as well as the effectiveness of the audit process in accordance with the applicable standards, and discuss the nature and scope of the audit with the independent auditors before the audit commences;
- To formulate and implement policies on engaging external auditors to provide non-audit services according to work needs. The Committee shall report to the Board identifying and making recommendations on any matters where action or improvement is needed;

Corporate Governance Report

- To review the quarterly, half-year and annual financial statements to be proposed to the Board, monitoring the completeness, accuracy and fairness of the financial statements of the Company. In reviewing these financial statements, the Committee shall focus on: any changes in accounting policies and estimates, areas involving critical judgment, significant adjustments required by the independent auditors after auditing the accounts, the going concern assumptions and any qualifications, compliance with accounting standards and the relevant legal requirements;
- To consider any significant or unusual items which are reflected or required to be reflected in the reports and accounts of the Company, and give due consideration to any matters raised by the Company's accounting and finance department, compliance department or auditors;
- To discuss the review of the half-year accounts and audit of the Company by the independent auditors;
- To review the independent auditors' explanatory notes of inspection or management proposal letter (including any material queries raised by the independent auditors regarding the accounting records, financial accounts or monitoring system), and the responses to queries from the management officers of the Company;
- To communicate with the Board, senior management officers and the independent auditors in respect of the Company's financial reports on a regular basis, at least two meetings must be convened each year with the independent auditors of the Company;
- To be responsible for any important communication between internal auditors and external auditors;
- To review the Company's financial policies, internal audit system, internal control system and risk management system and its implementation;
- The Audit and Risk Management Committee shall establish the relevant procedures for dealing with the following issues: receiving, retaining and dealing with complaints coming to the knowledge of the Company in relation to accounting, internal control, risk management or auditing matters; receiving or handling complaints or whistle blowing from the Company's employees on accounting or auditing matters and keeping their confidentiality;
- To actively understand the work dynamics of the internal audit department, timely coordinate major internal control deficiencies found and to report to the Board of Directors; and
- To fulfill other duties and responsibilities delegated by the securities regulatory authorities in the jurisdiction where the Company is listed.

Remuneration Committee

Please refer to the “Remuneration Committee Report” set out on page 141 of this Annual Report for details of the Remuneration Committee, including its composition, annual work summary, remuneration policy and remuneration of Directors, Supervisors and senior management in 2022.

The duties and responsibilities of the committee mainly include:

- To study the remuneration (including benefits in kind, pensions and compensation payments) policy, structure and procedures for formulating remuneration policies for Directors, Supervisors and senior management officers and make recommendations to the Board. The procedures for formulating remuneration policies shall be formal and transparent;
- To consider and make recommendation on the appraisals of Directors, Supervisors and senior management officers;
- To review and approve performance-based remuneration proposals for management officers with reference to corporate goals and objectives set by the Board;
- To organize the Company’s performance evaluation of management personnel except supervisors;
- To approve with authority delegated by the Board or make recommendations to the Board on the remuneration and benefits of the individual executive Directors and senior management;
- To make recommendations to the Board on the remuneration of non-executive Directors;
- To consider the level of salaries paid by comparable companies, time commitment and responsibilities of the relevant individual, and other positions held by such individual in the Company when determining the remuneration and benefits for Directors, Supervisors and senior management;
- To supervise the implementation of the remuneration system for Directors, Supervisors and senior management officers of the Company;
- To review and approve the compensation arrangements for Directors, Supervisors and senior management officers for any loss or termination of office and dismissal due to misconduct; and
- To ensure that none of the Directors or any of his/her associates will be involved in deciding on his/her own remuneration.

Corporate Governance Report

Nomination Committee

Please refer to the “Nomination Committee Report” set out on page 143 of this Annual Report for details of the Nomination Committee, including its composition and annual work summary.

The duties and responsibilities of the committee mainly include:

- To review the structure, size and composition (including the skills, knowledge, experience and diversity of perspectives) of the Board on a regular basis annually, and make recommendations on any proposed changes to the Board to complement the Company’s strategies;
- To review the selection criteria and procedures for directors and senior management and make recommendations thereon;
- To recommend individuals suitable to become directors and senior management; select and nominate such individuals for directorships or make recommendations thereon;
- To assess the independence of the independent non-executive Directors;
- To make recommendations to the Board for the appointment or re-appointment of Directors and succession planning for Directors;
- To review the Board diversity policy and any measurable objectives for implementing such Board diversity policy as may be adopted by the Board from time to time, and to review the progress of achieving relevant objectives; and
- To fulfill such other duties and responsibilities delegated by the Board.

Nuclear Safety Committee

Please refer to the “Nuclear Safety Committee Report” set out on page 145 of this Annual Report for details of the Nuclear Safety Committee, including its composition and annual work summary.

The duties and responsibilities of the committee mainly include:

- To listen to presentation of the Company relating to status of nuclear safety;
- To listen to independent nuclear safety assessment reports by third-party organizations obtained by the Company;
- To implement necessary nuclear safety oversight, offer guidance and conduct research activities in accordance with the needs;
- To report observations and recommendations to the Board;
- To give appropriate response to the shareholders’ meeting on nuclear safety issues of concern;
- To fulfill such other duties and responsibilities delegated by the Board; and
- To fulfill other duties and responsibilities delegated by the regulatory authorities in the jurisdiction where the Company is listed.

Particulars of Board Meetings

The Company has adopted the practice of holding Board meetings on a regular basis. The Company set out the next year's meeting schedule one year in advance. The notice of regular Board meeting and the meeting documents signed and issued by the management or chairmen of specialized Board Committees will be sent to all Directors at least 14 days prior to the date of convening the meeting to enable them to attend the meeting, have sufficient time to familiarize themselves with the meeting content and decision-making matters and include relevant matters for consideration in the agenda.

During the reporting period, we convened a total of eight Board meetings (including five regular meetings and three extraordinary meetings). The convening and voting procedures of such meetings were all in compliance with the requirements under the Articles of Association and the Procedural Rules of Board of Directors. Details of the meetings are as follows:

No	Meeting	Date	Mode
1	Thirteenth meeting of the third session of the Board of Directors	January 17, 2022	Physical
2	Fourteenth meeting of the third session of the Board of Directors	March 17, 2022	By teleconference
3	Fifteenth meeting of the third session of the Board of Directors (extraordinary meeting)	April 1, 2022	By teleconference
4	Sixteenth meeting of the third session of the Board of Directors	April 21, 2022	Physical
5	Seventeenth meeting of the third session of the Board of Directors (extraordinary meeting)	May 20, 2022	By teleconference
6	Eighteenth meeting of the third session of the Board of Directors	August 24, 2022	Physical
7	Nineteenth meeting of the third session of the Board of Directors ^{Note}	October 26, 2022	Physical
8	Twentieth meeting of the third session of the Board of Directors (extraordinary meeting)	December 23, 2022	By teleconference

Note: Before this Board meeting, the Chairman held a symposium with independent non-executive Directors, without attendance of other Directors.

All resolutions proposed at above meetings were approved. Save for the resolutions passed at above general meetings, major resolutions considered and approved by the Board during this reporting period also include:

- 2022 Operational Plan
- 2022 Comprehensive Risk Management Report
- 2022 Internal Audit Plan
- Amendment to the Management Rules on Investor Relations of CGN Power Co., Ltd.
- Amendment to the Management Rules on Related Party Transactions of CGN Power Co., Ltd.

Corporate Governance Report

Attendance of Directors at the Board Meetings, Board Committee Meetings and General Meetings

The table below shows details of attendance of Directors at the Board meetings, Board Committee meetings and general meetings during this reporting period.

Name	Position	Attendance/Frequency of Meetings					
		Board Meeting	Audit and Risk Management Committee meeting	Remuneration Committee meeting	Nomination Committee meeting	Nuclear Safety Committee meeting	General Meeting
Yang Changli	Chairman of the Board and Non-executive Director, NS (Chairman), P	8/8	-	-	3/3	2/2	1/1
Gao Ligang	Executive Director and President, NS	8/8	-	-	-	1/2	0/1
Jiang Dajin ⁽¹⁾	Executive Director and Vice President	8/8	-	-	-	-	1/1
Shi Bing	Non-executive Director	8/8	-	-	-	-	1/1
Wang Hongjun ⁽²⁾	Non-executive Director, S, NS	6/7	-	3/4	-	0/2	1/1
Gu Jian	Non-executive Director, A, NS	8/8	5/6	-	-	2/2	1/1
Li Fuyou	Independent non-executive Director, P (Chairman), NS	8/8	-	-	3/3	2/2	1/1
Yang Jiayi	Independent non-executive Director, A (Chairman), S	8/8	6/6	4/4	-	-	1/1
Xia Ceming	Independent non-executive Director, S (Chairman), P	8/8	-	4/4	3/3	-	1/1
Tang Chi Cheung	Independent non-executive Director, A	8/8	6/6	-	-	-	1/1

A: Audit and Risk Management Committee P: Nomination Committee NS: Nuclear Safety Committee S: Remuneration Committee

Notes:

- (1) Mr. Jiang Dajin resigned from his position as an executive Director of the third session of the Board and Vice President of the Company as he reached his retirement age, which became effective on December 28, 2022.
- (2) Mr. Wang Hongjun resigned from his position as a non-executive Director of the third session of the Board of the Company, a member of the Remuneration Committee and a member of the Nuclear Safety Committee due to work reasons, which became effective on December 23, 2022.

Certain Directors were unable to attend relevant meetings due to other business engagements and delegated in writing to the proxies to vote on relevant matters on their behalf.

Training for Directors

As stipulated by the Listing Rules, a director shall be aware of his duties. All newly appointed Directors have been provided with necessary induction training and information to ensure that they will have proper understanding of the operation and business of the Company and their responsibilities under the relevant laws, regulations and rules.

In order to provide better assistance to the Directors for performing their duties, we have actively made arrangements for the Directors to participate in trainings in relation to, among others, the business and corporate governance aspects of a listed company. Furthermore, we will provide the Directors with written information on applicable policies and regulations issued by the regulators from time to time.

In addition, the management of the Company will monthly provide the Directors with a monthly management report, which sets out the particulars such as achievements of our operating indicators, safety and environmental management, production and operation, project construction, the Company's performance in the capital market and other important matters.

We will arrange the Directors to participate in inspections from time to time every year to enable them to have a better understanding of our operation and business, and invite and encourage them to furnish reasonable suggestions and advice to the Company based on their respective areas of expertise.

The current Directors have received the following trainings in relation to the roles, functions and duties of directors of listed companies for the year ended December 31, 2022.

Director	Type of training		
	Reading Materials	Specific Training	On-site Inspections
Yang Changli	√	√	
Gao Ligang	√	√	
Jiang Dajin ⁽¹⁾	√	√	
Shi Bing	√	√	
Wang Hongjun ⁽²⁾	√	√	√
Gu Jian	√	√	√
Li Fuyou	√	√	√
Yang Jiayi	√	√	√
Xia Ceming	√	√	√
Tang Chi Cheung	√	√	√

Notes:

- (1) Mr. Jiang Dajin resigned from his position as an executive Director of the third session of the Board and Vice President of the Company as he reached his retirement age, which became effective on December 28, 2022.
- (2) Mr. Wang Hongjun resigned from his position as a non-executive Director of the third session of the Board of the Company, a member of the Remuneration Committee and a member of the Nuclear Safety Committee due to work reasons, which became effective on December 23, 2022.

Corporate Governance Report

Reading Materials:

- Company Management Monthly Report Once a month and a total of 12 issues.
- Listed Company Regulatory Work Newsletter (Issue 3, 2022) provided by the Shenzhen office of the CSRC.

Specific Trainings:

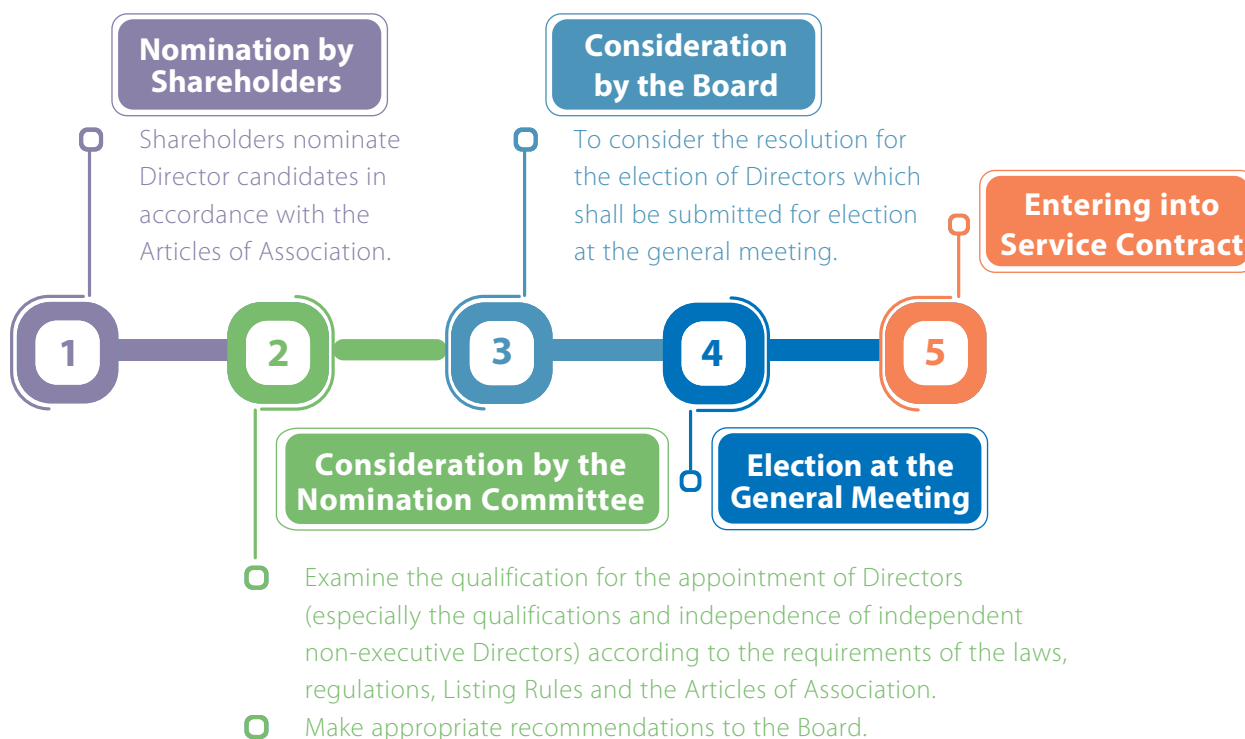
- On February 16, 2022, the independent non-executive Directors attended an online training session organized by the China Association for Public Companies, which primarily involved risk concerns by the independent non-executive directors of listed companies in the 2021 annual report.
- On 23 February, 2022, the independent non-executive Directors attended an online training session organized by the China Association for Public Companies, which primarily involved “New Legal Risks on False Statement” and legal risks of listed companies.
- On April 21, 2022, a lecture mainly on interpretation of the international and domestic macroeconomic environment was given by the chief economist of an investment bank.
- On June 24, 2022, the first specific training session in 2022 for directors, supervisors and senior management of listed companies in Shenzhen was organized by the Shenzhen Public Companies Association, which primarily involved details of the 2021 annual report, annual report disclosure and review.
- On September 1, 2022, the second specific training session in 2022 for directors, supervisors and senior management of listed companies in Shenzhen was organized by the Shenzhen Public Companies Association, which primarily involved non-compliant transactions by shareholders of listed companies, relevant regulations on changes in shareholding and case studies.
- On October 26, 2022, a lecture on hot issues in the capital market and the development path of the power industry under the goals of “carbon peaking” and “carbon neutrality” was given by the chief industry analyst of the power and utilities department of an investment bank. Another lecture on the latest ESG regulatory rules and development was given by the Company’s domestic and international lawyers.

On-site Inspections:

- Conducted online “cloud inspection” at Hongyanhe Nuclear on June 29, 2022.
- Conducted on-site inspection at Ningde Nuclear and Cangnan Nuclear from July 27, 2022 to July 30, 2022.
- Conducted on-site inspection at Hualong Pressurized Water Reactor Technology Corporation, Ltd. on September 20, 2022.

Appointment and Re-election of Directors

According to the Articles of Association, the Directors shall be elected at the general meeting and each term of office shall be three years. Directors must retire by rotation at least once every three years and may be re-elected for continuous appointment. The Company formulated the procedures for selection, appointment and re-election of Directors, and specified the working process and duties in appointment and re-election of Directors.



Board Diversity

Policy on Board Diversity

The Board has approved the Board Diversity Policy of the Company, setting forth: (1) purpose of the policy; (2) outlook; (3) principles; (4) candidates of the Board should be considered for various factors including but not limited to gender, age, culture and education background, race, professional experience, skills, knowledge and term of services; and (5) review and report. The policy is available on the Company's website.

Pursuant to the Board Diversity Policy of the Company, the Company formulated the assessment indicators for reviewing the structure and composition of the Board, including age, gender and profession. The relevant indicators complied with the Listing Rules and the Board Diversity Policy of the Company.

The Board and the Nomination Committee have reviewed the implementation and effectiveness of the Board Diversity Policy of the Company. The Directors of the current Board have professional backgrounds in technology, finance, auditing, management and economics as well as extensive management experience. The Directors have a reasonable age structure, diverse educational backgrounds, extensive professional experience, and reasonable term of service. The implementation of the Board Diversity Policy has met expectations, and no further revision is currently required.

Corporate Governance Report

Gender Diversity

The Nomination Committee has formulated a gender diversity plan for the Board, recommending the appointment of at least one female director at the election of a new session of the Board in 2023. In accordance with the Articles of Association, the Company has sent a letter to the shareholders entitled to recommend director nominees for female directorship.

Directors' Undertakings

Directors have confirmed that they have devoted sufficient time and attention to the affairs of the Company during the year. All Directors have also disclosed to the Company the number and nature of their positions held in public companies or entities listed in the PRC, Hong Kong and overseas and other significant commitments, and provide the names of the public companies and entities and the time involved in working for the relevant positions.

Each of the Directors has signed the Declaration for Dealing in the Company's Securities by Directors, Supervisors and Senior Management (《董事、監事和高級管理人員買賣本公司證券聲明書》), undertaking to comply with the relevant confidentiality provisions and the securities dealing requirements, and has undertaken to obtain the prior written approval from the Chairman of the Board or the designated Directors before dealing in the Company's securities and report and disclose the same to the Hong Kong Stock Exchange and the SZSE. All Directors have signed the confirmation for disclosure of interests by directors, supervisors and senior management on both Board meetings for annual and interim results. Directors shall notify the Company in writing of any changes in their personal information on a timely basis in order for the Company to timely report the same to the Hong Kong Stock Exchange, the SZSE and the Hong Kong Companies Registry within the prescribed period.

The Board office of the Company will regularly remind Directors to provide the company secretary with the information required to be disclosed in connection with matters needing disclosure by individuals under the Listing Rules on a timely basis.

Directors' Interest

As recorded in the register required to be kept pursuant to Section 352 of Part XV of the Hong Kong Securities and Futures Ordinance, none of the Directors held any shares of the Company or any of the Company's associated corporations as at December 31, 2022.

Model Code for Securities Transactions

The Company has formulated and adopted the Code for Securities Transactions by Directors and Specific Persons, the provisions of which are not less stringent than the Model Code in Appendix 10 to the Listing Rules. After making specific enquiries by the Company, the Directors of the Company have all confirmed that they have complied with the above two codes for the year 2022.

Roles of Chairman and President

According to the requirements of provision C.2.1 of the latest Hong Kong Stock Exchange Code, the roles of chairman and chief executive should be separated and should not be performed by the same individual. In 2022, Mr. Yang Changli and Mr. Gao Ligang served as the Chairman and the President, respectively. The Articles of Association have expressly specified the functions and powers of the Chairman and the President. The main functions and powers of the Chairman include presiding over the general meetings, convening and presiding over meetings of the Board and reviewing the implementation status of passed Board resolutions. The main functions and powers of the President include being in charge of the Company's production, operation and management.

Pursuant to the Articles of Association, the President shall coordinate the implementation of the passed Board resolutions and report his/her work to the Board; the Chairman shall prepare the Directors' Report on behalf of the Board and submit the same to the Company's AGM for consideration.

Directors' Financial Reporting Responsibilities in respect of Financial Statements

The Directors acknowledge their responsibilities for preparing the financial statements of the Company for the year ended December 31, 2022 which give a true and fair view of the affairs of the Company and the Group and of the Group's results and cash flows.

The management has provided the necessary explanations and information to the Board enabling the Board to make an informed assessment on the Company's financial statements submitted to the Board for approval.

The statement made by the auditors of the Company on their reporting responsibilities in respect of the Company's financial statements is contained in "Audit Report" on page 164 of this Annual Report.

Supervisory Committee

Please refer to the "Supervisory Committee Report" as set out on page 147 of this Annual Report for details of the Supervisory Committee, including its composition, duties and responsibilities and the annual work summary for the year.

Company Secretary

Mr. Yin Engang, being the chief financial officer, the secretary of the Board and a joint company secretary, serves as the main contact person of the Company. To comply with the Listing Rules, the Company has appointed Ms. Ng Sau Mei of TMF Hong Kong Limited as the joint company secretary of the Company, to provide assistance to Mr. Yin Engang. The joint company secretaries also play essential roles in supporting the Chairman, the Board of Directors and the special committees of the Board by ensuring on time and precise information flow, so the Board policies, procedures and decisions are followed. The joint company secretaries have the right to advise on the corporate governance matters and assist Directors to familiarize themselves with the affairs of the Company and acquire professional development.

In 2022, Mr. Yin Engang received the Best Board Secretary Award of the 12th China Securities Golden Bauhinia Awards and the "5A" grade (the highest grade) in the evaluation of the performance of the board secretaries of the China Association for Public Companies.

According to Rule 3.29 of the Listing Rules, the current joint company secretaries of the Company, Mr. Yin Engang and Ms. Ng Sau Mei, had taken not less than 15 hours of relevant professional training during the financial year ended December 31, 2022.

Management and Staff

As at the end of the reporting period, the total number of employees of the Company (excluding affiliated companies) was 18,968, and the percentage of male employees and female employees was 88.44% and 11.56% respectively. The Group adheres to an employment policy of equality and diversity. We oppose any discriminatory, including gender discrimination, and are committed to gender diversity in our workforce.

The responsibility of the management and staff of the Company is the successful implementation of strategy and direction determined by the Board, and they must observe national and local laws and regulations, and safeguard the interest of shareholders.

The delegation of specific authorities by the Board to the management is stated in the Provisions on the Corporate Governance Authorization (《治理授權規定》), and any amendment to the corporate governance authorization of the Company requires approval of the Board. The authorization delegated to the management and staff below the level of President have been stated in the provisions on the management authorization, and any amendment to the management authorization of the Company requires approval of the President.

The Staff Manual (《員工手冊》), which is compiled by the Company as an appendix to the employment contract, has the same effect as that of the employment contract. All staff who have signed employment contracts with the Company shall sign for receipt of the Staff Manual and make a statement that they have received, been aware of and will comply with all provisions set out in the Staff Manual. All management and staff are subject to the specific obligations as set out in the Staff Manual in respect of the work time, disciplines, workplace code, confidentiality and non-competition restriction, conflict of interests, value and code of conduct. All management and staff receive training on the Staff Manual on regular basis in order to ensure their understanding of the Staff Manual.

Corporate Governance Report

The Company has formulated handling measures of non-compliance and disciplinary matters by employees, Code of Conduct of Listed Companies, Detailed Implementing Measures of the Eight-point Decision of the Central Government, as well as management measures on comprehensive supervision and discipline inspection. These applicable rules for handling non-compliance and disciplinary matters should be strictly abided by all management and employees.

In 2022, we strengthened the deployment of disciplinary staff in certain members of the Group. Through various measures such as carrying out discipline education and learning month activities, convening education conferences, initiating typical cases study and making videos for alerting awareness, we reinforced the reporting of typical cases of violations of discipline and law among our own employees and strengthened the promotion of honest practices among our staff, which were well received by the staff. In 2022, we found 11 breaches of discipline and regulations, all of which were handled in strict accordance with relevant system and procedures. The disciplinary actions carried out included warnings, demerits, demotions (reduction in rank), dismissals, etc. Such cases concerning non-compliance with discipline and regulations did not have significant impact on our financial statements and the overall operation. The actions taken in respect of the non-compliance with discipline and regulations provided effective reminders on honest practices and facilitated the improvement of management of the Company. The Company has established effective whistleblower channels to report any malpractices or irregularity in any matters related to the Company.

The principles and details of the remuneration of senior management officers are set out in the "Remuneration Committee Report" on page 141 of this Annual Report.

The Company has attached great importance to the continuous professional development of management and staff. The details of its talent cultivation are set out in the "Human Capital" on page 55 of this Annual Report.

Internal Auditors

The Company has established an internal audit department, which plays a major role in monitoring the internal governance of the Company. The Group has 96 auditing staff with related professional qualifications (such as intermediate and senior auditors, internal auditors with international certifications, international certified information systems auditors, international internal control self-assessment professional qualifications, PRC certified public accountants, members of the Association of Chartered Certified Accountants in UK, legal professional qualification, cost engineers and nuclear safety engineers).

Duties of the internal audit department include:



Unrestricted access to review all aspects of the activities and internal controls of the Company;



Specific audits on the business, procedures, expenditures and internal controls of all functional departments, business units, subsidiaries and major affiliated companies of the Company on a regular basis; and



Specific reviews or audits of areas of concern identified by management or the Audit and Risk Management Committee.

The manager of the internal audit department is nominated by the Audit and Risk Management Committee and engaged by the Board, reports directly to the Audit and Risk Management Committee and the President, and his audit opinions will be reflected directly to the Board through the Chairman of the Audit and Risk Management Committee.

In 2022, the internal audit department of the Company conducted specific audits on key areas of management such as internal control, asset management, business management, risk management and financial management of the Company as well as areas of concern identified by the management, and issued reports to senior management officers.

External Auditors

KPMG Huazhen LLP has audited the consolidated financial statements for the year 2022 prepared by the Company in accordance with the CASBE. Pan-China Certified Public Accountants LLP has expressed its audit opinion on the effectiveness of financial report internal control of the Company in 2022 according to the relevant requirements in the Guidelines for Auditing of Enterprise Internal Controls and the Practice Standards for Certified Public Accountants of China. The auditing expenses for the Group for 2022 were about RMB8.74 million in total and the auditors of the Company do not provide non-auditing services.

KPMG Huazhen LLP was proposed to be reappointed by the Company as the external auditor of the Company for 2023 to undertake audit and interim review work for 2023, and Pan-China Certified Public Accountants LLP was proposed to be appointed to undertake internal control audit work for 2023. Their terms of appointment will last until the conclusion of the 2023 AGM (subject to approval at the 2022 AGM).

Other Stakeholders

Other stakeholders of the Company include customers, partners, social environment and regulators, details of which are set out in the 2022 ESG Report of the Company.



Corporate Governance Report

Internal Control

Risk Management

The Company has established a comprehensive risk management system with the principle of “Unified Leadership, Hierarchical Management”, including risk management strategy, organizational function system of risk management and risk management information system. The Company identifies the risks and adopts qualitative and quantitative approaches to analyze and categorize the risks identified based on the possibility of occurrence and seriousness of impact of risks. Based on the result of risk analysis and the risk tolerance, the Company considers relevant risks and benefits and determines the focus points and major risks that require control, based on which it formulates risk control strategies. Please refer to the “Risk Management Report” for details of risk management.



**Unified Leadership,
Hierarchical Management**

Structure of the internal control system




Based on the principle of “unified theory and methods, multi-layer establishment and divided responsibilities”, the “Basic Standards of Internal Control for Enterprises” 《企業內部控制基本規範》 and its guidelines and taking into account of the business characteristics of the Company, the Company established the standards for internal control construction and management, and formed a collaborative system of internal control within the Company. The internal control system of the Company is designed to manage rather than completely eliminate the risk of failure to achieve its business objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss.



**unified theory and
methods, multi-layer
establishment and divided
responsibilities**

The Board is the decision maker for internal control and is responsible for the establishment and effective implementation of sound and effective internal control. The Supervisory Committee is the supervision body for internal control, and is responsible for supervising the Board in establishment and implementation of internal control. The management is the executive body in charge of internal control and is responsible for organizing and being in charge of the daily operation of internal control.

The Company formulated and the Board of the Company approved the Internal Control Manual of CGN Power Co., Ltd. (2017, First Edition). The manual standardizes the relevant management systems and procedures of various businesses and functions of the Company, breaks down and specifies the internal control responsibilities, reasonably guarantees legal and compliant operation and management and ensures the authenticity of financial reports.

Key Elements of Internal Control	Initiatives
 <p>Internal Environment</p>	<p>The corporate governance structure specifies the management authority at various levels</p> <p>Internal organizations and posts clearly define the allocation of responsibilities and powers</p> <p>The internal supervision system</p> <p>Corporate strategies</p> <p>Integrity and moral values and corporate culture</p> <p>Competency of staff</p>
 <p>Risk Assessment</p>	<p>Timely identifying and systematically analyzing risks associated with the realization of internal control objectives in the process of operation activities and reasonably determines strategies in response to risks</p>
 <p>Control Activities</p>	<p>Taking corresponding control measures and formulating internal rules, systems and procedures based on the risk assessment results to ensure the implementation of control measures</p> <p>Covering major business areas such as funding activities, procurement, sales, engineering projects management, guarantee, R&D, business outsourcing, asset management and financial reporting</p> <p>Formulating control measures from the perspectives of, among others, separation of incompatible duties, authority approval, accounting system control, property protection, budgets, operation analyses and evaluation</p>
 <p>Information and Communication</p>	<p>Collecting and transmitting information related to internal control in a timely and accurate manner to ensure that the information is effectively transmitted within the Company, and between the companies and external parties</p>
 <p>Internal Supervision</p>	<p>Regularly evaluating the implementation of systems and procedures</p> <p>Independent internal monitoring and auditing activities</p> <p>Self-assessment of internal control system on a regular basis</p>

Corporate Governance Report

Internal control evaluation

According to the relevant provisions of the Corporate Governance Code of the Company, we have prepared the Internal Control Assessment Proposal for 2022 of the Company (the “**Internal Control Assessment Proposal**”), which clearly provides the evaluation covers the full 2022 financial year, and determines the major units, businesses and matters to be included in the scope of evaluation as well as high-risk areas based on the risk-oriented principle. The Internal Control Assessment Proposal was approved by the Audit and Risk Management Committee of the Board in August 2022.

The Board shall be responsible for the internal control system of the Group, and has obtained confirmation from the management of the Company on the effectiveness of the risk management and internal control systems of the Company and completed the review on the effectiveness of the operation of internal control system of the Group in 2022. In accordance with the approved Internal Control Assessment Proposal, entities included in the scope of the current internal control evaluation mainly comprised the Company and 37 major subsidiaries, which covered all business segments and major business areas of the Company; as at December 31, 2022, the aggregate net assets and operating revenue of the aforesaid companies represented approximately 100% and 100% of the net assets and operating revenue of the Group, respectively. Each of those entities which are included in the relevant evaluation shall, based on its own business characteristics and key points of management, follow the principles of comprehensiveness and importance to incorporate key business areas and major business processes into the scope of evaluation. Overall, high-risk areas that need to be focused on mainly include, among others, safety, quality and environmental management, construction projects, and procurement business. The aforesaid businesses and matters included in the scope of evaluation together with high-risk areas cover the major aspects of the Company’s operational management and there is no material omission.

Based on the determination of material defects in the internal control on the Company’s financial reporting, as at the benchmark date (December 31, 2022) of the internal control evaluation report, there were no material defects in the internal controls on the financial reporting of the Company, and the Board considers that the Company has maintained effective and adequate internal control on financial reporting in all material aspects in compliance with the requirements of the Regulated System of Internal Control for Enterprises 《企業內部控制規範體系》 and the relevant provisions.

Based on the determination of material defects in the internal control on the Company’s non-financial reporting, as at the benchmark date (December 31, 2022) of the internal control evaluation report, the Company was not aware of any material defect in the internal control on non-financial reporting. From the benchmark date of the internal control evaluation report up to the issue date of the internal control evaluation report, there were no factors which would affect the evaluation conclusion of effectiveness and adequacy of internal controls.

Monitoring inside information

The measures for the management and control of inside information by the Company



The Company has expressly stated in the Staff Manual that unauthorized use of confidential or inside information is strictly prohibited.



The Company has regulated the channels of disseminating information.



The information disclosure management system and its ancillary procedures have been formulated in order to regulate the management requirements and handling procedures of inside information.



The relevant trainings on information disclosure have been provided to the Company's management and staff of the subsidiaries and major affiliated companies on a sustained basis.

In 2022, we carried out trainings on information disclosure through various ways such as face-to-face training, video communication and internet examinations and learning, adding for this year sessions on the latest requirements in both H-share and A-share markets and relevant practices of the Company to ensure compliance with relevant requirements on information disclosure in respect of H shares and A shares, covering over 90% of the staff. At the same time, we published special issues on the analysis of typical cases of capital market violations compiled according to the categories of information disclosure violations on a regular basis, so as to strengthen information disclosure violation warnings, and added the latest changes of H-share and A-share regulatory rules to the special issues in 2022 to ensure the compliance of information disclosure. In 2022, we also conducted random inspection on the implementation of relevant systems and procedures of information disclosure and found no violation of the systems and procedures.

Conclusion

The Company is committed to improving its corporate governance. We believe that good corporate governance lays a solid foundation for the continuous development of the Company, and is critical to creating value for our shareholders. The Company will further reinforce the good practices in corporate governance, continuously monitor the changes in relevant regulatory requirements, actively receive the opinions and recommendations from the investors and constantly optimize the corporate governance system, thereby providing powerful support to the long-term and sustainable development of the Company.

Directors' Report

Operations

Major operations: We build, operate and manage NPPs, sell electricity generated by these stations, and organize and develop the design and R&D of NPPs.

Financial Statements

For the Group's financial statements for the financial year ended December 31, 2022, please refer to page 168 to 317.

Five-Year Financial Highlights

The summary of operating results and financial information of the Group in the previous five financial years are set out in the "Financial Highlights" of this Annual Report on page 4. This summary does not form part of the audited consolidated financial statements.

Earnings and Dividends

The details about the earnings of the Group for the year are set out in the "Consolidated Income Statement" in this Annual Report on page 172.

Details of dividend payments and policy are set out in the "Shareholder Value" in this Annual Report on page 17.

Business Review and Performance

For the analysis of business performance and its impact factors in 2022, please refer to the "Finance, Assets and Investment" from page 22 to 27 and the "Business Performance and Outlook" from page 30 to 45.

For the major risks and uncertain factors faced by the Group, please refer to the "Risk Management Report" of this Annual Report from page 152 to 161.

The business outlook of the Group is discussed in different parts of this Annual Report, including the "Chairman's Statement" from page 8 to 11, the "President's Review" from page 12 to 16, the "Business Performance and Outlook" from page 30 to 45, and the "Risk Management Report" from page 152 to 161.

The relationships between the Group and its connected persons of major business are set out in the "Directors' Report" of "Corporate Governance" of this Annual Report from page 122 to 138.

Moreover, environment-related performance and policy of the Group are set out in the part of “Environment Capital” of this Annual Report. Charity-related performance and policy of the Group are set out in the part of “Social and Relationship Capital” of this Annual Report. The discussion on compliance status of relevant laws and regulations that would have a material impact on the Group is set out in the “Business Performance and Analysis” from page 30 to 45, the “Corporate Governance Report” from page 87 to 121, and the “Supervisory Committee Report” from page 147 to 151.

Save as disclosed in “Events after the Reporting Period” on page 132, there is no event that had a significant impact on the Group’s operation, financial and trading prospects from January 1, 2023 to the date of this Annual Report.

The above discussions form part of the Directors’ Report.

Assets

Fixed Assets and Construction in Progress

Additions to fixed assets and construction in progress of the Group for the year amounted to a total of approximately RMB14,099.7 million. In 2021, a total amount of approximately RMB11,097.9 million was added to fixed assets and construction in progress. Details of changes in fixed assets and construction in progress of the Group are set out in Note (V)13 and 14 to the Financial Statements.

Bank Borrowings and Other Borrowings

The total borrowings of the Group as of December 31, 2022 amounted to approximately RMB199,967.4 million (2021: approximately RMB205,468.4 million). Details of borrowings are set out in Note (V)22, 30, 31 and 32 to the Financial Statements.

Finance Costs Capitalized

Finance costs amounting to approximately RMB1,785.7 million (2021: approximately RMB1,724.7 million) were capitalized by the Group during the year, the details are as set out in Note (V)49 to the Financial Statements.

Major Subsidiaries

For the details of the Company’s major subsidiaries, please refer to Note (VII) 1 to the Financial Statements and the “Business at a glance for the year” on page 5 of this Annual Report.

Directors' Report

Share Capital

Issuance and Listing of Securities

The initial registered share capital of the Company at incorporation was RMB35,300,000,000, being divided into 35,300,000,000 Domestic Shares with a nominal value of RMB1.00 per share, and all the Domestic Shares were held by three promoters.

On December 10, 2014, the Company completed the initial public offering ("IPO"). The registered share capital of the Company was RMB45,448,750,000, being made up of 34,285,125,000 Domestic Shares and 11,163,625,000 H Shares.

On August 26, 2019, the Company completed the A Share IPO. The registered share capital of the Company increased to RMB50,498,611,100, being made up of 11,163,625,000 H Shares, 34,285,125,000 A Shares converted from original Domestic Shares and 5,049,861,100 newly issued A Shares.

Purchase, Sale or Redemption of the Company's Listed Shares

During the year ended December 31, 2022, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed shares.

Equity-Linked Agreements

During the year ended December 31, 2022, neither the Company nor any of its subsidiaries have entered into equity-linked agreements.

Changes in the Number of Shares and Shareholding Structure during the Reporting Period

	December 31, 2021	Increase/ (decrease) due to changes during the reporting period	December 31, 2022
A Shares	39,334,986,100	0	39,334,986,100
H Shares	11,163,625,000	0	11,163,625,000
Total number (Shares)	50,498,611,100	0	50,498,611,100

Corporate Governance

The Company's corporate governance principles and practices are set out in the "Corporate Governance Report" of this Annual Report on page 87.

Particulars of Board Meetings

The details of 2022 Board meetings of the Company are set out in "Particulars of Board Meetings" on page 109 of this Annual Report.

Directors

On December 23, 2022, Mr. Wang Hongjun resigned from his position as a non-executive Director of the third session of the Board, a member of the Remuneration Committee and a member of the Nuclear Safety Committee of the Company due to work reasons. On December 28, 2022, Mr. Jiang Dajin resigned from his position as an executive Director of the third session of the Board of the Company as he reached his retirement age. On February 10, 2023, the Company approved the election of Mr. Feng Jian as a non-executive Director of the third session of the Board and the Board approved the appointment of Mr. Feng Jian as a member of the Remuneration Committee and a member of the Nuclear Safety Committee of the Company at the 2023 First EGM of the Company.

The biographical details of current Directors are set out in "Board of Directors, Supervisors and Senior Management" on page 80 of this Annual Report. Details of Directors' remuneration are set out in "Remuneration Committee Report" of this Annual Report on page 141 and Note (X)5(5) to the Financial Statements.

Supervisors

On April 1, 2022, Mr. Hu Yaoqi resigned from his position as a non-employee representative Supervisor of the third session of the Supervisory Committee of the Company due to work reasons. On April 11, 2022, Mr. Chen Sui resigned from his position as the chairman and a non-employee representative Supervisor of the third session of the Supervisory Committee of the Company due to work reasons. On May 27, 2022, the appointment of Ms. Pang Xiaowen as a non-employee representative Supervisor of the third session of the Supervisory Committee of the Company was approved at the 2021 AGM of the Company.

The biographical details of the current supervisors are set out in "Board of Directors, Supervisory Committee and Senior Management" on page 83 of this Annual Report. Details of Supervisors' remuneration are set out in "Remuneration Committee Report" of this Annual Report on page 141 and Note (X)5(5) to the Financial Statements.

Senior Management

On June 1, 2022, Mr. Su Shengbing resigned from his position as a vice president of the Company as he reached his retirement age. On August 1, 2022, Mr. Chen Yingjian resigned from his position as a vice president of the Company as he reached his retirement age. On December 28, 2022, Mr. Jiang Dajin resigned from his position as a vice president of the Company as he reached his retirement age. On January 4, 2023, Mr. Zhou Jianping and Mr. Liu Haijun were appointed as the vice presidents of the Company at the 21st meeting of the third session of the Board of the Company.

The biographical details of the current senior management are set out in "Board of Directors, Supervisory Committee and Senior Management" on page 80 of this Annual Report. Details of the remuneration of senior management are set out in the "Remuneration Committee Report" of this Annual Report on page 141 and Note (X)5(5) to the Financial Statements.

Directors' Report

Interests

Interests of Directors, Supervisors and Chief Executive Officers

Pursuant to the register required to be kept pursuant to Section 352 of Part XV of the Hong Kong Securities and Futures Ordinance, none of the Directors, Supervisors and Chief Executive Officers has any interests/short positions in the shares, relevant shares and debentures of the Company and its associated corporations as of December 31, 2022.

Shareholders' Interests must be Disclosed under the Hong Kong Securities and Futures Ordinance

Pursuant to Divisions 2 and 3 of Part XV of the Hong Kong Securities and Futures Ordinance or the record in the register required to be kept pursuant to Section 336 of the Securities and Futures Ordinance, the interests/short positions of the following persons (other than the Directors, Supervisors and Chief Executive Officers of the Company) in the shares and relevant shares of the Company as at December 31, 2022 are set out in the following table.

Aggregate long positions in the shares and relevant shares of the Company

The Company had been notified of the following shareholders' interests in the shares (other than pursuant to equity derivatives such as share options, call warrants or convertible bonds) of the Company as of December 31, 2022:

Shareholders	Capacity as holder of shares	Number and Class of the Shares held in the Company	Approximate % of the Relevant Shares Classes	Approximate % of the Total Issued Shares of the Company
CGNPC	Beneficial owner	29,176,641,375 (A Shares)	74.17%	57.78%
		570,235,000 ^(Note) (H Shares)	5.11%	1.13%
Hengjian Investment	Beneficial owner	3,428,512,500 (A Shares)	8.72%	6.79%
BlackRock, Inc.	Interest of controlled corporation	673,008,059 (H Shares)	6.03%	1.33%
China Life Insurance Company Limited	Beneficial owner	666,006,000 (H Shares)	5.97%	1.32%

Note: Among which including 10,000,000 H shares held by CGNPC through one of its wholly-owned subsidiaries.

Aggregate short positions in the shares and relevant shares of the Company

The Company had been notified of the following shareholders' holding short positions in the shares of the Company as of December 31, 2022:

Shareholders	Capacity as holder of shares	Number and Class of the Shares held in the Company	Approximate % of the Relevant Shares Classes	Approximate % of the Total Issued Shares of the Company
BlackRock, Inc.	Interest of controlled corporation	5,148,000 ^(Note) (H Shares)	0.05%	0.01%

Note: Among which including 120,000 H shares held in equity derivatives.

Interests of Other Persons

As of December 31, 2022, the Company had not been notified of any persons other than the above shareholders who had interests or short positions in the shares or underlying shares of the Company, under Divisions 2 and 3 of Part XV of the Hong Kong Securities and Futures Ordinance.

Material Contracts with Controlling Shareholder

Save as disclosed in the section headed "Connected Transactions" of this Annual Report on page 132, none of the Company or any of its subsidiaries entered into material contracts with the controlling shareholder or any of its subsidiaries other than the Group, nor was there any material contract between the Group and the controlling shareholder or any of its subsidiaries other than the Group in relation to provision of services.

Controlling Shareholder's Interests in Material Contracts

The details of material contracts entered into between the Company and the controlling shareholder or its subsidiaries have been disclosed in "Connected Transactions" in this Annual Report on page 132.

Directors' and Supervisors' or Entities Connected with Directors' and Supervisors' Interests in Material Transactions, Arrangements and Contracts

For the year ended December 31, 2022, none of the Company or any of its subsidiaries entered into any material transactions, arrangements or contracts which the Directors and Supervisors or the entities connected with Directors and Supervisors of the Company had material interests, either directly or indirectly.

Directors' Report

Directors' Interests in Competing Businesses

For the year ended December 31, 2022, save as disclosed below, none of the Directors or their associates had any competing interests in any business which competed or was likely to compete, either directly or indirectly, with the business of the Company:

Name of Director	Position in the Company	Other Interests
Yang Changli	Chairman of the Board and non-executive Director	Chairman of CGNPC
Gao Ligang	Executive Director and president	Director and general manager of CGNPC
Shi Bing	Non-executive Director	Deputy general manager of CGNPC

Controlling Shareholder's Non-competition Undertakings

CGNPC, the controlling shareholder of the Company, has undertaken that it would not, and it would procure that its associates and connected persons (other than any members of the Group) do not and would not, directly or indirectly, whether on its own account or in conjunction with or on behalf of any person, firm or company, among other things, carry on, participate, be interested or engaged in or acquire or hold (in each case whether as a shareholder, director, partner, agent, employee or otherwise be involved, whether for profit, reward or otherwise), any restricted business during the agreed restricted period.

On the basis of the undertaking of the controlling shareholder to avoid horizontal competition in the Company's A Share IPO, i.e. CGNPC will comply with the deed of non-competition and China General Nuclear Power Corporation's Undertaking to Avoid Horizontal Competition (this "Letter of Undertaking"), to further avoid horizontal competition with the issuer, China General Nuclear Power Corporation's Letter of Undertaking on Further Avoiding Horizontal Competition was issued, which further confirmed, undertook and guaranteed that:

- 1 CGN Power is the sole platform for final integration of nuclear power generation business of CGNPC.
- 2 If CGNPC acquires a business opportunity for new development or acquisition of nuclear power projects in the PRC, it will procure that such business opportunity is provided to CGN Power in priority, subject to applicable laws and regulations and the national requirements such as those in relation to qualification of major developer. If CGN Power waives or does not explicitly accept such business opportunity within a reasonable period of time, CGNPC may engage in such business opportunity on terms and conditions no less favourable than those provided to CGN Power.

- 3 Regarding the domestic retained business owned by CGNPC on the date of this Letter of Undertaking, taking into account the special nature of the nuclear power industry, CGNPC undertakes that it will invest in CGN Power in accordance with legal procedures no later than five years after the official commencement of construction of the nuclear power project (i.e. FCD), when such assets meet the requirements for investing in a listed company or when agreeing with CGN Power. Requirements for investing in a listed company include: (1) assets and equity are with clear titles; (2) there was no major administrative penalty in the past 36 months; (3) preservation and appreciation of state-owned assets; and (4) there are no other circumstances that are detrimental to the issuer's continued stable development or to the interests of the issuer and its minority shareholders. When such assets are invested in a listed company, the valuation will be based on the results of asset appraisals filed with relevant authorities or valuation methods that meet the requirements of laws and regulations and relevant authorities, while fully taking into account the interests of the minority shareholders.
- 4 In the process of transferring the retained business, CGNPC undertakes that the issuer is entitled to the right of first refusal and acquisition option for the retained business proposed to be disposed by CGNPC. Subject to the applicable laws and regulations, CGN Power has the right to acquire any equity, assets and other interests in the retained business and/or competitive business from CGNPC at one time or multiple times at any time, or CGN Power may, in ways as permitted by applicable laws and regulations, choose (including but not limited to) to entrust, lease or contract to operate the assets or business of CGNPC in such retained business and/or competitive business.
- 5 CGNPC undertakes that, if CGNPC violates this undertaking and causes CGN Power to suffer any loss from the effective date of this Letter of Undertaking, CGNPC shall bear the liability of compensation.

CGNPC confirms that it has complied with the above undertakings during the year. For the details of material contracts which provided services to the Group by CGNPC, please refer to "Connected Transactions" on page 132 in this Annual Report.

Pre-emptive Rights

There are no provisions for pre-emptive rights under the Articles of Association or the relevant laws of the PRC, under which the Company is required to issue new shares to its existing shareholders on a pro rata basis.

Distributable Reserves

As of December 31, 2022, our reserves available for distribution to our equity holders amounted to approximately RMB21,443.39 million (representing retained earnings of the parent company of approximately RMB21,443.39 million).

Directors' Report

Management Contracts

For the year ended December 31, 2022, except for service contracts entered into with the Directors and the Supervisors, the Company did not enter into any contract in respect of the management or administration of the entire or any substantial part of the business of the Company and no such contract existed.

Major Customers and Suppliers

Major Customers

Most of our revenue comes from the sales of electricity generated by NPPs in which we have controlling interest. During the year, our total sales to the top five customers accounted for 97.58% of the Group's total revenue. Below is the information of the top five customers in descending order:

- 1** China Southern Power Grid Company Limited (“CSG”) (representing 49.93% of our total revenue): The Group did not hold any interest in this company. CSG is a company under the SASAC. It is engaged in the investment, construction and operation management of the power grid in South China, operation of relevant power transmission and distribution, power dispatch control, operation and maintenance of the power grid. Under a long-term agreement, the Group sold the electricity generated by the NPPs in Daya Bay, Ling’ao, Lingdong, Yangjiang, Taishan and Fangchenggang to Guangdong Power Grid Co., Ltd. and Guangxi Power Grid Co., Ltd. under the CSG.

- 2** CGNPC (representing 25.93% of our total revenue): CGNPC, the controlling shareholder of the Company, is a large-scale power group engaging in the production and supply of nuclear power-based electricity, and provision of related professional technical services. The Group mainly offers engineering services, technical support and maintenance services and general services to CGN Group.

- 3** Fujian Electric Power Co., Ltd. (國網福建省電力有限公司) (representing 12.13% of our total revenue): The Group did not hold any interest in this company. Fujian Electric Power Co., Ltd. is a company under the State Grid Corporation of China. It is engaged in operation of relevant power transmission and distribution, power dispatch control, operation and maintenance of the power grid. Under a long-term agreement, the Group sold the electricity generated by Ningde NPP to Fujian Electric Power Co., Ltd.

- 4** HKNIC (representing 7.07% of our total revenue): This company is a subsidiary of CLP Holdings Ltd. (a company listed on the Hong Kong Stock Exchange (stock code: 0002), “CLP Holdings”), holding a 25% equity interest in Guangdong Nuclear Power Joint Venture Co., Ltd. It is a connected person of the Group. Under a long-term agreement, the Group sold some of the electricity generated by the Daya Bay NPP to HKNIC.

- 5** Hongyanhe Nuclear (representing 2.52% of our total revenue): Hongyanhe Nuclear is an associate of the Group, and is responsible for the investment, construction and operation of Hongyanhe NPP. The Group offer engineering services, technical support and maintenance services and general services to Hongyanhe Nuclear.

Major Suppliers

Our major suppliers include providers of nuclear fuel and related services, project construction and technical support. During the year, our purchases from the top five suppliers accounted for 52.72% of the Group's total annual procurement. Below is the information of the top five suppliers in descending order:

- 1 CGNPC (representing 25.47% of the Group's total procurement): CGNPC, the controlling shareholder of the Company, is a large-scale power group engaging in the production and supply of nuclear power-based electricity, and provision of related professional technical services. We mainly purchase nuclear fuel supplies and services, general services and technical support and maintenance services from CGN Group.
- 2 CNNC (representing 10.59% of the Group's total procurement): The Group did not hold any interest in this company. CNNC mainly engages in nuclear power, nuclear fuel cycle, nuclear technology application, nuclear environmental engineering and other fields of power production and supply, scientific and technology R&D, engineering construction and provision of related professional technical services and other businesses. We mainly purchase nuclear island construction, processing service of nuclear fuel components and unit maintenance services from CNNC.
- 3 Mingyang Smart Energy Group Limited (明陽智慧能源集團股份公司) ("Mingyang Smart Energy") (representing 8.23% of the Group's total procurement): The Group did not hold any interest in this company. Mingyang Smart Energy mainly provides new energy equipment and technical support. As CGN Engineering undertakes CGNPN's wind power business, we purchased equipment for wind power generation unit from Mingyang Smart Energy.
- 4 China State Construction Engineering Corporation Ltd. ("CSCEC") (representing 5.51% of the Group's total procurement): The Group did not hold any interest in this company. CSCEC mainly offers construction and installation services for enterprises. We mainly purchase regular islands construction and installation services from CSCEC and its subsidiaries.
- 5 China Communications Construction Group Corporation Limited (中國交通建設集團有限公司) ("CCCC") (representing 2.29% of the Group's total procurement): The Group did not hold any interest in this company. CCCI mainly engages in the investment, construction and operation of transportation infrastructure, equipment manufacturing, real estate and comprehensive urban development. As CGN Engineering undertakes CGNPN's wind power business, we purchased wind turbine foundation construction and installation services from CCCI.

Save as disclosed above, during the year, to the knowledge of Directors, none of our Directors or Supervisors, their respective close associates or any of our shareholders holding more than 5% of our issued shares, held any interest in any of our top five suppliers or top five customers.

Directors' Report

We upheld the concept of mutual benefit and win-win cooperation, and maintained continuous and close relationship with our stakeholders including customers and suppliers. We adhered to the principles of openness, fairness, justice and compliance, so we continued to establish a comprehensive tender system and supplier management system, and improved the quality management of upstream and downstream in the industrial chain. Through constructive communication, we endeavored to balance the opinions and interests of the stakeholders, thereby setting the long-term development direction for the Company and the regions where our business operates. Please refer to the 2022 ESG Report issued by the Company for more information.

Exchange Rate

For the year ended December 31, 2022, the Group faced no major difficulties or impacts regarding its operations or capital flow due to the fluctuation of foreign exchange rate. 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. For the risk management of exchange rate volatility, please refer to the section headed "Financial Capital" on page 66 in this Annual Report.

Events after the Reporting Period

From January 1, 2023 to the date of this report, there was no event that occurred to have a significant impact on the operation, financial or business prospects of the Group.

Connected Transactions

In 2022, we followed a principle of fairness, justice, bona fide and competitive preference in the course of our transactions with suppliers. For business with an open market, we adopted competitive procurement by continuing to require connected persons to provide us with the relevant materials, products and services through the bidding procedures for standardizing connected transactions. In the actual course of business, we signed one-off connected transaction agreements and continuing connected transaction agreements with connected persons, which constitute major connected transactions of the Group in 2022, after taking into consideration our partnership established with connected persons, familiarity with their respective businesses as well as the factors such as service quality, price and work efficiency.

One-off Connected Transactions

Due to the fact that CGNPC owns a 58.91% equity interest in the Group, CGNPC and its associates are our connected persons under Rules 14A.07 (1) and (4) of the Listing Rules. The following transaction constitutes an one-off connected transaction between the Group and our connected persons.

Disposal of 75% Equity Interest in CNPSTC

In order to further optimize the business structure of CNPRI and improve the operating efficiency of the Group, CNPRI and Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司), a wholly-owned subsidiary of CGNPC, entered into an equity transfer agreement for the disposal of 75% equity interest in CNPSTC on March 17, 2022.

Pursuant to the equity transfer agreement, the consideration in respect of the disposal of the target interest amounted to approximately RMB50.58 million. The agreement was approved by the Board on March 17, 2022. The transaction was completed and CNPSTC ceased to be our subsidiary.

Continuing Connected Transactions

Due to the fact that: (1) CGNPC owns a 58.91% equity interest in the Group; and (2) HKNIC, a wholly-owned subsidiary of CLP Holdings Ltd., CLP Nuclear Power Operations & Management (China) Limited (中電核電運營管理(中國)有限公司), and CLP Nuclear Power (Yangjiang) Limited hold a 25% equity interest in Guangdong Nuclear Power Joint Venture Co., Ltd. (廣東核電合營有限公司) (a subsidiary indirectly owned as to 75% by the Company), 12.5% equity interest in DNMC (a subsidiary indirectly owned as to 87.5% by the Company), and 17% equity interest in Yangjiang Nuclear (a subsidiary directly and indirectly owned as to 61.72% by the Company), respectively; under Rules 14A.07 (1) and (4) of the Listing Rules, CGNPC and its associates, and CLP Holdings Ltd. and its associates are our connected persons.

During the year, the Company had entered into the following continuing connected transaction agreements with the connected persons as defined in the Listing Rules, and carried out the specific transactions according to the terms of such agreements. The continuing connected transactions carried out in 2022 are as follows:

Nature of Transaction	Annual Cap for 2022 (RMB million)	Actual Transaction Amount for 2022 (RMB million)
General Services Framework Agreement ⁽¹⁾		
Payment to the CGN Group	2,026.00	1,961.62
Receipt from the CGN Group	152.00	52.52
Technical Support and Maintenance Services Framework Agreement ⁽²⁾		
Payment to the CGN Group	2,362.00	1,053.52
Receipt from the CGN Group	181.00	164.36
Engineering Services Framework Agreement ⁽³⁾		
Receipt from the CGN Group	30,793.00	21,857.19
Financial Services Framework Agreement ⁽⁴⁾		
Payment to the CGN Group in relation to settlement, entrustment loans and other financial services	14.00	3.89
Maximum daily balance of deposits placed by our Group with the CGN Group and interest income	31,500.00	23,639.47
Maximum daily balance of loans provided by the CGN Group to our Group	34,000.00	24,525.88
Nuclear Fuel Supply and Services Framework Agreement and its Supplemental Agreement ⁽⁵⁾		
Payment to the CGN Group	11,615.65	9,691.25
Electricity Supply Arrangement under the Joint Venture Contract ⁽⁶⁾		
Tariff on sale of electricity to HKNIC	6,957.00	5,834.91

Directors' Report

Notes:

- (1) It was renewed on November 30, 2021 on normal commercial terms, which would be valid until December 31, 2024, pursuant to which the Group and CGN Group will provide general services to each other.
- (2) It was renewed on November 30, 2021 on normal commercial terms, which would be valid until December 31, 2024, pursuant to which the Group and CGN Group will provide technical support and maintenance services to each other.
- (3) It was renewed on March 12, 2019 on normal commercial terms, which would be valid until December 31, 2022, pursuant to which the Group will provide engineering services to CGN Group. Pursuant to such agreement, in 2022, the annual cap of total amount payable to the CGN Group by the Group was approximately RMB11,970.00 million. The annual cap was approved and updated at the 2021 AGM. Please refer to the above table for relevant data.

The Company renewed the Engineering Services Framework Agreement with CGN Group on March 17, 2022 on normal commercial terms, which would be valid until December 31, 2025, pursuant to which the Group will provide engineering services to CGN Group.

- (4) It was renewed on March 18, 2021 on normal commercial terms, which would be valid until December 31, 2023, pursuant to which CGN Group will provide financial services to us.
- (5) It was entered into on November 21, 2014 on normal commercial terms and the supplemental agreement to the 2014 Nuclear Fuel Supply and Services Framework Agreement was entered into on September 25, 2016, and would be valid until December 31, 2023, pursuant to which CGN Group will provide us with nuclear fuel supplies and services. Pursuant to the 2014 Nuclear Fuel Supply and Services Framework Agreement, in 2022, the annual cap of total amount payable to the CGN Group by the Group was RMB4,471.00 million. The annual cap was updated by the supplemental agreement to the nuclear fuel supply and services framework agreement signed in 2016. Please refer to the above table for relevant data.
- (6) It was entered into on January 18, 1985 and renewed on September 29, 2009 and would be valid until May 6, 2034, pursuant to which the Group will sell electricity to HKNIC. The Group entered into the 2018 Increased Power Purchase Agreement with HKNIC on December 28, 2018 on normal commercial terms, which would be valid until December 31, 2023, pursuant to which the Group will provide increased electricity sales services to HKNIC.

In addition to the above continuing connected transactions, our continuing connected transactions in 2022 included trademark license agreement, custodian service framework agreement and guarantee from CGNPC, which were exempted from the reporting, annual review, announcement and independent shareholders' approval requirements under Chapter 14A of the Listing Rules.

Connected Transaction Management

To ensure the fairness, justice and openness of procurement business, we have formulated the internal control standards related to management of contracts and procurements, whereby all departments of the Company shall monitor and restrict each other, and the procurements that are within the scope of mandatory tendering as required by the Bidding Law and its related regulations shall be carried out through tendering in strict accordance with the relevant laws and regulations.

In accordance with the relevant requirements of the Hong Kong Stock Exchange and the SZSE in relation to the management of related party transactions and the experience of and feedback from the related party transaction management of the Company, we formulated and continued to improve our related party transaction management system and management procedures to standardize the pricing principles, methods, division of management responsibilities, decision-making authority and clarify information disclosure requirements for related party transactions. With regard to the management rules on related party transactions approved by the Board, the pricing principles for related party transactions are applied in the following order:

- 1 If the transaction is subject to a government-prescribed price, the price shall be directly applied;

- 2 If the transaction is subject to a government-guided price, the transaction price shall be reasonably determined within the range of the government-guided price;

- 3 In addition to the adoption of government-prescribed prices or government-guided prices, if the transaction has a comparable market price or charging standard of an independent third party, the transaction price shall be determined with priority reference to such price or standard;

- 4 If there is no comparable independent third-party market price for related matters, the transaction price shall be determined with reference to the transaction price between the seller and the third party independent of the transaction parties; and

- 5 If there is neither the market price of an independent third party nor the independent non-related transaction price for reference, a reasonable price shall be used as the basis for pricing, and such price shall be reasonable costs plus reasonable profits.

The connected transactions of the Group strictly adhere to the above pricing principles. For specific framework agreements and/or contracts, one or more pricing principles shall be applied in sequence according to the specific circumstances. The specific application of the pricing principles of the Company's other connected transaction framework agreements and/or contracts will be announced when such framework agreements and/or contracts are signed or renewed at an appropriate time in accordance with the applicable regulatory requirements.

The internal control measures we have adopted in the course of related party transactions are as follows:

- 1 We established a related party transaction management system, and all subsidiaries shall designate personnel for related party transaction management;

- 2 The Company's audit department conducts internal audits on related party transaction management on a semi-annual basis;

Directors' Report

- 3 We conducted regular training and communication, covering the Group's personnel for related party transaction management and key related parties of CGNPC;
- 4 We update the list of related parties at least on a semi-annual basis; and
- 5 We conduct quarterly inspections and share good internal practices.

In 2022, we strictly complied with the latest regulatory requirements of the Hong Kong Stock Exchange and the SZSE in relation to related party transactions. The management rules on related party transactions amended during the reporting period was implemented after approval by the Board. The effective implementation of the Company's rules and procedures on related party transactions ensured the effectiveness of internal control measures and ensured that the related party transactions took place are in compliance with the relevant laws and regulations.

The independent non-executive Directors of the Company have examined the specific implementation of the continuing connected transactions and confirmed that:

- the transactions were entered into in the ordinary and usual course of business of the Company;
- the transactions were carried out on normal commercial terms or more favorable terms;
- the transactions were carried out in accordance with the framework agreements in respect thereof, the terms of which were fair and reasonable and in the interest of our shareholders as a whole; and
- the Company has formulated appropriate and effective internal control procedures with sound operation.

We have also engaged an external auditor to review the Group's continuing connected transactions to ensure that the transactions carried out under the framework agreements will be in compliance with the requirements under the Listing Rules. The Board has confirmed that the auditor has issued an unqualified letter in respect of the aforesaid continuing connected transactions in accordance with Rule 56 of Chapter 14A under the Listing Rules and reported the results in this letter to the Board, and a copy of the auditor's letter was submitted to the Hong Kong Stock Exchange.

The letter stated that:

- nothing has come to their attention that causes them to believe that the disclosed continuing connected transactions have not been approved by the Board;
- for transactions involving the provision of goods or services by the Group, nothing has come to their attention that causes them to believe that the disclosed continuing connected transactions were not, in all material respects, in accordance with the pricing policies of the Group;
- nothing has come to their attention that causes them to believe that the disclosed continuing connected transactions were not entered into, in all material respects, in accordance with the relevant framework agreements governing such transactions; and
- with respect to the aggregate amount of the continuing connected transactions, nothing has come to their attention that causes them to believe that the disclosed continuing connected transactions have exceeded the annual cap as set by the Company.

The Company has complied with the disclosure requirements under the Listing Rules of the places where the shares of the Company are listed.

Related Party Transactions

Details of the significant related party transactions carried out in the normal course of business are set out in Note (X) to the Financial Statements. Save as the connected transactions disclosed above, none of these related party transactions constitutes a discloseable connected transaction as defined under the Listing Rules.

Permitted Indemnity Provisions

At no time during the year ended December 31, 2022 and up to the date of this report, there was or is, any permitted indemnity provision being in force for the benefit of any of the Directors and Supervisors (whether made by the Company or other parties) or any of those of an associated company (if made by the Company).

The Company took out directors' liability insurance for Directors and Supervisors during the year. The relevant insurance covers the liability of Directors and Supervisors and the related costs incurred by the Directors and Supervisors in respect of potential legal proceedings against them arising out of corporate activities.

Directors' Report

Auditor

The consolidated financial statements for the year have been audited by KPMG Huazhen LLP, its term of appointment shall expire on the date of the AGM of the Company.

Remuneration Policy

For details of the Company's remuneration policy, please refer to the section headed "Human Capital" on page 55 and the section headed "Remuneration Committee Report" on page 141 of this Annual Report.

Remuneration of Directors and Five Individuals with the Highest Remuneration

Details of the remuneration of the Directors and the five individuals with the highest remuneration are set out in Note (X)5(5) to the Financial Statements.

Employee Retirement Benefits

For details of the Company's employee retirement benefits, please refer to the section headed "Remuneration Committee Report" on page 141.

Charitable Donations

For the year ended December 31, 2022, the Group adhered to the national planning on strengthening and amplifying the outcomes of poverty alleviation and full implementation of rural revitalization, and make active efforts in poverty alleviation to fulfill its social responsibilities. In 2022, the Group incurred a total of RMB40.4 million for rural revitalization, disaster relief and other donations.

The Board of Directors

March 15, 2023

Audit and Risk Management Committee Report

Composition and Duties

The members of the Audit and Risk Management Committee are appointed by the Board, and it comprises three members, namely Yang Jiayi (楊家義) (the chairman of the Audit and Risk Management Committee and an independent non-executive Director), Tang Chi Cheung (鄧志祥) (an independent non-executive Director) and Gu Jian (顧健) (a non-executive Director). The details of their personal particulars are set out in the “Board of Directors, Supervisory Committee and Senior Management” on page 81 to 82 of this Annual Report.

The Board has delegated to the Audit and Risk Management Committee with written terms of reference prepared according to the relevant requirements of the Articles of Association, the Company Law of the PRC, the listing rules of the places where the shares of the Company are listed, A Guide for Effective Audit Committees published by the Hong Kong Institute of Certified Public Accountants. The Audit and Risk Management Committee shall be responsible for examining the regular financial statements of the Company, the appointment of independent auditors, audit fees and other matters. 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 are available on the websites of the Company, the SZSE and the Hong Kong Stock Exchange. For details, please refer to the “Corporate Governance Report” on page 87 to 121 of this Annual Report.

Meetings of the Audit and Risk Management Committee shall be held on a regular basis per year or an extraordinary meeting shall be convened when necessary. The meetings shall discuss financial report, internal audit work plan and internal control and risk management related issues, and listen to working reports from the Company’s management, review the Company’s regular report, etc. The Audit and Risk Management Committee may, if needed, engage relevant professional institutions and listen to experts’ advice from professional institutions before making decisions and recommendations to the Board.

Annual Work Summary

In 2022, the Audit and Risk Management Committee paid full attention to the Company’s development, innovated working methods, focused on the key areas and crucial process of the Company, and earnestly perform their duties in accordance with the national policies and regulations and the annual work plan of the Board. With the support from the Board and the cooperation of the relevant departments of the Company, they also advised on the Company’s management and operation based on the key focuses of the Company, enabling the Company to enhance the level of internal control and strengthen risk prevention and control capabilities, and thus exercised the functions as a special committee effectively.

Audit and Risk Management Committee Report

In 2022, the Audit and Risk Management Committee convened six meetings to consider and review 35 resolutions. All members expressed independent opinions, which were reported to the Board by the chairman of the committee. The Audit and Risk Management Committee considered resolutions in relation to the interim and annual financial reports, quarterly reports and the appointment of audit firms of the Company for 2022, as well as the relevant resolutions in relation to the internal control and risk management, including the internal control assessment report and risk management assessment report of the Company for the year 2021, and the internal control assessment plan and risk management assessment plan for the year 2022. The committee also considered the resolutions in relation to the annual plans concerning the relevant work such as the 2022 internal audit plan of the Company and working plan of the committee so as to make reasonable arrangement for the relevant audit and the work of the committee.

All members actively performed the duties of the Audit and Risk Management Committee, reviewed and considered each and every resolution, made recommendations and requested relevant departments to implement them; provided advice on the reappointment and remuneration of the external auditors of the Company, and regularly communicated with the external auditors on audit plans and financial reports; oversaw the effective implementation of internal control and self-evaluation of internal control; monitored the preparation process of regular financial reports and reviewed the information related to regular financial reports and financial results announcements; understood the work status of the internal audit department and regularly listened to and formulated internal audit work, etc.

Audit and Risk Management Committee

March 15, 2023

Remuneration Committee Report

Composition and Duties

The members of the Remuneration Committee are appointed by the Board, and it comprises three members, namely Xia Ceming (夏策明) (the chairman of the Remuneration Committee and an independent non-executive Director), Yang Jiayi (楊家義) (an independent non-executive Director) and Feng Jian (馮堅) (a non-executive Director). The details of their personal particulars are set out in the “Board of Directors, Supervisory Committee and Senior Management” on page 81 to 82 of this Annual Report. Mr. Wang Hongjun, a former member of the Remuneration Committee, resigned on December 23, 2022 due to work reasons.

The Board has delegated to the Remuneration Committee with written terms of reference prepared according to the Articles of Association, the Company Law of the PRC, the listing rules of the places where the shares of the Company are listed and other related provisions. The Remuneration Committee shall be mainly responsible for making recommendations on the remuneration of the Directors, Supervisors and senior management of the Company and other matters. The terms of reference are detailed in Terms of Reference for the Remuneration Committee under the Board of Directors of CGN Power Co., Ltd. and available on the websites of the Company, the SZSE and the Hong Kong Stock Exchange. For details, please refer to the “Corporate Governance Report” on page 107 of this Annual Report.

Meetings of the Remuneration Committee shall be held at least once a year or an extraordinary meeting shall be convened where necessary. The meetings shall discuss the annual work plan and listen to the work report of the Company’s management, review the report of the Remuneration Committee as well as formulate the remuneration allocation plan and methods, etc. The Remuneration Committee may, if needed, engage professionals and listen to expert advice from professional institutions before making decisions and recommendations to the Board.

Annual Work Summary

In 2022, the Remuneration Committee convened 4 meetings to consider and review 8 resolutions. Independent opinions were expressed at each committee meeting, which were reported to the Board by the chairman of the committee. According to the terms of reference of the Remuneration Committee, the committee considered and discussed the remuneration of the Directors, Supervisors and senior management, considered the resolution on the 2022 remuneration plan for the Directors of the third session of the Board and the Supervisors of the third session of the Supervisory Committee of the Company, the resolution on the 2022 remuneration plan for the senior management of the Company and the resolution on the 2022 remuneration plan for the candidate of non-employee representative Supervisor of the third session of the Supervisory Committee of the Company, and made recommendation to the Board. It considered and discussed the appraisal matters of the senior management, considered the resolution on the appraisal results of the Company's senior management for 2021 and the appraisal plan for 2022 as well as the resolution on the 2022-2024 tenure performance contract of the senior management of the Company, and made recommendation to the Board. It considered the adjustment to the price of the second issue of the H-share appreciation rights incentive scheme of the Company. In 2022, the Remuneration Committee also formulated the evaluation measures for the duty performance of independent non-executive directors (trial) of the Company, which clarifies the purpose, evaluation subject, evaluation method, evaluation content and application of evaluation results of performance evaluation, in order to further enhance the efficiency of independent non-executive Directors in performing their duties.

Remuneration Committee Report

Remuneration for Directors, Supervisors and Senior Management

The remuneration for the Directors appointed by the controlling shareholder and the participating shareholders of the Company shall be paid by the company they work for. The remuneration for the independent non-executive Directors appointed by the Company is determined according to relevant requirements, and with reference to the appointments held by the Director in the Board Committees.

The remuneration for executive Directors of the Company is determined in accordance with the remuneration requirements of the Company.

The remuneration for the non-employee representative Supervisors appointed by the controlling shareholder and the participating shareholders of the Company shall be paid by the company they work for. The remuneration for employee representative Supervisors is determined in accordance with the remuneration requirements of the Company.

The remuneration of senior management of the Company is determined in accordance with the remuneration requirements of the Company.

The sum of remunerations for Directors, Supervisors and senior management in 2022 are set out below. For details of the remuneration for Directors, Supervisors and senior management and the details of the remunerations for the five individuals with the highest remuneration, please refer to Note (X)5(5) to the financial statements.

	Fees RMB' 000	Salaries, other allowances and discretionary bonus RMB' 000	Pension scheme* contributions RMB' 000	Total RMB' 000
Directors	240	3,534	236	4,010
Supervisors	—	3,135	226	3,361
Senior management**	—	9,023	366	9,389

Remuneration data includes the settlement of bonuses for the three-year business performance appraisal plan from 2019 to 2021.

* The Company contributes a certain proportion of the salaries of all the staff for their basic pension insurance according to the national and local regulations on pensions, and the staff will collect their pension according to the local polices upon retirement. In addition, the Company has also launched a corporation pension plan. According to the plan, the Company will contribute an amount of not exceeding 8% of the individual contracted remuneration per month and the individuals will contribute an amount of not exceeding half of the contribution from the Company, and the staff can collect such pension from their individual accounts every month upon retirement. Other than these, the Company has no other responsibility for the pension scheme of the staff.

** The remuneration of executive Directors concurrently serving as senior management members is only listed in the remuneration of Directors.

Remuneration Committee

March 15, 2023

Nomination Committee Report

Composition and Duties

The members of the Nomination Committee are appointed by the Board, and it comprises three members, namely Li Fuyou (李馥友) (the chairman of the Nomination Committee and an independent non-executive Director), Yang Changli (楊長利) (Chairman and non-executive Director) and Xia Ceming (夏策明) (an independent non-executive Director). Their personal particulars are set out in the “Board of Directors, Supervisory Committee and Senior Management” on page 80 to 82 of this Annual Report.

The Board has delegated to the Nomination Committee with written terms of reference prepared according to the Articles of Association, the Company Law of the PRC, the listing rules of the places where the shares of the Company are listed and other related provisions. The Nomination Committee shall be responsible for reviewing the structure of the Board on a regular basis, making recommendations on the members of the Board and senior management officers, verifying the independence of independent non-executive Directors and other matters. The terms of reference are detailed in the Terms of Reference for the Nomination Committee and are available on the websites of the Company, the SZSE and the Hong Kong Stock Exchange. For details, please refer to the “Corporate Governance Report” on page 108 of this Annual Report.

Meetings of the Nomination Committee shall be held at least once a year or an extraordinary meeting shall be convened where necessary. The meetings shall review the composition of the Board and the policy on Board diversity and discuss the annual work plan, etc. The Nomination Committee may, if needed, engage relevant professional institutions and listen to their advice before making decisions and recommendations to the Board.

Annual Work Summary

Particulars of meetings

In 2022, the Nomination Committee convened three meetings to consider two resolutions, which mainly included the plan to select a new session of the Board and the nomination of Director candidates. Four resolutions were reviewed, which mainly included the annual report of the Nomination Committee, the gender diversity plan of the Board, the independence of independent Directors and the structure and composition of the Board. Opinions were expressed by each committee member, which were reported to the Board by the chairman on behalf of the committee.

Nomination Committee Report

Review of the structure and composition of the Board

The Nomination Committee reviewed the structure and composition of the Board in accordance with the Board Diversity Policy of the Company and confirmed the independence of independent Directors. The Nomination Committee considered that: the Board has a reasonable structure, the skills, knowledge, experience and diversity of Directors meet the governance requirements, and all independent non-executive Directors are able to express independent opinions on appointment of Directors, execution of the non-competition deeds and connected transactions and other matters; the independent non-executive Directors have confirmed their independence by signing the independence confirmation letters, and the Company has yet to receive any personal information feedback from the independent non-executive Directors which will affect their independence.

The Nomination Committee has formulated a gender diversity plan for the Board in accordance with the Board Diversity Policy of the Company and the latest requirements of the Listing Rules. Details of the Board Diversity Policy of the Company and the gender diversity plan are set out in the Corporate Governance Report on page 113.

Nomination of Director candidates

The Nomination Committee considered the qualifications for the Director candidate Feng Jian in terms of education background, skills, experience, expertise and work experience in accordance with the Company Law of the PRC, the Articles of Association, the Director Nomination Policy of CGN Power Co., Ltd., the Board Diversity Policy of the Company and other requirements, and reported to the Board on its review opinions that approved the qualifications of the Director candidate nominated.

Director Nomination Policy

The Board has approved the Director Nomination Policy of CGN Power Co., Ltd. 《中國廣核電力股份有限公司董事提名政策》 at the eighth meeting of the second session of the Board on November 14, 2018, setting forth (1) the responsibility of director selection; (2) the nomination body for directors; (3) the nomination procedure for directors; (4) the qualifications of independent non-executive Directors; and (5) the resignation and term of office of directors, the re-election and selection of new session of the Board, and other matters.

The policy is available on the Company's website.

Nomination Committee

March 15, 2023

Nuclear Safety Committee Report

Composition and Duties

The members of the Nuclear Safety Committee are appointed by the Board, and it comprises five members, namely Yang Changli (楊長利) (the chairman of the Nuclear Safety Committee, Chairman and non-executive Director), Gao Ligang (高立剛) (an executive Director), Feng Jian (馮堅) (a non-executive Director), Gu Jian (顧健) (a non-executive Director) and Li Fuyou (李馥友) (an independent non-executive Director). Their biographical details are set out in the “Board of Directors, Supervisory Committee and Senior Management” on page 80 to 81 of this Annual Report. Mr. Wang Hongjun (王紅軍), a former member of the Nuclear Safety Committee, resigned on December 23, 2022 due to work reasons.

The Board has delegated to the Nuclear Safety Committee with written terms of reference prepared according to the relevant national laws, regulations, regulatory documents, the Articles of Association, the Procedural Rules of Board of Directors, and the actual situation of the Company. The terms of reference are detailed in the Terms of Reference for the Nuclear Safety Committee under the Board of Directors of CGN Power Co., Ltd. and are available on the websites of the Company, the SZSE and the Hong Kong Stock Exchange. For details, please refer to the “Corporate Governance Report” on page 108 of this Annual Report.

Meetings of the Nuclear Safety Committee shall be held at least twice a year. The meetings shall discuss the internal nuclear safety management plan of the Company and listen to the reports on nuclear safety of the Company from the relevant departments of the Company and the assessment report on the Company by third party institutions and other matters. The Nuclear Safety Committee may, if needed, engage relevant professional institutions and listen to experts’ advice from professional institutions before making recommendations to the Board. The Nuclear Safety Committee shall perform duties as prescribed in the Articles of Association.

Annual Work Summary

In 2022, the chairman and each member of the Nuclear Safety Committee conducted special inspections or on-site investigations on safety management at Daya Bay, Ningde, Hongyanhe, Fangchenggang, Taishan, Huizhou and Cangnan NPPs, respectively, emphasizing that the Company should always give utmost priority to safety, and adhere to the work style of “Strict Compliance, Prudent Decision-making, Detail-oriented and Fact-based Approach”, so as to ensure the safe and stable operation of all nuclear power generating units in operation and the high quality production of all nuclear power generating units under construction.

Nuclear Safety Committee Report

In 2022, the Nuclear Safety Committee convened two meetings to consider five resolutions, which mainly included the Company's safety and quality management, nuclear safety-related incidents and improvements, the Nuclear Safety Committee's 2021 work report, the Company's 2022 production safety inspection and rectification. All members expressed independent opinions, which were reported to the Board by the chairman of the committee. The Nuclear Safety Committee considered that the Company must deeply understand that safety is the foundation of the development of the nuclear power industry, strictly implement a series of national decision-making arrangements on strengthening the safety and quality of nuclear power, continuously improve the safety and quality management system, enhance the quality control and integrity management of the industrial chain, and work further in the investigation and management of potential hazards, continue to improve the thermal sink risk prevention mechanism and capacity of NPPs, strengthen the management of human error prevention in terms of awareness and knowledge as well as technical prevention, and continuously improve the Company's nuclear safety management.

In 2023, based on the basic principles of "Safety First, Quality Foremost, Pursuit of Excellence", the Nuclear Safety Committee will remain problem-oriented and stick to bottom-line thinking, promote improvement in safety from the perspective of culture and technological innovation, further strengthen the foundation of safety management and supervision effectiveness, and continue to promote high-quality development, so as to ensure that the operational objectives of the Company are achieved.

Nuclear Safety Committee

March 15, 2023

Supervisory Committee Report

Composition

The Company has four Supervisors, two of which are employee representative Supervisors and two are non-employee representative Supervisors. Ms. Zhu Hui (朱慧) and Mr. Wang Hongxin (王宏新) are employee representative Supervisors, while Ms. Pang Xiaowen (龐曉雯) and Mr. Zhang Baishan (張柏山) are non-employee representative Supervisors. The biographical details of the current Supervisors are set out in the “Board of Directors, Supervisory Committee and Senior Management” on page 83 to 84 of this Annual Report.

The Supervisory Committee shall convene at least two regular meetings per year, and extraordinary meetings of the Supervisory Committee shall be convened when considered necessary by the chairman of Supervisory Committee or proposed by other Supervisors. Members of the Supervisory Committee perform their supervisory duties and responsibilities pursuant to the laws, regulations, the Articles of Association and the mandate granted by the general meeting, and shall be accountable to the general meeting, in order to protect the interests of the shareholders, the Company and the legitimate interests of staff against infringements.

Duties and Responsibilities

- To review the regular report of the Company prepared by the Board of Directors and submit review opinions in written form;
- To review the Company’s financial position;
- To supervise Directors and senior management to ensure that they do not act in contravention of any law, administrative regulation or the Articles of Association in performing their duties, and to advise on dismissal of Directors or senior management who are in breach of laws, administrative regulations, the Articles of Association or resolutions of the general meetings;
- To demand Directors or senior management to rectify their error if they have acted in a harmful manner to the Company’s interest;
- To check and inspect the financial information such as the financial reports, business reports and profit distribution plans to be submitted by the Board to the general meetings, and to engage, in the Company’s name, certified public accountants or practicing auditors to assist in reviewing such information should any doubt arise in respect thereof;
- To make proposals at a general meeting;
- To propose to convene an EGM; where the Board fails to perform the duties in relation to convening or chairing a general meeting as required by the Company Law of the PRC, to convene and chair a general meeting;
- To propose to convene an extraordinary Board meeting;
- To represent the Company in negotiations with or in bringing actions against a Director or senior management according to Article 151 of the Company Law of the PRC;

Supervisory Committee Report

- To investigate into any abnormalities in operation of the Company; if necessary, to engage accounting firms, law firms and other professional institutions to assist its work, and the expenses incurred shall be borne by the Company; and
- To perform other duties and powers as stipulated in the Articles of Association.

Annual Work Summary

During the reporting period, the Supervisory Committee convened five meetings. The Supervisors attended all on-site meetings of the Board, and focused on the review of the annual and interim financial reports, and profit distribution plans of the Company. All Supervisors attended the general meetings, and the Supervisor representatives supervised the voting results of the general meetings.

The meetings convened by the Supervisory Committee in 2022 are as follows:

Number	Meeting	Date	Method of Convening	Attendance/ Number of Supervisors
1	Ninth meeting of the third session of the Supervisory Committee	March 16, 2022	By teleconference	5/5
2	Tenth meeting of the third session of the Supervisory Committee	April 1, 2022	By teleconference	4/4 ⁽¹⁾
3	Eleventh meeting of the third session of the Supervisory Committee	April 21, 2022	Physical	3/3 ⁽²⁾
4	Twelfth meeting of the third session of the Supervisory Committee	August 24, 2022	By teleconference	4/4 ⁽³⁾
5	Thirteenth meeting of the third session of the Supervisory Committee	October 26, 2022	Physical	4/4

Notes:

- (1) Mr. Hu Yaoqi resigned from his position as a non-employee representative Supervisor of the Company due to work reasons, which became effective on April 1, 2022.
- (2) Mr. Chen Sui resigned from his position as the chairman of the Supervisory Committee and a non-employee representative Supervisor of the Company due to work reasons, which became effective on April 11, 2022.
- (3) The appointment of Ms. Pang Xiaowen as a non-employee representative Supervisor of the third session of the Supervisory Committee of the Company was approved at the Company's 2021 AGM, which became effective on May 27, 2022.

The Supervisory Committee reviewed matters for the Board's regular meetings, and pursuant to its responsibilities, the Supervisory Committee reviewed the following contents and expressed its opinions, and all resolutions requiring voting were passed by the Supervisory Committee by voting.

- Report of the Supervisory Committee of the Company for 2021
- Annual Report of the Company for 2021 and its summary (including the Annual Results Announcement of the Company for 2021)
- Financial Report of the Company for 2021
- Internal Control Assessment Report of the Company for 2021
- Profit Distribution Plan of the Company for 2021
- First Quarterly Report of the Company for 2022
- Interim Financial Report of the Company for 2022
- Interim Report of the Company for 2022 and its summary (including the Interim Results Announcement of the Company for 2022)
- Third Quarterly Report of the Company for 2022
- Appointment of the Financial Report Auditor of the Company for the Year 2022
- Appointment of the Internal Control Auditor of the Company for the Year 2022
- Work Plan for the Re-election of the Supervisory Committee
- Approval of Ms. Pang Xiaowen (龐曉雯) as a candidate of Non-employee Representative Supervisor of the Third Session of the Supervisory Committee of the Company

We arrange for Supervisors to receive training on the Company's business and corporate governance and carry out relevant on-site inspections with them from time to time to enable the Supervisors to have a better understanding of our operations and business and better perform their duties as Supervisors.

Supervisory Committee Report

In 2022, the trainings received and the inspections conducted by the Supervisors of the Company were as follows:

Name	Position	Training received	Inspection conducted
Chen Sui ⁽¹⁾	Non-employee representative Supervisor/ Chairman of the Supervisory Committee	–	–
Hu Yaoqi ⁽²⁾	Non-employee representative Supervisor	–	–
Pang Xiaowen ⁽²⁾	Non-employee representative Supervisor	√	√
Zhang Baishan	Non-employee representative Supervisor	√	–
Zhu Hui	Employee representative Supervisor	√	–
Wang Hongxin	Employee representative Supervisor	√	–

Notes:

- (1) Mr. Chen Sui resigned from his position as the chairman of the Supervisory Committee and a non-employee representative Supervisor of the Company due to work reasons, which became effective on April 11, 2022.
- (2) Mr. Hu Yaoqi resigned from his position as a non-employee representative Supervisor of the Company due to work reasons, which became effective on April 1, 2022. The appointment of Ms. Pang Xiaowen as a non-employee representative Supervisor of the third session of the Supervisory Committee of the Company was approved at the Company's 2021 AGM, which became effective on May 27, 2022.

Independent Opinions of the Board of Supervisors on the Relevant Matters

Lawful Operation

The Company operates in compliance with the law and its substantial decisions are made in compliance with relevant laws and regulations. The internal control system established by the Company meets the demands of management. The Board and the management of the Company are able to operate regularly in strict compliance with the Company Law of the PRC, the Securities Law of the PRC, the Articles of Association and relevant regulations of the places where the shares of the Company are listed, performing their duties and responsibilities with integrity and diligence, and carefully implemented resolutions passed and mandates granted at general meetings. The Company's decisions and operating activities were in compliance with the laws and regulations and the Articles of Association. During the reporting period, no violation of the laws, regulations and the Articles of Association committed by the Board and the management of the Company was identified and no harm was inflicted on the interests of the Company.

Financial Information of the Company

The financial statements of the Company give an objective, true and fair view of the financial position and the operating results of the Company in all material aspects and are true and reliable under its regulated financial auditing and sound internal control system.

Internal control system of the Company

In accordance with the requirements of the relevant provisions of the Basic Standards of Internal Control for Enterprises (《企業內部控制基本規範》) and Enterprises Internal Control Guidelines, upon adequate verification of the Company's internal control operation, the Supervisory Committee is of the view that the existing internal control system of the Company has complied with the currently applicable laws, regulations and regulatory requirements, and can exercise effective control over risks in all material respects; and that the Internal Control Assessment Report of the Company for 2022 (《公司2022年度內部控制評價報告》) has given an objective and true view of the establishment, operation, inspection and supervision of the internal control system of the Company.

Profit Distribution Plan

The Supervisory Committee reviewed the "Profit Distribution Plan for 2021" of the Company and considered that such resolution complied with relevant provisions of laws, regulations, the Articles of Association and the Dividend Distribution Plan for the Coming Five Years (2021-2025), and that the plans were in the interests of the shareholders as a whole, and were conducive to the long-term development of the Company.

The Supervisory Committee will continue to diligently and duly perform its supervisory duties in strict compliance with the Company Law of the PRC, the Articles of Association and the State's relevant laws and regulations, so as to enhance the Company's standard operation and safeguard the lawful interests of the Company and its shareholders.

Supervisory Committee

March 14, 2023

Risk Management Report

Philosophy of Risk Management

We focus on the development of strategies and objectives. We face various internal and external risks during the development of the business of the Company. We need to proactively identify and manage risks by adopting risk management strategies to mitigate, avoid, transfer or manage such risks, while at the same time enhance the effect and efficiency of operation, to create and protect the Company's values. In this respect, the Company has strived to improve its comprehensive risk management structure, strengthening the Company's ability in risk management and nurturing a sound risk management culture. Risk management is implemented throughout every aspect of business management and operational process. Every employee of the Company is a safeguard to risk management.

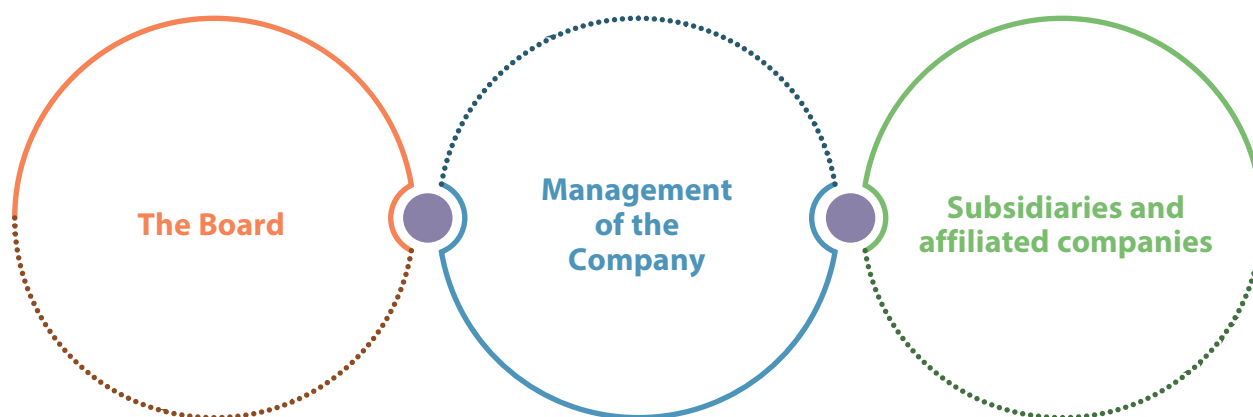
Objectives, Strategies, System and Procedure of Risk Management

Objectives and Strategies of Risk Management

The risk tolerance of the Company refers to the level of risk that the Company is willing to undertake in order to achieve its own strategic and business objectives. The Board of the Company is responsible for assessing the risk the Company is willing to tolerate. The assessment is mainly based on the Company's values, goals and resources, and must follow the requirements of the laws and regulations. The reasonable level of risk that is acceptable by the Company must conform to its development strategy and can be fully understood and controlled and will not place the Company under the following risks: having a disruptive influence on the Company's development; material financial losses that affect the business development capacity of the Company, and/or cause serious damage to the Company's financial management capacity; occurrence of serious incidents, resulting in disruption of operation/supply; serious violations of external regulations to the extent that the Company may disrupt operations/withdraw licenses and/or be imposed with huge fines; incidents that affect the safety and the health of the employees, contractors and the public; and causing harm to the Company's reputation or brands.

We set up a risk management team to assess risks and rank them in the monthly meeting, while requiring each business unit to identify the consequences and likelihood of risks, set up risk control targets, and take corresponding risk prevention strategies.

System of Risk Management



The Company's risk management system:

- to promote full identification and delivery of risk information to support the Board's access to risk information;
- to ensure the effective operation of the risk management system and clarify the roles and responsibilities for risk management; and
- the following three different roles and responsibilities are included.

Decision making and monitoring – The Board

- To consider annual risk management report, to supervise, assess and inspect the effectiveness of the operation of the Company's internal overall risk management system;
- To monitor the major risks for the year and fulfill the management responsibilities of major risks;
- To discuss risk management and internal control system with the management, ensuring that management has fulfilled its obligation on the establishment of effective system;
- To study the significant or unusual matters reflected or to be reflected in the Company's report and accounts, and to make adequate reference to matters proposed by the Company's subordinate accounting and finance department, supervision department or auditors; and
- To study the important findings of risk management and internal control matters and the relevant measures taken by the management.

Risk Management Report

Setting goals and solutions – Management of the Company

The President

- To continuously improve the risk management system;
- To understand and know the significant risks which the Company faces and their current state, and to approve major risk management solutions of the Company; and
- To continuously supervise and evaluate the effectiveness of establishing and operating the Company's comprehensive risk management system.

Risk Management Department

- To promote and facilitate the normal operation of the Company's comprehensive risk management and related risk management workflow;
- To organize and coordinate the routine work of the comprehensive risk management;
- To guide and supervise each unit to carry out comprehensive risk management; and
- To prepare the risk monitoring reports, and the annual risk assessment reports by the Company.

Execution and reporting – the Company, its subsidiaries and affiliated companies

- To be responsible for the comprehensive risk management duties within the unit's business operation;
- To manage the specific risks of the unit;
- To submit the unit's monthly risk monitoring reports and annual risk management reports;
- To organize the risk assessment of the unit according to the supervision of the Risk Management Department; and
- To organize the investigations, assessments and analyses on the relevant risk incidents before, during and after they take place in the unit respectively.

The Procedure of Risk Management

We incorporate the Company's social responsibility, economic operation and development prospects into risk management, make reference to the risk management of IAEA-TECDOC-1209, the risk management framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and ISO 31000:2009 risk management – principles and guidelines, so as to make continuous improvement to comply with the leading standard and practice in the industry. We cultivate sound risk management culture and establish a sound and comprehensive risk management system, by focusing on the overall development and operational objectives and through implementing basic procedures of risk management in all segments of corporate management and in the course of business operation, in order to provide reasonably assured processes and methods for achieving the overall targets of risk management.

We always adhere to the same concept on risk management, continue to improve the risk management system by strengthening the active identification, regular assessment and active management of risk events, and setting up a dedicated risk management team to manage risks as well as other effective management measures to constantly improve the risk management structure, facilitate each department of the Company to transit from risk warning to active management of risk, and consolidate the front line of risk management and prevention.

Assessment of the Company

- To identify significant risks which may affect the Company's business development and operation during the Company's annual business planning for the next year.
- To analyse the internal and external situations for the next year by the Risk Management Department through procedures such as collecting, screening and sorting to find out significant risks the Company will face, and incorporate counter-measures against the significant risks identified into the Company's business plans to ensure that appropriate management or monitoring measures will be adopted to avoid the negative effects of material risks on the Company's business development and operation.
- To organize President specific meeting to consider and prepare the annual risk management report which will be submitted to the Audit and Risk Management Committee and the Board for review.

Quarterly risk monitoring

- To identify significant risks, and report to the Board for review on a quarterly basis.

Risk Management Report

Monthly risk monitoring

- The major business units of the Company will prepare the monthly risk monitoring reports for their own units as the basis for risk information collection.
- Assign the risk management team to assess, rank, report and discuss risks. They will selectively track risks that reveal a tendency of negative changes in the current month, and request the relevant business department or business unit to handle in a timely manner.
- The Risk Management Department will prepare a monthly risk monitoring report and submit to the President and the Chairman for reporting the risk status of the current month.

Risk management during the business development process





- When business units conduct major investment, business units must identify significant risks and put forward corresponding counter-measures according to the risk management requirements of the Company.

We will identify new risks through risk information collection from the basic level to the top level in daily risk monitoring, and assign the risk management team to prepare monthly risk monitoring report and identify the ranking changes of major risks, and identify the undiscovered risks that may arise so as to address the impacts of risk changes for the year. Meanwhile, we will understand and discover new risks through various channels during the process of daily business development and operation. We will timely evaluate and analyze new risks brought out by external environmental changes. Those which are recognized as significant risks will be monitored in a targeted manner until they no longer are significant risks.


Key Risk Management Initiatives in 2022

In 2022, the Company actively responded to the internal and external challenges and opportunities. According to the changes of internal and external environment, we analyzed the situations, explored internal drivers, made active response and captured the opportunities to resolve the impact of internal and external uncertainties on the Company's development.

In 2022, we have identified the following major risks in the business development practices and have taken corresponding measures:

Description of risks	Key changes	Key measures
Safe and stable operation of NPPs		
<p>Commencement of commercial operations of new power generating units as well as simultaneous operation and management of multiple bases have brought us many challenges.</p> <p>As multiple bases and multiple units outages interacted and overlapped, coupled with the impact of the pandemic, outage resource assurance faced challenges.</p> <p>As part of our nuclear plant units have operated for more than ten years, and it takes some time to inspect the new units, we shall focused on the assurance of reliability of equipment of multiple bases.</p>	 <ul style="list-style-type: none"> <li data-bbox="544 620 858 771">○ In 2022, a total of 26 units are in operation, an increase of one unit year-on-year. <li data-bbox="544 849 858 957">○ Continuous resurgence of the pandemic in the PRC. 	<ul style="list-style-type: none"> <li data-bbox="884 513 1433 778">○ Continue to carry out the promotion of the Nuclear Safety Law and refresher education of safety on all staff, further carry out the “Upholding compliance and fighting against non-compliance” activities, and strengthen the implementation of codes of conduct. <li data-bbox="884 806 1433 1274">○ Strengthen online safety supervision, carry out benchmarking work on management to avoid human error, improve the in-depth defense system of thermal sink security, optimize the management and operation mechanism for significant and major equipment, and strengthen feedback to external experience to improve equipment management, ensure the safe operation of units in operation, and eliminate potential dangers by all means. <li data-bbox="884 1302 1433 1489">○ Normalize the implementation of pandemic prevention and control requirements, strictly control costs and expenditures as well as spending on non-production activities; deepen lean management.
 <p>Lower than the risk level of last year</p>	 <p>Same as the risk level of last year</p>	 <p>Higher than the risk level of last year</p>

Risk Management Report

Description of risks	Key changes	Key measures
Risks of sales of electricity		
<p>The impact of the local economic development, local demand for electricity, accelerated power market reform and local power generation policies of the places in which they are located are posing challenges to the nuclear power bases in terms of sales of electricity.</p>	 <ul style="list-style-type: none"> <li data-bbox="502 517 837 679">○ Trading mechanism of electricity changes as a result of the power market reform. <li data-bbox="502 689 837 808">○ The proportion of market-based power increases. <li data-bbox="502 819 837 1175">○ The national electricity supply and demand situation is tight in general, and the electricity supply and demand in certain areas is tight at the beginning of the year, summer and autumn. <li data-bbox="502 1185 837 1347">○ Government and power grid projects affect power transmission. <li data-bbox="502 1358 837 1670">○ Power grids request the units to operate at lower power levels due to natural disasters such as typhoons, heavy rains, and snowstorms. 	<ul style="list-style-type: none"> <li data-bbox="837 409 1396 689">○ Strengthen communication and coordination with national competent departments, local governments and power grid, actively keep up with the trend of power market reform, and further research on the marketing mechanisms of the power market. <li data-bbox="837 700 1396 862">○ Leveraging the coordination mechanism with regional power stations which assumes responsibilities at different levels, strive to pursue more planned output. <li data-bbox="837 873 1396 1078">○ Enhance marketing strength in the power market in each region, improve the transaction capacity in the power market, strengthen resource allocation, and seize large users in the market. <li data-bbox="837 1088 1396 1218">○ Formulate and implement corresponding solutions to lower and avoid the chances of deloading occurring during holidays.





Lower than the risk level of last year



Same as the risk level of last year



Higher than the risk level of last year

Description of risks	Key changes	Key measures
Control on projects under construction		
<p>Safety and quality control, progress control and cost control of nuclear power projects in progress will have many adverse factors affecting the achievement of high-quality production.</p>	 <ul style="list-style-type: none"> We managed seven nuclear power units under construction, which is the same as the last year. 	<ul style="list-style-type: none"> Assure proper construction and resource commissioning to ensure working progress with quality, formulate special optimization measures and guarantee the project construction targets. Strengthen the feedback from the experience of the first reactor, implement investment control objectives of HPR1000 demonstration project, strengthen the design, procurement and construction schedule control of HPR1000 demonstration project. Continue to carry out nuclear safety education, enhance the management on high-risk operations and major sources of danger, and improve the workers' technical skills and awareness of safety and quality.
Financial risks		
<p>As RMB exchange rate fluctuated, the foreign currency debts (mainly denominated in Euro) of the Company resulted in the continuous fluctuation in our profit and loss of exchange rate.</p> <p>The fluctuating market interest rates affected the debt financing cost of the Company.</p>	 <ul style="list-style-type: none"> In the first half of 2022, the Euro depreciated against the RMB; in the second half of 2022, the Euro appreciated against the RMB. In 2022, the loan rate to loan prime rate ("LPR") was overall at a lower level, with both one-year and five-year LPRs declining. 	<ul style="list-style-type: none"> Reduce Euro debt exposure by repaying debts denominated in Euro; The Company managed new foreign currency debts by payments for foreign commercial contracts through spot purchase of foreign exchange in RMB; Maintain the proportion of long-term bank loans to match the Company's long-term cash flow, and reduce the risk of refinancing. We reduced financing cost by issuing ultra short-term financing notes and medium-term notes to increase the scale of direct financing as appropriate.
 <p>Lower than the risk level of last year</p>	 <p>Same as the risk level of last year</p>	 <p>Higher than the risk level of last year</p>

In 2022, under our inspection, we are of opinion that the overall nuclear safety of the conditions of nuclear power generating units in operation are under control; the overall project quality, progress and construction cost of the projects under construction are under control without material and adverse changes. In 2022, through internal and external efforts, the annual power generation plan was basically completed.

Risk Management Report

Outlook for 2023 and Important Measures

In 2023, the Company will continue to promote risk management optimization actions. Leveraging the operational objectives and major tasks of 2023 for the “14th Five-Year” and in the medium to long planning, we will identify the risks that affect us in achieving our targets, further enhance the effectiveness of the Company’s risk management, strengthen the risk management responsibility, formulate and implement risk prevention and control measures to ensure the Company achieves its development and operational objectives and creates value for the shareholders.

The objectives of the Company’s risk management in 2023 are to stick to the bottom line of nuclear safety and ensure absolute nuclear safety; adhere to the strategic direction, focus on achieving the Company’s strategic objectives, prevent and resolve major risks; continue to identify, track, monitor and resolve major risks, etc.

We continue to fulfill risk management responsibilities and optimize the risk monitoring methods through internal control functions and business departments and units, so as to reduce the impacts of significant risks on our business development.

As for safe and stable operation of multiple bases

- ✔ continue to work on safety standards and international benchmarking, specify the accountability of safety management, fully fulfill the requirements of the Action Plan for Safety and Quality Improvement of the Nuclear Power Industry (2022-2025) 《核電行業安全質量提升行動計劃(2022-2025)》, further carry out activities such as safety culture development, nuclear safety leadership and “Upholding compliance and fighting against non-compliance”, focus on improving the competence of key personnel, and comprehensively enhance the effectiveness of the safety, quality and environmental management system.
- ✔ with an aim to identify potential hazards, resolve defects and prevent human errors, continuously improve the management and operation mechanism of major equipment, enhance equipment reliability, improve the dual prevention mechanisms of risk classification, control and management and review of potential hazards, eliminate potential risks by all means and ensure absolute nuclear safety.

As for risks of sales of electricity

- ✓ actively facilitate the implementation of policies in relation to supporting the consumption of electricity generated by NPPs.
- ✓ actively respond to market reforms, promote innovation of the power marketing model in an orderly manner to seize major market users and increase on-grid power generation.
- ✓ strengthen market conception, build an electricity marketing system that is compatible with the new energy system, and continue to improve marketing capabilities.

As for controls on projects under construction

- ✓ adhere to the idea of “safety first and quality foremost”, continue to carry out safety and quality management and environmental protection activities.
- ✓ enhance construction planning, strengthen the control of construction resources, optimize work schedules, and avoid work in rush or work delays.
- ✓ reinforce skills training for employees, strengthen the feedback system and continuously enhance the effectiveness of feedback.
- ✓ continue to work on design optimization and technical improvement to ensure safety and competitiveness.

In the face of increasing uncertainties in the business environment, the Company will monitor risks continuously and rigorously for the realization of the Company’s operational and strategic objectives.



贯保监督





FINANCIAL REPORT

164	Audit Report
168	Consolidated Balance Sheet
170	Balance Sheet of the Parent Company
172	Consolidated Income Statement
174	Income Statement of Parent Company
175	Consolidated Cash Flow Statement
177	Cash Flow Statement of the Parent Company
178	Consolidated Statement of Changes in Shareholder's Equity
179	Statement of Changes in Shareholders' Equity of Parent Company
180	Notes to the Financial Statements

Audit Report

KPMG Huazhen Shen Zi No. 2301748

The Shareholders of 中國廣核電力股份有限公司CGN Power Co., Ltd.

I. Opinion

We have audited the accompanying financial statements of 中國廣核電力股份有限公司CGN Power Co., Ltd. ("CGN Power"), which comprise the consolidated and company balance sheets as at December 31, 2022, the consolidated and company income statements, the consolidated and company cash flow statements, the consolidated and company statements of changes in shareholders' equity for the year then ended, and notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the consolidated and company financial position of CGN Power as at December 31, 2022, and the consolidated and company financial performance and cash flows of CGN Power for the year then ended in accordance with Accounting Standards for Business Enterprises issued by the Ministry of Finance of the People's Republic of China.

II. Basis for Opinion

We conducted our audit in accordance with China Standards on Auditing for Certified Public Accountants ("CSAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of CGN Power in accordance with the China Code of Ethics for Certified Public Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

III. Key Audit Matters

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

Measurement of Provision for NPP Decommissioning

Please refer to the accounting policy stated in "III. Significant Accounting Policies and Accounting Estimates" 23 and "V. Notes to Items in the Consolidated Financial Statements" 36 in Notes to the Financial Statements.

The key audit matters

The principal business of CGN Power and its subsidiaries ("CGN Power Group") is construction and operation of NPPs. CGN Power Group has incurred obligations to handle the decommissioning of its NPPs in accordance with the relevant regulatory requirements in the People's Republic of China (the "PRC"). As at December 31, 2022, the provision for NPP decommissioning presented in the consolidated financial statements of CGN Power was RMB5,372,623,933.88.

CGN Power Group recognized the provision for NPP decommissioning based on the discounted amount of the expected decommissioning expenses. The management needs to determine the timing of decommissioning, the amount of future decommissioning expenditure and discount rate to estimate the provision for NPP decommissioning. In particular, the amount of future decommissioning expenditure needs to estimate the demolition costs, labor costs and safe disposal fees of radioactive waste that will incur when the NPP is closed. CGN Power Group refers to the estimation methods and models of NPP decommissioning issued by international authorities, and adjusts the specific requirements of NPP, including technical differences, labor costs, and relevant laws and regulations, according to the actual situation of CGN Power Group.

Due to the importance of the carrying value of the provision for NPP decommissioning to the financial statements and the estimation of the future decommissioning expenditure amount involves significant judgments and estimates, we identified the measurement of provision for NPP decommissioning as a key audit matter.

How the matter was addressed in our audit

The audit procedures related to the evaluation of the measurement of the provision for NPP decommissioning primarily included the following:

- Evaluating the design and operational effectiveness of the key internal control of financial reporting of CGN Power Group regarding the measurement of the provision for NPP decommissioning;
- Meeting with the engineers in the technical department of CGN Power Group who are responsible for compiling and reviewing the prediction model of NPP decommissioning to understand the formulation process of CGN Power Group's NPP decommissioning plan;
- Obtaining the NPP decommissioning plan prepared by the management, comparing it with relevant national regulatory regulations, and evaluating the compliance and feasibility of the NPP decommissioning plan of CGN Power Group;
- Evaluating the appropriateness of the method adopted by the management when forecasting the NPP decommissioning cost and the rationality of key assumptions based on our understanding of the industry and business and with reference to the estimation method and model of NPP decommissioning cost published by international authorities, including the demolition costs, labor costs and safe disposal fees of radioactive waste estimated by CGN Power Group;
- According to the technical differences between NPPs at home and abroad and adjustments made according to economic environment differences, including exchange rates, inflation rates, labor costs and safe disposal fees for radioactive waste, and the discount rate used, obtaining external data related to the above key parameters and comparing the management's estimated provision for NPP decommissioning with the results of our evaluation; and
- Evaluating and conducting sensitivity analysis with respect to the key parameters that affect the measurement of provision for NPP decommissioning, including major costs, expenses, exchange rates, inflation rates, and discount rates, and considering whether there is any indication that these parameters may be biased by the management.

Audit Report

IV. Other Information

CGN Power's management is responsible for the other information. The other information comprises all the information included in 2022 annual report of CGN Power, other than the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

V. Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Accounting Standards for Business Enterprises, and for the design, implementation and maintenance of such internal control necessary to enable that the financial statements are free from material misstatement, whether due to fraud or error. In preparing the financial statements, management is responsible for assessing CGN Power's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate CGN Power or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CGN Power's financial reporting process.

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

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with CSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with CSAs, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

- (1) Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- (2) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- (3) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- (4) Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on CGN Power's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause CGN Power to cease to continue as a going concern.

Finance, Assets and
InvestmentBusiness Performance
and Outlook

Capitals

Corporate
GovernanceFINANCIAL
REPORT

- (5) Evaluate the overall presentation, including the disclosures, structure and content of the financial statements, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- (6) Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within CGN Power to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and, where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

KPMG Huazhen LLP
Beijing, China

Certified Public Accountants
Registered in the People's Republic of China
Chen Zimin (The engagement partner)
Wang Jie

March 15, 2023

Consolidated Balance Sheet

As at December 31, 2022

(Unit: RMB)

Item	NOTES	December 31, 2022	December 31, 2021 (Restated)
Assets			
Current assets:			
Cash at bank and in hand	(V)1	14,840,775,400.46	15,827,729,811.43
Bills receivable	(V)2	3,605,535.11	1,707,261,500.00
Accounts receivable	(V)3	14,937,561,118.67	10,851,815,965.20
Prepayments	(V)4	17,506,790,909.33	17,372,065,000.89
Other receivables	(V)5	334,927,504.46	53,320,247.61
Inventories	(V)6	17,775,458,321.06	15,248,475,732.06
Contract assets	(V)7	2,860,873,537.43	3,346,751,008.49
Other current assets	(V)8	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	(V)9	48,917,096.53	37,739,834.23
Long-term equity investments	(V)10	13,657,597,890.59	12,457,405,017.92
Other investment in equity instruments	(V)11	569,823,570.13	590,195,970.13
Investment properties	(V)12	180,474,430.77	204,919,250.54
Fixed assets	(V)13	232,763,516,089.38	239,781,814,198.65
Construction in progress	(V)14	68,299,405,441.78	57,561,621,171.27
Right-of-use assets	(V)15	1,041,919,328.49	1,040,777,428.86
Intangible assets	(V)16	5,205,320,306.21	5,202,831,122.59
Development costs	(V)17	5,031,087,404.91	3,575,421,186.66
Goodwill	(V)18	419,242,673.32	419,242,673.32
Long-term deferred expenses	(V)19	1,563,607,925.18	1,527,444,432.48
Deferred tax assets	(V)20	2,407,719,951.15	2,311,931,738.14
Other non-current assets	(V)21	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

The accompanying notes to the financial statements form an integral part of these financial statements.

Item	NOTES	December 31, 2022	December 31, 2021 (Restated)
Liabilities and shareholders' equity			
Current liabilities:			
Short-term loans	(V)22	11,930,482,045.91	16,374,993,758.88
Bills payable	(V)23	5,094,227,695.25	3,549,771,587.50
Accounts payable	(V)24	22,967,701,771.92	18,817,580,701.92
Receipts in advance	(V)25	450,000.00	
Contract liabilities	(V)26	2,713,506,296.40	4,124,772,960.60
Employee benefits payable	(V)27	57,289,658.73	55,849,381.67
Taxes payable	(V)28	2,099,287,224.92	1,561,020,572.25
Other payables	(V)29	6,756,582,982.51	4,075,609,945.61
Non-current liabilities due within one year	(V)30	21,370,443,527.73	22,719,658,250.53
Other current liabilities	(V)31	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	(V)32	160,074,949,905.97	155,921,820,998.03
Bonds payable	(V)33	4,492,066,733.52	5,988,041,567.89
Lease liabilities	(V)34	651,291,464.61	692,172,850.27
Long-term employee benefits payable	(V)35	60,783,521.25	195,433,077.84
Provisions	(V)36	5,959,875,294.10	5,334,823,453.78
Deferred income	(V)37	2,325,356,501.66	2,361,217,837.38
Deferred tax liabilities	(V)20	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	(V)38	50,498,611,100.00	50,498,611,100.00
Capital reserve	(V)39	10,807,810,823.13	10,790,413,325.63
Other comprehensive income	(V)40	741,762,782.92	345,482,066.81
Specific reserve	(V)41	200,139,433.39	249,371,452.84
Surplus reserve	(V)42	5,740,430,152.70	4,901,787,799.63
Retained earnings	(V)43	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

These financial statements were approved by the board of directors on March 15, 2023.

The accompanying notes to the financial statements form an integral part of these financial statements.

The financial statements and notes were signed by the following persons in charge.

Yang Changli
Legal Representative
(Chairman)

Gao Ligang
Executive Director

Yin Engang
Chief Financial Officer

Shan Jing
Head of the Accounting
Department

Balance Sheet of the Parent Company

As at December 31, 2022

(Unit: RMB)

Item	NOTES	December 31, 2022	December 31, 2021 (Restated)
Assets			
Current assets:			
Cash at bank and in hand		6,276,518,296.50	9,733,956,725.88
Accounts receivable	(XV)1	335,122,339.25	1,231,082,748.72
Prepayments		27,426,987.35	244,781,069.15
Other receivables	(XV)2	4,817,369,269.83	1,891,933,966.37
Non-current assets due within one year		4,004,622,317.91	5,006,465,631.80
Other current assets	(XV)3	14,846,875,133.93	18,470,729,359.93
Total current assets		30,307,934,344.77	36,578,949,501.85
Non-current assets:			
Debt investments	(XV)4	7,506,380,422.89	8,537,703,160.59
Long-term equity investments	(XV)5	86,604,309,314.03	82,965,665,556.21
Fixed assets		89,411,852.95	119,200,253.44
Construction in progress		80,206,103.36	70,802,824.69
Right-of-use assets		97,792,165.16	207,949,957.38
Intangible assets		210,051,447.15	285,905,825.06
Development costs		4,015,366,360.18	2,493,893,739.45
Other non-current assets		32,559,400.00	12,354.72
Total non-current assets		98,636,077,065.72	94,681,133,671.54
Total assets		128,944,011,410.49	131,260,083,173.39
Liabilities and shareholders' equity			
Current liabilities:			
Accounts payable		642,341,565.61	488,845,346.91
Contract liabilities		10,584,776.26	7,386,539.93
Employee benefits payable		786,038.63	2,278,203.51
Taxes payable		28,425,537.02	9,832,473.38
Other payables		6,419,938,995.95	8,365,136,771.88
Non-current liabilities due within one year		4,230,439,223.85	5,276,912,359.22
Other current liabilities	(V)31(1)	2,814,282,739.72	5,246,547,452.05
Total current liabilities		14,146,798,877.04	19,396,939,146.88
Non-current liabilities:			
Long-term loans	(XV)6	1,210,000,000.00	800,000,000.00
Bonds payable	(V)33	4,492,066,733.52	5,988,041,567.89
Lease liabilities		41,190,918.72	140,033,806.68
Long-term employee benefits payable		616,166.05	18,587,634.13
Deferred income		904,266.67	6,696,926.67
Total non-current liabilities		5,744,778,084.96	6,953,359,935.37
Total liabilities		19,891,576,962.00	26,350,299,082.25

The accompanying notes to the financial statements form an integral part of these financial statements.

Item	NOTES	December 31, 2022	December 31, 2021 (Restated)
Liabilities and shareholders' equity (Cont'd)			
Shareholders' equity:			
Share capital		50,498,611,100.00	50,498,611,100.00
Capital reserve		31,781,695,128.05	31,781,695,128.05
Surplus reserve		5,328,738,712.60	4,490,096,359.53
Retained earnings		21,443,389,507.84	18,139,381,503.56
Total shareholders' equity		109,052,434,448.49	104,909,784,091.14
Total liabilities and shareholders' equity		128,944,011,410.49	131,260,083,173.39

These financial statements were approved by the board of directors on March 15, 2023.

The accompanying notes to the financial statements form an integral part of these financial statements.

The financial statements and notes were signed by the following persons in charge.

Yang Changli Legal Representative (Chairman)	Gao Ligang Executive Director	Yin Engang Chief Financial Officer	Shan Jing Head of the Accounting Department
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Consolidated Income Statement

2022

(Unit: RMB)

Item	NOTES	2022	2021 (Restated)
I. Operating revenue	(V)44	82,822,403,586.43	80,678,744,757.95
Less: Operating costs	(V)44	55,280,973,105.26	53,895,340,108.78
Tax and surcharges	(V)45	806,025,863.88	610,245,628.19
Selling expenses	(V)46	47,349,032.18	78,994,204.22
Administrative expenses	(V)47	2,419,767,020.20	2,426,031,547.96
Research and development expenses	(V)48	1,869,791,343.35	1,753,035,238.82
Finance costs	(V)49	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	(V)50	1,450,689,383.51	1,698,945,028.91
Investment income	(V)51	1,677,126,744.30	1,406,776,939.36
Including: Income from investment in associates and joint ventures		1,600,355,681.69	1,404,062,934.87
Gains/(losses) from changes in fair value	(V)52	55,548,413.93	(103,245,506.73)
Losses from credit impairment	(V)53	(128,834,101.51)	(14,595,464.34)
Asset impairment losses	(V)54	(22,401,046.89)	(148,094,089.05)
Gains from disposal of assets	(V)55	6,229,587.41	78,676.45
II. Operating profit		18,844,614,435.90	18,353,534,688.86
Add: Non-operating income	(V)56	23,802,356.82	47,254,111.21
Less: Non-operating expenses	(V)57	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	(V)58	3,456,424,586.34	2,442,175,526.17
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

The accompanying notes to the financial statements form an integral part of these financial statements.

Item	NOTES	2022	2021 (Restated)
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. Other comprehensive income that can be transferred to profit or loss under the equity method		–	–
2. 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	(V)59	0.197	0.193
(II) Diluted earnings per share	(V)59	0.197	0.193

The accompanying notes to the financial statements form an integral part of these financial statements.

Income Statement of Parent Company

2022

(Unit: RMB)

Item	NOTES	2022	2021 (Restated)
I. Operating revenue	(XV)7	225,990,731.73	816,601,748.69
Less: Operating costs	(XV)7	170,859,790.46	721,771,037.37
Taxes and surcharges		1,725,857.65	278,925.70
Administrative expenses		537,652,839.82	487,622,076.21
Research and development expenses		267,064,178.28	275,844,772.57
Finance costs		536,012,241.38	586,930,512.76
Including: Interest expenses		629,035,587.76	680,621,415.75
Interest income		97,433,684.84	87,939,122.27
Add: Other gains		2,606,199.81	5,380,218.81
Investment income	(XV)8	9,662,123,045.32	6,819,602,224.89
Including: Income from investment in associates and joint ventures		431,659,558.53	341,455,617.85
Gains/(losses) from changes in fair value		9,220,720.27	(15,889,732.55)
Losses from credit impairment		(979,100.95)	(1,638,913.88)
Gains from disposal of assets		1,866,127.18	3,554.26
II. Operating profit		8,387,512,815.77	5,551,611,775.61
Add: Non-operating income		–	49,225.38
Less: Non-operating expenses		1,089,285.10	31,200.00
III. Total profit		8,386,423,530.67	5,551,629,800.99
Less: Income tax expenses		–	–
IV. Net profit		8,386,423,530.67	5,551,629,800.99
(I) Net profit from continuing operations		8,386,423,530.67	5,551,629,800.99
V. Other comprehensive income, net of tax		–	–
VI. Total comprehensive income		8,386,423,530.67	5,551,629,800.99

The accompanying notes to the financial statements form an integral part of these financial statements.

Consolidated Cash Flow Statement

2022

(Unit: RMB)

Item	NOTES	2022	2021
I. Cash flows from operating activities:			
Cash received from the sales of goods and rendering of services		88,863,673,367.24	89,371,694,224.86
Tax rebate received		1,484,239,840.35	1,694,762,454.55
Other cash received relating to operating activities	(V)61(1)	2,339,640,344.48	2,335,329,177.35
Subtotal of cash inflow from operating activities		92,687,553,552.07	93,401,785,856.76
Cash payments for goods purchased and services received		40,237,070,749.89	39,923,751,585.11
Cash payments to and on behalf of employees		9,844,499,378.97	9,305,470,339.73
Payments of various types of taxes		8,192,140,005.38	6,024,262,814.46
Other cash payments relating to operating activities	(V)61(2)	3,045,434,929.18	3,237,199,828.24
Subtotal of cash outflow from operating activities		61,319,145,063.42	58,490,684,567.54
Net cash flows from operating activities	(V)62(1)	31,368,408,488.65	34,911,101,289.22
II. Cash flows from investing activities:			
Cash received from investment income		914,991,172.64	898,712,507.62
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		51,074,818.08	7,667,549.12
Net cash received from disposal of subsidiaries	(V)62(2)	51,054,347.36	–
Other cash received relating to investing activities	(V)61(3)	6,028,600,422.89	5,170,436,523.62
Subtotal of cash inflow from investing activities		7,045,720,760.97	6,076,816,580.36
Cash paid to purchase and construct fixed assets, intangible assets and other long-term assets		11,839,683,132.70	14,440,815,872.68
Cash paid for investments		869,755,204.00	175,292,774.97
Other cash paid relating to investing activities	(V)61(4)	8,715,647,994.05	6,029,620,908.26
Subtotal of cash outflow from investing activities		21,425,086,330.75	20,645,729,555.91
Net cash flow used in investing activities		(14,379,365,569.78)	(14,568,912,975.55)

The accompanying notes to the financial statements form an integral part of these financial statements.

Consolidated Cash Flow Statement

2022

Item	NOTES	2022	2021
III. Cash flows from financing activities:			
Cash receipts from capital contributions		404,378,560.00	1,020,895,760.22
Including: Cash receipts from capital contributions by minority shareholders of subsidiaries		404,378,560.00	1,020,895,760.22
Cash received from borrowings		78,405,264,484.76	68,089,476,340.06
Other cash received relating to financing activities	(V)61(5)	1,148,050.00	–
Subtotal of cash inflow from financing activities		78,810,791,094.76	69,110,372,100.28
Cash repayments of borrowings		82,498,752,655.97	69,457,523,645.45
Cash payments for distribution of dividends or profits or settlement of interest expenses		16,828,618,943.96	16,822,925,444.82
Including: Payments for distribution of dividends or profits to minority shareholders of subsidiaries		4,639,634,241.91	4,344,230,249.14
Other cash payments relating to financing activities	(V)61(6)	379,814,714.72	320,913,681.70
Subtotal of cash outflow from financing activities		99,707,186,314.65	86,601,362,771.97
Net cash flow used in financing activities		(20,896,395,219.89)	(17,490,990,671.69)
IV. Effect of foreign exchange rate changes on cash and cash equivalents		(106,883,162.51)	1,497,433.09
V. Net (decrease)/increase in cash and cash equivalents		(4,014,235,463.53)	2,852,695,075.07
Add: Opening balance of cash and cash equivalents	(V)62(3)	11,571,839,016.11	8,719,143,941.04
VI. Closing balance of cash and cash equivalents	(V)62(3)	7,557,603,552.58	11,571,839,016.11

The accompanying notes to the financial statements form an integral part of these financial statements.

Cash Flow Statement of the Parent Company

2022

(Unit: RMB)

Item	NOTES	2022	2021
I. Cash flows from operating activities:			
Cash received from the sales of goods and rendering of services		1,142,677,427.91	621,229,248.68
Tax rebate received		55,761,824.18	58,457,086.11
Other cash received relating to operating activities		123,930,479.85	130,856,841.25
Subtotal of cash inflow from operating activities		1,322,369,731.94	810,543,176.04
Cash payments for goods purchased and services received		210,344,484.05	520,288,736.66
Cash payments to and on behalf of employees		277,487,463.59	437,517,487.14
Payments of various types of taxes		1,725,857.65	278,925.70
Other cash payments relating to operating activities		282,419,339.30	443,806,999.53
Subtotal of cash outflow from operating activities		771,977,144.59	1,401,892,149.03
Net cash flows from/(used in) operating activities	(XV)9	550,392,587.35	(591,348,972.99)
II. Cash flows from investing activities:			
Cash received from disposal of investments		31,196,000,000.01	28,571,000,000.00
Cash received from investment income		6,670,568,205.15	8,011,477,759.83
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		513,841.18	51,320.00
Net cash received from disposal of subsidiaries		10,429,199.93	–
Subtotal of cash inflow from investing activities		37,877,511,246.27	36,582,529,079.83
Cash paid to purchase and construct fixed assets, intangible assets and other long-term assets		1,330,811,535.97	1,233,939,504.79
Cash paid for investments		29,115,013,895.00	33,942,774,345.58
Other cash paid relating to investing activities		5,743,642.48	4,596,690.59
Subtotal of cash outflow from investing activities		30,451,569,073.45	35,181,310,540.96
Net cash flow from investing activities		7,425,942,172.82	1,401,218,538.87
III. Cash flows from financing activities:			
Cash received from borrowings		13,255,891,926.25	14,489,416,335.06
Other cash received relating to financing activities		1,000,000.00	–
Subtotal of cash inflow from financing activities		13,256,891,926.25	14,489,416,335.06
Cash repayments of borrowings		19,717,154,565.61	7,520,300,322.65
Cash payments for distribution of dividends or profits or settlement of interest expenses		4,883,227,160.56	4,674,502,121.35
Other cash payments relating to financing activities		90,264,280.39	70,005,532.96
Subtotal of cash outflow from financing activities		24,690,646,006.56	12,264,807,976.96
Net cash flow (used in)/from financing activities		(11,433,754,080.31)	2,224,608,358.10
IV. Effect of foreign exchange rate changes on cash and cash equivalents		347,202.90	4,016,001.85
V. Net (decrease)/increase in cash and cash equivalents		(3,457,072,117.24)	3,038,493,925.83
Add: Opening balance of cash and cash equivalents	(XV)9	9,732,690,649.20	6,694,196,723.37
VI. Closing balance of cash and cash equivalents	(XV)9	6,275,618,531.96	9,732,690,649.20

The accompanying notes to the financial statements form an integral part of these financial statements.

Consolidated Statement of Changes in Shareholders' Equity

2022

(Unit: RMB)

Item	NOTES	2022								
		Attributable to shareholders of the Parent Company							Non-controlling interest	Total shareholders' equity
		Share capital	Capital reserve	Other comprehensive income	Specific reserve	Surplus reserve	Retained earnings	Subtotal		
I. Balance at December 31, 2021 and January 1, 2022 (Restated)		50,498,611,100.00	10,790,413,325.63	345,482,066.81	249,371,452.84	4,901,787,799.63	34,156,472,714.58	100,942,138,459.49	50,008,158,442.57	150,950,296,902.06
II. Changes in the current year		-	17,397,497.50	396,280,716.11	(49,232,019.45)	838,642,353.07	4,882,438,885.65	6,085,527,432.88	894,097,515.20	6,979,624,948.08
(I) Total comprehensive income		-	-	396,280,716.11	-	-	9,964,854,412.04	10,361,135,128.15	5,422,136,075.43	15,783,271,203.58
(II) Shareholders' contributions and reduction in capital		-	17,397,497.50	-	-	-	-	17,397,497.50	391,746,128.16	409,143,625.66
1. Shareholders' capital contributions		-	-	-	-	-	-	-	404,378,560.00	404,378,560.00
2. Others	(V)39	-	17,397,497.50	-	-	-	-	17,397,497.50	(12,632,431.84)	4,765,065.66
(III) Profit distribution		-	-	-	-	838,642,353.07	(5,082,415,526.39)	(4,243,773,173.32)	(4,919,784,688.39)	(9,163,557,861.71)
1. Transfer to surplus reserve	(V)42	-	-	-	-	838,642,353.07	(838,642,353.07)	-	-	-
2. Distribution to shareholders	(V)43	-	-	-	-	-	(4,243,773,173.32)	(4,243,773,173.32)	(4,919,784,688.39)	(9,163,557,861.71)
(IV) Specific reserve	(V)41	-	-	-	(49,232,019.45)	-	-	(49,232,019.45)	-	(49,232,019.45)
1. Transfer to specific reserve in the year		-	-	-	355,097,905.50	-	-	355,097,905.50	33,688,841.83	388,786,747.33
2. Amount utilized in the year		-	-	-	(404,329,924.95)	-	-	(404,329,924.95)	(33,688,841.83)	(438,018,766.78)
III. Balance at December 31, 2022		50,498,611,100.00	10,807,810,823.13	741,762,782.92	200,139,433.39	5,740,430,152.70	39,038,911,600.23	107,027,665,892.37	50,902,255,957.77	157,929,921,850.14

(Unit: RMB)

Item	NOTES	2021 (Restated)								
		Attributable to shareholders of the Parent Company							Non-controlling interest	Total shareholders' equity
		Share capital	Capital reserve	Other comprehensive income	Specific reserve	Surplus reserve	Retained earnings	Subtotal		
I. Balance at December 31, 2020 and January 1, 2021		50,498,611,100.00	10,784,004,133.34	405,306,708.13	248,862,260.50	4,346,624,819.53	28,989,865,085.43	95,273,274,106.93	46,357,332,150.98	141,630,606,257.91
II. Changes in the current year		-	6,409,192.29	(59,824,641.32)	509,192.34	555,162,980.10	5,166,607,629.15	5,668,864,352.56	3,650,826,291.59	9,319,690,644.15
(I) Total comprehensive income		-	-	(59,824,641.32)	-	-	9,764,174,706.56	9,704,350,065.24	5,924,254,318.32	15,628,604,383.56
(II) Shareholders' contributions and reduction in capital		-	6,409,192.29	-	-	-	-	6,409,192.29	2,884,587,200.22	2,890,996,392.51
1. Shareholders' capital contributions		-	-	-	-	-	-	-	2,884,587,200.22	2,884,587,200.22
2. Others		-	6,409,192.29	-	-	-	-	6,409,192.29	-	6,409,192.29
(III) Profit distribution		-	-	-	-	555,162,980.10	(4,597,567,077.41)	(4,042,404,097.31)	(5,158,015,226.95)	(9,200,419,324.26)
1. Transfer to surplus reserve		-	-	-	-	555,162,980.10	(555,162,980.10)	-	-	-
2. Distribution to shareholders		-	-	-	-	-	(4,042,404,097.31)	(4,042,404,097.31)	(5,158,015,226.95)	(9,200,419,324.26)
(IV) Specific reserve		-	-	-	509,192.34	-	-	509,192.34	-	509,192.34
1. Transfer to specific reserve in the year		-	-	-	169,564,981.82	-	-	169,564,981.82	-	169,564,981.82
2. Amount utilized in the year		-	-	-	(169,055,789.48)	-	-	(169,055,789.48)	-	(169,055,789.48)
III. Balance at December 31, 2021 (Restated)		50,498,611,100.00	10,790,413,325.63	345,482,066.81	249,371,452.84	4,901,787,799.63	34,156,472,714.58	100,942,138,459.49	50,008,158,442.57	150,950,296,902.06

The accompanying notes to the financial statements form an integral part of these financial statements.

Statement of Changes in Shareholders' Equity of Parent Company

2022

(Unit: RMB)

	2022				Total shareholders' equity
	Share capital	Capital reserve	Surplus reserve	Retained earnings	
I. Balance at December 31, 2021 and January 1, 2022 (Restated)	50,498,611,100.00	31,781,695,128.05	4,490,096,359.53	18,139,381,503.56	104,909,784,091.14
II. Changes in the current year	-	-	838,642,353.07	3,304,008,004.28	4,142,650,357.35
(I) Total comprehensive income	-	-	-	8,386,423,530.67	8,386,423,530.67
(II) Profit distribution	-	-	838,642,353.07	(5,082,415,526.39)	(4,243,773,173.32)
1. Transfer to surplus reserve	-	-	838,642,353.07	(838,642,353.07)	-
2. Distribution to shareholders	-	-	-	(4,243,773,173.32)	(4,243,773,173.32)
III. Balance at December 31, 2022	50,498,611,100.00	31,781,695,128.05	5,328,738,712.60	21,443,389,507.84	109,052,434,448.49

(Unit: RMB)

	2021 (Restated)				Total shareholders' equity
	Share capital	Capital reserve	Surplus reserve	Retained earnings	
I. Balance at December 31, 2020 and January 1, 2021	50,498,611,100.00	31,781,612,580.88	3,934,933,379.43	17,185,318,779.98	103,400,475,840.29
II. Changes in the current year	-	82,547.17	555,162,980.10	954,062,723.58	1,509,308,250.85
(I) Total comprehensive income	-	-	-	5,551,629,800.99	5,551,629,800.99
(II) Owners' contributions and reduction in capital	-	82,547.17	-	-	82,547.17
1. Others	-	82,547.17	-	-	82,547.17
(III) Profit distribution	-	-	555,162,980.10	(4,597,567,077.41)	(4,042,404,097.31)
1. Transfer to surplus reserve	-	-	555,162,980.10	(555,162,980.10)	-
2. Distribution to shareholders	-	-	-	(4,042,404,097.31)	(4,042,404,097.31)
III. Balance at December 31, 2021 (Restated)	50,498,611,100.00	31,781,695,128.05	4,490,096,359.53	18,139,381,503.56	104,909,784,091.14

The accompanying notes to the financial statements form an integral part of these financial statements.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(I) COMPANY OVERVIEW

CGN Power Co., Ltd. (the "Company") is a joint stock company jointly established by 中國廣核集團有限公司China General Nuclear Power Corporation ("CGNPC"), as the main promoter by way of contribution with equity of 11 companies involved in the development, investment, operation and R&D of NPPs as well as certain assets and liabilities in respect of the above businesses (the "Business Contribution"), together with other promoters by way of cash contribution in accordance with relevant provisions under PRC laws and administrative regulations, with approvals from the State-Owned Assets Supervision and Administration Commission of the State Council (the "SASAC") through the Reply on the Matters Related to the Main Business Restructuring and Listing of China General Nuclear Power Corporation (Guo Zi Gai Ge [2013] No. 1005) (國資改革[2013]1005號《關於中國廣核集團有限公司核電主業改制並上市有關事項的批覆》) dated December 4, 2013 and the Reply on the Establishment of CGN Power Co., Ltd. (Guo Zi Gai Ge [2014] No. 123) (國資改革[2014]123號《關於設立中國廣核電力股份有限公司的批覆》) dated March 14, 2014. The Company was incorporated in Shenzhen, Guangdong Province on March 25, 2014, and obtained the business license (No. 440301109037551) issued by the State Administration of Industry and Commerce.

Upon establishment, the Company's total share capital was RMB35,300,000,000.00, which was valued by 北京中企華資產評估有限責任公司(Beijing China Enterprise Appraisals Co., Ltd.), with final approval by the SASAC through the Reply on the Approval of the Asset Valuation Results to the Main Business Restructuring and Listing Project of China General Nuclear Power Corporation (Guo Zi Chan Quan [2014] No. 108) (《關於中國廣核集團有限公司核電主業改制並上市項目資產評估結果核准的批覆》(國資產權[2014]108號)). CGNPC contributed RMB43,017,097,508.00, including valuation of the Business Contribution at RMB40,425,171,692.47 and cash contribution of RMB2,591,925,815.53, translating into 30,040,300,000 shares of the Company at a ratio of 69.83%, representing 85.10% of the total shares; Guangdong Hengjian Investment Holding Co., Ltd. contributed RMB5,054,888,074.00, translating into 3,530,000,000 at a ratio of 69.83%, representing 10.00% of the total shares; and China National Nuclear Corporation (formerly 中國核工業集團公司China National Nuclear Corporation) ("CNNC") contributed RMB2,476,895,156.00, translating into 1,729,700,000 at a ratio of 69.83%, representing 4.90% of the total shares.

As approved by the Reply on the Approval to Issue Overseas Listed Foreign Share of CGN Power Co., Ltd. (Zheng Jian Xu Ke [2014] No. 1165) (《關於核准中國廣核電力股份有限公司發行境外上市外資股的批覆》(證監許可[2014]1165號)) issued by China Securities Regulatory Commission on November 3, 2014, and the Letter of Consent for Listing issued by the Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange") on December 9, 2014, the Company publicly issued overseas listed foreign shares (H shares) in December 2014 and was listed on the Main Board of the Hong Kong Stock Exchange, with an initial offering size of 8,825,000,000 overseas listed foreign shares (H shares), and 1,323,750,000 shares issued and allotted due to the exercise of over-allotment option with a nominal value of RMB1.00 per share and an issuance price of HK\$2.78 per share. Under the PRC regulations related to the disposal of state-owned shares, CGNPC, Guangdong Hengjian Investment Holding Co., Ltd. and CNNC are required to transfer the amount of domestic shares equivalent to 10% of offer shares to the National Council for Social Security Fund ("NCSSF"), totaling 1,014,875,000 shares. Upon the listing of the Company, shares held by the NCSSF were translated into H shares amounting to 1,014,875,000 shares on a one-for-one basis.

As approved by the Reply on Approval of the Initial Public Offer of Shares of CGN Power Co., Ltd. (Zheng Jian Xu Ke [2019] No. 1381) (《關於核准中國廣核電力股份有限公司首次公開發行股票的批覆》(證監許可[2019]1381號)) issued by China Securities Regulatory Commission on July 26, 2019, the Company issued RMB ordinary shares (A shares) under the public offer in August 2019 and the shares were listed on the SME Board of the Shenzhen Stock Exchange. A total of 5,049,861,100 RMB ordinary shares (A shares) were issued with a nominal value of RMB1.00 each. The issue price was RMB2.49. The proceeds amounted to RMB12,574,154,139.00 in total. After deducting the issuance costs, the actual net proceeds amounted to RMB12,389,775,559.44, of which, RMB5,049,861,100.00 was included in the share capital and RMB7,339,914,459.44 was included in the capital reserve. The status of proceeds has been verified by Deloitte Touche Tohmatsu (Certified Public Accountants LLP), which has issued the Capital Verification Report (De Shi Bao (Yan) Zi (19) No. 00386).

The headquarters of the Company is located in Shenzhen, Guangdong Province. The parent of the Company is CGNPC. The ultimate beneficial owner of the Company is the SASAC.

The scope of business of the Company and its subsidiaries (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 for NPPs engineering projects; organization of the operation, repair and related businesses for NPPs; organization of the design development and scientific research for NPPs; and engagement in related investment, import and export businesses.

For the scope of consolidated financial statements for the reporting period, please refer to Note (VII) “INTEREST IN OTHER ENTITIES”. For the changes in the scope of consolidated financial statements, please refer to Note (VI) “CHANGES IN CONSOLIDATION SCOPE”.

(II) BASIS OF PREPARATION OF FINANCIAL STATEMENTS

Basis of preparation

The Group adopts the Accounting Standards for Business Enterprises and relevant requirements promulgated by the Ministry of Finance of the People’s Republic of China (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年修訂)》. In addition, the financial statements also include information disclosure according to the relevant disclosure requirements under the Hong Kong Companies Ordinance and the Listing Rules of the Hong Kong Stock Exchange.

Going concern

The Group has evaluated its ability of going concern for the next 12 months since January 1, 2023. There is no indication of major events that may affect the ability of going concern. Thus, the financial statements have been prepared under the assumption of going concern.

Basis of accounting and principle of measurement

The Group’s financial statements have been prepared on an accrual basis. Except for certain financial instruments which are measured at fair value, the financial statements are prepared under the historical cost convention. In the event that impairment of assets occurs, a provision for impairment is made accordingly in accordance with the relevant regulations.

Under historical cost method, the amount of assets was measured at the fair value of cash or cash equivalents or consideration paid at the time of purchase. Liabilities were measured at the amount of money or assets and liabilities due to the current obligations actually received, or a present obligation of the contract amount, or the measurement of cash or cash equivalents in accordance with daily activities to repay the debts of the amount expected to be paid.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Whether fair value is observable or measured by valuation techniques, the measurement and disclosure in these financial statements were all based on it.

Fair value measurements are categorized into three levels based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than the Level 1 inputs, that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(III) SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

1. Statement of compliance

The financial statements have been prepared in compliance with the Accounting Standards for Business Enterprises to truly and completely reflect consolidated and the parent company's financial position of the Group as at December 31, 2022 and consolidated and the parent company's operating results and cash flows for 2022.

2. Accounting period

The Group has adopted the calendar year as its accounting year, i.e. from January 1 to December 31.

3. Operating cycle

Operating cycle refers to period from assets purchased for production to cash or cash equivalents realized.

4. Functional currency

Apart from the functional currency of the primary economic environment of 廣東核電合營有限公司Guangdong Nuclear Power Joint Venture Co., Ltd. ("GNPJVC"), a subsidiary of the Company, being USD, the functional currency of the primary economic environment that the Company and its other subsidiaries operate in is RMB. The Company adopts RMB to prepare the financial statements.

5. The accounting treatment of business combinations involving enterprises under common control and business combinations not involving enterprises under common control

If the Group obtains control of another or more companies (or a group of assets or net assets) which constitutes a business, such transaction or event constitutes a business combination. Business combinations are classified into business combination under common control and not under common control.

For transactions not involving enterprises under common control, the purchaser will consider whether to adopt the simplified judgment method of "concentration test" when determining whether the acquired assets combination constitute a business. If the combination passes the concentration test, it is determined not to constitute a business. If the combination fails the concentration test, it should still be determined according to business conditions.

When the Group acquires a set of assets or net assets that do not constitute a business, the purchase cost shall be allocated on the basis of the relative fair value of the identifiable assets and liabilities acquired on the purchase date, instead of the being accounted for using the following accounting treatment methods for business combinations.

(1) Business combinations involving enterprises under common control

A business combination involving enterprises under common control is a business combination in which all of the combining enterprises are ultimately controlled by the same party or parties both before and after the combination, and that control is not transitory.

Assets and liabilities obtained in the business combination are recognized at their carrying amounts at the date of merger as recorded by the ultimate controlling party. The difference between the carrying amount of the net assets obtained and the carrying amount of the consideration paid for the combination and/or aggregate face values of the shares issued is adjusted to the share premium in the capital reserves. If the share premium in the capital reserve is not sufficient to absorb the difference, any excess is adjusted to retained profits.

Costs that are directly attributable to the business combination are charged to profit or loss when incurred.

(2) Business combinations not involving enterprises under common control and goodwill

A business combination involving enterprises not under common control is a business combination in which all of the combining enterprises are not ultimately controlled by the same party or parties before and after the combination.

The combination costs shall be the fair value of the assets paid, the liabilities incurred or assumed and the equity instruments issued by the acquirer in exchange for the control over the acquiree. For business combinations not involving enterprises under common control realized step by step through multiple transactions, the cost of combination is the sum of the consideration paid at the acquisition date and the fair value at the acquisition date of the acquirer's previously held interest in the acquiree. The overhead for the business combination of the combining party, including the expenses for audit, legal services, assessment, and other administrative expenses, shall be recorded in profit or loss for the period when incurred.

Identifiable assets, liabilities and contingent liabilities of acquiree qualifying for the conditions of recognition acquired by the acquirer in business combination are measured at fair value on the acquisition date.

For the difference that the combination cost is larger than the portion of fair value of net identifiable assets of acquiree acquired in combination, it is recognized as goodwill as an asset, and initially measured at cost. For those with combination cost lower than the portion of fair value of net identifiable assets of acquiree acquired in combination, re-verification is first carried out on the measurement of the fair value of all identifiable assets, liabilities and contingent liabilities as well as the combination cost. For those with combination cost still lower than the portion of fair value of net identifiable assets of acquiree acquired in combination after re-verification, they are credited to profit or loss for the period.

Goodwill occurred as a result of business combination shall be recognized separately in the consolidated financial statements and measured at cost less accumulated impairment losses.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

6. Basis for preparation of consolidated financial statements

The scope of consolidated financial statements is determined on the basis of control. Control is achieved when the investor has power over the investee; is exposed, or has rights to receive variable returns from its involvement with the investee; and has the ability to use its power to affect its returns. Once the relevant facts and situation changed that altered the elements define control, the Group shall re-evaluate control.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary.

For a subsidiary disposed of by the Group, the operating results and cash flows before the date of disposal (the date when control is lost) are included in the consolidated income statement and consolidated statement of cash flows, as appropriate.

For a subsidiary acquired through a business combination involving enterprises not under common control, the operating results and cash flows from the acquisition date (the date when control is obtained) are included in the consolidated income statement and consolidated statement of cash flows, as appropriate.

No matter when the business combination occurs in the reporting period, subsidiaries acquired through a business combination involving enterprises under common control are included in the Group's scope of consolidation as if they had been included in the scope of consolidation from the date when they first came under the common control of the ultimate controlling party. Their operating results and cash flows from the beginning of the earliest reporting period are included in the consolidated income statement and consolidated statement of cash flows, as appropriate.

The significant accounting policies and accounting periods adopted by the subsidiaries are determined based on the accounting policies and accounting periods consistently set out by the Company.

The effects of all intra-group transactions between the Company and subsidiaries and among the subsidiaries are eliminated on consolidation.

The portion of subsidiaries' equity that is not attributable to the parent company is treated as non-controlling interests and presented as "non-controlling interests" in the consolidated balance sheet within shareholders' equity. The portion of net profits or losses of subsidiaries for the period attributable to non-controlling interests is presented as "non-controlling interests" in the consolidated income statement below the "net profit" line item.

When the amount of loss for the period attributable to the minority shareholders of a subsidiary exceeds the minority shareholders' portion of the opening balance of owners' equity of the subsidiary, the excess amount is still allocated against non-controlling interests.

Acquisition of non-controlling interests or disposal of interest in a subsidiary that does not result in the loss of control over the subsidiary is accounted for as equity transactions. The carrying amounts attributable to shareholders' of the parent company and non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiary. The difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is adjusted to capital reserve. If the capital reserve is not sufficient to absorb the difference, the excess is adjusted against retained earnings.

When the Group loses control over a subsidiary due to disposal of certain equity interest or other reasons, any retained interest is re-measured at its fair value at the date when control is lost. The difference between the aggregate of the consideration received on disposal and the fair value of any retained interest(s) and the share of the former subsidiary's net assets cumulatively calculated from the acquisition date according to the original proportion of ownership interest is recognized as investment income in the period in which control is lost, and at the same time adjusted against goodwill. Except for the other comprehensive income arising from the change in net liabilities or net assets as a result of the remeasurement of defined benefit plan by the acquiree, other comprehensive income associated with investment in the former subsidiary is reclassified to investment income in the period in which control is lost.

7. Classification of joint arrangements and accounting treatment for joint ventures

There are two types of joint arrangements – joint operations and joint ventures. The type of joint arrangements is determined based on the rights and obligations of joint operators to the joint arrangements by considering the factors, such as the structure, the legal form of the arrangements, and the contractual terms, etc. A joint operation is a joint arrangement whereby the joint operators have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the joint ventures have rights to the net assets of the arrangement.

8. Standards for determining cash and cash equivalents

Cash comprises cash in hand and deposits that can be readily withdrawn on demand. Cash equivalents are the Group's short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

9. Translation of transactions and financial statements denominated in foreign currencies

(1) Transactions denominated in foreign currencies

A foreign currency transaction is recorded, on initial recognition, by applying the spot exchange rate on the date of the transaction.

At the balance sheet date, foreign currency monetary items are translated using the spot exchange rates at the balance sheet date. Exchange differences arising from the differences between the spot exchange rates prevailing at the balance sheet date and those on initial recognition or at the previous balance sheet date are recognized in profit or loss for the period, except that (1) exchange differences related to a specific-purpose borrowing denominated in foreign currency that qualify for capitalization are capitalized as part of the cost of the qualifying asset during the capitalization period; (2) exchange differences related to hedging instruments for the purpose of hedging against foreign currency risks are accounted for using hedge accounting.

Foreign currency non-monetary items measured at historical cost are translated into the amounts in functional currency at the spot exchange rates on the dates of the transactions. Foreign currency non-monetary items measured at fair value are re-translated at the spot exchange rate on the date the fair value is determined. Difference between the re-translated functional currency amount and the original functional currency amount is treated as changes in fair value (including changes of exchange rate) and is recognized in profit and loss or as other comprehensive income.

(2) Translation of financial statements denominated in foreign currencies

For the purpose of preparing the consolidated financial statements, financial statements with USD as the functional currency are translated from the foreign currency into RMB using the following method: assets and liabilities on the balance sheet are translated at the spot exchange rate prevailing at the balance sheet date; owners' equity items are translated at the spot exchange rates at the dates on which such items arose; all items in the income statement as well as items reflecting the distribution of profits are translated at exchange rates that approximate the actual spot exchange rates on the dates of the transactions; the difference between the translated assets and the aggregate of liabilities and owners' equity items is recognized as other comprehensive income and included in shareholders' equity in the consolidated financial statements.

Cash flows arising from a transaction in foreign currency and the cash flows of a foreign subsidiary are translated at an exchange rate which approximates the spot exchange rate on the date of the cash flows. The effect of exchange rate changes on cash and cash equivalents is regarded as a reconciling item and presented separately in the consolidated cash flow statement as "effect of foreign exchange rate changes on cash and cash equivalents".

The opening balances and the comparative figures of previous year are presented at the translated amounts in the previous year's financial statements.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

On disposal of the Group's entire interest in a foreign operation, or upon a loss of control over a foreign operation due to disposal of certain interest in it or other reasons, the Group transfers the accumulated exchange differences arising on translation of financial statements of this foreign operation attributable to the shareholders' equity of the parent company and presented under shareholders' equity in the consolidated balance sheet, to profit or loss in the period in which the disposal occurs.

In case of a disposal or other reason that results in a reduction in the proportional interest held but does not result in losing control over a foreign operation, the proportionate share of accumulated exchange differences arising on translation of financial statements are re-attributed to non-controlling interests and are not recognized in profit and loss. For partial disposals of equity interests in foreign operations which are associates or joint ventures, the proportionate share of the accumulated exchange differences arising on translation of financial statements of foreign operations is reclassified to profit or loss.

10. Financial instruments

Financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the financial instrument.

For financial assets purchased and sold in regular way, the assets to be received or liabilities to be repaid on the settlement date are recognized on the transaction date, or the financial assets and receivables to be delivered on the settlement date are derecognized on the transaction date and the relevant profit or loss is recognized.

The financial assets and liabilities were initially recognized at fair value. For the financial assets and liabilities measured at fair value through profit or loss ("FVTPL"), related transaction expenses are charged to the profit or loss, for other financial assets and liabilities, related transaction expenses are included in the initial recognized amount. When initially recognized by the Group according to the Accounting Standards for Business Enterprises No.14 – Revenue" (the "New Standards for Revenue"), accounts receivable that do not contain a significant financing component or for which the financing component in the contract within 1 year is not considered are initially recognized at the transaction price defined under the New Standards for Revenue.

The effective interest rate method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expense over each accounting period.

The effective interest rate is the rate that exactly discounts estimated future cash flow through the expected life of the financial asset or financial liability to the book balance of a financial asset or to the amortized cost of a financial liability. In determining the effective interest rate, expected cash flow is estimated after taking into account all contract terms of financial assets or financial liabilities, including early repayment, extension, call option or other similar options, without considering expected credit loss.

The amortized cost of financial assets or financial liabilities is calculated by deducting repaid principal amount from initially recognized amount of the financial assets or financial liabilities, adding or subtracting the accumulated amortization amount which is the amortized difference between the initial recognition amount and the amount at the expiry date using the effective interest rate method, then further deducting the accumulated impairment of loss (only applicable to financial assets).

(1) Classification, recognition and measurement of financial assets

(a) Classification of financial assets of the Group

The classification of financial assets is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. On initial recognition, a financial asset is classified as measured at amortized cost, at fair value through other comprehensive income ("FVTOCI"), or at FVTPL.

If contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and the financial asset is held within the Group's business model whose objective is to hold financial assets in order to collect contractual cash flows, such asset is classified into financial asset measured at amortized cost. Such financial asset mainly includes cash at bank and in hand, bills receivable, accounts receivable and other receivables, etc.

If contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and the financial asset is held within the Group's business model whose objective is to hold financial assets in order to collect contractual cash flows and sell the financial asset, such asset is classified into financial asset measured at FVTOCI. Such financial asset is presented as other debt investments. The debt investments due within 1 year (inclusive) from the balance sheet date are presented in non-current assets due within one year; other debt investments due within 1 year (inclusive) when they are acquired are presented in other current assets.

On initial recognition, the Group may, on the basis of individual financial asset, irrevocably designate equity instrument investments not held for trading (excluding contingent considerations) recognized in business combination not under common control as financial assets at FVTOCI. Such financial assets are stated as investment in other equity instruments.

Apart from the derivative financial assets presented in financial assets held for trading, financial assets at FVTPL includes financial assets at FVTPL and those designated as at FVTPL. The assets due more than 1 year and expected to be held for more than 1 year are presented in other non-current financial assets.

- Both financial assets fail to qualify as at amortized cost or at FVTOCI are classified into financial assets at FVTPL.
- On initial recognition, the Group may irrevocably designate a financial asset as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch and includes mixed contract conditions of embedded derivatives.

If a financial asset meets one of the following conditions, it is considered that such asset is held by the Group for trading:

- The purpose of obtaining such financial asset is mainly for selling in the near future.
- Such financial asset is part of the identifiable financial instrument portfolio that is centrally managed at initial recognition, and there is objective evidence that short-term profit model exists in the near future.
- Such financial asset is a derivative, except for derivatives that meet the definition given in the financial guarantee contract and derivatives that are designated as effective hedging instruments.

The business model for managing the financial assets refers to how the Group manages its financial assets in order to generate cash flows. That is, the Group's business model determines whether cash flows from managing financial assets will result from collecting contractual cash flows, selling financial assets or both. The Group determines the business model for managing the financial assets according to the facts and based on the specific business objective for managing the financial assets determined by the Group's key management personnel.

In determining whether the contractual cash flows generated from a financial asset on a specific date are solely payments of principal and interest based on the principal amount outstanding, the Group assesses the characteristics of the contractual cash flows of such financial asset. For such purposes, "principal" is defined as the fair value of the financial asset on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs, as well as a profit margin. The Group also assesses whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(b) Subsequent measurement of financial assets of the Group

– Financial assets at amortized cost

Financial assets at amortized cost adopt the effective interest rate method and subsequently measured at amortized cost. Gains or losses arising from impairment, reclassification or derecognition is recognized in profit or loss.

The Group adopts the effective interest rate method to recognize interest income for financial assets at amortized cost. Interest income is calculated by the carrying amount of financial assets multiplied by effective interest rate, with the following exception:

- a purchased or originated credit-impaired ("POCI") financial asset, whose interest income is calculated since initial recognition by applying the credit-adjusted effective interest rate to its amortized cost.

– Financial assets at FVTOCI

Except for impairment losses or gains of financial assets classified as measured at FVTOCI, and interest income and exchange gains or losses calculated at effective interest rate recognized in profit or loss, the changes in fair value of the financial asset are recognized in the other comprehensive income. When the financial assets are derecognized, the accumulated gains or losses previously included in other comprehensive income shall be transferred from other comprehensive income and included in profit or loss.

After designating equity instrument investments not held for trading as financial assets at FVTOCI, changes in fair value of such financial assets are recognized in other comprehensive income. Upon derecognition, accumulated gains or losses previously recognized in other comprehensive income shall be transferred and included in retained earnings. In the duration of holding such equity instrument investments not held for trading, when the Group's right to receive dividends is established, economic benefits related to dividends are likely to flow into the Group, and the amount of dividends may be reliably measured, dividend income shall be calculated and recognized in profit or loss.

– Financial assets at FVTPL

Financial assets at FVTPL shall be subsequently measured at fair value. Relevant gains or loss as well as dividends and interest income related to such financial assets shall be recognized in profit or loss.

(2) Impairment of financial instruments

For financial assets measured at amortized cost, financial assets classified as measured at FVTOCI and contract assets, impairment shall be accounted for on the basis of expected credit loss and loss impairment shall be recognized.

The Group makes a loss allowance against amount of expected credit losses equal to the whole life of the contract assets or accounts receivable that exclude significant financing component or do not consider the financing component in the contract within one year arising from transactions adopting the New Standards for Revenue.

As for other financial instruments, other than purchased or POCI financial assets, the Group assesses the changes in credit risk of such financial instruments since the initial recognition at each balance sheet date. If the credit risk of such financial instrument has significantly increased since initial recognition, the Group shall make loss allowance equivalent to the amount of expected credit loss during its whole life; if the credit risk of such financial instrument has not significantly increased since initial recognition, the Group shall make loss allowance equivalent to the amount of expected credit loss for the next 12 months. Apart from financial assets classified as measured at FVTOCI, increase or reversal of credit loss allowance are recognized in profit or loss as impairment losses or gains. The Group recognizes the credit loss allowance of financial assets classified as measured at FVTOCI, while allowance losses or gains are recognized in profit or loss, without deducting its carrying amount stated in the balance sheet.

The Group has made a loss allowance against amount of expected credit losses equal to the whole life in the prior accounting period. However, at the balance sheet date, the credit risk on a financial instrument has not increased significantly since initial recognition; the Group will measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. Reversed amount of loss allowance arising from such circumstances shall be included in profit or loss as impairment gains.

– Significant increase of credit risk

The Group will make use of reasonable and supportable forward-looking information that is available to determine whether credit risk has increased significantly since initial recognition through comparing the risk of a default occurring on the financial instrument on the balance sheet date with the risk of a default occurring on the financial instrument as at the date of initial recognition.

The Group will take the following factors into consideration when assessing whether credit risk has increased significantly:

- Debtor's failure to make payments of principal and interest on their contractually due dates;
- An actual or expected significant deterioration in a financial instrument's external or internal credit rating (if available);
- An actual or expected significant deterioration in the operating results of the debtor; and
- Existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet its obligation to the Group.

Regardless if the above assessment indicates any significant changes in credit risk, if contractual payment of a financial instrument is over due by 30 days (inclusive), it is considered that the credit risk of such instrument has significantly increased.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

– Credit-impaired financial assets

When the Group expected occurrence of one or more events which may cause adverse impact on future cash flows of a financial asset, the financial asset will become a credit-impaired financial asset. Objective evidence that a financial asset is impaired includes the following observable events:

- (1) Significant financial difficulty of the issuer or obligor;
- (2) A breach of contract by the borrower, such as a default or delinquency in interest or principal payments;
- (3) The creditor, for economic or legal reasons relating to the borrower's financial difficulty, granting a concession to the borrower, which would not be made under any other circumstances;
- (4) It becoming probable that the borrower will enter bankruptcy or other financial reorganizations;
- (5) The disappearance of an active market for that financial asset because of financial difficulties of the issuer or the borrower;
- (6) Purchase or originate a financial asset with a large scale of discount, which reflects facts of credit loss incurred.

Based on its internal credit risk management, the Group considers that a default event has occurred when internal advice or externally obtained information indicates that financial instrument debtor is unable to fully repay the creditors including the Group, without consideration of any guarantees obtained by the Group.

Regardless of the results of the above assessment, the Group considers that a default event related to the financial instrument has occurred when contractual payment for such instrument is overdue by 90 days (inclusive).

– Determination of expected credit loss

The Group uses a provision matrix to determine the expected credit losses for relevant financial instruments based on a collective basis of bills receivable, accounts receivable and contract assets. The Group classifies financial instruments into different groups based on common risk characteristics. The common risk characteristics adopted by the Group include: types of financial instrument, credit risk ratings, remaining contract terms and industry in which the debtor operates, etc.

For financial assets, a credit loss is the present value of the difference between the contractual cash flows that are due to the Group under the contract and the cash flows that the Group expects to receive.

The factors reflected in methods of measurement of expected credit losses of financial instruments include an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes; time value of money; reasonable and supportable information about past events, current conditions and forecasts on future economic status at balance sheet date without unnecessary additional costs or efforts.

– Write-down of financial assets

When the Group will no longer reasonably expect that the contractual cash flows of financial assets can be collected in aggregate or in part, the Group will directly write down the carrying amount of the financial asset. Such write-down constitutes derecognition of relevant financial assets.

(3) Transfer of financial assets

The Group derecognizes a financial asset if one of the following conditions is satisfied: (1) the contractual rights to the cash flows from the financial asset expire; or (2) the financial asset has been transferred and substantially all the risks and rewards of ownership of the financial asset is transferred to the transferee; or (3) although the financial asset has been transferred, the Group neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset but has not retained control of the financial asset.

If the Group neither transfers nor retains substantially all the risks and rewards of ownership of a financial asset, and it retains control of the financial asset, it recognizes the financial asset to the extent of its continuing involvement in the transferred financial asset and recognizes an associated liability. The Group measures relevant liabilities as follows:

- For the transferred financial asset measured at amortized cost, the carrying amount of relevant liabilities equals to carrying amount of the continuously-involved transferred financial asset less amortized cost of rights retained by the Group (if the Group retains relevant right due to transfer of financial assets) plus amortized costs of the obligation assumed by the Group (if the Group assumes relevant obligation due to transfer of financial assets), relevant liabilities shall not be designated as financial liabilities at FVTPL.
- For the transferred financial asset measured at fair value, the carrying amount of relevant liabilities equals to carrying amount of the continuously-involved transferred financial asset less fair value of rights retained by the Group (if the Group retains relevant right due to transfer of financial assets) plus fair value of the obligation assumed by the Group (if the Group assumes relevant obligation due to transfer of financial assets), the fair value of the right and obligation is fair value measured on stand-alone basis.

For a transfer of a financial asset in its entirety that satisfies the derecognition criteria, the difference between the carrying amount of the financial asset transferred on the date of derecognition and the derecognition-related part of the sum of the consideration received from the transfer and any cumulative gain or loss that has been recognized in other comprehensive income, is recognized in profit or loss. If the financial assets transferred by the Group are equity instrument not held for trading designated as financial assets at FVTOCI, cumulative gain or loss that has been recognized in other comprehensive income should be transferred from other comprehensive income to retained earnings.

If a part of the transferred financial asset qualifies for derecognition, the carrying amount of the transferred financial asset is allocated between the part derecognized and the part that continues to be recognized, based on the respective fair values of those parts on transfer date. The difference between the sum of the consideration received for the part derecognized and any cumulative gain or loss allocated to the part derecognized which has been previously recognized in other comprehensive income and the carrying amount allocated to the part derecognized on derecognition date; and, is recognized in profit or loss. If the financial assets transferred by the Group are designated as equity instrument investment not held for trading at FVTOCI, cumulative gains or losses previously recognized in other comprehensive income are transferred to retained earnings.

For a transfer of a financial asset in its entirety that does not satisfy the derecognition criteria, the Group will continuously recognize the transferred financial asset in its entirety. Considerations received due to transfer of assets shall be recognized as a liability upon receipts.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(4) Classification of financial liabilities and equity instruments

Financial instruments or its constituent parts issued by the Group are classified into financial liabilities or equity instruments on the basis of the contractual arrangements and the economic substance not only its legal form, together with the definition of financial liability and equity instruments.

(a) Classification, recognition and measurement of financial liabilities

On initial recognition, financial liabilities are classified into financial liabilities at FVTPL and other financial liabilities.

– Financial liabilities at FVTPL

Financial liabilities at FVTPL consist of financial liabilities held for trading (including derivatives included in financial liabilities) and those designated as at FVTPL. Other than derivative financial liabilities to be set out separately, financial liabilities at FVTOCI are stated as financial liabilities held for trading.

If a financial liability meets one of the following conditions, it is considered that such liability is held by the Group for trading:

- The financial liability was acquired principally for the purpose of repurchasing in near future.
- The financial liability is part of a portfolio of identifiable financial instruments upon initial recognition, and there is objective evidence that a recent actual pattern of short-term profit-making exists.
- The financial liability is a derivative instrument, except for derivatives meeting the definition of financial guarantee contract, or designated as an effective hedging instrument.

A financial liability may be designated as measured at FVTPL upon initial recognition when one of the following conditions is satisfied: (1) such designation can eliminate or significantly reduce accounting mismatches; (2) conduct management and performance evaluation on groups of financial liabilities or groups of financial assets and financial liabilities on a fair value basis, in accordance with the Group's formally documented risk management or investment strategy, and report to key management personnel on that basis; or (3) qualified mixed financial instrument with embedded derivatives.

Financial liabilities held for trading are subsequently measured at fair value. Any gains or losses arising from changes in the fair value and any dividend or interest expenses paid on the financial liabilities are recognized in profit or loss.

For financial liabilities designated as measured at FVTPL, changes in fair value arising from the Group's own changes in credit risks are recognized in other comprehensive income, while other fair value changes are recognized in profit or loss. Upon derecognition, the cumulative changing amount of fair value arising from the Group's own changes in credit risks shall be transferred to retained earnings. Any dividend or interest expenses paid on the financial liabilities are recognized in profit or loss. If make treatment on effect of the changes in own credit risks by the aforesaid means which may cause or enlarge an accounting mismatch in profit or loss, the Group will recognize all gains or losses (including the affected amount arising from changes in the own credit risk) of the financial liability into profit or loss.

– Other financial liabilities

Other financial liabilities, except for financial liabilities arising from transfer of financial assets does not satisfy derecognition criteria or continue involvement of transferred financial assets, are subsequently measured at amortized cost, with gain or loss arising from derecognition or amortization recognized in profit or loss.

In the event that the Group and its counterparty modify or renegotiate the contract does not result in derecognition of a financial liability subsequently measured at amortized cost but result in changes in contractual cash flows, the Group will recalculate the carrying amount of the financial liability, with relevant gain or loss recognized in profit or loss. The Group will determine carrying amount of the financial liability based on the present value of renegotiated or modified contractual cash flows discounted at the financial liability's original effective interest rate. For all costs or expenses arising from modification or renegotiation of the contract, the Group will adjust the modified carrying amount of the financial liability and make amortization during the remaining term of the modified financial liability.

(b) Derecognition of financial liabilities

The Group derecognizes a financial liability (or part of it) only when the underlying present obligation (or part of it) is discharged. An agreement between the Group (an existing borrower) and an existing lender to replace the original financial liability with a new financial liability with substantially different terms is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability.

When the Group derecognizes a financial liability or a part of it, it recognizes the difference between the carrying amount of the financial liability (or part of the financial liability) derecognized and the consideration paid (including any non-cash assets transferred or new financial liabilities assumed) in profit or loss.

(c) Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Equity instruments issued (including refinanced), repurchased, sold and cancelled by the Group are recognized as changes of equity. Change of fair value of equity instruments is not recognized by the Group. Transaction costs related to equity transactions are deducted from equity.

The Group recognizes the distribution to holders of the equity instruments as distribution of profits, and dividends paid do not affect total amount of shareholders' equity.

(5) Derivatives

Derivative financial instruments include foreign currency forward contracts, currency swap contracts, interest rate swap contracts, etc. Derivatives are initially measured at fair value on the date of signing of such contracts, and subsequently measured at fair value.

(6) Offsetting financial assets and financial liabilities

Where the Group has a legal right that is currently enforceable to set off the recognized financial assets and financial liabilities, and intends either to settle on a net basis, or to realize the financial asset and settle the financial liability simultaneously, a financial asset and a financial liability shall be offset and the net amount is presented in the balance sheet. Except for the above circumstances, financial assets and financial liabilities shall be presented separately in the balance sheet and shall not be offset.

11. Receivables**(1) Receivables for which bad debt provision is individually assessed:**

Reason for individual provision for bad debts	If there exists objective evidence that the credit risk of certain individual receivable is significant, bad debt provision is individually assessed for such receivable.
Method for bad debt provision	To be impaired individually, and the difference between the present value of the estimated future cash flows and its carrying amount is used for bad debt provision.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Receivables for which bad debt provision is collectively assessed on a portfolio basis by credit risk characteristics:

Other than receivables for which bad debt provision is individually assessed, receivables are grouped based on portfolio with similar credit risk characteristics. The basis for determination and method of determining provision for bad debt of each portfolio are as follows:

Name of portfolio	Basis of determining the portfolio
Portfolio 1	Amount from debtors simultaneously having a long-term cooperation history, no history of bad debt and sound state of operation
Portfolio 2	Receivables other than Portfolio 1

Bad debt provision of above portfolios is made using expected credit loss model:

Aging	Portfolio 1	Portfolio 2
Within 1 year	0.30%	0.30%
1 to 2 years	5.00%	10.00%
2 to 3 years	20.00%	30.00%
3 to 4 years	30.00%	50.00%
4 to 5 years	50.00%	80.00%
Over 5 years	100.00%	100.00%

12. Inventories

(1) Classification of inventories

The Group's inventories mainly include raw materials, nuclear fuel, spare parts, products in stock, consigned processing materials and reusable materials. Inventories are initially measured at cost. Inventory costs include procurement costs, processing costs and other expenses incurred to enable the inventories to reach the present site and working condition.

(2) Valuation method of inventories upon delivery

Upon delivery of inventories, actual cost of nuclear fuel is calculated using the specific identification method based on the number of refueling batches, and included in the production cost by installments at the current and the next refueling period based on the on-grid power generation. Actual costs of other inventories are calculated using the weighted average method or specific identification method, and are included in the production cost when they are actually consumed.

Reusable materials are materials that can be used repeatedly and still be remained in original condition after gradual transfer of their value but are not recognized as fixed assets, including packaging materials, low-value and short-lived consumables and other turnover materials. Packaging materials, low-value and short-lived consumables and other turnover materials are amortized when they are used.

(3) Recognition of net realizable value of inventories and provision for inventory impairment

At the balance sheet date, inventories are calculated at the lower of cost and net realizable value. Provision for inventory impairment is made when the net realizable value is lower than the cost. Net realizable value represents the estimated selling price of inventories minus cost estimated to incur upon completion, estimated selling costs and relevant taxes during normal course of business. The net realizable value of inventory is determined based on the actual evidences obtained while the objectives of inventories holding and the impact of post balance sheet date event are also considered.

Provision for decline in value of inventories is made based on the excess of cost of inventory over its net realizable value on an item-by-item basis.

After the provision for decline in value of inventories is made, if the circumstances that previously caused inventories to be written down below cost no longer exist so that the net realizable value of inventories is higher than their cost, the original provision for decline in value is reversed and the reversal is included in profit or loss for the period.

(4) Inventory count system

The inventory count system shall be on a perpetual basis.

13. Held-for-sale assets

When the Group recovers the book value of a non-current asset or disposal group mainly by selling (including the exchange of non-monetary assets with commercial substance) rather than using such non-current asset or disposal group on a continuous basis, the non-current asset or disposal group is classified as held-for-sale.

Non-current assets or disposal groups classified as held-for-sale shall satisfy the following conditions:

- (1) according to the practice of selling such assets or disposal groups in similar transactions, they can be sold immediately in the current condition;
- (2) the sale is highly likely, that is, the Group has made a decision on a sale plan and entered into a legally binding purchase commitment with other parties, and the sale is expected to be completed within one year.

Where the Group has lost control of a subsidiary due to reasons such as disposal of investment in a subsidiary regardless of the Group retaining part of equity investment after the disposal, upon the investment in subsidiary intended to be disposed of satisfying the conditions for classification as held-for-sale, the investment in subsidiary will be generally classified as held-for-sale in the parent's separate financial statements, and all assets and liabilities of the subsidiary is classified as held-for-sale in the consolidated financial statements.

The Group measures held-for-sale non-current assets or disposal groups at the lower of the net amount of the book value and fair value minus the cost of sale. If the book value is higher than the fair value minus the selling expenses, the book value shall be written down to the net amount after the fair value minus the selling expenses. The amount written down shall be recognized as asset impairment loss, and shall be included in the current profit or loss, and the provision for impairment of held-for-sale shall be made. In case of the net increase in the fair value of the held-for-sale non-current assets minus the selling expenses on subsequent statement of balance sheet date, the amount previously written down shall be recovered, and the amount of asset impairment loss recognized after being classified as held-for-sale shall be reversed, and the amount reversed shall be included in the current profit or loss.

Held-for-sale non-current assets or those in the disposal group are not depreciated or amortized, and the interest and other expenses on liabilities in the held-for-sale disposal group continue to be recognized.

The equity investment in associates or joint ventures is classified as held-for-sale assets in whole or in part, and the portion classified as held-for-sale shall be no longer measured under the equity method from the date of being classified as held-for-sale.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

14. Long-term equity investments

(1) Judgement criterion of determining joint control or significant influence over the investee

Control exists when the investor has power over the investee; is exposed, or has rights, to variable returns from its involvement with the investee; and has the ability to use its power over the investee to affect its returns. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. Significant influence is the power to participate in the financial and operating policy decisions of an enterprise, except to control or jointly control the formulation of such policies together with other parties. In determining whether there is control or significant influence over the investee, potential voting right factors (such as the convertible corporate bonds for the period and the exercisable stock warrants for the period of the investee and other invested units held) were taken into account.

(2) Determination of initial investment cost

For a long-term equity investment acquired through a business combination involving enterprises under common control, the initial investment cost of the long-term equity investment is the attributable share of the carrying amount of the shareholders' equity of the acquiree at the date of combination in the consolidated financial statements of the ultimate controlling party. The difference between the initial investment cost and the carrying amount of cash paid, non-cash assets transferred and liabilities assumed is adjusted to capital reserve. If the balance of capital reserve is not sufficient, any excess is adjusted to retained earnings. If the consideration of the combination is satisfied by the issue of equity securities, the initial investment cost of the long-term equity investment is the attributable share of the carrying amount of the shareholders' equity of the acquiree in the consolidated financial statements of the ultimate controlling party. The aggregate face value of the shares issued is accounted for as share capital. The difference between the initial investment cost and the aggregate face value of the shares issued is adjusted to capital reserve. If the balance of capital reserve is not sufficient, any excess is adjusted to retained earnings.

For a long-term equity investment acquired through business combination not involving enterprises under common control, the initial investment cost of the long-term equity investment is the cost of acquisition at the date of combination. For a business combination realized by more than one transaction and ultimately not under common control, different accounting methods are adopted by the criteria of whether those transactions are classified as "a bundle of transactions" or not. If yes, all transactions are deemed as one transaction getting control of the acquirer and are dealt with the relevant accounting method. If no, the Company regards the sum of carrying value of the equity investment of the acquirer plus added cost of investment as the initial cost of investment. For such carrying value of the equity investment, if it is accounted by equity method, then the relevant other comprehensive income is not accounted for the period.

The intermediary fees incurred by the absorbing party or acquirer such as audit, legal, valuation and consulting fees, etc. and other related administrative expenses attributable to the business combination are recognized in profit or loss when they are incurred.

The long-term equity investment acquired otherwise than through a business combination is initially measured at cost. When the entity is able to exercise significant influence or joint control (but not control) over an investee due to additional investment, the cost of long-term equity investments is the sum of the fair value of previously-held equity investments determined in accordance with the Accounting Standards for Business Enterprises No. 22 – Recognition and Measurement of Financial Instruments, and the additional investment cost.

(3) Method for subsequent measurement and profit or loss recognition

- Long-term equity investments accounted for using the cost method
 Long-term equity investments in subsidiaries are accounted for using the cost method in the financial statements of the parent company. A subsidiary is an investee that is controlled by the Group.
 Under the cost method, a long-term equity investment is measured at initial investment cost. When additional investment is made or the investment is recouped, the cost of the long-term equity investment is adjusted accordingly. Investment income is recognized in the period in accordance with the attributable share of cash dividends or profit distributions declared by the investee.
- Long-term equity investments accounted for using the equity method
 Except for all or part of the investment in associates and joint ventures classified as assets held for sale, the Group accounts for investment in associates and joint ventures using the equity method. An associate is an entity over which the Group has significant influence; a joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement.
 Under the equity method, where the initial investment cost of a long-term equity investment exceeds the Group's share of the fair value of the investee's identifiable net assets at the time of acquisition, no adjustment is made to the initial investment cost. Where the initial investment cost is less than the Group's share of the fair value of the investee's identifiable net assets at the time of acquisition, the difference is recognized in profit or loss for the period, and the cost of the long-term equity investment is adjusted accordingly.
 Under the equity method, the Group recognizes its share of the net profit or loss and other comprehensive income made by the investee as investment income and other comprehensive income respectively, and adjust the carrying amount of the long-term equity investment accordingly; the carrying amount of the investment is reduced by the portion of any profit distributions or cash dividends declared by the investee that is distributed to the Group; the share of the changes in owners' equity of the investee other than those arising from net profit or loss, other comprehensive income and profit distribution are recognized in the capital reserve and the carrying amount of the long – term equity investment is adjusted accordingly. The Group recognizes its share of the investee's net profit or loss after making appropriate adjustments based on the fair value of the investee's individual separately identifiable assets, etc. at the acquisition date. Where the accounting policies and accounting period adopted by the investee are not consistent with those of the Group, the Group shall adjust the financial statements of the investee to conform to its own accounting policies and accounting period, and recognize investment income and other comprehensive income based on the adjusted financial statements.
 For the Group's transactions with its associates and joint ventures where assets contributed or sold does not constitute a business, unrealized intra-group profits or losses are recognized as investment income or loss to the extent that those attributable to the Group's proportionate share of interest are eliminated. However, unrealized losses resulting from the Group's transactions with its associates and joint ventures which represent impairment losses on the transferred assets are not eliminated.
 If the assets transfer made by the Group is classified as a business transaction, fair value of the asset transferred are recognized as initial cost of the additional long-term equity investment, and the difference between initial cost of investment and carrying value of asset transferred are taken in full amount into the current profit or loss, if the investor obtained long-term equity investment but not control over the investee. If the disposal of assets made by the Group is classified as a business transaction, the difference between consideration of assets sold and carrying value of the asset are taken in full amount into the current profit or loss. If assets purchased from associates and joint ventures are classified as business transactions, then full amount of profit or loss relating to the transaction are recognized, according to the requirements under the Accounting Standards for Business Enterprise No. 20 – Business Combination.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

The Group discontinues recognizing its share of net losses of the investee after the carrying amount of the long-term equity investment and any long-term interest that in substance forms part of the Group's net investment in the investee is reduced to zero, except to the extent that the Group has an obligation to assume additional losses, in which case, the expected liability shall be recognized at the obligation to be assumed and be included in investment loss incurred during the current periods. Where net profits are subsequently made by the investee, the Group resumes recognizing its share of those profits only after its share of the profits equals the share of losses not recognized.

(4) Disposal of long-term equity investments

On disposal of a long-term equity investment, the difference between the proceeds actually received and the carrying amount is recognized in profit or loss for the period. For long-term equity investments accounted for using the equity method, if the remaining interest after disposal is still accounted for using the equity method, other comprehensive income previously recognized for using the equity method is accounted for on the same basis as would have been required if the investee had directly disposed of related assets or liabilities, and transferred to profit or loss for the period on a pro rata basis; owners' equity recognized due to changes in other owners' equity of the investee (other than net profit or loss, other comprehensive income and profit distribution) is transferred to profit or loss for the period on a pro rata basis. For long-term equity investments accounted for using the cost method, if the remaining interest after disposal is still accounted for using the cost method, other comprehensive income previously recognized for using the equity method or in accordance with the standards for the recognition and measurement of financial instruments before obtaining the control over the investee, is accounted for on the same basis as would have been required if the investee had directly disposed of related assets or liabilities, and transferred to profit or loss for the period on a pro rata basis; changes in other owners' equity in the investee's net assets recognized under the equity method (other than net profit or loss, other comprehensive income and profit distribution) is transferred to profit or loss for the period on a pro rata basis.

For the remaining share equity after partial disposal which causes the Group to lose full control over the investee, equity method will be used to account and adjust for the remaining share equity as if they are accounted by the same method upon acquisition, if such equity enables the Group to exercise joint control or significant influences over the investee. If not, the difference between the fair value upon the date of losing control and the carrying value will be taken into the current profit or loss, according to the regulations of financial instrument recognition and measurement. For the other comprehensive income recognized by equity method or by financial instruments recognition and measurement before the Group takes control of the investee, the same basis the investee while disposing relative asset or liability will be adopted for accounting when the Group loses control over the investee, changes to shareholders' equity in the net asset of investee recognized by equity method, other than net profit or loss, other comprehensive income and profit distribution will be carried forward to the current profit or loss. Meanwhile, other comprehensive income and other shareholders' equity will be carried proportionately if the remaining share equity is accounted by equity method; and will be carried in full amount if the remaining share equity is accounted by financial instrument recognition and measurement.

The remaining share equity after partial disposal that causes the Group to lose joint control or significant influences over the investee are accounted by the Accounting Standards for Business Enterprises No. 22 – Recognition and Measurement of Financial Instruments, difference between the fair value of such equity upon the date of losing control or significant influence and the carrying value will be taken into the current profit or loss. Other comprehensive income recognized using equity method for the previous share equity investment will be accounted using the same basis as the investee while disposing relative asset or liability, full amount of shareholders' equity recognized by other change to shareholders' equity other than net profit or loss, other comprehensive income or profit distribution will be taken into return on investment for the period when equity method stops being adopted.

15. Investment properties

Investment property refers to real estate held to earn rentals or for capital appreciation, or both, including leased land use rights, land use rights held and provided for transferring after appreciation and leased buildings, etc.

Investment property is initially measured at cost. Subsequent expenditures related to an investment property shall be included in cost of investment property only when the economic benefits associated with the asset will likely flow to the Group and its cost can be measured reliably. All other subsequent expenditures shall be included in profit or loss for the current period when incurred.

The Group adopts cost method for subsequent measurement of investment property, which is depreciated or amortized using the same policy as that for buildings and land use rights. An investment property is depreciated over its useful life using the straight-line method since the month subsequent to the one in which it is ready for intended use. The useful life, estimated net residual value rate and annual depreciation rate of investment property are as follows:

Category	Useful life	Estimated net residual value rate	Annual depreciation rate
Buildings and structures	15 – 50 years	5%	1.90% – 6.33%

When an investment property is sold, transferred, retired or damaged, the amount of proceeds on disposal of the property net of the carrying amount and related taxes is recognized in profit or loss for the current period.

16. Fixed assets

(1) Conditions for recognition of fixed assets

Fixed assets are tangible assets that are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes and have a useful life of more than one accounting period. Fixed assets are only recognized when their related economic benefits are likely to flow to the Group and their cost can be reliably measured. Fixed assets are initially measured at cost and the effect of any expected costs of abandoning the asset at the end of its use is considered.

A fixed asset that is ready for its intended use but before the final account for completed project is stated at cost and depreciated based on estimated value, which will be adjusted based on actual cost upon the final account for completed project without adjustment to the depreciation already made.

NPP decommissioning cost is recognized in the initial cost of fixed assets based on the discounted amount of the expected decommissioning expense. Two-third of the initial nuclear fueling costs as necessary expenses before the NPP is ready for its intended use are recognized in the construction cost of the NPP, and its depreciation is provided under the same method as the NPP. The remaining initial nuclear fueling costs are recognized in the inventory, and are included in the production cost by installments at the period between the initial fueling and the next refueling based on the on-grid power generation.

Subsequent expenditures incurred for the fixed asset are included in the cost of the fixed asset if it is probable that economic benefits associated with the asset will flow to the Group and the subsequent expenditures can be measured reliably. Meanwhile, the carrying amount of the replaced part is derecognized. Other subsequent expenditures are recognized in profit or loss in the period in which they are incurred.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Method for depreciation of different fixed assets

Fixed assets of the Group include nuclear power facilities and non-nuclear power facilities.

– Method for depreciation of nuclear power facilities

Method for classification and depreciation, estimated useful life and estimated net residual value of nuclear power facilities are as follows:

Except for the decommissioning costs of nuclear power facilities that are separately accounted for, other nuclear power facilities are classified into two categories: (I) the nuclear islands, regular islands and auxiliary systems, and (II) machinery, electricity, instruments, buildings and structures. Nuclear power facilities are depreciated using the units of production method, except for the buildings and structures that are depreciated using the straight-line method, since the month subsequent to the one in which it is ready for intended use. The net residual value rate of machineries of regular islands and auxiliary system is 5%, and the net residual value rate of other fixed-assets categorized as nuclear power facilities is zero.

The estimated useful lives of the nuclear power facilities of the Group are as follows:

Category	Nuclear islands	Regular islands	Auxiliary systems
Machinery	30 – 60 years	20 – 30 years	20 – 30 years
Electricity	15 – 20 years	15 – 20 years	15 – 20 years
Instruments	10 – 15 years	10 – 15 years	10 – 15 years
Buildings	40/60 years	30 years	30 years
Structures	25 – 60 years	25 years	25 years
Decommissioning costs of nuclear power facilities	40/60 years	N/A	N/A

Calculations of depreciation by the units of production method are as follows:

Current depreciation rate=current actual on-grid power generation ÷ (current actual on-grid power generation + estimated on-grid power generation during remaining useful life)

Current depreciation amount=[cost of fixed assets as at the end of the period x (1 – estimated net residual value rate) – depreciated amount as at the beginning of the period – provision of fixed assets impairment] x current depreciation rate

– Method for depreciation of non-nuclear power facilities

Non-nuclear power facilities are depreciated over its useful life using the straight-line method since the month subsequent to the one in which it is ready for intended use. The useful life, estimated net residual value rate and annual depreciation rate of fixed assets of non-nuclear power facilities are as follows:

Category	Useful life	Estimated net residual value rate	Annual depreciation rate
Building and structure for administration purpose	20 – 50 years	5%	1.90% – 4.75%
Machinery and equipment	5 – 15 years	5%	6.33% – 19.00%
Transportation vehicles	5 years	5%	19.00%
Electronic equipment and office facilities	5 years	5%	19.00%
Vessels	25 years	5%	3.80%

Estimated net residual value of a fixed asset is the estimated amount that the Group would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset was already of the stage and in the condition expected at the end of its useful life.

(3) Other explanations

If a fixed asset is upon disposal or no future economic benefits are expected to be generated from its use or disposal, the fixed asset is derecognized. When a fixed asset is sold, transferred, retired or damaged, the amount of any proceeds on disposal of the asset net of the carrying amount and related taxes is recognized in profit or loss for the current period.

The Group reviews the useful life and estimated net residual value of a fixed asset and the depreciation method applied at least once at each financial year-end, and account for any change as a change in an accounting estimate.

17. Construction in progress

Construction in progress is measured based on the actual cost, including all expenditures incurred for construction projects, capitalized borrowing costs for the construction in progress before it is ready for its intended use, and other related expenses during the construction period. A construction in progress is not depreciated and is transferred to fixed assets when it is ready for its intended use.

When a company sells products or by-products produced before fixed assets reaching their intended use, the related revenues and costs shall be accounted for separately and included in the profit or loss for the period in accordance with the Accounting Standards for Business Enterprises No. 14 – Revenue, the Accounting Standards for Business Enterprises No. 1 – Inventories and other requirements.

18. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying asset are capitalized when expenditures for such asset and borrowing costs are incurred and activities relating to the acquisition, construction or production of the asset that are necessary to prepare the asset for its intended use or sale have commenced. Capitalization of borrowing costs ceases when the qualifying asset being acquired, constructed or produced becomes ready for its intended use or sale. If acquisition, construction or production of assets qualifying capitalization is interrupted abnormally for a continuous period of more than 3 months, the capitalization of borrowing costs should be ceased until the assets resume acquisition, construction or production. Other borrowing costs are recognized as an expense in the period in which they are incurred.

Where funds are borrowed under a specific-purpose borrowing, the amount of interest to be capitalized is the actual interest expense incurred on that borrowing for the period less any bank interest earned from depositing the borrowed funds before being used on the asset or any investment income on the temporary investment of those funds. Where funds are borrowed under general-purpose borrowings, the Group determines the amount of interest to be capitalized on such borrowings by applying a capitalization rate to the weighted average of the excess of cumulative expenditures on the asset over the amounts of specific-purpose borrowings. The capitalization rate is the weighted average of the interest rates applicable to the general-purpose borrowings. During the capitalization period, exchange differences related to a specific-purpose borrowing denominated in foreign currency are all capitalized. Exchange differences in connection with general-purpose borrowings are recognized in profit or loss in the period in which they are incurred.

19. Intangible assets

(1) Intangible assets

An intangible asset is measured initially at cost. When an intangible asset with a finite useful life is available for use, its original cost less net residual value and any accumulated impairment losses is amortized over its estimated useful life using the straight-line method. An intangible asset with an indefinite useful life is not amortized. The years of useful life of intangible assets are as follows:

Category	Useful life
Land use rights	20 – 50 years
Computer software	5 – 10 years
Patent rights	10 – 20 years
Non-patented technology	10 years
Sea area use rights	50 years
Others	5 – 37 years

The estimated net residual values of intangible assets are zero. The Group shall review the finite useful life of an intangible asset and the amortization method applied at the end of the period and make adjustments when necessary.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Internal R&D expenditure

Expenditure arising from the research phase is accounted for in profit or loss for the current period when incurred.

Expenses incurred during the development stage that satisfy the following conditions are recognized as intangible assets, while those that do not satisfy the following conditions are accounted for in the profit or loss for the current period:

- (1) it is technically feasible that the intangible asset can be used or sold upon completion;
- (2) there is intention to complete the intangible asset for use or sale;
- (3) the intangible asset can produce economic benefits, including there is evidence that the products produced using the intangible asset has a market or the intangible asset itself has a market; if the intangible asset is for internal use, there is evidence that there is usage for the intangible asset;
- (4) there is sufficient support in terms of technology, financial resources and other resources in order to complete the development of the intangible asset, and there is capability to use or sell the intangible asset;
- (5) the expenses attributable to the development stage of the intangible asset can be measured reliably.

If the expenses incurred during the research stage and the development stage cannot be distinguished separately, all R&D expenses incurred are accounted for in the profit or loss for the current period.

20. Impairment of long-term assets

The Group assesses at each balance sheet date whether there is any indication that any long-term equity investments, investment properties, fixed assets, construction in progress, right-of-use assets and intangible assets with a finite useful life may be impaired. If there is any evidence indicating that an asset may be impaired, the recoverable amount shall be estimated for the individual asset. The intangible assets with infinite useful life and intangible assets that are not ready for intended use are tested for impairment yearly, regardless of any indication of impairment.

The recoverable amount should be estimated of the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, the Group shall determine the recoverable amount of the asset group to which the asset belongs. The recoverable amount of an asset is determined at the higher of the net amount after deducting the disposal expenses from the assets' fair value and the current value of the assets' estimated future cash flow.

If the recoverable amount of an asset is less than its carrying amount, a provision for impairment loss of the asset will be made for the reduction and is charged to profit or loss for the current period.

Goodwill is tested for impairment yearly. When conducting the impairment test for goodwill, the test is conducted through combination with its related asset group or portfolio of asset group. That is, the carrying amount of goodwill is reasonably allocated to the related asset group or each of asset group expected to benefit from the synergies of the combination from the acquisition date. If the recoverable amount of asset group or portfolio of asset group containing the allocated goodwill is lower than its carrying value, relevant impairment loss is recognized. The amount of impairment loss is first written down and allocated to the carrying amount of the goodwill of that asset group or portfolio of asset group, and is then written down to the carrying value of all other types of assets proportionally according to the weighting of the carrying value of all other types of assets other than goodwill within asset group or portfolio of asset group.

When recognizing the impairment loss of contractual costs related assets, other assets in relation to contractual costs that are recognized pursuant to other relevant corporate accounting standards shall take priority. For contractual costs related assets, the Group shall make provisions and recognize an impairment loss to the extent that the carrying amount of an asset exceeds: (1) the remaining amount of consideration that the Group expects to receive in exchange for the goods or services to which the asset relates; (2) the estimated costs that relate to providing those goods or services.

Except for the impairment loss related to contractual costs, an impairment loss once recognized shall not be reversed in a subsequent period. The Group shall, after the impairment of contractual costs has been provided, recognized in profit or loss a reversal of the impairment loss previously recognized when the impairment conditions no longer exist or have improved. However, the increased carrying amount of the asset shall not exceed the carrying amount that would have been determined if no impairment loss had been recognized previously.

21. Long-term deferred expenses

Long-term deferred expenses are expenses which have incurred but shall be amortized over the current year and subsequent years of more than one year. Long-term deferred expenses are amortized evenly over the estimated benefit period.

22. Employee benefits

(1) Accounting treatment of short-term employee benefits

In the accounting period in which employees have rendered services, the Group shall recognize the short-term employee benefits that actually occurred as liability, and charged to profit or loss for the current period or cost of relevant assets. The Group shall recognize the amount of employee welfare that actually occurred and charged to profit or loss for the current period or cost of relevant assets. If the employee welfare expense is non-monetary welfare, it shall be measured according to its fair value.

During the accounting periods which employees rendered service, the Group makes contribution to medical insurance, work-related injury insurance, maternity insurance and other social security contributions and housing provident fund, and extracts for labor union funds and employees' education expenses as stipulated. Based on the required accrual basis and proportions in order to determine the appropriate amount of employee benefits, such employee benefits shall be recognized as corresponding liabilities, and charged to profit or loss during current period or cost of relevant assets.

(2) Accounting treatment of post-employment benefits

Post-employment benefits are classified into defined contribution plans and defined benefit plans.

For defined contribution plans, during the accounting periods which employees rendered service, the contribution payable to the plans shall be recognized as liability in profit or loss during current period or as relevant asset cost.

For defined benefit plans, the Group assigns the welfare obligation generated from the defined benefit plans to the period of rendering services using the formula determined by the projected unit credit method, and includes it in the current profit or loss or related asset costs. Employee benefit costs generated from the defined benefit plans are categorized as follows:

- Service cost (including current service cost, past service cost, as well as gains and losses on curtailments and settlements);
- Net interest of net liabilities or net assets of defined benefit plans (including interest income of planned assets, interest expenses of defined benefit plan liabilities and effect of asset ceiling); and
- Remeasurement of changes in net liabilities or net assets of defined benefit plans.

Service cost and net interest of net liabilities or net assets of defined benefit plans are included in the current profit or loss or related asset costs. Remeasurement of changes in net liabilities or net assets of defined benefit plans (including actuarial gains or losses, return on plan assets excluding the amount included in the net interest of net liabilities or net assets of defined benefit plans, and changes to the asset ceiling excluding the amount included in the net interest of net liabilities or net assets of defined benefit plans) is included in other comprehensive income.

Deficit or surplus generated from the present value of the obligation of defined benefit plan less the fair value of defined benefit plan asset is recognized as a net liability or a net asset of defined benefit plan.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(3) Accounting treatment of termination benefits

When the Group provides termination benefits to employees, employee benefit liabilities are recognized for termination benefits, with a corresponding charge to the profit or loss for the period at the earlier of: when the Group cannot unilaterally withdraw the offer of termination benefits because of the termination plan or a curtailment proposal; or when the Group recognizes costs or expenses related to restructuring that involves the payment of termination benefits.

(4) Accounting treatment of other long-term benefits

For other long-term benefits, when meeting the determined conditions for withdrawal and deposit plan, the Group will conduct accounting treatment according to the determined withdrawal and deposit plan. For net liabilities and net assets of other long-term benefits apart from the above, the Group will conduct accounting treatment according to the determined benefit plan. As at the end of the reporting period, employee welfare cost of other long-term employee welfare are recognized as service cost, net interest of net liabilities or net assets of other long-term employee welfare and remeasurement of changes in net liabilities or assets of other long-term employee welfare, and the total amount of which is recognized in profit or loss or as relevant asset cost.

23. Provisions

Provisions are recognized when the Group has a present obligation related to a contingency, it is probable that an outflow of economic benefits will be required to settle the obligation, and the amount of the obligation can be measured reliably.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account factors pertaining to a contingency such as the risks, uncertainties and time value of money. Where the effect of the time value of money is material, the best estimate of provision is determined by discounting the related future cash outflows.

Where all or some of the expenditure required to settle a provision is expected to be reimbursed by a third party, the reimbursement is recognized as a separate asset only when it is virtually certain that reimbursement will be received, and the amount of reimbursement recognized does not exceed the carrying amount of the provision.

The Group's provisions primarily consist of provision for NPP decommissioning and provision for low and medium level radioactive waste management.

(1) Provision for NPP decommissioning

Provision for NPP decommissioning is the expenses expected to be incurred in the process of the Group putting nuclear reactor systems out of service safely and permanently when they reach the end of their service lives, in order to ensure staff, the public and surrounding ecological environment being not subject to the hazards of the remaining radioactive substance and other potential risks. Provision for NPP decommissioning is estimated on the basis of best estimate, and the discounted amount shall be included in the initial cost of fixed assets.

(2) Provision for low and medium level radioactive waste management

Provision for low and medium level radioactive waste management is the expenses expected to be incurred in respect of disposal of low and intermediate level radioactive waste from NPP. Provision for low and medium level radioactive waste management shall be made on the basis of best estimate by adopting the accrual-basis principle.

24. Share-based payment

The share-based payments of the Group are transactions that grant equity instruments or assume equity-instrument based liabilities for receiving services rendered by employees. The share-based payments of the Company are cash-settled share-based payments.

(1) Cash-settled share-based payments

Cash-settled share-based payment is measured at the fair value of liabilities determined on the basis of shares or other equity instruments of the Group. As to a cash-settled share-based payment, if the right may be exercised immediately after the grant, relevant costs and expenses shall be included on the date of the grant, and the liabilities shall be increased accordingly. On each balance sheet date within the vesting period, the services obtained in the current period shall, based on the best estimate of the information about the exercisable right, be included in the relevant costs or expenses and the corresponding liabilities at the fair value of the liability undertaken by the Group. Fair values of the liabilities are remeasured and the changes are stated in profit or loss of the period on each balance sheet date and settlement date before settlement of relevant liabilities.

(2) Accounting treatment of the implementation, modification and termination of share-based payments

If fair value of the granted equity instrument is increased by the Group's modifications to the share-based payment plans, the increase in fair value shall be accordingly recognized in the increase in service obtained. If the quantity of the granted equity instruments is increased by such modifications, the increase in fair value shall be accordingly recognized in the increase in service obtained. Increase in the fair value of equity instrument is the difference between such fair value on the date of modification before and after the modification. If aggregate fair value of share-based payments are reduced by the modification, or that terms and conditions of share-based plan is otherwise modified to the disadvantage of the employees, it is considered that such modification never took place and accounting treatment shall continue to be made for services obtained, unless the granted equity instrument is partially or entirely cancelled by the Group.

If employees or other parties can choose to fulfil the non-vesting conditions but have not fulfilled them during the vesting period, then the equity-settled share-based payments are dealt with as cancelled.

25. Specific reserve

The safe production expenses provided by the Group in accordance with national regulations are recognized in the cost of relevant products or profit or loss and included in specific reserve.

When the Group uses the specific reserve, if it is related to revenue expenditures, specific reserve is directly offset. Where fixed assets are formed with the safe production expenses provided, the expenses incurred under the "construction in progress" will be recognized as fixed assets when the safety projects are completed and reaches the working condition for their intended use. Meanwhile, special reserves are written down based on costs of fixed asset formed, and accumulated depreciation of the same amount shall be recognized. No further provision for depreciation shall be made for such fixed assets in subsequent period.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

26. Revenue recognition

The Group's revenue sources mainly include the following businesses:

- sales of electricity;
- construction, installation and design services;
- provision of labor services;
- sales of goods and others.

When the Group has implemented the performance obligation in the contract, namely, when the customer acquires controls over relevant goods or services, revenues will be recognized as per transaction prices allocated to such performance obligation. Performance obligation represents the Group's commitment to transfer distinct goods or services to the customer in the contract. The transaction price is the amount of consideration to which the Group expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties and amounts expected to be refunded to a customer.

For performance obligations to be satisfied over time, the Group recognizes revenue over time by measuring the progress towards completion if one of the following criteria are met: (1) the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs; (2) the Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; (3) the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date. Otherwise, the Group recognizes revenue when the customer obtains control of the related goods or services.

For performance obligations to be satisfied at a certain point in time, the Group recognizes revenue at the time of acquiring control of such goods. In judging if the customer has acquired control of the goods, the Group takes into consideration: (1) the Group has a present right to payment for the goods, as in the customer has a present obligation to payment for the goods; (2) the Group has transferred the legal ownership of the good to the customer, as in the customer has acquired the legal ownership of the good; (3) the Group has transferred physical possession of the good to the customer, as in the customer is in possession of the physical good; (4) the Group has transferred the major risks and rewards of the ownership of the good to the customer, as in the customer has acquired the major risks and rewards of the ownership of the good to the customer; (5) the customer has accepted the good; and (6) other indications that the customer has acquired control of the good.

For each performance obligation satisfied over time, the Group recognizes revenue over time by measuring the progress towards completion, except when progress cannot be reasonably determined. In determination of the progress towards completion in satisfying such obligations, the Group adopts the input method or output method based on the nature of business. When the performance progress cannot be determined, the Group is expected to be reimbursed for the costs already incurred and recognize the revenue based on the costs already incurred until the performance progress can be reasonably determined.

A contract asset is the Group's right to consideration in exchange for goods or services that it has transferred to a customer when that right is conditional on something other than the passage of time. Accounts receivable is the Group's right to consideration that is unconditional (only the passage of time is required).

For sales with quality assurance clause, if an individual service is rendered to the customer under such clause beyond providing the customer with goods or services meeting the established criteria, the quality assurance clause shall constitute a single performance obligation. Otherwise, accounting treatments shall be made according to the quality assurance liability under the Accounting Standards for Business Enterprises No.13 – Contingencies.

The Group judges its status as the main responsible party or proxy in a transaction based on whether the Group had control over the good or service prior to transferring to the customer. Where the Group had control over the good or service prior to transferring to the customer, the Group is the main responsible party, and total received or receivable consideration shall be recognized as revenue; otherwise, the Group is the proxy, and the commission or fee expected to receive shall be recognized as revenue, which is determined by deducting net payable to other parties from the total received or receivable consideration.

For receipt in advance from customers for the provision of good or service, the amount shall initially be recognized as liability, and converted into revenue when relevant performance obligations are satisfied. When it is unnecessary for the Group to return the receipt in advance and the customer may forfeit all or part of his/her contractual rights, and that the Group is entitled to the amount in respect of the contractual rights forfeited by the customer, such amount shall be recognized as revenue in proportion to the pattern of rights exercised by the customer. Otherwise, the Group only recognizes such balance of the above liability as revenue when it becomes highly unlikely that customers would demand the fulfilling of the remaining performance obligation.

(1) Revenue from sales of electricity

Revenue from sales of electricity is the primary component of revenue from sales of goods of the Group. Revenue is recognized when electricity of the Group is transferred to the grids stipulated in the electricity sales contracts, as in when the customer acquires control of the electricity.

(2) Revenue from construction, installation and design services

The Group adopts the input method to appropriately determine the progress to completion of satisfying performance obligation for construction, installation and design services. Input method is a way to determine the progress to satisfying the performance obligation based on the Group's input, for which the Group adopts costs incurred as the indicator of input. Revenue is recognized at the amount calculated by total transaction price under the contract at the date of balance sheet multiplied by progress in satisfying the performance obligation, and further deducting recognized revenue from prior accounting periods. When progress cannot be reasonably determined and the incurred costs is expected to be compensated, revenue is recognized according to costs already incurred until the reasonable determination of progress becomes practicable.

(3) Provision of labor services

The Group adopts the output method to appropriately determine the progress to completion of satisfying performance obligation for the provision of labor services. Output method is a way to determine the progress to satisfying the performance obligation based on the value of goods transferred to the customer, for which the Group adopts milestones reached as the indicator of output. Revenue is recognized at the amount calculated by total transaction price under the contract at the date of balance sheet multiplied by progress in satisfying the performance obligation, and further deducting recognized revenue from prior accounting periods. If the result of labor transaction cannot be reliably estimated, labor revenue is recognized at labor costs already incurred or that which can be compensated, and the labor costs incurred shall be stated as current expense. Labor costs already incurred not expected to be compensated shall not be recognized as revenue.

(4) Sale of goods

Revenue is recognized when the goods of the Group are delivered to the venue of the customer and the customer has accepted such goods, as in when the customer acquires control of the goods.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

27. Government grants

Government grants are transfer of monetary assets and non-monetary assets from the government to the Group at no consideration. Government grants are recognized when prescribed conditions are satisfied and they will be received without uncertainties.

If a government grant is in the form of a transfer of a monetary asset, it is measured at the amount received or receivable. If a government subsidy is a non-monetary asset, it should be measured at its fair value. If its fair value cannot be obtained in a reliable way, it should be measured at its nominal amount. Government grants measured at nominal amount are directly recognized in profit or loss.

(1) Determination basis and accounting treatment of government grants related to assets

A government grant related to an asset is recognized as deferred income, and evenly amortized to current profit or loss over the useful life of the related asset.

(2) Determination basis and accounting treatment of government grants related to income

For a government grant related to income, if the grant is a compensation for related expenses or losses to be incurred in subsequent periods, the grant is recognized as deferred income, and recognized in profit or loss over the period in which the related costs or loss are recognized. If the grant is a compensation for related expenses or losses already incurred, the grant is recognized immediately in profit or loss for the current period. If the nature of the government grants is difficult to differentiate, such grants are wholly classified under government grants related to income.

A government grant related to Group's business activities, is recognized as other income based on the substance of economic activities. A government grant non-related to the Group's business activities, is recognized as non-operating income.

For the repayment of a government grant already recognized, if there is any balance of related deferred income, the repayment shall be written-off against the book balance of deferred income, and any excess shall be recognized in profit or loss for the period.

28. Deferred tax assets/deferred tax liabilities

Income tax expenses include current income tax and deferred income tax.

(1) Current income tax

At the balance sheet date, current income tax liabilities (or assets) for the current and prior periods shall be measured at the amount expected to be paid (or recovered) according to the requirements of tax laws.

(2) Deferred tax assets and deferred tax liabilities

For temporary differences between the carrying amounts of certain assets or liabilities and their tax base, or between the nil carrying amount of those items that are not recognized as assets or liabilities and their tax base that can be determined according to tax laws, deferred tax assets and liabilities are recognized using the balance sheet liability method.

Deferred tax is generally recognized for all temporary differences. Deferred tax assets for deductible temporary differences are recognized to the extent that it is probable that taxable profits will be available against which the deductible temporary differences can be utilized. However, for temporary differences associated with the initial recognition of goodwill and the initial recognition of an asset or liability arising from a transaction (not a business combination) that affects neither the accounting profit nor taxable profits (or deductible losses) at the time of transaction, no deferred tax asset or liability is recognized.

For deductible losses and tax credits that can be carried forward, deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which the deductible losses and tax credits can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

At the balance sheet date, deferred tax assets and liabilities are measured at the tax rates, according to tax laws, that are expected to apply in the period in which the asset is realized or the liability is settled.

Current and deferred tax expenses or income are recognized in profit or loss for the period, except when they arise from transactions or events that are directly recognized in other comprehensive income or in shareholders' equity, in which case they are recognized in other comprehensive income or in shareholders' equity; and when they arise from business combinations, in which case they adjust the carrying amount of goodwill.

At the balance sheet date, the carrying amount of deferred tax assets is reviewed and reduced if it is no longer probable that sufficient taxable profits will be available in the future to allow the benefit of deferred tax assets to be utilized. Such reduction in amount is reversed when it becomes probable that sufficient taxable profits will be available.

(3) Offsetting of income tax

When the Group has a legal right to settle on a net basis and intends either to settle on a net basis or to realize the assets and settle the liabilities simultaneously, current tax assets and current tax liabilities of the Group are offset and presented on a net basis.

When the Group has a legal right to settle current tax assets and liabilities on a net basis, and deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax assets and liabilities on a net basis or to realize the assets and liabilities simultaneously, in each future period in which significant amounts of deferred tax assets or liabilities are expected to be reversed, deferred tax assets and deferred tax liabilities are offset and presented on a net basis.

29. Leases

A lease refers to a contract in which a lessor assigns the right to use an asset to a lessee within a certain period of time to obtain consideration.

At the commencement date of a contract, the Group evaluates whether the contract is a lease or contains a lease. Unless the contract terms and conditions change, the Group does not reassess whether the contract is a lease or contains a lease.

(1) The Group as a lessee

(a) Allocation of leases

For a contract that contains one or more lease component and non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative standalone price of the lease component and the aggregate standalone price of the non-lease components.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(b) Right-of-use assets

Except for short-term leases and leases of low value assets, the Group recognizes right-of-use assets at the commencement date of the lease (i.e. the date the underlying asset provided by the lessor is available for use by the Group). The right-of-use asset is initially measured at cost. This cost includes:

- the initial measurement amount of the lease liabilities;
- any lease payments made at or before the commencement date of the lease, less any lease incentives received;
- any initial direct costs incurred by the Group;
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

The Group makes provisions for depreciation of right-of-use assets according to the relevant depreciation requirements in the Accounting Standards for Business Enterprises No. 4 – Fixed Assets. Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated over the shorter of its estimated useful life and the lease term.

The Group determines whether a right-of-use asset has been impaired in accordance with the Accounting Standards for Business Enterprises No. 8 – Asset Impairment and accounts for the identified impairment losses.

(c) Lease liabilities

At the commencement date of a lease, the Group initially measures the lease liabilities at the present value of lease payments that are unpaid at that date, except for short-term leases and low-value asset leases. In calculating the present value of lease payments, the Group uses the interest rate implicit in the lease as the discount rate. If the interest rate implicit in the lease is not readily determinable, the incremental borrowing rate is used as the discount rate.

Lease payment refers to the amount paid by the Group to the lessor relating to the right to use an underlying asset during the lease term, including:

- fixed payments and in-substance fixed payments less any lease incentives receivable;
- variable lease payments that depend on an index or a rate;
- the exercise price of a purchase option reasonably certain to be exercised by the Group;
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate;
- amounts expected to be paid under residual value guarantees.

After the commencement date of the lease term, the Group calculates the interest expense of the lease liabilities for each period of the lease term based on a fixed periodic interest rate, and included it in the current profit or loss or the cost of underlying assets.

After the commencement date of the lease term, the Group re-measures the lease liabilities and adjusts the corresponding right-of-use asset in the following circumstances. If the carrying value of the right-of-use asset has been reduced to zero, but the lease liability still needs to be further reduced, the Group will calculate the difference into the current profit or loss:

- The Group re-measures the lease liabilities based on the present value of the post-change lease payments and the revised discount rate as a result of changes in the lease term or changes in the purchase option;
- The Group re-measures the lease liabilities based on the present value of the changed lease payments and the original discount rate, based on the amount of the amount payable or the index or proportion used to determine the lease payments.

(d) Short-term leases and leases of low-value assets

The Group decides not to recognize right-of-use assets and lease liabilities for short-term leases and leases of low-value assets. Short-term leases are leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. A lease of low-value asset refers to a single lease asset, when new, is of low value. Lease payments on short-term leases and leases of low-value assets are recognized in the current period profit or loss or the cost of underlying assets on a straight-line basis over the lease term.

(e) Lease modifications

The Group accounts for as a separate lease when the lease changes and the following conditions are met at the same time:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets;
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For lease changes that are not accounted for as a separate lease, the Group will reallocate the consideration of the contract after the change on the effective date of the lease change, and re-determine the lease term, and the lease liability shall be remeasured at the present value calculated based on the changed lease payment amount and the revised discount rate.

If the modification of lease results in a narrower scope of lease or a shorter lease term, the Group reduces the carrying value of the right-of-use assets to reflect the partial or complete termination of the lease. The Group recognizes the gain or loss relevant to the partial or complete termination of the leases in the current profit or loss. For other modification of lease, the Group adjusts the carrying value of the right-of-use assets accordingly.

(2) The Group as a lessor**(a) Allocation of leases**

Where the contract includes both the lease and non-lease components, the Group apportions the contract consideration according to the provisions of the Accounting Standards for Business Enterprises No. 14 – Revenue on the transaction price allocation. The basis of the apportionment is the individual selling price of the leased part and the non-lease part.

(b) Classification of leases

A lease that substantially transfers almost all the risks and rewards related to the ownership of leased assets is a financial lease. Leases other than finance leases are operating leases.

- The Group records the operating lease business as a lessor
During each period of the lease term, the Group recognizes the lease payments from operating leases as rental income using the straight-line method. The initial direct expenses incurred by the Group in relation to the operating leases are capitalized and allocated in the current period profit or loss by instalments during the lease term on the same basis as the recognition of rental income.

The variable lease payments received by the Group in connection with the operating leases that are not included in the lease payments are recognized in profit or loss in the period in which they are incurred.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

30. Major accounting estimates and judgments

The preparation of the consolidated financial statements requires the management of the Group to make estimates and assumptions that affect the application of accounting policies and the amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Key assumptions of the estimates and judgments of uncertainties are reviewed on an ongoing basis by the management of the Group. The effects of changes in accounting estimates are recognized in the period in which the estimate is revised and in any future periods affected. Except for the accounting estimates in relation to the depreciation and amortization of assets such as investment properties, fixed assets, intangible assets, long-term deferred expenses and right-of-use assets (see Notes (III) 15, 16, 19, 21 and 29) and the impairment of various assets (see Notes (V) 3, 5, 6, 7, 10, 12, 13, 14, 15, 16 and 18, and Notes (XV) 1, 2 and 5), the other major accounting estimates are as follows:

- (a) Revenue recognition — As stated in Note (III) 26, the Group recognizes the revenue related to the construction, installation and design services and provision of labor services over a period of time. The recognition of the relevant revenue and profits depends on the Group's estimates of the contract results and the performance progress. If the total revenue and total cost actually incurred are higher or lower than the estimated value of the management, it will affect the amount of revenue and profit to be recognized by the Group in the future.
- (b) Note (V) 20 – Recognition of deferred tax assets;
- (c) Note (V) 35 – Post-employment benefits of defined benefit plan;
- (d) Note (V) 36 – Provisions;
- (e) Note (IX) – Disclosure of fair value; and
- (f) Note (XI) – Share-based payment.

31. Changes in significant accounting policies

(1) 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:

	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:

	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:

	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

	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

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

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:

	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

	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:

	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

	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 the date of change, in which the acquired services are accounted for capital surplus, and derecognizes the liability recognized for the cash-settled share-based payment at that date. 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.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(IV) TAXATION

1. Main tax categories and tax rates

	Taxation basis	Tax rate/charge rate
Value-added tax (VAT)	(Note 1)	Exempted, 3%, 5%, 6%, 9%, 13%
Education surcharges	Paid-in VAT	3%
Local education surcharges	Paid-in VAT	2%
Urban maintenance and construction tax	Paid-in VAT	1%, 5%, 7%
Real estate tax	Tax basis under relevant tax law (Note 2)	1.2% or 12%
Enterprise income tax	Taxable income	25%, 20%, 15%

Note 1: VAT payable is output tax minus deductible input tax, and the output tax is calculated based on sales and applicable VAT tax rate as determined by relevant tax law.

The revenue from sales of electricity of the subsidiaries of the Company, namely Guangdong Nuclear Power Investment Co., Ltd. ("GNIC"), GNPJVC, Fujian Ningde Nuclear Power Co., Ltd. (福建寧德核電有限公司) ("Ningde Nuclear"), Ling'ao Nuclear Power Co., Ltd. (嶺澳核電有限公司) ("Ling'ao Nuclear"), 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"), Taishan Nuclear Power Joint Venture Co., Ltd. (台山核電合營有限公司) ("Taishan Nuclear"), Guangxi Fangchenggang Nuclear Power Co., Ltd. (廣西防城港核電有限公司) ("Fangchenggang Nuclear"), Guangxi Fanghe Power Sales Co., Ltd. (廣西防核售電有限公司), CGN Power Sales Co., Ltd. (中廣核電力銷售有限公司) ("Power Sales Company") and Fujian Ninghe Power Sales Co., Ltd. (福建寧核售電有限公司), was subject to VAT. The revenue from sales of goods or equipment of the subsidiaries of the Company, namely China Nuclear Power Technology Research Institute (中廣核研究院有限公司) ("CNPRI"), Suzhou Nuclear Power Research Institute (蘇州熱工研究院有限公司) ("SNPI"), China Nuclear Power Engineering Co., Ltd. (中廣核工程有限公司) ("CGN Engineering"), China Nuclear Power Design Co., Ltd. (Shenzhen) (深圳中廣核工程設計有限公司) ("CGN Design"), GNPJVC, Ningde Nuclear, Ling'ao Nuclear, Lingdong Nuclear, Yangjiang Nuclear, Taishan Nuclear, Fangchenggang Nuclear, CGN Inspection Technology Co., Ltd. (中廣核檢測技術有限公司) ("Inspection Company"), China Nuclear Power (Shenzhen) Operational Technology and Radiation Monitoring Co., Ltd. (中廣核(深圳)運營技術與輻射監測有限公司) ("Radiation Monitoring Company"), Worldwide Engineering CGNPC AREVA Nuclear Co., Ltd. (中核國際核能工程有限公司) ("Worldwide Engineering") and CGN Import & Export Co., Ltd. (中廣核電進出口有限公司), was subject to VAT. Revenue from repair service of China Nuclear Power Operations Co., Ltd. (中廣核核電運營有限公司) ("CGN Operations"), a subsidiary of the Company, was subject to VAT. Except for certain export sales of electricity of GNPJVC are applicable to VAT exemption, deduction and refund, the applicable VAT tax rate of the revenue from aforesaid business was 13%.

Revenue from newspaper and magazine publication of SNPI, a subsidiary of the Company, was subject to VAT at 9% using the general tax calculation method. Revenue from leasing offshore wind power installation platforms of CGN Engineering, a subsidiary of the Company, was subject to VAT at 9% using the general tax calculation method. Revenue from the production and supply of thermal power of Guizhou Yuping Clean Thermal Energy Co., Ltd. (貴州玉屏清潔熱能有限公司), a subsidiary of the Company, was subject to VAT at 9% using the general tax calculation method. The real estate rental income of Ling'ao Nuclear, Lingdong Nuclear, Fangchenggang Nuclear and GNPJVC and certain real estate rental income of SNPI was subject to VAT at 9% using the general tax calculation method. The real estate rental income of the subsidiaries of the Company, namely Inspection Company, GNIC, Yangjiang Nuclear, Ningde Nuclear, CNPRI and CGN Engineering and certain real estate rental income of Yangjiang Nuclear and SNPI, was subject to VAT at 5% using a simple tax computation method.

Revenue from technical service of the subsidiaries of the Company, namely CNPRI, SNPI, Radiation Monitoring Company, Inspection Company, CGN Engineering, CGN Design, Worldwide Engineering, CGN Nanfang Technology Co., Ltd. (中廣核南方科技有限公司), Guangdong Daya Bay Nuclear Power Environment Protection Company Co., Ltd. (廣東大亞灣核電環保有限公司) and CGN Operations, was subject to VAT. Entrusted loan interest income of the subsidiaries of the Company, namely Fangchenggang Nuclear, Taishan Nuclear, CGN Engineering, CGN Design, Ningde Nuclear, Ling'ao Nuclear, Lingdong Nuclear, Yangjiang Nuclear, SNPI, CNPRI, CGN Nanfang Technology Co., Ltd. (中廣核南方科技有限公司) GNIC, Radiation Monitoring Company, CGN Operations, Inspection Company, Power Sales Company, Guangxi Fangchenggang CGN Nuclear Power Industry Investment Co., Ltd. (廣西防城港中廣核核電產業投資有限公司) ("Fangchenggang Investment"), Guangxi Fangchenggang Third Nuclear Power Co., Ltd. (廣西防城港第三核電有限公司), GNPJVC, CGN Lufeng Nuclear Power Co., Ltd. (中廣核陸豐核電有限公司) ("Lufeng Nuclear"), Shandong Zhaoyuan Nuclear Power Co., Ltd. (山東招遠核電有限公司), Guangdong Daya Bay Nuclear Power Environment Protection Co., Ltd. (廣東大亞灣核電環保有限公司), Shenzhen Hepeng Project Supervision Co., Ltd. (深圳市核鵬工程監理有限責任公司) ("Hepeng Supervision Company"), CGN Import & Export Co., Ltd. (中廣核電進出口有限公司) and Guangxi Fanghe Power Sales Co., Ltd. (廣西防核售電有限公司), was subject to VAT. Revenue from outages service of the subsidiaries of the Company, namely Daya Bay Nuclear Power Operations and Management Co., Ltd. (大亞灣核電運營管理有限責任公司) ("DNMC") and CGN Operations, was subject to VAT. Revenue from training of the subsidiaries of the Company, namely DNMC, CGN Operations, Yangjiang Nuclear, Ningde Nuclear and Fangchenggang Nuclear, was subject to VAT. Revenue from human resources services of DNMC, a subsidiary of the Company, was subject to VAT. Revenue from import and export agency service fee of CGN Import & Export Co., Ltd. (中廣核電進出口有限公司), a subsidiary of the Company, was subject to VAT. Revenue from supervision of Hepeng Supervision Company, a subsidiary of the Company, was subject to VAT. Revenue

from accommodation service of the subsidiaries of the Company, namely Fangchenggang Nuclear, Ningde Nuclear and Yangjiang Nuclear, was subject to VAT. Revenue from entrusted operation and management services of Fangchenggang Nuclear, a subsidiary of the Company, was subject to VAT. The applicable VAT tax rate of the revenue from aforesaid business was 6%.

Revenue from construction contracts provided by way of projects with self-supplying materials and old construction projects of CGN Engineering, a subsidiary of the Company, was subject to VAT at 3% using a simple tax computation method, while revenue from other construction contracts of CGN Engineering, CGN Design and SNPI was subject to tax rate at 9% using the general tax calculation method.

The subsidiaries of the Company, namely CGN Ninghe Investment Co., Ltd. (中廣核寧核投資有限公司), CGN Nuclear Power Investment Co., Ltd. (中廣核核電投資有限公司) and China Daya Bay Nuclear Power Technology Research Institute Co., Ltd. (中國大亞灣核電技術研究院有限公司), were subject to VAT at 3% of taxable income of small-scale taxpayers under the tax law.

Note 2: Self-occupied properties are subject to tax at 1.2% per year, with residual value after a one-time deduction of 10%-30% as tax basis; the properties located in Shenzhen, Guangdong Province are subject to tax at 1.2% per year, with residual value after a one-time deduction of 10%-30% as tax basis, while the remaining properties are subject to tax at 12% per year, with the real estate lease income as tax basis.

2. Tax preference

VAT “levy first, refund later” policy

Pursuant to the Circular on Relevant Issues Concerning Taxation in Nuclear Power Industry (Cai Shui [2008] No. 38) 《關於核電行業稅收政策有關問題的通知》(財稅[2008]38號)) issued by the Ministry of Finance and State Administration of Taxation, sales of electrical products of the Company’s subsidiaries, namely Lingdong Nuclear, Yangjiang Nuclear, Ningde Nuclear, Fangchenggang Nuclear and Taishan Nuclear, were entitled to the VAT “levy first, refund later” policy within 15 years from the second month to the commencement of commercial production of their power generating units, with the refund ratio gradually decreasing in three phases. Within 5 years from the second month to the commencement of commercial production, refund ratio is 75% of deposited tax; between 6th to 10th years from the second month to the commencement of commercial production, refund ratio is 70% of deposited tax; and between 11th to 15th years from the second month to the commencement of commercial production, refund ratio is 55% of deposited tax. After 15 years from the second month to the commencement of commercial production, the “levy first, refund later” policy is no longer applicable.

The stages of VAT “levy first, refund later” policy applicable to each generating unit are as follows:

Applicable generating unit	75% tax refund	70% tax refund	55% tax refund
Lingdong Unit 1	October 2010-September 2015	October 2015-September 2020	October 2020-September 2025
Lingdong Unit 2	September 2011-August 2016	September 2016-August 2021	September 2021-August 2026
Yangjiang Unit 1	April 2014-March 2019	April 2019-March 2024	April 2024-March 2029
Yangjiang Unit 2	July 2015-June 2020	July 2020-June 2025	July 2025-June 2030
Yangjiang Unit 3	February 2016-January 2021	February 2021-January 2026	February 2026-January 2031
Yangjiang Unit 4	April 2017-March 2022	April 2022-March 2027	April 2027-March 2032
Yangjiang Unit 5	August 2018-July 2023	August 2023-July 2028	August 2028-July 2033
Yangjiang Unit 6	August 2019-July 2024	August 2024-July 2029	August 2029-July 2034
Ningde Unit 1	May 2013-April 2018	May 2018-April 2023	May 2023-April 2028
Ningde Unit 2	June 2014-May 2019	June 2019-May 2024	June 2024-May 2029
Ningde Unit 3	July 2015-June 2020	July 2020-June 2025	July 2025-June 2030
Ningde Unit 4	August 2016-July 2021	August 2021-July 2026	August 2026-July 2031
Fangchenggang Unit 1	February 2016-January 2021	February 2021-January 2026	February 2026-January 2031
Fangchenggang Unit 2	November 2016-October 2021	November 2021-October 2026	November 2026-October 2031
Taishan Unit 1	January 2019-December 2023	January 2024-December 2028	January 2029-December 2033
Taishan Unit 2	October 2019-September 2024	October 2024-September 2029	October 2029-September 2034

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Income tax incentives

Pursuant to the PRC Enterprise Income Tax Law, the subsidiaries or generating units of the Group enjoying preferential enterprise income tax policies are as follows:

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
GNPJVC	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

Name of company or generating unit	Tax rate applicable for the current year	Tax rate applicable for the previous year	Reason for tax incentives
Sansha Advanced Energy Co., Ltd. (三沙先進能源有限公司)	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises
Guangdong Daya Bay Nuclear Power Environment Protection Company Co., Ltd. (廣東大亞灣核電環保有限公司)	20%	20%	Preferential enterprise income tax policy for small profit-making enterprises
CGN Import & Export Co., Ltd. (中廣核電進出口有限公司)	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%.

Other tax preferential policies

Pursuant to the Notice on Levy of and Exemption from Urban Land Use Tax for Land of Nuclear Power Station (Cai Shui [2007] No. 124) 《關於核電站用地徵免城鎮土地使用稅的通知》(財稅[2007]124號)) issued by the Ministry of Finance and the State Administration of Taxation, other than nuclear islands, regular islands, auxiliary plants, land for communication facilities (excluding land for underground lines) and land for living and office, other land for NPPs are exempt from urban land use tax. Taxable land of NPPs is subject to half of the urban land use tax during infrastructure construction period.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(V) Notes to Items in the Consolidated Financial Statements

1. Cash at bank and in hand

Item	December 31, 2022	December 31, 2021
Cash at bank	14,689,825,716.70	15,723,207,414.81
– Deposits with CGN Finance	14,430,272,164.33	15,573,998,255.45
– Deposits with CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	121,617,978.22	70,783,796.97
– Deposits with banks	137,935,574.15	78,425,362.39
Other cash at bank and in hand	150,949,683.76	104,522,396.62
Total	14,840,775,400.46	15,827,729,811.43
Include: Total amount deposited overseas	122,957,388.86	115,153,656.20
Total amount subject to restrictions in its use due to pledges, mortgages or freezes	150,949,683.76	104,522,396.62

As at December 31, 2022 and December 31, 2021, the other cash at bank and in hand as mentioned above were various deposits, land reclamation deposits, restricted and frozen deposits by the Group, as a supplier, in accordance with the purchase and sales contracts, and their uses were restricted (please see Note (V) 63).

As at December 31, 2022 and December 31, 2021, the Group's fixed deposits of more than three months amounted to RMB7,129,488,016.07 and RMB4,151,368,398.70, respectively.

2. Bills receivable

(1) Bills receivable disclosed by category

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

(2) Bills receivable discounted but outstanding at the balance sheet date

Item	Derecognized amount at the end of the year	Not-yet derecognized amount at the end of the year
Bank acceptance bills	3,609,486,199.65	–

There was no bills receivable which were endorsed but outstanding at the balance sheet date. The bills receivable which were discounted but outstanding at the balance sheet date and did not meet the conditions of derecognition amounted to RMB0.00 (December 31, 2021: RMB1,700,000,000.00). Please refer to Note (V) 63 for details.

(3) All of the bills receivable are due within one year, and the aging are counted starting from the date when bills receivable are recognized.

- (4) As at December 31, 2022 and December 31, 2021, the Group had no bills transferred to accounts receivable due to non-performance of the issuers.
- (5) The Group considers that the acceptors of its bank bills have high credit ratings and there is no significant credit risk.

3. Accounts receivable

(1) Accounts receivable disclosed by category

Category	December 31, 2022					December 31, 2021				
	Carrying balance		Bad debt provisions			Carrying balance		Bad debt provisions		
	Amount	Percentage	Amount	Provisions percentage	Carrying value	Amount	Percentage	Amount	Provisions percentage	Carrying value
Accounts receivable for which provision for bad debts has been individually made	74,259,091.80	0.49%	74,259,091.80	100.00%	-	74,259,091.80	0.67%	74,259,091.80	100.00%	-
Accounts receivables for which provision for bad debts has been made by group	15,176,127,425.73	99.51%	238,566,307.06	1.57%	14,937,561,118.67	10,957,212,726.85	99.33%	105,396,761.65	0.96%	10,851,815,965.20
- Group 1	13,907,734,857.26	91.20%	163,697,613.72	1.18%	13,744,037,243.54	10,519,170,762.40	95.36%	58,554,291.67	0.56%	10,460,616,470.73
- Group 2	1,268,392,568.47	8.31%	74,868,693.34	5.90%	1,193,523,875.13	438,041,964.45	3.97%	46,842,469.98	10.69%	391,199,494.47
Total	15,250,386,517.53	100.00%	312,825,398.86	2.05%	14,937,561,118.67	11,031,471,818.65	100.00%	179,655,853.45	1.63%	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:

Aging	December 31, 2022				December 31, 2021			
	Expected credit		Bad debt provisions	Carrying value	Expected credit		Bad debt provisions	Carrying value
	loss rate	Carrying balance			loss rate	Carrying balance		
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

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Group 2:

Aging	December 31, 2022				December 31, 2021			
	Expected credit				Expected credit			
	loss rate	Carrying balance	Bad debt provisions	Carrying value	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:

Aging	December 31, 2022				December 31, 2021			
	Expected credit				Expected credit			
	loss rate	Carrying balance	Bad debt provisions	Carrying value	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	-

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

Disclosed by aging

Aging	December 31, 2022 Carrying balance	December 31, 2021 Carrying balance
Within 1 year (including 1 year)	13,366,118,488.69	10,257,478,874.64
1 to 2 years	1,403,099,043.94	603,144,051.47
2 to 3 years	317,685,710.87	44,307,416.78
More than 3 years	163,483,274.03	126,541,475.76
– 3 to 4 years	43,450,858.27	42,431,484.56
– 4 to 5 years	38,370,464.56	7,589,055.40
– More than 5 years	81,661,951.20	76,520,935.80
Total	15,250,386,517.53	11,031,471,818.65

(2) Changes in provisions for bad debts of accounts receivable

	December 31, 2022
Opening balance	179,655,853.45
Provisions made during the year	179,440,187.55
Recovered or reversed during the year	(45,983,345.48)
Impact of disposal of subsidiaries	(456,059.12)
Exchange differences arising on translation of financial statements	168,762.46
Closing balance	312,825,398.86

(3) Top five debtors with the largest closing balances of accounts receivable

Name of entity	Carrying balance	Percentage to total accounts receivable	Balance of provisions for bad debts at end of the year
Guangdong Power Grid Co., Ltd. (廣東電網有限責任公司)	4,291,179,547.83	28.14%	12,873,538.64
CGNPC New Energy Offshore Wind Power (Shanwei) Co., Ltd. (中廣核新能源海上風電(汕尾)有限公司)	2,417,596,593.64	15.85%	36,445,890.99
CGN Shanwei New Energy Co., Ltd. (中廣核汕尾新能源有限公司)	2,330,006,728.28	15.28%	6,990,020.18
CGN New Energy (Huizhou) Co., Ltd. (中廣核新能源(惠州)有限公司)	1,191,915,797.34	7.82%	4,799,354.78
Fujian Electric Grid Co., Ltd. (國網福建省電力有限公司)	926,993,289.85	6.08%	2,780,979.87
Total	11,157,691,956.94	73.17%	63,889,784.46

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

4. Prepayments

(1) Prepayments by aging

Aging	December 31, 2022		December 31, 2021	
	Amount	Percentage	Amount	Percentage
Within 1 year	9,845,027,771.20	56.24%	9,511,674,348.19	54.75%
1 to 2 years	4,232,784,754.65	24.18%	5,749,514,633.15	33.10%
2 to 3 years	1,703,814,248.03	9.73%	571,592,810.28	3.29%
More than 3 years	1,725,164,135.45	9.85%	1,539,283,209.27	8.86%
Total	17,506,790,909.33	100.00%	17,372,065,000.89	100.00%

Description of the reasons for the non-timely settlement of prepayments aged over 1 year and in significant amount:

Prepayments in significant amount and aged over 1 year are mainly prepayments for construction projects made to CGN Engineering and prepayments for nuclear fuel procurement made to nuclear power companies, which have not yet been settled with the other party due to the long cycle of the projects and long processing cycle of nuclear fuel components.

(2) Top five entities with the largest closing balances of prepayments

Name of entity	Amount	Percentage to total prepayments
CGNPC Uranium Resources Co., Ltd.	8,255,144,383.48	47.15%
China Construction Second Engineering Bureau Ltd.	2,232,355,744.53	12.75%
China Nuclear Industry Huaxing Construction Co., Ltd. (中國核工業華興建設有限公司)	1,661,978,812.70	9.49%
Dongfang Electric Corporation	379,345,472.94	2.17%
China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	335,381,497.69	1.92%
Total	12,864,205,911.34	73.48%

5. Other receivables

Item	December 31, 2022	December 31, 2021
Dividends receivable	288,734,975.09	10,562,708.35
Others	46,192,529.37	42,757,539.26
Total	334,927,504.46	53,320,247.61

(1) Dividends receivable

(a) Dividends receivable

Investee	December 31, 2022	December 31, 2021
CGN Industry Investment Fund Phase I Co., Ltd. (中廣核一期產業投資基金有限公司) ("CGN Fund Phase I")	271,730,900.00	–
China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	17,055,240.81	7,883,797.15
CIECC Engineering Company Limited (中諮工程有限公司)	–	2,710,600.00
Total	288,786,140.81	10,594,397.15
Less: Bad debt provision	51,165.72	31,688.80
Carrying value	288,734,975.09	10,562,708.35

(b) Determining provision for bad debt

Item	December 31, 2022			Total
	Phase 1 Expected credit losses within 12 months	Phase 2 Expected credit losses during the whole life (no credit impairment occurred)	Phase 3 Expected credit losses during the whole life (credit impairment occurred)	
January 1, 2022	31,688.80	–	–	31,688.80
Provisions for the year	51,165.72	–	–	51,165.72
Recovery or reversal for the year	(31,688.80)	–	–	(31,688.80)
December 31, 2022	51,165.72	–	–	51,165.72

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Other receivables

(a) Other receivables by nature

Nature of other receivables	December 31, 2022	December 31, 2021
Related party payments	20,763,638.52	17,549,172.90
Employee borrowings and petty cash fund	9,595,589.68	15,396,408.99
Others	38,897,214.64	37,848,724.13
Total	69,256,442.84	70,794,306.02
Less: Bad debt provision	23,063,913.47	28,036,766.76
Carrying value	46,192,529.37	42,757,539.26

(b) Disclosed by aging

Aging	December 31, 2022 Carrying balance	December 31, 2021 Carrying balance
Within 1 year	42,200,399.23	36,977,358.00
1 to 2 years	3,270,475.65	2,004,006.40
2 to 3 years	714,648.64	987,625.50
More than 3 years	23,070,919.32	30,825,316.12
–3 to 4 years	425,955.25	3,835,846.04
–4 to 5 years	3,073,862.99	6,315,103.41
–More than 5 years	19,571,101.08	20,674,366.67
Total	69,256,442.84	70,794,306.02

(c) Other receivables disclosed by category

Category	December 31, 2022					December 31, 2021				
	Carrying balance		Bad debt provisions			Carrying balance		Bad debt provisions		
	Amount	Percentage	Amount	Provisions percentage	Carrying value	Amount	Percentage	Amount	Provisions percentage	Carrying value
Receivables for which provision for bad debts has been individually made	350,000.00	0.51%	350,000.00	100.00%	-	350,000.00	0.49%	350,000.00	100.00%	-
Receivables for which provision for bad debts has been made by group	68,906,442.84	99.49%	22,713,913.47	32.96%	46,192,529.37	70,444,306.02	99.51%	27,686,766.76	39.30%	42,757,539.26
– Group 1	22,642,045.95	32.69%	12,784,957.07	56.47%	9,857,088.88	17,792,568.61	25.14%	17,549,173.01	98.63%	243,395.60
– Group 2	46,264,396.89	66.80%	9,928,956.40	21.46%	36,335,440.49	52,651,737.41	74.37%	10,137,593.75	19.25%	42,514,143.66
Total	69,256,442.84	100.00%	23,063,913.47	33.30%	46,192,529.37	70,794,306.02	100.00%	28,036,766.76	39.60%	42,757,539.26

(d) Changes in bad debt provisions for other receivables

Item	December 31, 2022			Total
	Phase 1 Expected credit losses within 12 months	Phase 2 Expected credit losses during the whole life (no credit impairment occurred)	Phase 3 Expected credit losses during the whole life (credit impairment occurred)	
Opening balance	109,168.00	27,577,598.76	350,000.00	28,036,766.76
– Transferred to phase 2	(8,478.21)	8,478.21	–	–
Provisions for the year	383,897.77	8,789,588.48	–	9,173,486.25
Reversal for the year	(97,251.73)	(13,718,452.00)	–	(13,815,703.73)
Impact of disposal of subsidiaries	–	(266,627.60)	–	(266,627.60)
Exchange differences arising on translation of financial statements	(3,438.06)	(60,570.15)	–	(64,008.21)
Closing balance	383,897.77	22,330,015.70	350,000.00	23,063,913.47

(e) Top five debtors with the largest closing balances

Name of entity	Nature	Amount	Aging	Percentage to total other receivables	Closing balance of provisions for bad debts
CGN Services Group Co., Ltd. (中廣核服務集團有限公司) ("CGN Services Group")	Related party payments	12,924,281.75	Within 1 year and more than 5 years	18.66%	12,763,113.25
Customs of Fangchenggang	Customs deposit	9,079,392.44	Within 1 year	13.11%	27,238.18
Liaoning Hongyanhe Nuclear Power Co., Ltd. (遼寧紅沿河核電有限公司) ("Hongyanhe Nuclear")	Related party payments	5,087,156.82	Within 1 year	7.35%	15,261.47
Guangxi Gi Cultural Tourism Investment Co., Ltd. (廣西廣投文化旅遊投資有限公司)	Lease deposit	3,760,000.00	More than 5 years	5.43%	3,760,000.00
Shenzhen Pengjinsheng Investment Development Co., Ltd. (深圳市騰錦生投資發展有限公司)	Lease deposit	2,723,520.55	4 to 5 years	3.93%	2,178,816.44
Total		33,574,351.56		48.48%	18,744,429.34

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

6. Inventories

(1) Inventories by category

Item	December 31, 2022			December 31, 2021		
	Carrying balance	Provision for decline in value	Carrying value	Carrying balance	Provision for decline in value	Carrying value
Nuclear fuel	9,955,234,183.49	-	9,955,234,183.49	8,057,601,522.06	-	8,057,601,522.06
Spare parts	7,503,678,235.70	590,330,593.17	6,913,347,642.53	6,199,192,732.13	602,318,672.38	5,596,874,059.75
Consigned processing materials	892,886,264.86	-	892,886,264.86	1,578,700,935.77	-	1,578,700,935.77
Raw materials	13,187,701.22	-	13,187,701.22	13,970,265.19	-	13,970,265.19
Goods on hand	802,528.96	-	802,528.96	1,244,014.52	-	1,244,014.52
Reusable materials	-	-	-	84,934.77	-	84,934.77
Total	18,365,788,914.23	590,330,593.17	17,775,458,321.06	15,850,794,404.44	602,318,672.38	15,248,475,732.06

(2) Provision for decline in value of inventories

Inventory categories	Additions during the year		Deductions during the year			December 31, 2022
	January 1, 2022	Provision	Exchange differences arising on translation of financial statements	Reversal or write-backs	Write-offs	
Spare parts	602,318,672.38	7,897,216.13	17,115,767.19	3,818,847.06	33,182,215.47	590,330,593.17

(3) Description of the inventory balance containing the capitalized borrowing costs

One-third of the initial nuclear fueling costs is recognized in the inventory, and is included in the production cost by installments at the period between the initial fueling and the next refuelling based on the on-grid power generation. As at December 31, 2022 and December 31, 2021, no capitalized borrowing cost was included in the initial nuclear fueling costs in the Group's inventory.

7. Contract assets

(1) Presentation of contract assets

Item	December 31, 2022			December 31, 2021		
	Carrying balance	Impairment provision	Carrying value	Carrying balance	Impairment provision	Carrying value
Completed but unsettled assets resulting from construction contracts	3,056,278,958.03	203,170,102.96	2,853,108,855.07	3,542,015,988.29	204,515,541.12	3,337,500,447.17
Guarantee deposits	7,982,933.42	218,251.06	7,764,682.36	12,025,303.81	2,774,742.49	9,250,561.32
Total	3,064,261,891.45	203,388,354.02	2,860,873,537.43	3,554,041,292.10	207,290,283.61	3,346,751,008.49

The impairment provision made for contract assets of the Group mainly came from Mengzi Zhongneng New Energy Co., Ltd. (蒙自中能新能源有限公司). The reason for the provision was that the recoverable amount was lower than the carrying value of the onshore wind power project entered into by the Group and Mengzi Zhongneng New Energy Co., Ltd. (蒙自中能新能源有限公司). As at December 31, 2022, the accumulated impairment provision made for such contract assets amounted to RMB197,796,089.10 (December 31, 2021: RMB197,796,089.10).

(2) Impairment provision made for contract assets for the year

Item	January 1, 2022	Provisions for the year	Reversal for the year	Impact of disposal of subsidiaries	December 31,
					2022
Completed but unsettled assets resulting from construction contracts	204,515,541.12	2,158,491.87	3,503,930.03	-	203,170,102.96
Guarantee deposits	2,774,742.49	119,952.82	39,721.38	(2,636,722.87)	218,251.06
Total	207,290,283.61	2,278,444.69	3,543,651.41	(2,636,722.87)	203,388,354.02

(3) Qualitative analysis of contract assets

The amount associated with construction contracts is CGN Engineering's right to consideration in exchange for construction services that it has transferred to customers when that right is conditional on something other than the passage of time, and is stated as contract assets. The Group firstly recognizes the completed construction as a contract asset and reclassifies the recognized contract assets to accounts receivable upon obtaining the right to unconditionally collect the consideration of contracts from the customer.

8. Other current assets

Item	December 31, 2022	December 31, 2021
VAT input tax credit	2,212,427,308.90	3,534,796,566.46
Others	32,490,459.67	23,934,998.31
Total	2,244,917,768.57	3,558,731,564.77

9. Debt investment

Item	December 31, 2022			December 31, 2021		
	Carrying balance	Impairment provision	Carrying value	Carrying balance	Impairment provision	Carrying value
Others	48,917,096.53	-	48,917,096.53	37,739,834.23	-	37,739,834.23

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

10. Long-term equity investments

Investee	Balance at January 1, 2022 (Restated)	Changes in the current year						Balance at December 31, 2022	Closing balance of impairment provisions
		Additional investment	Reduced investment	Investment gains/losses recognized under the equity method	Adjustment of comprehensive income other	Changes in other equity	Declared cash dividends or profits		
Associates									
Hongyanhe Nuclear	7,405,269,832.26	-	-	807,082,235.27	-	-	(681,452,866.56)	-	-
Fujian Ningde Second Nuclear Power Co., Ltd. (福建寧德第二核電有限公司) ("Ningde Second Nuclear")	318,632,261.80	-	-	-	-	-	-	-	-
CGN Fund Phase I	2,601,837,377.07	809,711,221.70	-	431,659,558.53	-	-	(333,840,820.00)	-	-
China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	660,111,617.56	-	-	96,279,750.03	(183,539.88)	17,397,497.50	(34,110,481.62)	-	-
CGN Finance Co., Ltd. (中廣核財務有限責任公司) ("CGN Finance")	1,405,404,974.80	-	-	153,909,826.89	6,791,700.00	-	(132,214,969.27)	-	-
CECC Engineering Company Limited (中諮工程有限公司)	37,398,954.43	-	-	902,264.19	-	-	(2,645,126.23)	-	-
Xiong'an Xingrong Nuclear Power Innovation Center Co., Ltd. (雄安興融核電創新中心有限公司)	20,000,000.00	-	-	-	-	-	-	-	-
Gansu Longhe Environmental Protection Technology Co., Ltd. (甘肅龍和環保科技有限公司)	8,750,000.00	-	-	906,622.12	-	-	-	-	-
Huizhou Zhongdong Energy Storage and Power Generation Co., Ltd. (惠州中洞蓄能發電有限公司)	-	60,000,000.00	-	-	-	-	-	-	-
Total	12,457,405,017.92	869,711,221.70	-	1,490,740,257.03	6,608,160.12	17,397,497.50	(1,184,264,263.68)	-	-

11. Other investment in equity instruments

(1) Other investment in equity instruments

Item	December 31, 2022	December 31, 2021
Chinergy Co., Ltd. (中核能源科技有限公司)	110,000,000.00	110,000,000.00
China Nuclear Industry Huaxing Construction Co., Ltd. (中國核工業華興建設有限公司)	437,756,200.00	458,128,600.00
Fujian Power Exchange Center Co., Ltd. (福建電力交易中心有限公司)	10,960,113.30	10,960,113.30
Guangxi Power Exchange Center Co., Ltd. (廣西電力交易中心有限責任公司)	2,607,256.83	2,607,256.83
Gansu Solar Thermal Power Generation Co., Ltd. (甘肅光熱發電有限公司)	8,500,000.00	8,500,000.00
Total	569,823,570.13	590,195,970.13

(2) Investment in other equity instruments measured at fair value

Item	Reason for designated as at FVTOCI	Dividend income recognized for the year	Accumulated gains or losses included in other comprehensive income	Amount of other comprehensive income transferred to the retained earnings	Reason for other comprehensive income transferred to the retained earnings
Chinergy Co., Ltd. (中核能源科技 有限公司)	Not intended to hold for recent sale or short-term profit	-	-	-	-
China Nuclear Industry Huaxing Construction Co., Ltd. (中國核工業華興建設有限公司)	Not intended to hold for recent sale or short-term profit	31,856,543.70	155,962,864.84	-	-
Fujian Power Exchange Center Co., Ltd. (福建電力交易中心 有限公司)	Not intended to hold for recent sale or short-term profit	-	-	-	-
Guangxi Power Exchange Center Co., Ltd. (廣西電力交易中心 有限責任公司)	Not intended to hold for recent sale or short-term profit	-	-	-	-
Gansu Solar Thermal Power Generation Co., Ltd. (甘肅光熱發電有限公司)	Not intended to hold for recent sale or short-term profit	-	-	-	-
Total		31,856,543.70	155,962,864.84	-	-

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

12. Investment properties

(1) Investment properties measured at cost

Investment properties Item	Buildings and structures
2022	
I. Original carrying value	
1. Opening balance	453,183,908.24
2. Additions during the year	53,737,581.33
(1) Transfer from fixed assets	52,890,267.63
(2) Exchange differences arising on translation of financial statements	847,313.70
3. Deductions during the year	5,133,128.71
(1) Transferred to self-use properties	3,533,128.71
(2) Disposal	1,600,000.00
4. Closing balance	501,788,360.86
II. Accumulated depreciation and accumulated amortization	
1. Opening balance	248,264,657.70
2. Additions during the year	76,949,089.94
(1) Provisions	35,594,996.31
(2) Transfer from fixed assets	40,896,655.89
(3) Exchange differences arising on translation of financial statements	457,437.74
3. Deductions during the year	3,899,817.55
(1) Transferred to self-use properties	2,379,817.55
(2) Disposal	1,520,000.00
4. Closing balance	321,313,930.09
III. Impairment provision	
1. Opening balance	-
2. Additions during the year	-
3. Deductions during the year	-
4. Closing balance	-
IV. Carrying value	
1. Closing carrying value	180,474,430.77
2. Opening carrying value	204,919,250.54

(2) Undiscounted future lease receipts after the balance sheet date

Maturity analysis of undiscounted operating future lease receipts	December 31, 2022	December 31, 2021
The first year after the balance sheet date	24,472,297.14	21,290,114.61
The second year after the balance sheet date	24,824,547.01	16,905,438.03
The third year after the balance sheet date	20,355,977.94	18,133,998.33
The fourth year after the balance sheet date	20,358,349.98	18,133,998.33
The fifth year after the balance sheet date	20,765,509.82	18,519,440.91
After the sixth year after the balance sheet date	141,828,444.74	148,923,386.08
Total	252,605,126.63	241,906,376.29

13. Fixed assets

(1) Fixed assets

Item	Buildings and structures	Machinery and equipment	Transportation vehicles	Electronic equipment and office facilities	Cost of NPP decommissioning	Vessels	Total
2022							
I. Original carrying value							
1. Opening balance	71,876,233,442.55	253,968,760,518.01	182,658,902.15	3,227,791,336.65	2,632,950,930.79	420,686,049.15	332,309,081,179.30
2. Additions during the year	1,050,396,976.85	3,107,771,690.03	7,650,882.02	374,943,736.77	15,439,551.50	-	4,556,202,837.17
(1) Acquisition	3,137,682.73	399,382,410.83	6,982,684.96	203,176,920.16	-	-	612,679,698.68
(2) Transfer from construction in progress	598,602,022.09	715,843,485.16	-	163,933,762.78	-	-	1,478,379,270.03
(3) Investment properties transferred to self-use properties	3,533,128.71	-	-	-	-	-	3,533,128.71
(4) Exchange differences arising on translation of financial statements	445,124,143.32	1,992,545,794.04	668,197.06	7,833,053.83	15,439,551.50	-	2,461,610,739.75
3. Deductions during the year	77,675,069.51	284,633,037.20	8,192,185.83	174,914,316.58	-	-	545,414,609.12
(1) Disposal	24,784,801.88	284,633,037.20	8,192,185.83	174,914,316.58	-	-	492,524,341.49
(2) Self-use properties transferred to investment properties	52,890,267.63	-	-	-	-	-	52,890,267.63
4. Adjustment from final account for completed project (Note 1)	(2,849,323,883.94)	3,517,054,887.79	-	-	94,538,008.71	-	762,269,012.56
5. Closing balance	69,999,631,465.95	260,308,954,058.63	182,117,598.34	3,427,820,756.84	2,742,928,491.00	420,686,049.15	337,082,138,419.91
II. Accumulated depreciation							
1. Opening balance	17,722,339,193.10	71,947,605,273.64	136,303,340.36	2,180,543,569.35	477,675,965.30	42,609,378.43	92,507,076,720.18
2. Additions during the year	2,437,102,156.87	9,384,488,497.59	11,547,296.98	283,105,724.28	68,273,805.12	15,986,971.68	12,200,504,452.52
(1) Provisions	2,036,927,706.05	7,596,366,914.36	11,113,358.49	276,534,331.71	56,915,431.08	15,986,971.68	9,993,844,713.37
(2) Investment properties transferred to self-use properties	2,379,817.55	-	-	-	-	-	2,379,817.55
(3) Exchange differences arising on translation of financial statements	397,794,633.27	1,788,121,583.23	433,938.49	6,571,392.57	11,358,374.04	-	2,204,279,921.60
3. Deductions during the year	50,235,763.08	210,947,248.79	7,698,099.70	157,512,335.01	-	-	426,393,446.58
(1) Disposal	9,339,107.19	210,947,248.79	7,698,099.70	157,512,335.01	-	-	385,496,790.69
(2) Self-use properties transferred to investment properties	40,896,655.89	-	-	-	-	-	40,896,655.89
4. Closing balance	20,109,205,586.89	81,121,146,522.44	140,152,537.64	2,306,136,958.62	545,949,770.42	58,596,350.11	104,281,187,726.12

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Item	Buildings and structures	Machinery and equipment	Transportation vehicles	Electronic equipment and office facilities	Cost of NPP decommissioning	Vessels	Total
III. Impairment provisions							
1. Opening balance	-	20,190,260.47	-	-	-	-	20,190,260.47
2. Additions during the year	1,452,141.69	16,081,658.68	-	-	-	-	17,533,800.37
(1) Provisions	1,452,141.69	15,585,642.67	-	-	-	-	17,037,784.36
(2) Exchange differences arising on translation of financial statements	-	496,016.01	-	-	-	-	496,016.01
3. Deductions during the year	-	289,456.43	-	-	-	-	289,456.43
(1) Disposal	-	289,456.43	-	-	-	-	289,456.43
4. Closing balance	1,452,141.69	35,982,462.72	-	-	-	-	37,434,604.41
IV. Carrying value							
1. Closing carrying value	49,888,973,737.37	179,151,825,073.47	41,965,060.70	1,121,683,798.22	2,196,978,720.58	362,089,699.04	232,763,516,089.38
2. Opening carrying value	54,153,894,249.45	182,000,964,983.90	46,355,561.79	1,047,247,767.30	2,155,274,965.49	378,076,670.72	239,781,814,198.65

Note 1: In 2022, Taishan Nuclear completed the final accounts for completed project for its Phase I project, and reclassified the assets and adjusted the value of certain assets based on the final accounts for completed project.

(2) As at December 31, 2022 and December 31, 2021, the Group had no idle fixed assets.

(3) Fixed assets under operating leases are as follows:

Item	Buildings and structures	Machinery and equipment	Total
2022			
I. Original carrying value			
1. Opening balance	10,752,400.00	3,661,019.21	14,413,419.21
2. Additions during the year	71,383,651.69	-	71,383,651.69
3. Deductions during the year	-	1,306,524.57	1,306,524.57
4. Closing balance	82,136,051.69	2,354,494.64	84,490,546.33
II. Accumulated depreciation			
1. Opening balance	2,453,686.22	3,477,968.24	5,931,654.46
2. Additions during the year	33,710,127.12	-	33,710,127.12
(1) Provisions	33,710,127.12	-	33,710,127.12
3. Deductions during the year	-	1,241,198.34	1,241,198.34
4. Closing balance	36,163,813.34	2,236,769.90	38,400,583.24
III. Impairment provisions			
1. Opening balance	-	-	-
2. Additions during the year	-	-	-
3. Deductions during the year	-	-	-
4. Closing balance	-	-	-
IV. Carrying value			
1. Closing carrying value	45,972,238.35	117,724.74	46,089,963.09
2. Opening carrying value	8,298,713.78	183,050.97	8,481,764.75

- (4) As at December 31, 2022 and December 31, 2021, the carrying values of the properties held by the Group for which the application of title certificates was still in progress amounted to RMB613,317,864.79 and RMB350,423,043.02, respectively. The Group believed that the ongoing application for the above title certificates will not affect the use of the properties.

14. Construction in progress

(1) Construction in progress

Name of project	December 31, 2022			December 31, 2021		
	Carrying balance	Impairment provision	Carrying value	Carrying balance	Impairment provision	Carrying value
Fangchenggang Nuclear Phase II Project	37,532,113,962.29	-	37,532,113,962.29	30,583,724,586.64	-	30,583,724,586.64
Lufeng Nuclear Project	23,295,718,589.79	-	23,295,718,589.79	20,433,117,775.36	-	20,433,117,775.36
Baolong Industrial Park project	1,644,089,561.58	-	1,644,089,561.58	1,243,474,325.71	-	1,243,474,325.71
Others	5,827,483,328.12	-	5,827,483,328.12	5,435,535,745.09	(134,231,261.53)	5,301,304,483.56
Total	68,299,405,441.78	-	68,299,405,441.78	57,695,852,432.80	(134,231,261.53)	57,561,621,171.27

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Changes in major construction in progress

Name of project	Budget amount	January 1, 2022	Additions during the year	Transfer to fixed assets	December 31, 2022	Proportion of investment to budget	Project progress	Accumulated capitalized interest	Including: capitalized interest for the year	Ratio of capitalized interest amount for the year	Sources of fund
Fangchenggang Nuclear Phase II Project	37,489,790,000.00	30,583,724,586.64	6,948,679,314.16	289,938.51	37,532,113,962.29	97.46%	97.46%	4,326,266,725.60	1,137,111,766.62	3.45%	Self-owned funds, loans
Lufeng Nuclear Phase I Project (Note 1)	N/A	19,603,644,069.02	1,414,777,387.42	332,011,075.44	20,686,410,381.00	N/A	N/A	4,267,431,921.88	558,068,453.62	3.16%	Self-owned funds, loans
Lufeng Nuclear Phase II Project (Note 2)	41,279,080,000.00	829,473,706.34	1,779,834,502.45	-	2,609,308,208.79	11.04%	11.04%	106,421,224.88	50,034,010.31	3.16%	Self-owned funds, loans
Baolong Industrial Park project	2,985,000,000.00	1,243,474,325.71	400,615,235.87	-	1,644,089,561.58	55.08%	55.08%	78,157,881.65	31,075,025.39	4.90%	Self-owned funds, loans
Total		52,260,316,687.71	10,543,906,439.90	332,301,013.95	62,471,922,113.66			8,778,277,754.01	1,776,289,255.94		

Note 1: According to the approval letter in relation to the launch of preliminary work of Lufeng Phase I from the General Office of the NDRC 《國家發改委辦公廳關於同意廣東陸豐核電一期工程開展前期工作的函》, the preliminary work of the Lufeng Nuclear Phase I Project launched by CGN Lufeng Nuclear Power Co., Ltd. ("Lufeng Nuclear") has been pursuing approval, and there is no investment budget at present.

Note 2: Currently, Lufeng Unit 5 and Unit 6 of the Lufeng Nuclear Phase II Project have been approved by the State Council in April 2022. The "Permit for the Construction of Guangdong Lufeng Unit 5" and the "Permit for the Construction of Guangdong Lufeng Unit 6" were obtained in September 2022. On September 8, 2022, Unit 5 commenced construction and entered the civil construction phase.

(3) The Group assessed and determined that the recoverable amount of the construction in progress of Hebei Zhongzhuang Clean Thermal Energy Co., Ltd. (河北中莊清潔熱能有限公司) was less than its carrying amount, so it made a full provision for impairment. As at December 31, 2021, the balance of provision for impairment was RMB134,231,261.53. In October 2022, according to the resolution of the general meeting (i.e. Guanghe Zhongzhuang Gujue [2022] No. 2), such impairment provision was wrote off.

15. Right-of-use assets

(1) Right-of-use assets

Item	Buildings and structures	Machinery and equipment	Total
2022			
I. Original carrying value			
1. Opening balance	1,860,442,815.95	860,249.76	1,861,303,065.71
2. Additions during the year	344,456,057.95	1,965,754.80	346,421,812.75
(1) Additions	340,987,523.30	1,965,754.80	342,953,278.10
(2) Exchange differences arising on translation of financial statements	3,468,534.65	–	3,468,534.65
3. Deductions during the year	116,949,122.30	132,743.36	117,081,865.66
(1) Deductions due to termination of contracts	116,949,122.30	132,743.36	117,081,865.66
4. Closing balance	2,087,949,751.60	2,693,261.20	2,090,643,012.80
II. Accumulated depreciation			
1. Opening balance	820,183,311.61	342,325.24	820,525,636.85
2. Additions during the year	287,411,964.44	882,082.29	288,294,046.73
(1) Provisions	285,187,656.79	882,082.29	286,069,739.08
(2) Exchange differences arising on translation of financial statements	2,224,307.65	–	2,224,307.65
3. Deductions during the year	60,018,565.63	77,433.64	60,095,999.27
(1) Deductions due to termination of contracts	60,018,565.63	77,433.64	60,095,999.27
4. Closing balance	1,047,576,710.42	1,146,973.89	1,048,723,684.31
III. Impairment provisions			
1. Opening balance	–	–	–
2. Additions during the year	–	–	–
3. Deductions during the year	–	–	–
4. Closing balance	–	–	–
IV. Carrying value			
1. Closing balance	1,040,373,041.18	1,546,287.31	1,041,919,328.49
2. Opening balance	1,040,259,504.34	517,924.52	1,040,777,428.86

(2) Amounts recognized in profit or loss

Buildings and structures, machinery and equipment	2022	2021
Depreciation expenses of right-of-use assets (Note 1)	282,377,354.44	324,791,389.07
Interest expenses on the lease liabilities (Note 2)	41,849,237.61	37,844,402.26
Short-term lease expenses	117,583,903.79	79,873,933.62

Note 1: In 2022, the capitalized depreciation expense of right-of-use assets amounted to RMB3,692,384.64.

Note 2: In 2022, the capitalized interest expense on the lease liabilities amounted to RMB343,879.70.

(3) In 2022, the total cash outflow of the Group's leases (including the short-term lease expenses under simplified accounting treatment) amounted to RMB465,673,498.04.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

16. Intangible assets

(1) Intangible assets

Item	Land use rights	Computer software	Patent rights	Non-patented technology	Sea area use right	Others	Total
2022							
I. Original carrying value							
1. Opening balance	4,317,477,680.49	2,496,257,496.16	1,164,482,899.42	718,367,945.89	263,676,952.00	88,114,126.18	9,048,377,100.14
2. Additions during the year	256,387,257.74	192,557,863.79	741,629.70	176,495,180.26	-	-	626,181,931.49
(1) Acquisition	224,111,689.82	48,018,416.32	-	-	-	-	272,130,106.14
(2) Transfer from construction in progress	-	48,678,076.71	721,160.13	2,027,331.60	-	-	51,426,568.44
(3) Transfer from development cost	-	77,818,551.90	20,469.57	174,467,848.66	-	-	252,306,870.13
(4) Exchange differences arising on translation of financial statements	32,275,567.92	18,042,818.86	-	-	-	-	50,318,386.78
3. Deductions during the year	30,456,301.24	33,033,485.06	-	-	-	-	63,489,786.30
(1) Disposal or retirement	30,456,301.24	33,033,485.06	-	-	-	-	63,489,786.30
4. Reclassification	-	-	26,101,205.97	(26,101,205.97)	-	-	-
5. Closing balance	4,543,408,636.99	2,655,781,874.89	1,191,325,735.09	868,761,920.18	263,676,952.00	88,114,126.18	9,611,069,245.33
II. Accumulated amortization							
1. Opening balance	1,109,767,046.60	1,868,357,416.48	458,076,946.92	335,547,936.69	34,722,078.06	39,074,552.80	3,845,545,977.55
2. Additions during the year	128,626,736.69	275,395,984.42	111,375,384.59	66,119,110.23	6,328,195.24	1,712,506.92	589,557,918.09
(1) Provisions	104,054,437.32	257,703,417.77	111,375,384.59	66,119,110.23	6,328,195.24	1,712,506.92	547,293,052.07
(2) Exchange differences arising on translation of financial statements	24,572,299.37	17,692,566.65	-	-	-	-	42,264,866.02
3. Deductions during the year	2,182,701.62	27,172,254.90	-	-	-	-	29,354,956.52
(1) Disposal or retirement	2,182,701.62	27,172,254.90	-	-	-	-	29,354,956.52
4. Reclassification	-	-	3,269,508.52	(3,269,508.52)	-	-	-
5. Closing balance	1,236,211,081.67	2,116,581,146.00	572,721,840.03	398,397,538.40	41,050,273.30	40,787,059.72	4,405,748,939.12
III. Impairment provisions							
1. Opening balance	-	-	-	-	-	-	-
2. Additions during the year	-	-	-	-	-	-	-
3. Deductions during the year	-	-	-	-	-	-	-
4. Closing balance	-	-	-	-	-	-	-
IV. Carrying value							
1. Closing balance	3,307,197,555.32	539,200,728.89	618,603,895.06	470,364,381.78	222,626,678.70	47,327,066.46	5,205,320,306.21
2. Opening balance	3,207,710,633.89	627,900,079.68	706,405,952.50	382,820,009.20	228,954,873.94	49,039,573.38	5,202,831,122.59

As at December 31, 2022 and December 31, 2021, the Group's intangible assets from internal R&D accounted for 25.08% and 23.85% of the carrying value of intangible assets, respectively.

(2) Right-of-use assets without proper title certificates

As at December 31, 2022 and December 31, 2021, the Group had no right-of-use assets without proper title certificates.

17. Development cost

Item	January 1, 2022	Additions during the year	Deductions during the year		December 31, 2022
			Transfer to intangible asset during the year	Transfer to profit or loss during the year	
AP1000	442,650,755.90	7,256,828.25	-	-	449,907,584.15
HPR/ACPR 1000	205,632,316.26	195,264,577.92	35,786,481.76	-	365,110,412.42
Others	2,927,138,114.50	1,780,223,343.99	216,520,388.37	274,771,661.78	4,216,069,408.34
Total	3,575,421,186.66	1,982,744,750.16	252,306,870.13	274,771,661.78	5,031,087,404.91

18. Goodwill

Item	January 1, 2022 and December 31, 2022
Original carrying value	
China Daya Bay Nuclear Power Technology Research Institute Co., Ltd. (中國大亞灣核電技術研究院有限公司)	7,048,000.00
Ningde Nuclear	419,242,673.32
Subtotal	426,290,673.32
Impairment provision	
China Daya Bay Nuclear Power Technology Research Institute Co., Ltd.	7,048,000.00
Ningde Nuclear	-
Subtotal	7,048,000.00
Total	419,242,673.32

As at December 31, 2022, the Group assessed the recoverable amount of Ningde Nuclear's goodwill and determined that the Group's acquisition of Ningde Nuclear related goodwill had no impairment occurred.

The Group conducted impairment tests with Ningde Nuclear as a whole asset group. The recoverable amount of Ningde Nuclear was determined in accordance with the present value of its projected future cash flows. Its future cash flows were based on the financial budget approved by the management for the period from 2023 to 2056 and are discounted using a discount rate of 8.33%. Other key assumptions used in anticipation of future cash flows were: the estimated sales and gross profit based on the past performance of Ningde Nuclear and the expected market developments by the management. The management considered any reasonable change in the above assumptions will not result in the carrying value of the net assets of Ningde Nuclear being lower than its recoverable amount.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

19. Long-term deferred expenses

Item	January 1, 2022	Increase during the year	Amortization for the year	Exchange differences arising on translation of financial statements	December 31, 2022
Nuclear power production preparation staff training fee (Note 1)	1,069,756,385.36	82,512,510.74	1,049,435.71	–	1,151,219,460.39
Emergency passages (Note 2)	325,456,971.79	–	29,256,026.07	–	296,200,945.72
Others	132,231,075.33	2,271,425.38	19,529,928.70	1,214,947.06	116,187,519.07
Total	1,527,444,432.48	84,783,936.12	49,835,390.48	1,214,947.06	1,563,607,925.18

Note 1: The expenses incurred during the training of nuclear power production preparation staff shall be accounted as long-term deferred expenses of the Group, and shall be amortized according to the remaining working years as stipulated in the labor contract or training agreement from the conclusion of the training, and recognized in the cost of the related assets or profit or loss for the period.

Note 2: The emergency passages were constructed under funding by Ling'ao Nuclear, Lingdong Nuclear, Yangjiang Nuclear, Fangchenggang Nuclear and Ningde Nuclear. It was accounted as long-term deferred expenses by the Group, amortized based on the estimated useful life from the date of completion and recognized in cost of the related assets or the profit or loss for the period.

20. Deferred tax assets/deferred tax liabilities

(1) Deferred tax assets and deferred tax liabilities

Item	December 31, 2022		December 31, 2021	
	Deductible or taxable temporary differences	Deferred tax assets/liabilities	Deductible or taxable temporary differences	Deferred tax assets/liabilities
Deferred tax assets:				
Unrealized profit arising from internal transactions	8,713,019,061.00	2,178,254,765.25	8,492,048,631.72	2,123,012,157.93
Asset impairment provisions	833,034,181.66	134,034,248.58	842,548,833.09	133,250,769.14
Deferred income	406,518,310.01	61,122,576.50	404,089,185.88	60,613,377.89
Bad debt provisions	328,924,523.37	50,048,150.33	191,260,724.49	29,766,186.87
Others	476,690,550.16	72,248,479.19	160,792,732.34	26,406,314.23
Subtotal	10,758,186,626.20	2,495,708,219.85	10,090,740,107.52	2,373,048,806.06
Offsetting amount	(586,588,457.99)	(87,988,268.70)	(407,447,119.41)	(61,117,067.92)
Offsetting balance	10,171,598,168.21	2,407,719,951.15	9,683,292,988.11	2,311,931,738.14
Deferred tax liabilities:				
Depreciation of fixed assets	5,305,656,492.02	1,326,390,612.00	4,661,648,394.04	1,165,412,098.58
Revaluation gain of assets for business combinations involving entities not under common control	508,353,511.52	127,088,377.88	533,711,716.88	133,427,929.22
Others	155,962,864.84	23,394,429.73	208,191,808.54	31,228,771.28
Subtotal	5,969,972,868.38	1,476,873,419.61	5,403,551,919.46	1,330,068,799.08
Offsetting amount	(586,588,457.99)	(87,988,268.70)	(407,447,119.41)	(61,117,067.92)
Offsetting balance	5,383,384,410.39	1,388,885,150.91	4,996,104,800.05	1,268,951,731.16

(2) Unrecognized deferred tax assets

Item	December 31, 2022	December 31, 2021
Deductible temporary differences	478,919,691.67	212,092,251.97
Deductible losses	6,967,719,686.28	4,527,053,611.93
Total	7,446,639,377.95	4,739,145,863.90

Note: As it is uncertain for the Company and certain subsidiaries to obtain sufficient taxable income in the future, the above deductible temporary differences and deductible losses are not recognized as deferred tax assets.

(3) Maturity of deductible losses that are not recognized as deferred tax assets

Year	December 31, 2022	December 31, 2021
2022	–	78,148,961.20
2023	214,235,794.11	214,235,794.11
2024	1,137,311,404.62	1,137,311,404.62
2025	887,587,362.62	887,587,362.62
2026	1,599,861,571.65	2,209,770,089.38
2027	3,128,723,553.28	–
Total	6,967,719,686.28	4,527,053,611.93

21. Other non-current assets

Item	December 31, 2022	December 31, 2021
VAT input tax credit	4,425,769,418.59	4,094,617,209.36
Prepayment for engineering equipment	2,696,325,481.69	3,136,894,190.45
Others	199,928,346.12	123,866,868.42
Total	7,322,023,246.40	7,355,378,268.23

22. Short-term loans

(1) Short-term loans by category

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

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

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

23. Bills payable

(1) Bills payable by category

Item	December 31, 2022	December 31, 2021
Bank acceptance bills	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.

24. Accounts payable

(1) Accounts payable by aging

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.

(2) Significant accounts payable with aging of over 1 year

December 31, 2022

Name of creditors	Amount	Reason for outstanding or not transfer
Mingyang Smart Energy Group., Ltd. (明陽智慧能源集團股份公司)	1,188,831,941.04	Not yet settled
CCCC Third Harbor Engineering Co., Ltd.	257,689,885.31	Not yet settled
Zhongtian Technology Submarine Cable Co., Ltd. (中天科技海纜股份有限公司)	208,777,388.40	Not yet settled
China Construction Eighth Engineering Division Corp., Ltd.	125,021,099.29	Not yet settled
Zhejiang Hongwei Supply Chain Group Co., Ltd. (浙江宏偉供應鏈集團股份有限公司)	120,962,598.50	Not yet settled
Total	1,901,282,912.54	

25. Receipt in advance

Item	December 31, 2022	December 31, 2021
Lease rent received in advance	450,000.00	–

26. Contract liabilities

(1) Contract liabilities

Item	December 31, 2022	December 31, 2021
Settled payments of uncompleted construction, installation and design service contracts	2,643,370,071.45	4,061,736,430.35
Payments of sales, technical services and construction, installation and design services received in advance	70,136,224.95	63,036,530.25
Total	2,713,506,296.40	4,124,772,960.60

(2) Qualitative analysis of contract liabilities

The contract liabilities associated with the construction, installation and design service contracts are the balances generated when a specific milestone payment exceeds the revenue recognized as a result of the performance. The related revenue will be recognized after the Group fulfills the performance obligations.

For revenue on goods sold, it is recognized when the control right of the product is transferred to the customer. When the customer purchases a product and prepays to the Group, the Group recognizes the transaction price received as the contract liabilities until the control right of the product is transferred to the customer.

Revenue generated from rendering of services is recognized over a period of time. The Group recognizes the contract liabilities when it initially receives the service payment and transfers it to revenue during the service period.

27. Employee benefits payable

(1) Employee benefits payable

Item	January 1, 2022	Increase during the year	Decrease during the year	December 31, 2022
I. Short-term employee benefits payable	51,042,781.07	9,888,945,001.79	9,888,809,491.59	51,178,291.27
II. Post-employment benefits – defined contribution plan	4,806,600.60	1,238,876,315.30	1,237,571,548.44	6,111,367.46
III. Dismissal benefits	–	932,095.94	932,095.94	–
Total	55,849,381.67	11,128,753,413.03	11,127,313,135.97	57,289,658.73

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Short-term employee benefits

Item	January 1, 2022	Increase during the year	Decrease during the year	December 31, 2022
1. Salaries, bonuses, allowances and subsidies	–	7,403,110,253.72	7,403,110,253.72	–
2. Staff welfare	–	931,577,908.05	931,577,908.05	–
3. Social insurance premiums	1,367,294.41	610,888,654.81	610,381,016.91	1,874,932.31
Including: Medical insurance	1,089,419.77	574,698,064.95	574,310,749.97	1,476,734.75
Work-related injury insurance	153,809.67	16,521,252.84	16,514,916.57	160,145.94
Maternity insurance	124,064.97	19,531,962.74	19,417,976.09	238,051.62
Others	–	137,374.28	137,374.28	–
4. Housing provident funds	–	604,322,603.71	604,013,838.11	308,765.60
5. Labor union expenditures and employees' education expenses	49,508,718.86	219,603,415.63	221,344,500.56	47,767,633.93
6. Other short-term employee benefits	166,767.80	119,442,165.87	118,381,974.24	1,226,959.43
Total	51,042,781.07	9,888,945,001.79	9,888,809,491.59	51,178,291.27

(3) Post-employment benefits – defined contribution plan

Item	January 1, 2022	Increase during the year	Decrease during the year	December 31, 2022
1. Basic pension insurance	4,672,168.57	661,963,273.71	660,669,823.03	5,965,619.25
2. Unemployment insurance	97,814.46	7,930,802.04	7,929,985.78	98,630.72
3. Corporate annuity contribution	36,617.57	568,982,239.55	568,971,739.63	47,117.49
Total	4,806,600.60	1,238,876,315.30	1,237,571,548.44	6,111,367.46

The Group participates in pension insurance and unemployment insurance schemes established by the government as required, pursuant to which, the Group contributes a stipulated proportion to pension insurance and unemployment insurance schemes respectively. In addition, according to the Group's corporate annuity management system, the Group is required to pay the corporate annuity contribution which is a fixed proportion to the Company's annual salary standard of previous year. Other than the above, the Group has no further payment responsibility. The corresponding expenses are recognized in profit or loss for the period or the cost of related assets when incurred.

28. Taxes payable

Item	December 31, 2022	December 31, 2021
Enterprise income tax	1,357,452,823.33	913,501,246.87
VAT	496,934,427.17	402,748,479.74
Individual income tax	159,700,012.09	171,189,620.43
Urban maintenance and construction tax	39,681,512.11	27,911,764.71
Education surcharges	28,386,324.97	19,983,479.51
Real estate tax	4,407,101.14	18,302,682.33
Duty stamp	6,545,277.72	2,765,022.45
Others	6,179,746.39	4,618,276.21
Total	2,099,287,224.92	1,561,020,572.25

29. Other payables

Item	December 31, 2022	December 31, 2021
Dividends payable	1,138,782,200.00	808,784,268.88
Other payables	5,617,800,782.51	3,266,825,676.73
Total	6,756,582,982.51	4,075,609,945.61

(1) Dividends payable

Name of entity	December 31, 2022	December 31, 2021
CGN Fund Phase I	730,782,200.00	–
Guangdong Energy Group Co., Ltd. (廣東省能源集團有限公司)	204,000,000.00	–
CLP Nuclear Power (Yangjiang) Limited	204,000,000.00	–
Guangdong Electric Power Design Institute of China Energy Engineering Group	–	11,821,768.88
Hong Kong Nuclear Investment Co. Ltd. (香港核電投資有限公司) ("HKNIC")	–	796,962,500.00
Total	1,138,782,200.00	808,784,268.88

Note: As at December 31, 2022, the Group had no dividends payable for more than 1 year (December 31, 2021: RMB9,053,293.01).

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Other payables

(a) Other payables by nature

Item	December 31, 2022	December 31, 2021
Spent fuel management fund	3,293,349,544.70	2,834,282,109.53
Related party payments	1,805,635,936.72	75,482,458.34
Others	518,815,301.09	357,061,108.86
Total	5,617,800,782.51	3,266,825,676.73

(b) Other payables aged over one year with significant amount

Item	December 31, 2022	December 31, 2021	Reason for outstanding or not transfer
CGNPC	42,029,242.20	40,685,596.75	Not yet settled

30. Non-current liabilities due within one year

Item	December 31, 2022	December 31, 2021
Long-term loans due within one year (Note (V) 32)	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 (Note (V) 33)	3,996,403,438.97	4,999,104,783.84
Bonds payable interests payable	172,034,716.01	185,604,014.72
Post-employment benefit scheme liabilities due within one year (Note (V) 35)	4,065,909.85	4,356,233.28
Lease liabilities due within one year (Note (V) 34)	281,454,453.09	273,933,299.02
Total	21,370,443,527.73	22,719,658,250.53

31. Other current liabilities

Item	December 31, 2022	December 31, 2021
Short-term bonds payable (1)	2,814,282,739.72	5,246,547,452.05
Pending output tax	328,181,084.68	794,310,094.05
Total	3,142,463,824.40	6,040,857,546.10

(1) Changes in short-term bonds payable:

Name of bonds	Face value	Issue date	Term	Issue amount	Opening balance	Issue during the year	Accrued interest based on the face value	Amortization of premiums or discounts	Repayment during the year	Closing balance
21 CGN Power SCP002	1,000,000,000.00	June 8, 2021	220 days	1,000,000,000.00	1,013,724,383.56	-	861,917.81	-	1,014,586,301.37	-
21 CGN Power SCP003	2,000,000,000.00	July 6, 2021	248 days	2,000,000,000.00	2,024,618,630.13	-	9,489,863.01	-	2,034,108,493.14	-
21 CGN Power SCP005	1,200,000,000.00	September 15, 2021	120 days	1,200,000,000.00	1,207,882,520.55	-	875,835.62	-	1,208,758,356.17	-
21 CGN Power GN001	1,000,000,000.00	December 27, 2021	120 days	1,000,000,000.00	1,000,321,917.81	-	7,404,109.59	-	1,007,726,027.40	-
22 CGN Power SCP001	1,000,000,000.00	January 11, 2022	90 days	1,000,000,000.00	-	1,000,000,000.00	5,276,712.33	-	1,005,276,712.33	-
22 CGN Power SCP002	1,000,000,000.00	March 4, 2022	120 days	1,000,000,000.00	-	1,000,000,000.00	6,772,602.74	-	1,006,772,602.74	-
22 CGN Power SCP003	1,600,000,000.00	April 19, 2022	120 days	1,600,000,000.00	-	1,600,000,000.00	10,520,547.95	-	1,610,520,547.95	-
22 CGN Power SCP004	1,000,000,000.00	June 14, 2022	149 days	1,000,000,000.00	-	1,000,000,000.00	8,164,383.56	-	1,008,164,383.56	-
22 CGN Power SCP005	1,000,000,000.00	June 30, 2022	252 days	1,000,000,000.00	-	1,000,000,000.00	9,578,082.19	-	-	1,009,578,082.19
22 CGN Power SCP006	1,800,000,000.00	November 8, 2022	270 days	1,800,000,000.00	-	1,800,000,000.00	4,704,657.53	-	-	1,804,704,657.53
Total	12,600,000,000.00			12,600,000,000.00	5,246,547,452.05	7,400,000,000.00	63,648,712.33	-	9,895,913,424.66	2,814,282,739.72

32. Long-term loans

(1) Long-term loans by category

Item	December 31, 2022	December 31, 2021
Credit loans	49,937,703,288.16	28,492,720,834.55
Guaranteed loans (Note 1)	-	3,000,000,000.00
Pledged loans (Note 2)	126,587,969,848.03	140,448,785,905.69
Secured loans (Note 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 for classification of long-term loans:

Note 1: In August 2012, 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) pursuant to which Taiping Asset Management Co., Ltd. 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 Management Co., Ltd. As at December 31, 2022, the loan had been fully repaid.

Note 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 Investment and the Company pledged the equity of Taishan Nuclear to obtain the long-term loans, and GNIC, the Company and CGN Nuclear Power Investment Co., Ltd. pledged the equity of Lingdong Nuclear to obtain the long-term loans. For details of other pledges of the aforesaid pledged loans of the Group, please refer to Note (V) 63.

Note 3: Secured loans are secured by the Company's subsidiaries Lingdong Nuclear and CGN Engineering with equipment. For details, please refer to Note (V) 63.

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

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

33. Bonds payable

(1) Bonds payable

Category	December 31, 2022	December 31, 2021
Long-term bonds (Note 1)	–	2,000,000,000.00
Medium-term bonds (Note 2)	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 1: The Group issued 07 CGN Debt on December 20, 2007 with a nominal value amounting to RMB2,000,000,000.00, which was due and repaid in December 2022.

Note 2: 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.

(2) Changes in bonds payable

2022

Name of bonds	Face value	Issue date	Term	Issue amount	January 1, 2022	Accrued				December 31, 2022
						Issue during the year	interest based on the face value	Amortization of premiums or discounts	Repayment during the year	
07 CGN Debt	2,000,000,000.00	December 20, 2007	15 years	2,000,000,000.00	2,000,000,000.00	–	114,120,547.94	–	2,000,000,000.00	–
19 CGN Power MTN001	1,500,000,000.00	January 18, 2019	3 years	1,500,000,000.00	1,499,678,029.67	–	2,876,712.33	321,970.33	1,500,000,000.00	–
19 CGN Power MTN002	1,500,000,000.00	July 22, 2019	3 years	1,500,000,000.00	1,499,084,986.55	–	29,761,643.84	915,013.45	1,500,000,000.00	–
20 CGN Power MTN001	2,500,000,000.00	August 24, 2020	3 years	2,500,000,000.00	2,495,675,925.13	–	90,500,000.00	2,827,172.73	–	2,498,503,097.86
21 CGN Power MTN001	2,000,000,000.00	April 12, 2021	3 years	2,000,000,000.00	1,995,245,782.85	–	69,800,000.00	2,302,404.86	–	1,997,548,187.71
21 CGN Power MTN002	1,500,000,000.00	June 15, 2021	2 years	1,500,000,000.00	1,497,461,627.53	–	49,350,000.00	438,713.58	–	1,497,900,341.11
22 CGN Power MTN001	2,500,000,000.00	February 21, 2022	3 years	2,500,000,000.00	–	2,492,500,000.00	63,015,068.49	2,018,545.81	–	2,494,518,545.81
Total	13,500,000,000.00			13,500,000,000.00	10,987,146,351.73	2,492,500,000.00	419,423,972.60	8,823,820.76	5,000,000,000.00	8,488,470,172.49
Less: Bonds payable due within one year					4,999,104,783.84					3,996,403,438.97
Bonds payable due after one year					5,988,041,567.89					4,492,066,733.52

34. Lease liabilities

(1) Lease liabilities

Item	December 31, 2022	December 31, 2021
Lease liabilities	932,745,917.70	966,106,149.29
Less: Lease liabilities due within one year	281,454,453.09	273,933,299.02
Lease liabilities due after one year	651,291,464.61	692,172,850.27

(2) Term of lease liabilities

Item	December 31, 2022	December 31, 2021
Within 1 year	281,454,453.09	273,933,299.02
1 to 2 years (including 2 years)	201,638,270.87	302,013,007.16
2 to 5 years (including 5 years)	168,098,840.14	161,369,322.94
More than 5 years	281,554,353.60	228,790,520.17
Total	932,745,917.70	966,106,149.29

35. Long-term employee benefits payable

(1) Long-term employee benefits payable

Item	December 31, 2022	December 31, 2021
Post-employment benefits – net liabilities of defined benefit plan	48,835,909.85	57,011,233.28
Cash-settled share-based payment	16,013,521.25	142,778,077.84
Total	64,849,431.10	199,789,311.12
Less: Liabilities of post-employment benefits due within one year	4,065,909.85	4,356,233.28
Net amount	60,783,521.25	195,433,077.84

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Changes in defined benefit plan

The present value of obligations under the defined benefit plan:

Item	2022
I. Opening balance	57,011,233.28
II. Defined benefit cost included in profit or loss	(1,969,000.00)
1. Past service cost	(3,622,000.00)
2. Net interest	1,653,000.00
III. Defined benefit cost included in other comprehensive income	(1,840,000.00)
1. Actuarial gains	(1,840,000.00)
IV. Other changes	(4,366,323.43)
1. Paid benefits	(4,366,323.43)
V. Closing balance	48,835,909.85

The Group applies the following discount rate and growth rate actuarial assumptions for the above results of the defined benefit plan:

Item	2022	2021
Discount rate		
Discharge benefit plan	2.47%	2.54%
Retirement benefit plan	2.86%	2.81%
Growth rate		
Discharge benefit plan	2.10%	2.00%
Retirement benefit plan	2.60%	2.60%

The defined benefit plan usually exposes the Group to interest rate risk and longevity risk:

Interest rate risk: Rising discount rate will lead to a reduction in planned liabilities;

Longevity risk: As at December 31, 2022 and December 31, 2021, the life table used in the defined benefit plan is the experience life table of the pension business in China's life insurance industry (CL (2010-2013)).

Other explanation:

The Group provides supplementary retirement benefit plans for some resigned and retired employees. According to the plan, the supplementary retirement benefits paid by the Group include nursing recuperation fees, holiday fees, travel expenses, medical examination and vaccination fees and annually paid supplementary medical insurance in accordance with policies, and the benefits will be paid until their death.

The Group engaged China Life Pension Company Limited to estimate the present value of the retirement benefit plan obligations above in an actuarial manner based on the expected cumulative welfare unit method. The plan estimates future cash outflows based on inflation and mortality assumptions and determines its present value at a discount rate. The discount rate is determined according to the government bond market yield rate corresponding to the planned duration on the balance sheet date and the evaluation date of the defined benefit plan obligation and currency. The Group recognizes its liabilities based on the actuarial results. The relevant actuarial gains or losses are recognized in other comprehensive income and will not be reversed to profit or loss in subsequent accounting periods. Past service costs are recognized through profit or loss for the current period in which the plan is revised. The net interest is determined by multiplying the defined benefit plan net liabilities or net assets by the appropriate discount rate.

36. Provisions

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

Note 1: It is the discounted value of the best estimate of the expected cost of NPPs decommissioning of the Group.

Note 2: It is the best estimate of the expected disposal cost of low and medium level radioactive waste generated by NPPs

37. Deferred income

Item	January 1, 2022	Increase during the year	Amortization amount of the year	Exchange differences arising on translation of financial statements	December 31, 2022
Government grants	2,361,217,837.38	120,975,359.47	(191,361,975.53)	34,525,280.34	2,325,356,501.66

(1) Items related to government grants

Item	January 1, 2022	Increase in grants during the year	Amount recognized in other gains for the year	Exchange differences arising on translation of financial statements	December 31, 2022
Government grants related to asset	1,862,293,390.98	116,183,782.67	(126,196,077.69)	34,525,280.34	1,886,806,376.30
Government grants related to income	498,924,446.40	4,791,576.80	(65,165,897.84)	-	438,550,125.36
Total	2,361,217,837.38	120,975,359.47	(191,361,975.53)	34,525,280.34	2,325,356,501.66

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Details

Item	January 1, 2022	Increase in grants during the year	Amount recognized in other gains for the year	Exchange differences arising on translation of financial statements	December 31, 2022	Related to asset/ related to income
CGN Engineering Project 1	54,930,000.00	-	(5,493,000.00)	-	49,437,000.00	Related to asset
CNPRI Project 1	74,620,000.00	-	-	-	74,620,000.00	Related to asset
CNPRI Project 2	5,943,000.00	-	(5,943,000.00)	-	-	Related to asset
GNPJVC Project 1	362,259,441.26	38,600,000.00	(36,125,114.50)	34,525,280.34	399,259,607.10	Related to asset
CNPRI Project 3	62,427,800.00	-	-	-	62,427,800.00	Related to asset
CNPRI Project 4	46,970,000.00	-	-	-	46,970,000.00	Related to asset
Taishan Nuclear Project 1	68,346,565.87	-	(1,640,444.42)	-	66,706,121.45	Related to asset
CNPRI Project 5	39,407,933.34	-	(10,061,600.00)	-	29,346,333.34	Related to asset
CNPRI Project 6	329,905,000.00	14,245,000.00	-	-	344,150,000.00	Related to asset
CNPRI Project 7	271,520,000.00	-	-	-	271,520,000.00	Related to asset
CGN Engineering Project 2	212,615,000.00	8,285,000.00	-	-	220,900,000.00	Related to asset
Other government grants related to income	498,924,446.40	4,791,576.80	(65,165,897.84)	-	438,550,125.36	Related to income
Other government grants related to assets	333,348,650.51	55,053,782.67	(66,932,918.77)	-	321,469,514.41	Related to asset
Total	2,361,217,837.38	120,975,359.47	(191,361,975.53)	34,525,280.34	2,325,356,501.66	

38. Share capital

	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.

39. Capital reserve

Item	January 1, 2022	Increase during the year	December 31, 2022
Share premium	32,850,594,313.25	–	32,850,594,313.25
– Share capital contributed by owners	36,594,105,123.18	–	36,594,105,123.18
– Business combination involving entities under common control	(4,009,274,475.26)	–	(4,009,274,475.26)
– Others	265,763,665.33	–	265,763,665.33
Restructuring valuation adjustment	(27,701,479,836.62)	–	(27,701,479,836.62)
Other capital reserve	5,641,298,849.00	17,397,497.50	5,658,696,346.50
Total	10,790,413,325.63	17,397,497.50	10,807,810,823.13

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

40. Other comprehensive income

Item	Balance as at January 1, 2022	Incurred amount before income tax for the year	Amount incurred for the year		Attributable to minority shareholders, after-tax	Balance as at December 31, 2022
			Less: Income tax expenses	Attributable to the shareholders of the parent company, after-tax		
I. Other comprehensive income that will not be reclassified to profit or loss	157,381,367.97	(43,780,783.58)	(7,834,341.56)	(36,069,692.02)	123,250.00	121,311,675.95
1. Change arising from remeasurement of defined benefit plan	(11,555,691.11)	1,840,000.00	-	1,716,750.00	123,250.00	(9,838,941.11)
2. Other comprehensive income that cannot be transferred to profit or loss under the equity method	(8,025,978.18)	6,608,160.12	-	6,608,160.12	-	(1,417,818.06)
3. Change in fair value of investment in other equity instruments	176,963,037.26	(52,228,943.70)	(7,834,341.56)	(44,394,602.14)	-	132,568,435.12
II. Other comprehensive income that may be reclassified to profit or loss	188,100,698.84	576,467,210.84	-	432,350,408.13	144,116,802.71	620,451,106.97
1. Other comprehensive income that can be transferred to profit or loss under the equity method	(1,833,294.26)	-	-	-	-	(1,833,294.26)
2. Translation differences arising from translation of foreign currency financial statements	189,933,993.10	576,467,210.84	-	432,350,408.13	144,116,802.71	622,284,401.23
Total other comprehensive income	345,482,066.81	532,686,427.26	(7,834,341.56)	396,280,716.11	144,240,052.71	741,762,782.92

41. Specific reserve

Item	January 1, 2022	Increase during the year	Decrease during the year	December 31, 2022
Safe production expenses	249,371,452.84	355,097,905.50	404,329,924.95	200,139,433.39

Note: During the year, pursuant to the Administrative Measures for the Collection and Utilization of Enterprise Work Safety Funds (Cai Zi [2022] No. 136) (財資[2022]136號《企業安全生產費用提取和使用管理辦法》) jointly published by the Ministry of Finance and the Ministry of Emergency Management on November 21, 2022, CGN Engineering, Taishan Nuclear, GNPJVC, Ling'ao Nuclear, Lingdong Nuclear, Ningde Nuclear, Yangjiang Nuclear and Fangchenggang Nuclear provided for safe production expenses which were recognized in the cost of relevant products or profit or loss and included in specific reserve.

42. Surplus reserve

Item	January 1, 2022 (Restated)	Transfer to surplus reserve during the year	Decrease during the year	December 31, 2022
Statutory surplus reserves	4,901,787,799.63	838,642,353.07	–	5,740,430,152.70

43. Retained earnings

Item	2022	2021 (Restated)
Retained earnings at the beginning of the year	34,156,472,714.58	28,989,865,085.43
Add: Net profit attributable to shareholders of the parent company for the year	9,964,854,412.04	9,764,174,706.56
Less: Appropriation of statutory surplus reserves	838,642,353.07	555,162,980.10
Distributable profits for shareholders	43,282,684,773.55	38,198,876,811.89
Less: Profits payable (Note 1)	4,243,773,173.32	4,042,404,097.31
Retained earnings at the end of the year (Note 2)	39,038,911,600.23	34,156,472,714.58

Note 1: On May 27, 2022, a profit distribution plan was considered and approved at the general meeting of the Company, which proposed to distribute cash dividends of RMB0.084 (tax inclusive) per share based on total shares of 50,498,611,100 shares to all shareholders in order to distribute cash dividends from the accumulated retained earnings for 2021 of equivalent to RMB4,243,773,173.32 to shareholders. As at December 31, 2022, the dividends above were paid.

Note 2: As at December 31, 2022 and December 31, 2021, the balance of retained earnings of the Group included the surplus reserves used by subsidiaries which were RMB10,165,529,587.81 and RMB9,332,928,660.74, respectively

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

44. Operating revenue and operating costs

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	22,697,431,207.82	22,490,541,370.22	19,948,726,923.03	19,586,469,639.46
services 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

- (1) For the details of operating revenue, please refer to Note (XIV) 1 (2).
- (2) As at December 31, 2022, the transaction price attributable to outstanding (or partially outstanding) performance obligation and the estimated time of revenue recognition:

Item	2023	2024	2025	After January 1,	
				2026	Total
Construction, installation and design services	14,153,281,034.58	12,564,437,250.76	14,685,156,084.87	1,850,498,975.71	43,253,373,345.92
Rendering of services	275,114,381.25	226,896,362.50	244,776,362.50	1,482,330,393.75	2,229,117,500.00
Sales of goods and others	424,610,717.56	196,572,312.92	121,633,500.59	109,932,554.83	852,749,085.90
Total	14,853,006,133.39	12,987,905,926.18	15,051,565,947.96	3,442,761,924.29	46,335,239,931.82

- (3) As at December 31, 2022, there was no significant variable consideration in the transaction price of the Group.

45. Taxes and surcharges

Item	2022	2021
City maintenance and construction tax	355,116,988.64	244,104,991.29
Education surcharges	253,732,387.57	174,547,031.69
Real estate tax	145,019,237.33	141,773,380.69
Stamp duty	44,145,917.72	42,852,885.70
Others	8,011,332.62	6,967,338.82
Total	806,025,863.88	610,245,628.19

46. Selling expenses

Item	2022	2021
Employees' remuneration	31,726,607.50	56,498,912.63
Others	15,622,424.68	22,495,291.59
Total	47,349,032.18	78,994,204.22

47. Administrative expenses

Item	2022	2021
Employees' remuneration	1,209,702,982.60	1,285,792,652.49
Depreciation and amortization	528,582,732.43	417,495,396.58
Information technology expenses	202,548,825.80	195,758,886.20
Logistics service expenses	130,493,034.49	141,427,398.36
Labor technical service fees	161,920,841.03	150,058,037.29
Professional service consulting fees	9,191,142.47	12,109,480.87
Office expenses	28,469,808.60	29,793,694.12
Travelling expenses	14,104,234.16	19,740,375.09
Rental expenses	3,321,294.11	9,696,070.44
Other expenses	131,432,124.51	164,159,556.52
Total	2,419,767,020.20	2,426,031,547.96

48. R&D expenses

Item	2022	2021
Commissioning fees paid for R&D outsourcing, cooperation and others	901,414,648.29	848,762,696.09
Employees' remuneration	546,450,967.78	439,894,395.98
Inspection expenses	96,448,358.77	150,503,974.48
Depreciation and amortization	188,783,674.73	145,421,292.13
Others	136,693,693.78	168,452,880.14
Total	1,869,791,343.35	1,753,035,238.82

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

49. Finance costs

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 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

50. Other gains

Item	2022	Including: Amount included in non-recurring gains and losses	2021	Including: Amount included in non-recurring gains and losses
VAT 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 refunds received by the Group's subsidiaries that satisfied the preferential VAT "levy first, refund later" policy, the Group adopted the "levy first, refund later" policy for VAT in respect of its sale of electricity to grid companies generated by Lingdong Nuclear, Yangjiang Nuclear, Ningde Nuclear, Fangchenggang Nuclear and Taishan Nuclear. For details, please see Note (IV) 2.

51. Investment income

Details of investment income

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

52. Gains/(losses) arising from changes in fair value

Item	2022	2021
Gains/(losses) from changes in fair value of cash-settled share-based payments	55,548,413.93	(103,245,506.73)

53. Losses from credit impairment

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)

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

54. Asset impairment losses

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)

55. Gains arising from disposal of assets

Item	2022	2021
Gains from early termination of leases	1,866,127.18	–
Gains from disposal of fixed assets	4,363,460.23	78,676.45
Total	6,229,587.41	78,676.45

56. Non-operating income

Item	2022	Including: Amount included in non-recurring gains and losses	2021	Including: Amount included in non-recurring gains and losses
Others	23,802,356.82	23,802,356.82	47,254,111.21	47,254,111.21

57. Non-operating expenses

Item	2022	Including: Amount included in non-recurring gains and losses	2021	Including: Amount included in non-recurring gains and losses
Donations	40,375,792.28	40,375,792.28	30,409,971.13	30,409,971.13
Others	128,865,979.34	128,865,979.34	204,393,011.65	204,393,011.65
Total	169,241,771.62	169,241,771.62	234,802,982.78	234,802,982.78

58. Income tax expenses

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

(1) Reconciliation of income tax expenses to accounting profits

Item	For the period from January 1, to December 31, 2022	For the period from January 1, to December 31, 2021 (Restated)
Accounting profits	18,699,175,021.10	18,165,985,817.29
Income tax calculated at tax rate of 25%	4,674,793,755.28	4,541,496,454.32
Adjustment of income tax in previous years	112,075,046.96	(46,877,886.55)
Tax effect of non-taxable income	(292,307,346.35)	(439,584,944.01)
Tax effect of non-deductible expenses	98,874,673.45	64,265,962.03
Tax effect of utilization of unrecognized deductible losses and deductible temporary differences in previous years	(2,907,793.29)	(205,558.76)
Tax effect of unrecognized deductible losses and deductible temporary differences	851,795,541.54	571,255,774.27
The effect of the inconsistency between income tax rate applicable to the current period and the income tax rate when measuring the deferred income tax	(4,093,431.32)	(5,240,035.98)
Tax effect of tax incentives	(1,411,873,733.48)	(1,740,320,638.64)
Tax effect of tax-free income	(400,088,920.42)	(354,997,387.38)
Additional deduction for R&D costs	(217,328,960.09)	(177,357,717.70)
Others	47,485,754.06	29,741,504.57
Income tax expenses	3,456,424,586.34	2,442,175,526.17

59. Calculation of basic earnings per share

(1) Basic earnings per share

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

	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.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

60. Government grants

As at December 31, 2022, except for government grants related to asset and income as disclosed in Note (V) 37, the summary of government grants of the Group included in profit or loss is as follows:

Government grants	2022	2021
VAT refunds	1,198,666,468.01	1,404,992,858.69
CGN Operations Project 1	1,402,600.00	17,119,400.00
CNPRI Project 8	1,500,000.00	13,500,000.00
CNPRI Project 9	–	10,000,000.00
SNPI Project 1	12,619,666.99	22,809,684.75
CGN Operations Project 2	27,603,894.69	–
Others	182,952,031.53	222,133,929.20
Total	1,424,744,661.22	1,690,555,872.64

61. Cash flow statements items

(1) Cash received from other operating activities

Item	2022	2021
Guarantee deposit and deposit	1,227,964,988.56	1,094,270,873.85
Service payments received from related parties and engineering payments received from related parties	245,696,773.30	20,286,846.16
Government grants related to asset	116,183,782.67	337,068,759.38
Government grants related to income	55,574,127.87	266,115,525.98
Bank settlement and interest	223,176,332.75	128,160,437.74
Liquidated damages, refunds and advances	10,777,822.70	16,807,330.87
Rental, consulting and other services income	108,871,525.52	125,926,790.30
Others	351,394,991.11	346,692,613.07
Total	2,339,640,344.48	2,335,329,177.35

(2) Cash paid to other operating activities

Item	2022	2021
Guarantee deposit and deposit	1,154,398,303.18	1,038,733,240.29
Service payments to related parties and engineering payments	847,059,751.99	1,236,718,255.83
Transportation and travelling expenses and other expenses reimbursement	114,706,579.82	102,869,424.21
Consulting and other services expenses	147,291,078.74	101,706,948.25
Remittance of other expenses and other reimbursements	292,787,238.12	241,754,754.53
Transportation service fees	95,629,432.79	83,161,310.57
Insurance	58,090,546.42	82,555,460.86
Others	335,471,998.12	349,700,433.70
Total	3,045,434,929.18	3,237,199,828.24

(3) Cash received from other investing activities

Item	2022	2021
Recovery of fixed deposits with maturities of more than three months	6,013,254,548.55	5,108,282,118.66
Others	15,345,874.34	62,154,404.96
Total	6,028,600,422.89	5,170,436,523.62

(4) Cash paid to other investing activities

Item	2022	2021
Deposit of fixed deposits with maturities of more than three months	8,687,692,896.87	5,994,766,631.66
Others	27,955,097.18	34,854,276.60
Total	8,715,647,994.05	6,029,620,908.26

(5) Cash received from other financing activities

Item	2022	2021
Security deposits for accounts of financing activities recovered	1,000,000.00	–
Lease deposit recovered	148,050.00	–
Total	1,148,050.00	–

(6) Cash paid to other financing activities

Item	2022	2021
Payment of cash related to leases	363,655,564.31	291,227,417.02
Others	16,159,150.41	29,686,264.68
Total	379,814,714.72	320,913,681.70

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

62. Supplementary information to cash flow statements

(1) Supplementary information to cash flow statements

Supplementary information	2022	2021 (Restated)
(a) Reconciliation of net profit to cash flows from operating activities:		
Net profit	15,242,750,434.76	15,723,810,291.12
Add: Losses from credit impairment	128,834,101.51	14,595,464.34
Asset impairment losses	22,401,046.89	148,094,089.05
Depreciation of fixed assets	9,842,572,712.93	10,563,168,804.59
Amortization of intangible assets	544,962,116.43	550,475,697.82
Amortization of long-term deferred expenses	39,440,313.68	68,601,430.89
Depreciation of investment properties	35,594,996.31	30,405,050.95
Depreciation of right-of-use assets	282,377,354.44	324,583,496.52
Gains on disposal of fixed assets, intangible assets and other long-term assets	(6,229,587.41)	(78,676.45)
Losses on retirement of fixed assets	53,045,100.11	28,894,471.49
(Gains)/losses from changes in fair value	(55,548,413.93)	103,245,506.73
Finance costs	6,761,661,547.31	6,480,334,079.73
Investment income	(1,677,126,744.30)	(1,406,776,939.36)
Increase in deferred tax assets	(95,788,213.01)	(134,772,544.13)
Increase in deferred tax liabilities	127,767,761.30	55,290,832.52
Decrease in contract assets	489,779,400.65	458,486,216.12
(Decrease)/increase in contract liabilities	(1,411,266,664.20)	893,734,299.15
Increase in inventories	(2,550,726,825.44)	(272,853,038.17)
Increase in operating receivables	(2,445,715,264.43)	(1,442,711,482.54)
Increase in operating payables	6,039,623,315.05	2,724,574,238.85
Net cash flows from operating activities	31,368,408,488.65	34,911,101,289.22
(b) Net changes in cash and cash equivalents:		
Closing balance of cash	7,557,603,552.58	11,571,839,016.11
Less: Opening balance of cash	11,571,839,016.11	8,719,143,941.04
Add: Closing balance of cash equivalents	–	–
Less: Opening balance of cash equivalents	–	–
Net (decrease)/increase in cash and cash equivalents	(4,014,235,463.53)	2,852,695,075.07

(2) Cash received for disposal of subsidiaries

Item	2022	2021
Cash or cash equivalents received in current year for disposal of subsidiaries	51,861,894.70	–
Including: China Nuclear Power (Beijing) Simulation Technology Corporation Ltd. (中廣核(北京)仿真技術有限公司)	51,861,894.70	–
Less: Cash and cash equivalents held by the subsidiaries at the date when control is lost	807,547.34	–
Including: China Nuclear Power (Beijing) Simulation Technology Corporation Ltd. (中廣核(北京)仿真技術有限公司)	807,547.34	–
Net cash received from disposal of subsidiaries	51,054,347.36	–

(3) Composition of cash and cash equivalents

Item	December 31, 2022	December 31, 2021
I. Cash	7,557,603,552.58	11,571,839,016.11
Including: Cash in hand	–	–
Bank deposits available on demand	7,557,603,552.58	11,571,839,016.11
II. Closing balance of cash and cash equivalents	7,557,603,552.58	11,571,839,016.11

63. Assets with restricted ownership or right of use

Item	December 31, 2022	December 31, 2021	Reason for being restricted
Cash at bank and in hand (Note 1)	150,949,683.76	104,522,396.62	Various deposits, land reclamation deposits, restricted and frozen deposits
Bills receivable (Note 2)	–	1,700,000,000.00	Pledge loans
Accounts receivable (Note 3)	5,193,334,677.55	4,718,303,237.18	Pledge loans
Fixed assets (Note 4)	11,549,994,868.20	13,711,711,339.65	Mortgage loans
Construction in progress (Note 5)	–	773,632,000.00	Mortgage loans
Intangible assets (Note 6)	–	332,617,289.40	Mortgage loans
Total	16,894,279,229.51	21,340,786,262.85	

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

- Note 1: The various deposits were for the bank deposits of the Group (as the supplier) according to the supply and purchase contract, the land reclamation deposits were deposited by the Lufeng Nuclear to fulfill the obligations for land reclamation as required by the government and the restricted and frozen deposits of CGN Engineering.
- Note 2: According to the transaction with interest paid by buyers entered into between Ningde Nuclear and Fujian Electric Grid Co., Ltd. (國網福建省電力有限公司), Ningde Nuclear discounts on the acceptance bills to the accepting bank in advance. If the bills remain unpaid by Fujian Electric Grid Co., Ltd. (國網福建省電力有限公司) when the bills become due, or if Ningde Nuclear fails to fulfill its obligations under the contract, the accepting bank has the right to recover from Ningde Nuclear the amount unpaid or advanced by the accepting bank for the bills, as well as the interest and related expenses during the delayed payment period. As at December 31, 2022, the discounted bills receivable of Ningde Nuclear that were not yet due as at the balance sheet date amounted to RMB0 (December 31, 2021: RMB1,700,000,000.00).
- Note 3: On August 22, 2005, Lingdong Nuclear entered into the Common Terms Agreement on Loans for Phase II of Guangdong Ling'ao NPP Construction Project with China Development Bank (the "CDB"), Agricultural Bank of China Shenzhen Branch and Industrial and Commercial Bank of China Shenzhen Branch, and acquired a total loan facility equivalent to USD2.585 billion from the banks for the construction of its phase II project, with a maturity period ranged from 15 to 22 years. Lingdong Nuclear transferred its interest in the insurance contract of the phase II of the NPP project to CDB, and pledged the collection rights to all electricity sales income in the electricity sales income collection account to CDB.
- On December 16, 2008, Yangjiang Nuclear entered into the Common Terms Agreement on Guangdong Yangjiang Nuclear Power Construction Project with six financial institutions including the CDB and the Bank of China. On August 21, 2018, the original agreement was changed to the Amended and Restated Common Terms Agreement on Guangdong Yangjiang Nuclear Power Construction Project. Yangjiang Nuclear obtained a total loan facility equivalent to RMB62.032 billion from the banks for its construction projects. The term of the loan shall not be 25 years from the date of signing the original agreement. Yangjiang Nuclear transferred its interests in the insurance contract and the general contracting contract of the Guangdong Yangjiang Nuclear Power Construction Project to CDB, and pledged the collection rights to accounts receivable under the electricity sales contract to CDB.
- Taishan Nuclear entered into the Common Terms Agreement on Phase I of Guangdong Taishan NPP Construction Project with seven financial institutions (syndicate) including the CDB and the Bank of China, and obtained a total loan facility of equivalent to not more than RMB57.2 billion from the aforementioned banks. The term of the loan shall not be more than 25 years from the date of signing the agreement, and the final maturity date will not be later than September 7, 2034. Taishan Nuclear transferred its interests in the insurance contract of the phase I of Guangdong Taishan NPP Construction Project to CDB, and pledged the collection rights to accounts receivable under the electricity sales contract to CDB.
- On July 29, 2010, pledging the electricity sales receivables of Fangchenggang Phase I Construction Project, Fangchenggang Nuclear entered into a series of syndicate agreements with various financial institutions including the CGN Finance (as the leader), China Construction Bank and CDB to obtain a comprehensive borrowing facility equivalent to RMB22.671 billion (equivalent to USD0.4 billion) in aggregate for the construction of its phase I project, with a term from the date of signing until September 29, 2031. In addition, Fangchenggang Nuclear pledged the electricity sales receivables from the phase II project and signed a series of syndicate agreements with various financial institutions including China Construction Bank (as the leader), CDB and Export-Import Bank on February 16, 2016, obtaining comprehensive borrowing facilities equivalent to RMB28.529 billion and equivalent to USD246 million in aggregate for the construction of its phase II project, with a term from the date of the first withdrawal to the 25th anniversary after the date of the first withdrawal.
- On April 18, 2008, pledging the collection rights to electricity sales receivables under the future power sales agreement of Ningde Phase I Construction Project, the interest in construction entrustment contract and the interest in the construction insurance, Ningde Nuclear signed the Common Terms Agreement with four financial institutions including Industrial and Commercial Bank of China to obtain a borrowing equivalent to RMB39.966 billion in aggregate, with a term of 20 to 25 years.
- Note 4: According to the Commitment Letter on Land Use Rights and Equipment issued by Lingdong Nuclear to CDB, during the term of the loan contract, Lingdong Nuclear shall not, in any form, dispose of, including but not limited to sell, let or pledge, any of the equipment asset with an original value over USD500,000.
- According to the Mortgage Contract signed by CGN Engineering and CDB on April 26, 2019, CGN Engineering pledged the 1200T self-elevating offshore wind power installation platform owned by it.
- Note 5: According to the Finance Lease Agreements signed between Lufeng Nuclear and CGNPC International Financial Leasing Co., Ltd. (中廣核國際融資租賃有限公司), Lufeng Nuclear pledged its machinery and equipment of construction in progress in exchange for bank loans. The agreements have expired in September 2022.
- Note 6: According to the Loan Contract of China Guangdong Nuclear Power Engineering Building Agreement signed by CGN Engineering and ICBC on March 19, 2018, CGN Engineering pledged the land use rights of New Energy Industry Base owned by it. The loan has been repaid in March 2022 in advance.

64. Foreign currency monetary items

(1) Foreign currency monetary items

Item	December 31, 2022			December 31, 2021		
	Foreign currency balance	Exchange rate	RMB balance	Foreign currency balance	Exchange rate	RMB balance
Cash at bank and in hand						
Including: USD	1,723,457.08	6.9646	12,003,189.18	4,304,769.11	6.3757	27,445,916.41
EUR	15,820,074.22	7.4229	117,430,828.78	22,314,714.65	7.2197	161,105,545.36
HKD	252,483.79	0.8933	225,536.55	254,644.96	0.8176	208,197.72
GBP	5,465,073.94	8.3941	45,874,377.09	6,262,465.61	8.6064	53,897,284.03
RMB	3,912,522,376.25	1.0000	3,912,522,376.25	984,472,924.06	1.0000	984,472,924.06
Accounts receivable						
Including: USD	783,584.36	6.9646	5,457,351.63	2,346,165.00	6.3757	14,958,444.19
EUR	1,419,264.10	7.4229	10,535,055.49	3,831,383.36	7.2197	27,661,438.44
HKD	17,741,050.88	0.8933	15,848,080.75	-	-	-
GBP	1,462,434.54	8.3941	12,275,821.77	881,708.95	8.6064	7,588,339.91
RMB	4,003,652.98	1.0000	4,003,652.98	3,776,001.03	1.0000	3,776,001.03
CHF	69,221.00	7.5432	522,147.85	-	-	-
Other receivables						
Including: USD	65,000.00	6.9646	452,699.00	67,584.42	6.3757	430,897.99
EUR	6,014,674.28	7.4229	44,646,325.71	7,170,794.07	7.2197	51,770,981.95
HKD	7,602.00	0.8933	6,790.87	7,602.00	0.8176	6,215.40
GBP	-	8.3941	-	10,000.00	8.6064	86,064.00
RMB	10,604,005.28	1.0000	10,604,005.28	3,298,249.48	1.0000	3,298,249.48
Accounts payable						
Including: USD	6,601,425.09	6.9646	45,976,285.18	10,358,567.99	6.3757	66,043,121.93
EUR	69,378,602.95	7.4229	514,990,431.84	74,276,290.11	7.2197	536,252,531.71
HKD	6,896,996.00	0.8933	6,161,086.53	16,341,284.29	0.8176	13,360,634.04
GBP	160,865.30	8.3941	1,350,319.41	813,400.60	8.6064	7,000,450.92
RMB	28,525,660.17	1.0000	28,525,660.17	118,940,303.52	1.0000	118,940,303.52
CHF	502,457.14	7.5432	3,790,134.70	1,560,992.94	6.9776	10,891,984.34

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Item	December 31, 2022			December 31, 2021		
	Foreign currency balance	Exchange rate	RMB balance	Foreign currency balance	Exchange rate	RMB balance
Other payables						
Including: USD	3,966.00	6.9646	27,621.60	-	6.3757	-
EUR	510,863.01	7.4229	3,792,085.04	1,397,892.37	7.2197	10,092,363.54
HKD	40,404.00	0.8933	36,092.89	40,404.00	0.8176	33,034.31
GBP	41,944.72	8.3941	352,088.17	-	-	-
RMB	387,934,925.07	1.0000	387,934,925.07	408,202,866.03	1.0000	408,202,866.03
Employee benefits payable						
Including: RMB	3,788,025.80	1.0000	3,788,025.80	2,423,347.21	1.0000	2,423,347.21
Taxes payable						
Including: RMB	25,116,153.98	1.0000	25,116,153.98	411,585,365.20	1.0000	411,585,365.20
Non-current liabilities due within one year						
Including: EUR	96,518,379.08	7.4229	716,446,276.07	96,518,379.08	7.2197	696,833,741.44
RMB	7,976,024.90	1.0000	7,976,024.90	5,659,696.20	1.0000	5,659,696.20
Short-term loans						
Including: GBP	3,105,366.99	8.3941	26,066,761.05	-	-	-
Long-term loans						
Including: EUR	292,760,318.99	7.4229	2,173,130,571.83	386,073,516.66	7.2197	2,787,334,968.23
RMB	268,490,306.49	1.0000	268,490,306.49	-	-	-
Lease liabilities						
Including: RMB	2,940,023.49	1.0000	2,940,023.49	7,872,382.25	1.0000	7,872,382.25

(2) Description of overseas business entities:

The sales customers of GNPJVC are mainly GNIC and HKNIC, and all of the sales are conducted in USD. During the period of preparation for the establishment of GNPJVC, the funds required for the construction of the NPP were mainly obtained from loans for financing, the funds from which were mainly long-term USD loans, and such loans from financing activities were repaid in USD. Therefore, GNPJVC selected USD as its reporting currency

(VI) Change of consolidation scope

1. Disposal of subsidiaries

Loss of control due to a single disposal of investment in subsidiaries

Name of entity	Consideration of equity disposal (Note: transfer consideration based on the valuation benchmark date)	Percentage of equity disposed of	Way of disposal	Time of losing control	Basis of determination of time of losing control	Difference between the consideration of disposal and the share of net assets of such subsidiary attributable to the investment disposed of within the scope of consolidated financial statements	Percentage of the remaining equity on the day of losing control	Carrying value of the remaining equity on the day of losing control	Fair value of the remaining equity on the day of losing control	Gains or losses arising from the remaining equity remeasured at fair value	Method and key assumptions used in the determination of the remaining equity on the day of losing control	Amount transferred into investment gains or losses from other comprehensive income which is related to investment in the former subsidiary
China Nuclear Power (Beijing) Simulation Technology Corporation Ltd. (中廣核(北京)仿真技術有限公司)	RMB50,580,000.00	75%	Sold to a related party	March 31, 2022	Entering into of the equity transfer agreement	RMB13,901,627.45	0%	-	-	-	N/A	-

The Group's gains from the loss of control of China Nuclear Power (Beijing) Simulation Technology Corporation Ltd. (中廣核(北京)仿真技術有限公司) amounted to RMB53,572,716.38, of which the gains from the reversal of profits from intra-group transactions amounted to RMB39,671,088.93, which were included in the investment income item in the consolidated financial statements.

2. Cancellation of subsidiaries

On March 24, 2022, the business cancellation registration for CGN Hebei Thermal Power Co., Ltd. (中廣核河北熱電有限公司), a wholly-owned subsidiary of the Company, was completed.

3. Establishment of subsidiaries

Name of the newly established subsidiaries	Principal place of operation	Place of registration	Business nature	Time of establishment	Method of acquisition
CGN Nanfang Technology Co., Ltd. (中廣核南方科技有限公司)	Zhongshan, Guangdong Province	Zhongshan, Guangdong Province	Nuclear power technology development	April 2022	Establishment
Guangxi Fangchenggang Third Nuclear Power Co., Ltd. (廣西防城港第三核電有限公司)	Fangchenggang, Guangxi	Fangchenggang, Guangxi	Nuclear power generation	July 2022	Establishment

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(VII) Interests in other entities**1. Interests in subsidiaries****(1) Constitution of the corporate group**

Name of subsidiary	Principal place of operation	Place of registration	Business nature	Registered capital	Shareholding		Method of acquisition
					Direct	Indirect	
GNIC (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Investment	RMB16,000,000,000.00	100.00%	-	Establishment
GNPVC (Note 2)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Nuclear power generation	USD400,000,000.00	-	75.00%	Establishment
DNMC (Note 2)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Operations and management of NPP	RMB250,000,000.00	-	87.50%	Establishment
CGN Nuclear Power Investment Co., Ltd. (中廣核電力投資有限公司) (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Investment	RMB100,000,000.00	77.78%	-	Establishment
CGN Minghe Investment Co., Ltd. (中廣核寧核投資有限公司) (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Investment	RMB100,000,000.00	56.52%	-	Establishment
Lingao Nuclear (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Nuclear power generation	RMB3,323,274,000.00	70.00%	30.00%	Establishment
Lindong Nuclear (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Nuclear power generation	RMB5,348,000,000.00	25.00%	75.00%	Establishment
Yangjiang Nuclear (Note 2)	Yangjiang, Guangdong Province	Yangjiang, Guangdong Province	Nuclear power generation	RMB15,506,000,000.00	34.00%	25.00%	Establishment
CGN Operations (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Provision of management, technology and consultancy services	RMB100,000,000.00	100.00%	-	Establishment
CNPRI (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Nuclear power technology development	RMB2,335,550,000.00	100.00%	-	Establishment
Inspection Company (Note 2)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Testing and maintenance of power stations	RMB230,000,000.00	-	81.52%	Establishment
Guangdong Daya Bay Nuclear Power Environment Protection Co., Ltd. (廣東大亞灣核電環保有有限公司) (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Environment protection relating to nuclear power	RMB30,000,000.00	100.00%	-	Establishment
Radiation Monitoring Company (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Radiation detection and evaluation, instrument verification	RMB6,000,000.00	-	100.00%	Establishment
China Daya Bay Nuclear Power Technology Research Institute Co., Ltd. (中國大亞灣核電技術研究院有限公司) (Note 1)	Beijing	Beijing	Nuclear power technology development	RMB23,500,000.00	-	100.00%	Business combination not under common control
SNPI (Note 1)	Suzhou, Jiangsu Province	Suzhou, Jiangsu Province	Nuclear power technology development	RMB513,950,000.00	100.00%	-	Business combination not under common control

Name of subsidiary	Principal place of operation	Place of registration	Business nature	Registered capital	Shareholding		Method of acquisition
					Direct	Indirect	
Ningde Nuclear (Note 1) (Note 3)	Ningde, Fujian Province	Ningde, Fujian Province	Nuclear power generation	RMB11,177,500,000.00	-	46.00%	Business combination not under common control
Taishan Nuclear (Note 2)	Taishan, Guangdong Province	Taishan, Guangdong Province	Nuclear power generation	RMB28,600,000,000.00	12.50%	57.50%	Business combination under common control
Taishan Investment (Note 1)	Taishan, Guangdong Province	Taishan, Guangdong Province	Investment	RMB30,000,000.00	60.00%	-	Business combination under common control
CGN Engineering (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Construction	RMB3,286,000,000.00	100.00%	-	Business combination under common control
CGN Design (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Construction design	RMB79,360,000.00	-	60.00%	Business combination under common control
CGNPC AREVA (Note 2)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Other professional technical support	RMB280,000,000.00	-	55.00%	Business combination under common control
CGN Import & Export Co., Ltd. (中廣核華進出口有限公司) (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Import and export trade	RMB10,000,000.00	-	100.00%	Business combination under common control
Fangchenggang Nuclear (Note 1)	Fangchenggang, Guangxi	Fangchenggang, Guangxi	Nuclear power generation	RMB13,950,000,000.00	-	61.00%	Business combination under common control
Lufeng Nuclear (Note 1)	Shanwei, Guangdong Province	Shanwei, Guangdong Province	Nuclear power generation	RMB5,258,000,000.00	100.00%	-	Business combination under common control
Power Sales Company (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Sales of electricity	RMB210,000,000.00	100.00%	-	Business combination under common control
Ocean Power (Note 1)	Tianjin	Tianjin	Development, construction and operations of offshore power stations	RMB170,000,000.00	100.00%	-	Business combination under common control
Yangxi Nuclear Power Co., Ltd. (陽西核電有限公司) (Note 1)	Yangjiang, Guangdong Province	Yangjiang, Guangdong Province	Investment, construction and operations of NPPs	RMB133,000,000.00	-	51.00%	Establishment
Fangchenggang Investment (Note 1)	Fangchenggang, Guangxi	Fangchenggang, Guangxi	Investment	RMB30,000,000.00	60.00%	-	Establishment
Hebei Zhongzhuan Clean Thermal Energy Co., Ltd. (河北中環清潔熱能有限公司) (Note 5)	Xingtai, Hebei Province	Xingtai, Hebei Province	Thermal power generation	RMB141,700,000.00	100.00%	-	Establishment

Finance, Assets and Investment

Business Performance and Outlook

Capitals

Corporate Governance

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Name of subsidiary	Principal place of operation	Place of registration	Business nature	Registered capital	Shareholding		Method of acquisition
					Direct	Indirect	
Sansha Advanced Energy Co., Ltd. (三沙先進能源有限公司) (Note 1)	Sansha, Hainan Province	Sansha, Hainan Province	Island energy development, smart grid investment, transmission and distribution, sales of electricity	RMB1,000,000,000.00	-	60.00%	Establishment
Heheng Supervision (Note 1)	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Engineering supervision, engineering management and technical support service	RMB3,000,000.00	100.00%	-	Establishment
Fujian Ningde Power Sales Co., Ltd. (福建寧德售電有限公司) (Note 1)	Fuzhou, Fujian Province	Fuzhou, Fujian Province	Power sales, electricity supply and power distribution network maintenance service	RMB200,000,000.00	-	100.00%	Establishment
Guangxi Fanghe Power Sales Co., Ltd. (廣西防峯售電有限公司) (Note 1)	Fangchenggang, Guangxi	Fangchenggang, Guangxi	Electricity supply, power sales and power distribution network technical service	RMB201,000,000.00	-	100.00%	Establishment
Shandong Zhaoyuan Nuclear Power Co., Ltd. (山東招遠核電有限公司) (Note 1)	Yantai, Shandong Province	Yantai, Shandong Province	Nuclear power generation	RMB460,000,000.00	100.00%	-	Establishment
Guizhou Yuping Clean Thermal Energy Co., Ltd. (貴州玉屏清潔熱能有限公司) (Note 1)	Tongren, Guizhou Province	Tongren, Guizhou Province	Thermal power generation	RMB180,000,000.00	100.00%	-	Establishment
CGN Nanfang Technology Co., Ltd. (中廣核南方科技有限公司) (Note 1)	Zhongshan, Guangdong Province	Zhongshan, Guangdong Province	Nuclear power technology development	RMB1,000,000,000.00	-	100.00%	Establishment
Guangxi Fangchenggang Third Nuclear Power Co., Ltd. (廣西防峯第三核電有限公司) (Note 1)	Fangchenggang, Guangxi	Fangchenggang, Guangxi	Nuclear power generation	RMB100,000,000.00	61.00%	-	Establishment

Note 1: The company is a limited liability company established in China.

Note 2: The company is a Sino-foreign joint venture with limited liability.

Note 3: Basis for only holding half or less voting rights but still having control over the investees, as well as holding 50% or more voting rights but not having control over the investees: CGN Ningde Investment, a subsidiary of the Company, holds 46% equity interest in Ningde Nuclear, and Datang International Power Generation Co., Ltd. (大唐國際發電股份有限公司) holds 44% equity interest in Ningde Nuclear. CGN Ninghe Investment and Datang International Power Generation Co., Ltd. entered into the Concerted Party Agreement, which became effective on January 1, 2017. Datang International Power Generation Co., Ltd. agreed to act in concert with CGN Ninghe Investment at the shareholders' meetings and the meetings of board of directors of Ningde Nuclear. Therefore, after entry into force of the Concerted Party Agreement, the Group can thus lead the relevant activities of Ningde Nuclear, and Ningde Nuclear has been changed from a joint venture of the Group to a subsidiary of the Group with unchanged shareholding.

Note 4: As at December 31, 2022, none of the subsidiaries had issued any debt securities.

Note 5: On February 28, 2023, Hebei Zhongzhuan Clean Thermal Energy Co., Ltd. (河北中莊清潔熱能有限公司), a wholly-owned subsidiary of the Company, completed the industrial and commercial deregistration.

(2) Significant non-wholly-owned subsidiaries

Name of subsidiary	Shareholding of non-controlling shareholders	2022		December 31, 2022
		Gains or losses attributable to non-controlling shareholders	Dividends announced to be distributed to non-controlling shareholders	Balance of non-controlling interests
Yangjiang Nuclear	41.00%	2,251,371,855.45	2,236,127,915.98	9,978,066,875.02
Taishan Nuclear ^(Note)	30.00%	(637,556,667.33)	-	7,971,241,857.21
GNPJVC	25.00%	791,714,892.24	33,384,173.80	2,234,822,151.51
CGN Nuclear Power Investment Co., Ltd.	22.22%	380,127,411.12	222,200,000.00	3,412,733,439.97
CGN Ninghe Investment Co., Ltd.	43.48%	489,091,064.82	424,582,200.00	3,285,060,655.23
Ningde Nuclear	54.00%	1,316,317,329.89	1,178,006,036.06	8,337,511,922.36
Taishan Investment	40.00%	(403,787,858.03)	-	5,421,888,280.39
Fangchenggang Investment	40.00%	404,786,349.87	200,000,000.00	3,915,701,133.26
Fangchenggang Nuclear	39.00%	650,646,285.63	616,494,056.96	5,887,463,205.83

Note: EDF International, a minority shareholder of Taishan Nuclear, and its subsidiary EDF (China) Holding Ltd. (collectively, "EDF") hold a total of 30% equity interest in Taishan Nuclear. EDF has initiated arbitration in Singapore with the ICC International Court of Arbitration on matters related to the expected useful life of certain equipment in the Taishan NPP, seeking declaratory relief. The Company and relevant subsidiaries have made corresponding arrangements in accordance with the relevant arbitration procedures.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(3) Significant financial information of significant non-wholly-owned subsidiaries

The following table sets out the significant financial information of the above subsidiaries which represents the amounts without offsetting internal transactions, but with the adjustments made in light of the fair value at the combination date and the adoption of consistent accounting policies:

Name of subsidiary	December 31, 2022					
	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities
Yangjiang Nuclear	9,862,064,630.61	64,238,882,262.51	74,100,946,893.12	16,482,573,875.59	33,281,624,541.86	49,764,198,417.45
Taishan Nuclear	6,421,344,959.58	86,032,399,129.14	92,453,744,088.72	12,246,494,172.91	53,636,443,725.12	65,882,937,898.03
GNPJVC	9,393,392,292.27	4,535,836,388.77	13,929,228,681.04	1,922,283,286.58	3,067,656,788.44	4,989,940,075.02
CGN Nuclear Power Investment Co., Ltd.	1,834,281,262.19	14,524,819,846.49	16,359,101,108.68	1,000,264,745.18	-	1,000,264,745.18
CGN Ninghe Investment Co., Ltd.	7,800,131,474.74	40,564,812,916.76	48,364,944,391.50	9,587,932,958.57	22,884,162,217.03	32,472,095,175.60
Ningde Nuclear	6,791,386,179.75	40,145,570,243.44	46,936,956,423.19	8,611,228,344.36	22,884,162,217.03	31,495,390,561.39
Taishan Investment	532,568.34	13,554,197,566.60	13,554,730,134.94	9,433.96	-	9,433.96
Fangchenggang Investment	4,097,248,713.18	63,799,334,025.84	67,896,582,739.02	13,977,282,354.29	37,882,105,785.77	51,859,388,140.06
Fangchenggang Nuclear	4,081,900,635.22	63,799,334,025.84	67,881,234,661.06	13,978,765,373.16	37,882,105,785.77	51,860,871,158.93

Name of subsidiary	December 31, 2021					
	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities
Yangjiang Nuclear	10,865,333,775.49	66,927,656,988.66	77,792,990,764.15	17,734,180,713.45	35,759,241,915.21	53,493,422,628.66
Taishan Nuclear	5,232,167,184.61	87,729,460,477.27	92,961,627,661.88	17,613,405,789.70	46,652,226,790.37	64,265,632,580.07
GNPJVC	8,650,538,725.33	4,121,744,113.68	12,772,282,839.01	4,876,065,031.12	2,566,719,286.46	7,442,784,317.58
CGN Nuclear Power Investment Co., Ltd.	1,149,604,921.11	13,461,234,088.19	14,610,839,009.30	10,000.00	-	10,000.00
CGN Ninghe Investment Co., Ltd.	8,032,636,674.41	42,318,480,633.35	50,351,117,307.76	8,508,446,514.85	26,236,497,325.34	34,744,943,840.19
Ningde Nuclear	8,029,400,747.80	41,899,237,960.03	49,928,638,707.83	8,508,436,514.85	26,236,497,325.34	34,744,933,840.19
Taishan Investment	539,707.57	14,563,660,072.45	14,564,199,780.02	9,433.96	-	9,433.96
Fangchenggang Investment	5,856,419,229.97	57,134,735,813.10	62,991,155,043.07	10,235,688,166.38	37,624,868,941.07	47,860,557,107.45
Fangchenggang Nuclear	5,734,293,998.24	57,134,735,813.10	62,869,029,811.34	10,235,671,185.25	37,624,868,941.07	47,860,540,126.32

Name of subsidiary	2022				2021			
	Operating revenue	Net profit	Total comprehensive income	Cash flows from operating activities	Operating revenue	Net profit	Total comprehensive income	Cash flows from operating activities
Yangjiang Nuclear	18,273,521,297.67	5,491,150,866.97	5,491,150,866.97	11,355,365,648.30	17,740,620,962.01	5,317,463,158.49	5,317,463,158.49	11,589,288,952.86
Taishan Nuclear	4,728,665,928.88	(2,125,188,891.12)	(2,125,188,891.12)	1,504,689,056.82	7,018,450,789.74	(648,057,010.85)	(648,057,010.85)	5,015,001,603.16
GNPWC	7,355,188,952.99	3,166,859,568.95	3,743,326,779.79	3,992,850,425.98	6,787,004,936.30	3,408,347,325.88	3,266,980,760.94	3,613,639,877.71
CGN Nuclear Power Investment Co., Ltd.	–	1,710,744,424.47	1,710,744,424.47	(532,745.17)	–	1,238,799,553.34	1,238,799,553.34	(983,250.38)
CGN Ninghe Investment Co., Ltd.	10,958,302,433.83	2,441,181,794.39	2,441,181,784.39	5,801,713,464.46	10,723,454,756.35	2,405,127,044.49	2,405,127,044.49	6,740,884,353.40
Ningde Nuclear	10,958,302,433.83	2,440,063,675.98	2,440,063,675.98	5,802,188,406.65	10,723,454,756.35	2,403,414,038.71	2,403,414,038.71	6,741,040,352.57
Taishan Investment	–	(1,009,469,645.08)	(1,009,469,645.08)	(7,139.23)	–	(307,832,701.53)	(307,832,701.53)	(70,333.28)
Fangchenggang Investment	6,098,560,068.74	1,662,612,160.30	1,662,612,160.30	3,836,500,563.48	5,799,653,278.66	1,824,689,304.73	1,824,689,304.73	3,654,789,679.39
Fangchenggang Nuclear	6,106,060,068.74	1,668,323,809.31	1,668,323,809.31	3,844,347,587.09	5,799,653,278.66	1,822,107,897.08	1,822,107,897.08	3,653,083,606.38

(4) As at December 31, 2022 and December 31, 2021, there was no significant restriction on using the corporate group's assets and settling the corporate group's debts.

2. Interests in associates

(1) Significant associates

Name of associate	Principle place of operation	Place of registration	Business nature	Shareholding (%)		Accounting treatment for investment in associate
				Direct	Indirect	
Hongyanhe Nuclear	Dalian, Liaoning Province	Dalian, Liaoning Province	Nuclear power generation	–	45.00	Equity method
CGN Fund Phase I	Shenzhen, Guangdong Province	Beijing	Nuclear investment	38.82	–	Equity method
CGN Finance	Shenzhen, Guangdong Province	Shenzhen, Guangdong Province	Financial services	–	30.00	Equity method

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Significant financial information of significant associates

The following table sets out the significant financial information of the significant associates of the Group which represents the amounts following the adjustments made based on the fair value on investment and the adjustments following the adoption of consistent accounting policies. In addition, the following table also sets out the reconciliation of these financial information to the carrying amounts of investment in associates of the Group under the equity method:

Item	December 31, 2022			December 31, 2021 (Restated)		
	Hongyanhe Nuclear	CGN Fund Phase I	CGN Finance	Hongyanhe Nuclear	CGN Fund Phase I	CGN Finance
Current assets	11,260,723,610.40	742,655,477.34	18,986,985,966.53	11,469,461,667.17	6,879,507.12	32,258,172,210.88
Non-current assets	68,987,700,875.99	8,782,399,834.54	21,815,232,042.86	70,449,920,833.35	8,470,737,495.38	13,286,195,250.48
Total assets	80,248,424,486.39	9,525,055,311.88	40,802,218,009.39	81,919,382,500.52	8,477,617,002.50	45,544,367,461.36
Current liabilities	8,184,526,033.65	700,334,916.40	35,966,403,576.58	9,337,718,498.77	660,327.82	40,833,978,340.71
Non-current liabilities	53,412,406,638.07	-	56,175,991.41	54,371,305,150.07	-	25,705,871.31
Total liabilities	61,596,932,671.72	700,334,916.40	36,022,579,567.99	63,709,023,648.84	660,327.82	40,859,684,212.02
Equity attributable to the shareholders of the parent company	18,651,491,814.67	8,824,720,395.48	4,779,638,441.40	18,210,358,851.68	8,476,956,674.68	4,684,683,249.34
Share of net assets calculated as per shareholding	8,393,171,316.60	3,425,756,457.53	1,433,891,532.42	8,194,661,483.26	2,664,307,482.85	1,405,404,974.80
Adjustments						
- Goodwill occurred upon acquisition of investment	-	146,080,985.55	-	-	-	-
- Unrealized profits of internal transactions	(862,272,115.63)	(62,470,105.78)	-	(789,391,651.00)	(62,470,105.78)	-
Book value of equity investment in associates	7,530,899,200.97	3,509,367,337.30	1,433,891,532.42	7,405,269,832.26	2,601,837,377.07	1,405,404,974.80
Operating revenue	12,923,583,396.59	-	1,185,215,200.00	11,537,550,051.93	-	1,086,511,208.91
Net profit	1,955,472,666.29	1,207,386,480.09	513,032,750.00	1,765,406,181.01	1,086,448,336.67	504,517,519.15
Total comprehensive income	1,955,472,666.29	1,207,386,480.09	513,032,750.00	1,765,406,181.01	1,086,448,336.67	504,517,519.15
Dividends received from associates for the year	681,452,866.56	62,109,920.00	132,214,969.27	485,175,569.30	248,285,940.00	150,917,390.26

(3) Consolidated financial information of insignificant associates

Item	December 31, 2022	December 31, 2021
Associates:		
Total book value of investment	1,183,439,819.90	1,044,892,833.79
The sum of the following items calculated as per shareholding		
- Net profit	98,088,636.34	88,299,008.23
- Other comprehensive income	(183,539.88)	(1,733,428.18)
- Total comprehensive income	97,905,096.46	86,565,580.05

(4) As at December 31, 2022 and December 31, 2021, there was no significant restriction on capacity of capital transfer from associates to the Group.

(VIII) Risks Relevant to Financial Instruments

Major financial instruments of the Group include cash at bank and in hand, bills receivable, accounts receivable, other receivables, other investment in equity instruments, loans, bills payable, accounts payable, other payables, bonds payable etc. See Note (V) for details of the financial instruments. The following are risks relevant to these financial instruments and the risk management policies taken by the Group for reducing these risks. The management of the Group managed and supervised these risk exposures to keep the said risks under control.

The Group adopts sensitivity analysis method to analyze the potential impact of possible appropriate change in risk variables on current profits & losses or the shareholders' equity. As any risk variable seldom changes alone and correlation between variables greatly accounts for the final amount influenced by change of a certain risk variable, the following content is conducted under the assumption that change of each variable is independent.

1. Risk management objectives and policies

The Group's risk management objective is to achieve balance between risks and return, minimize the adverse effect of risks on the operating results of the Group and maximize the interests of shareholders and other equity investors. To achieve the said objective, the Group formulated a basic strategy of defining and analyzing various risks faced by the Group, setting a bottom line of risk tolerance and conducting timely and reliable supervision on the risks to keep them under control.

(1) Foreign exchange risk

Foreign exchange risk represents the risk of loss due to exchange rate changes. The Group's exposure to foreign exchange risk is mainly related to USD, EURO and GBP. Except for the GNPJVC which mainly conducts transactions denominated in USD, the Group's other major business activities are denominated and settled in RMB. On December 31, 2022 and December 31, 2021, except for the following balances of assets and liabilities, which are denominated in non-functional currency, the other assets and liabilities of the Group are functional currency balances. The foreign exchange risk arising from the assets and liabilities of the foreign currency balances described below may have an impact on the Group's operating results.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(a) Foreign currency assets and liabilities of the Group denominated in RMB

Item	December 31, 2022	December 31, 2021
Cash at bank and in hand – USD	12,003,189.18	27,445,916.41
Cash at bank and in hand – EUR	117,326,055.51	161,003,640.38
Cash at bank and in hand – HKD	192,635.66	178,086.24
Cash at bank and in hand – GBP	45,840,250.20	53,862,297.38
Accounts receivable – USD	5,457,351.63	14,958,444.19
Accounts receivable – EUR	10,535,055.49	27,661,438.44
Accounts receivable – HKD	4,471,624.07	–
Accounts receivable – GBP	12,275,821.77	7,588,339.91
Accounts receivable – CHF	522,147.85	–
Other receivables – USD	452,699.00	430,897.99
Other receivables – EUR	44,646,325.71	51,770,981.95
Other receivables – GBP	–	86,064.00
Accounts payable – USD	45,976,285.18	66,043,121.93
Accounts payable – EUR	510,816,639.98	531,888,132.38
Accounts payable – HKD	6,161,086.53	3,459,163.53
Accounts payable – GBP	1,133,651.91	6,785,619.01
Accounts payable – CHF	3,790,134.70	10,891,984.34
Other payables – USD	27,621.60	–
Other payables – EUR	3,792,085.04	10,092,363.54
Other payables – HKD	6,790.87	6,215.39
Other payables – GBP	352,088.17	–
Non-current liabilities due within one year – EUR	716,446,276.07	696,833,741.44
Short-term loans – GBP	26,066,761.05	–
Long-term loans – EUR	2,173,130,571.83	2,787,334,968.23

(b) Foreign currency assets and liabilities of the Group denominated in USD

Item	December 31, 2022	December 31, 2021
Cash at bank and in hand – RMB	3,912,522,376.25	984,472,924.06
Cash at bank and in hand – EUR	104,773.14	101,904.98
Cash at bank and in hand – HKD	32,901.19	30,111.48
Cash at bank and in hand – GBP	34,126.89	34,986.65
Accounts receivable – RMB	4,003,652.98	3,776,001.03
Accounts receivable – HKD	11,376,456.68	–
Other receivables – RMB	10,604,005.28	3,298,249.48
Other receivables – HKD	6,790.87	6,215.40
Accounts payable – RMB	28,525,660.17	118,940,303.52
Accounts payable – EUR	4,173,791.86	4,364,399.33
Accounts payable – HKD	–	9,901,470.51
Accounts payable – GBP	216,667.50	214,831.92
Other payables – RMB	387,934,925.07	408,202,866.03
Other payables – HKD	29,302.02	26,818.92
Employee benefits payable – RMB	3,788,025.80	2,423,347.21
Long-term loans – RMB	268,490,306.49	–
Taxes payable – RMB	25,116,153.98	411,585,365.20
Non-current liabilities due within one year – RMB	7,976,024.90	5,659,696.20
Lease liabilities – RMB	2,940,023.49	7,872,382.25

The management of the Group pays close attention to the influence of exchange rate fluctuations on the foreign exchange risk of the Group, and would consider hedging significant foreign exchange risk when necessary.

Sensitivity analysis of exchange rate risks

Assuming that all risk variables other than the exchange rate remain unchanged, as at December 31, 2022, if a foreign currency appreciated/depreciated by 5% against RMB as the reporting currency, profit before taxation of the Group would decrease or increase by RMB161,698,841.85 (December 31, 2021: decrease or increase by RMB188,662,264.64); if a foreign currency appreciated/depreciated by 5% against USD as the reporting currency, profit before taxation of the Group would increase or decrease by RMB160,474,710.10 (December 31, 2021: increase or decrease by RMB21,794,048.07).

(2) Interest rate risk – risk of changes in cash flow

The Group's risk of changes in cash flow of financial instruments which arise from changes in interest rates is mainly associated with bank loans at floating rate (see Note (V) 22, 30 and 32 for details). The Group continues to closely monitor the impact of interest rate changes on the Group's interest rate risk. The policies of the Group aim at maintaining the floating rates of these loans and there is not any interest rate swap arrangement at present.

Sensitivity analysis of interest rate risk

As at December 31, 2022, with other variables unchanged, if interest rate increased or decreased by 1%, profit before taxation of bank loans (including short-term loans, long-term loans and non-current liabilities due within one year) held by the Group would decrease or increase by RMB1,993,758,754.80 (December 31, 2021: decrease or increase by RMB1,892,482,958.44).

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(3) Credit risk

On the balance sheet date, the maximum exposure to credit risk that may cause financial losses to the Group mainly arises from the losses incurred to the financial assets of the Group due to the failure of the other party to perform its obligations, which specifically include:

The carrying amount of the financial assets recognized in the consolidated balance sheet. For financial instruments measured at fair value, the book value reflects its risk exposure, but it is not the maximum risk exposure, and its maximum risk exposure will vary in line with future changes in fair value.

In order to reduce credit risk, the Group reviews the collection of receivables on each statement of financial position date to ensure that adequate provision for expected credit loss is made for relevant financial assets. As a result, the management of the Group believes that the credit risk assumed by the Group has been significantly reduced.

The Group had taken necessary measures to make sure all customers have a good credit record. Except the top five accounts receivables, the Group had no other significant credit risk exposure concentrated at a single financial asset or a portfolio of financial assets with similar characteristics.

Accounts receivable from the top five customers for 2022

Item	December 31, 2022
Accounts receivable – Guangdong Power Grid Co., Ltd.	4,291,179,547.83
Accounts receivable – CGNPC New Energy Offshore Wind Power (Shanwei) Co., Ltd. (中廣核新能源海上風電(汕尾)有限公司)	2,417,596,593.64
Accounts receivable – CGN Shanwei New Energy Co., Ltd. (中廣核汕尾新能源有限公司)	2,330,006,728.28
Accounts receivable – CGN New Energy (Huizhou) Co., Ltd. (中廣核新能源(惠州)有限公司)	1,191,915,797.34
Accounts receivable – Fujian Electric Power Co., Ltd.	926,993,289.85
Total	11,157,691,956.94

Accounts receivable from the top five customers for 2021

Item	December 31, 2021
Accounts receivable – Guangdong Power Grid Co., Ltd.	3,807,658,945.86
Accounts receivable – Fujian Electric Power Co., Ltd.	1,102,725,233.76
Accounts receivable – CGN New Energy (Huizhou) Co., Ltd. (中廣核新能源(惠州)有限公司)	765,517,046.18
Accounts receivable – CGNPC New Energy Offshore Wind Power (Shanwei) Co., Ltd. (中廣核新能源海上風電(汕尾)有限公司)	705,530,783.08
Accounts receivable – CGNPC Yangjiang Offshore Wind Power Co., Ltd.	676,459,660.22
Total	7,057,891,669.10

(4) Liquidity risk

In the management of the liquidity risk, the Group monitors and maintains a level of cash and cash equivalents deemed adequate by the management to finance the Group's operations and mitigate the effects of fluctuations in cash flows. The management monitors the utilization of bank loans and ensures compliance with loan agreements.

As at December 31, 2022, the current liabilities of the Group exceeded the current assets by RMB5,627,524,932.68. The Group had unutilized loan facilities from banks and other financial institutions equivalent to RMB108,561,650,993.55 in total, including loan facilities with a term of more than 12 months of RMB84,958,030,964.93. The management of the Group is of the view that the Group would have adequate financial resources to settle the financial obligations and commitments in future. Therefore, the financial statements have been prepared on the basis of going concern.

The following is the maturity analysis for financial liabilities held by the Group which is based on undiscounted remaining contractual obligations:

Item	December 31, 2022				Book value on the balance sheet
	Within one year	One to five years	Over five years	Total	
Non-derivative financial liabilities:					
Short-term loans	12,212,087,806.42	-	-	12,212,087,806.42	11,930,482,045.91
Bills payable	5,094,227,695.25	-	-	5,094,227,695.25	5,094,227,695.25
Accounts payable	22,967,701,771.92	-	-	22,967,701,771.92	22,967,701,771.92
Other payables	6,756,582,982.51	-	-	6,756,582,982.51	6,756,582,982.51
Non-current liabilities due within					
one year	21,914,356,135.47	-	-	21,914,356,135.47	21,370,443,527.73
Short-term bonds payable	2,837,225,753.42	-	-	2,837,225,753.42	2,814,282,739.72
Long-term loans	5,361,628,312.77	97,226,764,267.36	89,904,814,253.60	192,493,206,833.73	160,074,949,905.97
Bonds payable	144,639,444.44	4,605,419,305.56	-	4,750,058,750.00	4,492,066,733.52
Lease liabilities	-	396,898,809.89	359,264,952.39	756,163,762.28	651,291,464.61

2. Transfer of financial assets

- (1) As at December 31, 2022, the Group did not have financial assets that have been transferred but not derecognized.
- (2) As at December 31, 2022, the Group did not have financial assets that have been derecognized but continued its involvement in transferred financial assets.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(IX) Disclosure of Fair Value

1. Closing fair value of assets and liabilities measured at fair value

Item	December 31, 2022			Total
	Level 1 fair value measurement	Level 2 fair value measurement	Level 3 fair value measurement	
Recurring fair value measurement				
Other investment in equity instruments	–	437,756,200.00	132,067,370.13	569,823,570.13
Total assets continuously measured at fair value	–	437,756,200.00	132,067,370.13	569,823,570.13
Cash-settled share-based payment	–	(16,013,521.25)	–	(16,013,521.25)
Total liabilities continuously measured at fair value	–	(16,013,521.25)	–	(16,013,521.25)

Item	December 31, 2021			Total
	Level 1 fair value measurement	Level 2 fair value measurement	Level 3 fair value measurement	
Recurring fair value measurement				
Other investment in equity instruments	–	458,128,600.00	132,067,370.13	590,195,970.13
Total assets continuously measured at fair value	–	458,128,600.00	132,067,370.13	590,195,970.13
Cash-settled share-based payment	–	(142,778,077.84)	–	(142,778,077.84)
Total liabilities continuously measured at fair value	–	(142,778,077.84)	–	(142,778,077.84)

2. Qualitative and quantitative information of valuation techniques and important parameters adopted for recurring level 2 fair value measurements

Item	Fair value at December 31, 2022	Fair value at December 31, 2021	Valuation technique	Inputs
Other investment in equity instruments	437,756,200.00	458,128,600.00	Market method	Net profit attributable to the parent company during the reporting period, non-operational assets, average price-earnings ratio of comparable companies, liquidity discount ratio of the investee
Cash-settled share-based payment	(16,013,521.25)	(142,778,077.84)	Black-Scholes Model	Share price, expected volatility, expected dividend yield

3. Qualitative and quantitative information of valuation techniques and important parameters adopted for recurring level 3 fair value measurements

Item	Fair value at December 31, 2022	Fair value at December 31, 2021	Valuation technique	Inputs
Other investment in equity instruments	132,067,370.13	132,067,370.13	Cost method	Investment costs

4. Reconciliation between the opening and closing carrying amount for recurring level 3 fair value measurements

There was no transfer in or out between different levels for the above-mentioned assets and liabilities continuously measured at fair value of the Group during the year.

5. Fair value of financial assets and financial liabilities not measured at fair value

The management of the Group believes that the book values of financial assets and financial liabilities measured at amortized cost in the financial statements are close to the fair values of the same.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(X) Related Parties and Related Party Transactions

1. Parent company of the Company

Name of parent company	Place of registration	Nature of business	Registered capital	Shareholding of the parent company in the Company	Voting rights of the parent company in the Company
CGNPC	Shenzhen	Nuclear power industry	RMB14,873.3730 million	58.91%	58.91%

The parent company of the Company is CGNPC. The ultimate actual controlling shareholder is the SASAC.

2. Subsidiaries of the Company

Details of the subsidiaries of the Company are set out in Note (VII) 1.

3. Associates of the Company

Details of the significant associates of the Company are set out in Note (VII) 2.

Other associates which conduct related party transactions with the Group, or have balance arising from related party transactions with the Group in prior periods are as follows:

Name of associate	Relationship with the Company
Ningde Second Nuclear	Associate
Hongyanhe Nuclear	Associate
China Nuclear Industry Second and Third Construction Co., Ltd.	Associate
CIECC Engineering Company Limited	Associate
CGN Finance	Associate, under the control of the same party
CGN Fund Phase I	Associate, a non-controlling shareholder with significant influence on subsidiaries

4. Other related parties

Name of other related parties	Relationship with the Company
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	Under the control of the same party
CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	Under the control of the same party
CGN Taishan No. 2 Nuclear Power Co., Ltd. (中廣核台山第二核電有限公司)	Under the control of the same party
CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	Under the control of the same party
CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	Under the control of the same party
CGN Services Group and its subsidiaries	Under the control of the same party
CGN Environmental Protection Industry Co., Ltd. (中廣核環保產業有限公司) and its subsidiaries	Under the control of the same party
CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	Under the control of the same party
CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries	Under the control of the same party
Shenzhen Nengzhihui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	Under the control of the same party
CGNPC Uranium Resources Co., Ltd. and its subsidiaries	Under the control of the same party
CGN Wind Energy Co., Ltd. and its subsidiaries	Under the control of the same party
Xianning Nuclear Power Co., Ltd. (咸寧核電有限公司)	Under the control of the same party
Lingwan Nuclear Power Co., Ltd. (嶺灣核電有限公司)	Under the control of the same party
HKNIC	Non-controlling shareholders with significant influence on subsidiaries
Framatome Inc.	Non-controlling shareholders with significant influence on subsidiaries
Guangdong Electric Power Design Institute of China Energy Engineering Group	Non-controlling shareholders with significant influence on subsidiaries

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Name of other related parties	Relationship with the Company
EDF International and its subsidiaries	Non-controlling shareholders with significant influence on subsidiaries
EDF (China) Holding Ltd.	Non-controlling shareholders with significant influence on subsidiaries
Guangdong Energy Group Co., Ltd. (廣東省能源集團有限公司)	Non-controlling shareholders with significant influence on subsidiaries
Guangxi GI Energy Group Co., Ltd. (廣西廣投能源集團有限公司)	Non-controlling shareholders with significant influence on subsidiaries
CLP Nuclear Power (Yangjiang) Limited	Non-controlling shareholders with significant influence on subsidiaries
Datang International Power Generation Co., Ltd. (大唐國際發電股份有限公司)	Non-controlling shareholders with significant influence on subsidiaries
Fujian Energy Group Co., Ltd. (福建省能源集團有限責任公司) and its subsidiaries	Non-controlling shareholders with significant influence on subsidiaries
Definite Arise Limited	An associate of the ultimate controlling party
Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	A joint venture of the ultimate controlling party

5. Related party transactions

(1) Related party transactions for purchase and sale of goods, rendering and acceptance of services:

Purchase of goods/Acceptance of services:

Related party	Related party transaction	2022	2021
CGNPC Uranium Resources Co., Ltd. and its subsidiaries	Purchase of goods/ acceptance of services	9,691,249,318.52	6,970,996,570.61
CGN Services Group and its subsidiaries	Purchase of goods/ acceptance of services	1,471,283,437.24	1,444,736,779.40
China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	Purchase of goods/ acceptance of services	1,289,417,333.57	1,852,110,871.95
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	Purchase of goods/ acceptance of services	1,119,675,799.33	611,769,366.97
Framatome Inc.	Purchase of goods/ acceptance of services	874,872,787.73	813,782,143.69
Guangdong Electric Power Design Institute of China Energy Engineering Group	Purchase of goods/ acceptance of services	107,592,079.49	18,158,875.18
CGN Environmental Protection Industry Co., Ltd. (中廣核環保產業有限公司) and its subsidiaries	Purchase of goods/ acceptance of services	75,954,064.91	58,002,111.72
Datang International Power Generation Co., Ltd. (大唐國際發電股份有限公司)	Purchase of goods/ acceptance of services	72,322,547.28	108,455,192.83
Shenzhen Nengzhahui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	Purchase of goods/ acceptance of services	50,990,496.22	28,571,898.57
CGN Finance	Purchase of goods/ acceptance of services	39,516,116.47	–
Hongyanhe Nuclear	Purchase of goods/ acceptance of services	38,866,737.24	4,969,541.61
EDF International and its subsidiaries	Purchase of goods/ acceptance of services	30,644,836.94	51,362,077.72
CIECC Engineering Company Limited (中諮工程有限公司)	Purchase of goods/ acceptance of services	14,298,443.39	13,374,393.22
CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries	Purchase of goods/ acceptance of services	1,497,169.82	45,387,773.63
CGNPC	Purchase of goods/ acceptance of services	4,318,300.38	8,383,345.34
Others	Purchase of goods/ acceptance of services	25,567,885.76	55,052,673.82
Total		14,908,067,354.29	12,085,113,616.26

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Sale of goods/Rendering of services:

Related party	Related party transaction	2022	2021
HKNIC	Sale of electricity	5,853,884,695.84	5,389,704,682.68
Hongyanhe Nuclear	Sale of goods/rendering of services	458,133,083.83	348,061,522.29
CGNPC	Sale of goods/rendering of services	213,603,662.61	24,416,846.95
CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	Sale of goods/rendering of services	91,648,586.68	62,794,775.05
CGN Wind Energy Co., Ltd. and its subsidiaries	Sale of goods/rendering of services	46,977,391.83	93,111,061.82
CGNPC Uranium Resources Co., Ltd. and its subsidiaries	Sale of goods/rendering of services	43,044,936.15	83,075,874.09
CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	Sale of goods/rendering of services	38,119,114.30	42,875,049.83
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	Sale of goods/rendering of services	25,086,076.97	25,267,291.31
CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	Sale of goods/rendering of services	8,499,648.02	99,169,055.44
Shenzhen Nengzhahui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	Sale of goods/rendering of services	7,556,173.06	17,439,574.14
CGN Services Group and its subsidiaries	Sale of goods/rendering of services	5,988,065.37	14,358,703.07
Others	Sale of goods/rendering of services	22,229,656.95	69,071,442.51
Total		6,814,771,091.61	6,269,345,879.18

Provision of construction, installation and design services:

Related party	Related party transaction	2022	2021
CGN Wind Energy Co., Ltd. and its subsidiaries	Provision of construction, installation and design services	11,447,565,056.89	10,141,915,213.42
CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	Provision of construction, installation and design services	5,803,770,693.97	3,437,470,947.75
CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	Provision of construction, installation and design services	3,945,704,861.88	1,996,356,575.85
Hongyanhe Nuclear CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	Provision of construction, installation and design services	691,446,974.25	1,478,368,670.78
Ningde Second Nuclear	Provision of construction, installation and design services	43,043,061.06	355,464,835.73
Lingwan Nuclear Power Co., Ltd. (嶺灣核電有限公司)	Provision of construction, installation and design services	11,066,965.67	6,499,208.72
Others	Provision of construction, installation and design services	2,287,886.70	–
Total		22,323,019,698.68	19,995,396,671.07

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Related party transactions for leasing

The Group as lessor:

Name of lessee	Type of leased assets	Rental income recognized in 2022	Rental income recognized in 2021
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	Buildings	5,557,207.88	1,486,624.32
CGN Services Group and its subsidiaries	Buildings	3,231,911.43	3,576,522.70
Hongyanhe Nuclear	Buildings	739,818.07	912,106.18
Lingwan Nuclear Power Co., Ltd. (嶺灣核電有限公司)	Buildings	–	421,236.77
Others	Buildings	42,568.79	128,013.53
Total		9,571,506.17	6,524,503.50

The Group as lessee:

Name of lessor	Type of leased assets	Transaction amount recognized in 2022 (Note)	Transaction amount recognized in 2021 (Note)
CGNPC	Buildings	119,689,399.95	141,618,161.49
CGN Services Group and its subsidiaries	Buildings	57,920,515.16	59,956,699.82
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	Buildings	12,014,208.05	3,846,467.89
Others	Buildings	1,768,149.70	200,533.33
Total		191,392,272.86	205,621,862.53

Note: Transaction amount includes the lease principal paid, handling fees and interest.

(3) Related party transactions for funds lending

Related party	Amount borrowed	Start date	Expiry date
Borrowing from CGN Finance Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際 核電技術有限公司)	30,438,124,302.95	Irregular	Irregular
CGNPC CGNPC Huasheng Investment Limited (中 廣核華盛投資有限公司)	200,000,000.00 150,000,000.00 26,022,044.03	Irregular 2022-11-03 Irregular	Irregular 2025-11-02 Irregular
Total	30,814,146,346.98		

Related party	Amount repaid	Repayment date
Repayment to CGN Finance Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	31,158,493,273.83 150,000,000.00	Irregular Irregular
CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	100,000,000.00 26,421,972.89	Irregular Irregular
Total	31,434,915,246.72	

(4) Related party transactions for asset transfer

Related party	Related party transaction	2022	2021
Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程 科技有限公司)	Disposal of subsidiaries	51,861,894.70	–
CGNPC Uranium Resources Co., Ltd	Transfer of land use rights	33,600,000.00	–
Total		85,461,894.70	–

(5) Emoluments for key management

Item	2022	2021
Emoluments for key management	16,760,206.03	12,883,847.57

Note: Remuneration data for the year includes the bonuses for the three-year business performance appraisal plan from 2019 to 2021.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

The remuneration of each director in 2022 is as follows:

	Directors' salaries	Wages and allowances	Bonus	Retirement benefits	Total
Chairman and non-executive director					
Yang Changli	-	-	-	-	-
Executive directors					
Gao Ligang	-	366,209.37	1,210,785.00	122,350.02	1,699,344.39
Jiang Dajin (Note 1)	-	894,630.47	1,062,264.00	114,068.76	2,070,963.23
Non-executive directors					
Shi Bing	-	-	-	-	-
Wang Hongjun (Note 2)	-	-	-	-	-
Gu Jian	-	-	-	-	-
Feng Jian (Note 3)	-	-	-	-	-
Independent non-executive directors					
Li Fuyou	60,000.00	-	-	-	60,000.00
Yang Jiayi	60,000.00	-	-	-	60,000.00
Xia Ceming	60,000.00	-	-	-	60,000.00
Tang Chi Cheung	60,000.00	-	-	-	60,000.00
Total	240,000.00	1,260,839.84	2,273,049.00	236,418.78	4,010,307.62

Note 1: Resigned on December 28, 2022.

Note 2: Resigned on December 23, 2022.

Note 3: Appointed on December 23, 2022.

The remuneration of each director in 2021 is as follows:

	Directors' salaries	Wages and allowances	Bonus	Retirement benefits	Total
Chairman and non-executive director					
Yang Changli	-	-	-	-	-
Executive directors					
Gao Ligang	-	355,353.40	573,929.00	112,336.62	1,041,619.02
Jiang Dajin	-	772,548.94	728,475.00	118,088.10	1,619,112.04
Non-executive directors					
Shi Bing	-	-	-	-	-
Wang Wei (Note 1)	-	-	-	-	-
Li Mingliang (Note 2)	-	-	-	-	-
Wang Hongjun (Note 3)	-	-	-	-	-
Gu Jian	-	-	-	-	-
Independent non-executive directors					
Li Fuyou	60,000.00	-	-	-	60,000.00
Yang Jiayi	60,000.00	-	-	-	60,000.00
Xia Ceming	60,000.00	-	-	-	60,000.00
Tang Chi Cheung (Note 4)	40,000.00	-	-	-	40,000.00
Total	220,000.00	1,127,902.34	1,302,404.00	230,424.72	2,880,731.06

Note 1: Resigned on February 25, 2021.

Note 2: Appointed on May 26, 2021 and resigned on September 9, 2021.

Note 3: Appointed on October 27, 2021.

Note 4: Appointed on May 26, 2021.

The remuneration of each supervisor in 2022 is as follows:

	Supervisors' salaries	Wages and allowances	Bonus	Retirement benefits	Total
Supervisors					
Zhu Hui	-	663,693.20	932,022.00	112,582.02	1,708,297.22
Wang Hongxin	-	684,904.10	854,139.00	113,221.38	1,652,264.48
Independent supervisors					
Chen Sui (Note 1)	-	-	-	-	-
Hu Yaoqi (Note 2)	-	-	-	-	-
Pang Xiaowen (Note 3)	-	-	-	-	-
Zhang Baishan	-	-	-	-	-
Total	-	1,348,597.30	1,786,161.00	225,803.40	3,360,561.70

Note 1: Resigned on April 11, 2022.

Note 2: Resigned on April 1, 2022.

Note 3: Appointed on May 27, 2022.

The remuneration of each supervisor in 2021 is as follows:

	Supervisors' salaries	Wages and allowances	Bonus	Retirement benefits	Total
Supervisors					
Zhu Hui	-	643,829.89	688,620.57	106,250.34	1,438,700.80
Wang Hongxin	-	614,728.44	579,810.60	106,889.70	1,301,428.74
Independent supervisors					
Chen Sui	-	-	-	-	-
Hu Yaoqi	-	-	-	-	-
Zhang Baishan	-	-	-	-	-
Total	-	1,258,558.33	1,268,431.17	213,140.04	2,740,129.54

The remuneration of each member of senior management in 2022 is as follows:

	Senior management's salaries	Wages and allowances	Bonus	Retirement benefits	Total
Senior management					
Su Shengbing (Note 1)	-	451,350.51	2,002,731.52	51,352.80	2,505,434.83
Chen Yingjian (Note 2)	-	592,728.87	774,704.00	72,212.16	1,439,645.03
Yin Engang	-	699,770.04	1,108,732.00	118,370.82	1,926,872.86
Qin Yuxin	-	693,989.42	2,699,235.61	124,158.96	3,517,383.99
Total	-	2,437,838.84	6,585,403.13	366,094.74	9,389,336.71

Note 1: Resigned on June 1, 2022.

Note 2: Resigned on August 1, 2022.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

The remuneration of each member of senior management in 2021 is as follows:

	Senior management's salaries	Wages and allowances	Bonus	Retirement benefits	Total
Senior management					
Su Shengbing	–	753,418.94	745,547.00	118,088.10	1,617,054.04
Chen Yingjian	–	719,747.94	1,350,063.40	118,088.10	2,187,899.44
Yin Engang	–	738,674.94	813,050.00	112,039.14	1,663,764.08
Qin Yuxin (Note)	–	681,796.68	994,785.58	117,687.15	1,794,269.41
Total	–	2,893,638.50	3,903,445.98	465,902.49	7,262,986.97

Note: Appointed on April 14, 2021.

For the years 2022 and 2021, the five highest paid individuals were neither the directors of the Group nor the supervisors of the Group:

The remuneration of five highest paid individuals is as follows:

	Unit: RMB	
	2022	2021
Wages and allowances	3,417,501.40	3,940,011.60
Bonus	13,039,332.31	7,883,890.24
Retirement benefits	618,231.88	588,277.66
Total	17,075,065.59	12,412,179.50

The above wages and allowances mainly include basic salaries and comprehensive subsidies. Bonuses are determined based on the performance of the Group and individuals.

The remuneration of five highest paid individuals by band:

	Number of persons in 2022	Number of persons in 2021
HK\$2,500,001 to HK\$3,000,000 (equivalent to RMB2,044,000.00 to RMB2,452,800.00)	–	3
HK\$3,000,001 to HK\$3,500,000 (equivalent to RMB2,452,800.00 to RMB2,861,600.00)	4	2
HK\$3,500,001 to HK\$4,000,000 (equivalent to RMB2,861,600.00 to RMB3,270,400.00)	1	–
Total	5	5

In 2022 and 2021, the Group did not pay any directors, supervisors or the five highest paid individuals as incentives or resignation compensation for joining the Group or when joining the Group. No director or supervisor had waived any remuneration.

(6) Other related party transactions

Item	2022	2021
Interest income – CGN Finance	191,124,529.76	149,179,798.28
Interest income – Others	224.91	29.92
Total	191,124,754.67	149,179,828.20
Interest expenses – CGN Finance	357,729,619.01	384,704,134.29
Interest expenses – CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries	2,700,100.00	25,955,555.55
Interest expenses – CGNPC	26,587,347.22	20,293,061.11
Interest expenses – CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	926,251.10	4,651,155.00
Interest expenses – Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	6,340,897.23	1,503,107.61
Total	394,284,214.56	437,107,013.56
Fee expenses – CGN Finance	1,802,989.60	2,447,954.23
Fee expenses – Others	–	1,189.79
Total	1,802,989.60	2,449,144.02

As at December 31, 2022, the continuing connected transactions as defined under Chapter 14A of the Listing Rules were listed in the Directors' Report section.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

6. Amounts due from/due to related parties

(1) Receivables

Item name	Related party	December 31, 2022		December 31, 2021	
		Carrying balance	Bad debt provisions	Carrying balance	Bad debt provisions
Cash at bank and in hand	CGN Finance	14,430,272,164.33	-	15,573,998,255.45	-
	CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	121,617,978.22	-	70,783,796.97	-
	Total	14,551,890,142.55	-	15,644,782,052.42	-
Accounts receivable	CGN Wind Energy Co., Ltd. and its subsidiaries	6,891,356,134.06	129,608,314.02	2,853,910,605.31	33,201,357.19
	CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	677,520,319.65	14,269,934.05	677,205,722.92	2,512,685.67
	CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	496,784,941.38	1,490,354.82	239,953,764.98	708,928.91
	HKNIC	328,799,779.14	986,399.36	466,269,844.51	1,398,809.52
	Hongyanhe Nuclear	304,061,563.83	1,489,191.30	276,133,282.06	1,235,379.73
	CGNPC Uranium Resources Co., Ltd. and its subsidiaries	49,743,952.81	166,668.86	72,573,249.52	892,410.86
	Shanghai Engineering Science & Technology Co., Ltd (上海中廣核工程科技有限公司) and its subsidiaries	36,130,464.80	247,279.61	21,291,565.43	73,466.48
	CGNPC	20,780,000.00	297,340.00	8,980,000.00	26,940.00
	CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	19,589,598.02	58,768.80	277,756,281.68	831,961.31
	CGN Services Group and its subsidiaries	4,643,188.75	13,402.55	21,000,681.09	63,002.04
	Shenzhen Nengzhahui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	4,204,422.19	12,613.28	24,123,478.29	222,808.03
	CGN Environmental Protection Industry Co., Ltd. (中廣核環保產業有限公司) and its subsidiaries	2,991,856.97	333,394.71	21,238,883.24	601,383.90
	Others	3,329,582.80	46,612.00	19,130,140.23	70,892.25
	Total	8,839,935,804.40	149,020,273.36	4,979,567,499.26	41,840,025.89

Item name	Related party	December 31, 2022		December 31, 2021	
		Carrying balance	Bad debt provisions	Carrying balance	Bad debt provisions
Prepayments	CGNPC Uranium Resources Co., Ltd. and its subsidiaries	8,255,144,383.48	-	8,651,702,115.43	-
	China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	335,381,497.69	-	247,380,597.58	-
	Shanghai Engineering Science & Technology Co., Ltd (上海中廣核工程科技有限公司) and its subsidiaries	205,272,609.11	-	75,038,318.82	-
	CGN Services Group and its subsidiaries	56,338,676.61	-	49,628,773.59	-
	Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	5,660,377.36	-	11,320,754.74	-
	CIECC Engineering Company Limited (中諮工程有限公司)	2,161,785.00	-	2,461,172.26	-
	Others	742,507.20	-	11,760,858.68	-
	Total	8,860,701,836.45	-	9,049,292,591.10	-
Contract assets	Hongyanhe Nuclear	592,449,797.28	1,777,349.39	484,044,792.82	1,528,051.74
	CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	362,170,129.79	1,086,510.39	-	-
	Ningde Second Nuclear	250,807,657.82	752,422.98	689,490,616.97	2,068,543.85
	CGN Wind Energy Co., Ltd. and its subsidiaries	229,803,952.22	689,411.86	343,811,446.60	1,031,434.34
	Xianning Nuclear Power Co., Ltd. (咸寧核電有限公司)	138,681,326.42	416,043.98	138,681,326.42	416,043.98
	CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	114,859,953.64	344,579.86	444,855,088.61	1,334,565.27
	CGN Taishan No. 2 Nuclear Power Co., Ltd. (中廣核台山第二核電有限公司)	40,319,145.80	120,957.44	40,319,145.80	120,957.44
	CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	-	-	84,448,657.33	253,345.97
	Others	1,657,532.86	4,972.60	15,148,186.63	45,444.56
	Total	1,730,749,495.83	5,192,248.50	2,240,799,261.18	6,798,387.15
Other receivables	CGN Fund Phase I	271,730,900.00	-	-	-
	China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	17,055,240.81	51,165.72	7,883,797.15	23,557.00
	CGN Services Group and its subsidiaries	15,118,397.46	12,763,113.25	17,549,172.90	17,549,172.90
	Hongyanhe Nuclear	5,087,156.82	15,261.47	-	-
	CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	417,000.00	1,251.00	-	-
	CIECC Engineering Company Limited (中諮工程有限公司)	-	-	2,710,600.00	8,131.80
	Others	141,084.24	423.25	-	-
	Total	309,549,779.33	12,831,214.69	28,143,570.05	17,580,861.70

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Item name	Related party	December 31, 2022		December 31, 2021	
		Carrying balance	Bad debt provisions	Carrying balance	Bad debt provisions
Others non-current assets	CGNPC Uranium Resources Co., Ltd. and its subsidiaries	1,590,800,720.14	-	2,236,608,696.22	-
	Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	2,939,990.00	-	2,423,040.00	-
	Shenzhen Nengzhahui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	2,447,020.41	-	-	-
	Others	138,000.00	-	3,208,490.57	-
Total		1,596,325,730.55	-	2,242,240,226.79	-

(2) Payables

Item name	Related party	December 31, 2022		December 31, 2021	
		Carrying balance	Bad debt provisions	Carrying balance	Bad debt provisions
Accounts payable	CGN Services Group and its subsidiaries	521,937,343.55	-	401,909,852.55	-
	Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	493,199,817.75	-	143,106,186.68	-
	CGNPC Uranium Resources Co., Ltd. and its subsidiaries	367,142,570.28	-	112,833,068.30	-
	China Nuclear Industry Second and Third Construction Co., Ltd. (中國核工業二三建設有限公司)	100,604,190.91	-	186,059,666.02	-
	CGN Environmental Protection Industry Co., Ltd. (中廣核環保產業有限公司) and its subsidiaries	58,229,820.02	-	45,840,894.07	-
	CGN Finance	41,974,721.61	-	-	-
	CGNPC	39,095,847.61	-	11,889,413.21	-
	Shenzhen Nengzhahui Investment Co., Ltd. (深圳市能之匯投資有限公司) and its subsidiaries	17,341,066.73	-	3,463,556.05	-
	Framatome Inc.	13,324,196.53	-	14,588,277.22	-
	Hongyanhe Nuclear	9,851,245.09	-	6,564,330.40	-
	CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	9,148,482.69	-	7,554,810.39	-
	Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	6,076,415.10	-	33,962,264.16	-
	CGN Wind Energy Co., Ltd. and its subsidiaries	6,029,677.49	-	4,759,404.15	-
	Guangdong Electric Power Design Institute of China Energy Engineering Group	4,613,207.56	-	4,198,113.22	-
	Others	3,711,100.48	-	77,312,728.56	-
	Total		1,692,279,703.40	-	1,054,042,564.98

Item name	Related party	December 31, 2022	December 31, 2021
Contract liabilities	CGN Wind Energy Co., Ltd. and its subsidiaries	664,103,733.62	1,644,558,932.94
	CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	359,357,081.67	195,374,666.79
	CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	188,489,514.06	18,317,011.77
	CGNPC International Limited (中廣核國際有限公司) and its subsidiaries	76,673,190.05	69,246,664.88
	Hongyanhe Nuclear	57,266,956.20	330,763,561.97
	Xianning Nuclear Power Co., Ltd. (咸寧核電有限公司)	37,528,979.34	37,531,180.50
	CGNPC	37,441,374.51	37,441,374.51
	Lingwan Nuclear Power Co., Ltd. (嶺灣核電有限公司)	16,200,929.56	27,142,447.89
	Others	14,247,272.81	35,097,699.23
		Total	1,451,309,031.82
Short-term loans	CGN Finance	4,875,362,896.60	7,882,845,145.69
	Hualong Pressurized Water Reactor Technology Corporation, Ltd. (華龍國際核電技術有限公司)	200,180,277.78	150,173,683.33
	CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries	–	100,040,000.00
	CGNPC Huasheng Investment Limited (中廣核華盛投資有限公司)	26,067,095.08	26,441,906.56
		Total	5,101,610,269.46
Long-term loans	CGN Finance	9,312,645,815.18	7,568,053,511.99
	CGNPC	950,000,000.00	800,000,000.00
		Total	10,262,645,815.18

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Item name	Related party	December 31, 2022	December 31, 2021
Other payables	CGN Wind Energy Co., Ltd. and its subsidiaries	1,626,141,158.97	3,663,212.58
	CGN Fund Phase I	730,782,200.00	–
	CLP Nuclear Power (Yangjiang) Limited	204,000,000.00	–
	Guangdong Energy Group Co., Ltd. (廣東省能源集團有限公司)	204,000,000.00	–
	Guangdong Electric Power Design Institute of China Energy Engineering Group	101,806,464.36	11,821,768.88
	CGNPC	42,029,242.20	48,164,748.38
	CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	14,111,237.49	1,457,503.11
	CGN Services Group and its subsidiaries	11,644,644.28	5,064,590.13
	Hongyanhe Nuclear	2,936,105.41	7,940,182.91
	China Nuclear Industry Second and Third Construction Co., Ltd.	2,057,373.50	2,350,545.28
	CGNPC Uranium Resources Co., Ltd. and its subsidiaries	1,817,966.56	1,847,551.28
	CIECC Engineering Company Limited (中諮工程有限公司)	920,000.00	200,000.00
	CGN Cangnan Nuclear Power Co., Ltd. (中廣核蒼南核電有限公司)	694,690.19	670,295.59
	HKNIC	–	796,962,500.00
	Others	1,477,053.76	4,123,829.08
	Total	2,944,418,136.72	884,266,727.22
Lease liabilities	CGNPC	56,601,003.80	149,518,836.23
	CGN Services Group and its subsidiaries	34,113,975.34	47,075,391.94
	Hongyanhe Nuclear	438,607.76	–
	Others	979,067.68	337,278.35
	Total	92,132,654.58	196,931,506.52
Non-current liabilities due within one year	CGN Finance	829,868,693.00	288,874,880.50
	CGNPC	90,545,978.24	121,803,234.45
	CGN Services Group and its subsidiaries	19,744,054.08	14,564,697.87
	Shanghai Engineering Science & Technology Co., Ltd. (上海中廣核工程科技有限公司) and its subsidiaries	7,357,973.16	3,973,631.37
	CGN Capital Holdings Co., Ltd. (中廣核資本控股有限公司) and its subsidiaries	–	486,670,218.75
	Others	1,467,787.62	3,554,176.86
	Total	948,984,486.10	919,440,839.80

(XI) Share-based Payment

1. Overall share-based payment

Item	Units: Units		
	2022 Second Batch	2021 First Batch	2021 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 0.95 year	/ 0 year	HKD1.7427 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 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 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.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

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 SAR 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 including achievements of 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 this period.

2. Cash-Settled Share-based Payment

Unit: RMB

Item	2022	2021
Methods for determining fair value of liabilities undertaken 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 the SAR 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.

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(XII) Commitments and Contingencies

1. Important commitments

Capital commitments

Item	December 31, 2022	December 31, 2021
Commitment of acquisition and construction of long-term assets	15,666,063,121.79	12,025,010,681.92
Large-amount contracts	3,132,510,182.32	6,051,692,000.00
Total	18,798,573,304.11	18,076,702,681.92

2. Contingencies

There are no important contingencies that should be disclosed by the Group.

(XIII) Events after the Balance Sheet Date

1. Profit distribution after the balance sheet date

Proposed dividends on ordinary shares after the balance sheet date

On March 15, 2023, the Board proposed the Company to distribute cash dividends of RMB0.087 (tax inclusive) per share (2021: RMB0.084 (tax inclusive) per share) to the holders of ordinary shares and it is expected to distribute RMB4,393,379,165.70 (2021: RMB4,241,883,332.40). The proposal is subject to approval at the general meeting. The cash dividends proposed after the balance sheet date were not recognized as liabilities on the balance sheet date.

(XIV) Other Important Matters

1. Segment report

(1) Basis and accounting policies of reporting segments

According to the internal organization structure, management requirements and internal reporting system of the Group, the Group's business is divided into 2 reporting segments, namely nuclear power business operation, sales of electricity and related technical services segment, and engineering, construction and related technical services segment. These reporting segments are recognized based on income, nature, business model, etc. The major products and services provided by the reporting segments of the Group are electricity sales, engineering, construction and technical services. The Group's management regularly evaluates the operating results of these segments to determine the resources to be allocated and evaluates its results.

Segment reporting information is disclosed in accordance with the accounting policies and measurement basis adopted for reporting to the management by each segment, which are consistent with the accounting policies and measurement basis for preparing the financial statements.

(2) Financial information of reporting segments

Item	Nuclear power business operation, sales of electricity and related technical services segment	Engineering, construction and related technical services segment	Inter-segment eliminations	December 31, 2022/2022
Operating revenue	59,903,506,103.00	30,726,474,682.66	(7,807,577,199.23)	82,822,403,586.43
Revenue from external customers	59,537,551,338.80	23,284,852,247.63	–	82,822,403,586.43
Revenue from internal segments	365,954,764.20	7,441,622,435.03	(7,807,577,199.23)	–
Operating cost	32,711,928,418.69	29,857,117,650.06	(7,288,072,963.49)	55,280,973,105.26
Total assets	391,359,814,164.65	35,418,525,394.32	(17,762,774,109.04)	409,015,565,449.93
Total liabilities	233,585,711,223.90	29,032,532,088.13	(11,532,599,712.24)	251,085,643,599.79
Income from investment in associates	1,228,786,755.47	310,005,590.59	61,563,335.63	1,600,355,681.69
Long-term equity investment accounted by using the equity method	11,817,714,924.63	2,209,042,468.40	(369,159,502.44)	13,657,597,890.59
Operating profit	19,022,849,542.29	282,871,536.36	(461,106,642.75)	18,844,614,435.90
Income tax expenses	3,479,131,951.11	46,458,631.64	(69,165,996.41)	3,456,424,586.34
Net profit	15,400,002,422.71	234,688,658.39	(391,940,646.34)	15,242,750,434.76

Item	Nuclear power business operation, sales of electricity and related technical services segment	Engineering, construction and related technical services segment	Inter-segment eliminations	December 31, 2021/2021 (Restated)
Operating revenue	60,876,611,980.58	28,850,482,770.06	(9,048,349,992.69)	80,678,744,757.95
Revenue from external customers	60,182,467,941.20	20,496,276,816.75	–	80,678,744,757.95
Revenue from internal segments	694,144,039.38	8,354,205,953.31	(9,048,349,992.69)	–
Operating cost	34,495,045,141.64	27,889,053,529.90	(8,488,758,562.76)	53,895,340,108.78
Total assets	386,721,258,176.74	31,781,922,806.04	(18,470,307,859.31)	400,032,873,123.47
Total liabilities	235,732,917,206.20	26,556,058,065.01	(13,206,399,049.80)	249,082,576,221.41
Income from investment in associates	1,108,590,931.91	228,499,015.63	66,972,987.33	1,404,062,934.87
Long-term equity investment accounted by using the equity method	10,785,212,309.20	2,102,915,546.79	(430,722,838.07)	12,457,405,017.92
Operating profit	18,785,293,195.34	113,666,820.50	(545,425,326.98)	18,353,534,688.86
Income tax expenses	2,564,212,880.58	(40,223,555.36)	(81,813,799.05)	2,442,175,526.17
Net profit	15,998,716,515.86	188,705,303.19	(463,611,527.93)	15,723,810,291.12

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Revenue from external customers by location of revenue sources and non-current assets by location of assets

Item	2022	2021
Revenue from external customers in the PRC	76,953,430,047.63	75,159,302,084.03
Revenue from external customers in other countries	5,868,973,538.80	5,519,442,673.92
Total	82,822,403,586.43	80,678,744,757.95

Item	December 31, 2022	December 31, 2021 (Restated)
Non-current assets in the PRC	338,480,532,265.29	332,030,694,412.22
Non-current assets in other countries	30,123,089.55	36,027,880.80
Total	338,510,655,354.84	332,066,722,293.02

Dependence on major customers

Item	Operating revenue of 2022	Percentage to the operating revenue of the Group	Operating revenue of 2021	Percentage to the operating revenue of the Group
Guangdong Power Grid Co., Ltd.	35,323,294,351.45	42.65%	36,836,879,570.64	45.66%
Fujian Electric Grid Co., Ltd.	10,043,676,324.99	12.13%	9,939,650,672.56	12.32%
CGN Shanwei New Energy Co., Ltd. (中廣核汕尾新能源有限公司)	8,530,444,268.64	10.30%	1,317,200.99	0.00%
Guangxi Power Grid Co., Ltd.	6,014,720,412.12	7.26%	5,768,442,673.66	7.15%
CGN Huizhou Nuclear Power Co., Ltd. (中廣核惠州核電有限公司)	5,895,419,280.65	7.12%	3,810,244,804.91	4.72%

(XV) Notes to Major Items in the Financial Statements of the Parent Company

1. Accounts receivable

(a) Accounts receivable disclosed by category

Type	December 31, 2022					December 31, 2021				
	Carrying balance		Bad debt provisions		Carrying value	Carrying balance		Bad debt provisions		Carrying value
	Amount	percentage	Amount	Provisions percentage		Amount	percentage	Amount	Provisions percentage	
Accounts receivables for which provision for bad debts has been made by group	338,579,966.35	100.00%	3,457,627.10	1.02%	335,122,339.25	1,233,528,873.24	100.00%	2,446,124.52	0.20%	1,231,082,748.72
Including: Accounts receivable by subsidiaries within the scope of consolidation	200,080,637.92	59.09%	-	-	200,080,637.92	882,762,937.50	71.56%	-	-	882,762,937.50
Group 1	138,443,828.43	40.89%	3,457,460.60	2.50%	134,986,367.83	350,698,964.99	28.43%	2,439,441.99	0.70%	348,259,523.00
Group 2	55,500.00	0.02%	166.50	0.30%	55,333.50	66,970.75	0.01%	6,682.53	9.98%	60,288.22
Total	338,579,966.35	100.00%	3,457,627.10	1.02%	335,122,339.25	1,233,528,873.24	100.00%	2,446,124.52	0.20%	1,231,082,748.72

As part of the Company's credit risk management, the Company 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:

Accounts receivable by subsidiaries within the scope of consolidation:

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	0.00%	192,539,379.34	-	192,539,379.34	0.00%	681,886,679.04	-	681,886,679.04
1 to 2 years	0.00%	5,018,913.31	-	5,018,913.31	0.00%	47,609,576.34	-	47,609,576.34
2 to 3 years	0.00%	2,473,269.80	-	2,473,269.80	0.00%	153,266,682.12	-	153,266,682.12
3 to 4 years	0.00%	49,075.47	-	49,075.47	0.00%	-	-	-
Total		200,080,637.92	-	200,080,637.92		882,762,937.50	-	882,762,937.50

Group 1:

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%	91,598,953.38	274,796.85	91,324,156.53	0.30%	323,503,318.44	973,909.66	322,529,408.78
1 to 2 years	5.00%	41,242,075.05	2,062,103.75	39,179,971.30	5.00%	26,490,646.55	1,324,532.33	25,166,114.22
2 to 3 years	20.00%	5,602,800.00	1,120,560.00	4,482,240.00	20.00%	705,000.00	141,000.00	564,000.00
Total		138,443,828.43	3,457,460.60	134,986,367.83		350,698,964.99	2,439,441.99	348,259,523.00

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Group 2:

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%	55,500.00	166.50	55,333.50	0.30%	150.00	0.45	149.55
1 to 2 years	10.00%	-	-	-	10.00%	66,820.75	6,682.08	60,138.67
Total		55,500.00	166.50	55,333.50		66,970.75	6,682.53	60,288.22

(2) Changes in provision for bad debts of accounts receivable

	December 31, 2022
Opening balance	2,446,124.52
Provisions made during the year	2,909,361.17
Recovered or reversed during the year	(1,897,858.59)
Closing balance	3,457,627.10

(3) Top five debtors with the largest closing balances of accounts receivable

2022

Top five debtors with the largest closing balances:

Name of entity	Carrying balance	Percentage to total accounts receivable	Closing balance of provisions for bad debts
Taishan Nuclear	51,079,104.81	15.09%	-
CGN Solar Energy Development Co., Ltd.	40,318,793.74	11.91%	2,015,939.69
CGN Operations	35,434,951.45	10.47%	-
Yangjiang Nuclear	31,591,489.76	9.33%	-
Ningde Nuclear	24,244,087.59	7.15%	-
Total	182,668,427.35	53.95%	2,015,939.69

2. Other receivables

Item	December 31, 2022	December 31, 2021
Dividends receivable	4,795,253,178.45	1,867,585,220.01
Other receivables	22,116,091.38	24,348,746.36
Total	4,817,369,269.83	1,891,933,966.37

(1) Dividends receivable

(a) Dividends receivable

Debtors with closing balances

Investee	December 31, 2022	December 31, 2021
Ling'ao Nuclear	1,569,511,940.10	551,292,681.66
CGN Nuclear Power Investment Co., Ltd. (中廣核核電投資有限公司)	777,800,000.00	–
CGN Ninghe Investment Co., Ltd. (中廣核寧核投資有限公司)	551,917,800.00	–
CGN Engineering	479,626,192.13	679,626,192.13
Lingdong Nuclear	436,666,346.22	636,666,346.22
Yangjiang Nuclear	408,000,000.00	–
CGN Operations	300,000,000.00	–
CGN Fund Phase I	271,730,900.00	–
Total	4,795,253,178.45	1,867,585,220.01
Less: Bad debt provisions	–	–
Carrying value	4,795,253,178.45	1,867,585,220.01

(b) As at December 31, 2022 and December 31, 2021, significant dividends receivable aged over 1 year of the Company are as follows:

Investee	Closing balance	Aging	Reason for being not recovered	Whether an impairment occurred and the basis for its judgment
Lingdong Nuclear	436,666,346.22	2 to 3 years	Fund arrangement in the Group	No impairment occurred and Lingdong Nuclear maintained sound operation
CGN Engineering	479,626,192.13	3 to 4 years	Fund arrangement in the Group	No impairment occurred and CGN Engineering maintained sound operation

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

(2) Other receivables

(a) Other receivables disclosed by category

Item	December 31, 2022					December 31, 2021				
	Carrying balance		Bad debt provisions			Carrying balance		Bad debt provisions		
	Amount	Percentage	Amount	percentage	Carrying value	Amount	Percentage	Amount	percentage	Carrying value
Other receivables by subsidiaries within the scope of consolidation	16,886,501.98	76.30%	-	-	16,886,501.98	23,358,216.17	95.74%	-	-	23,358,216.17
Provision for bad debts made by group	5,245,325.38	23.70%	15,735.98	0.30%	5,229,589.40	1,038,667.80	4.26%	48,137.61	4.63%	990,530.19
- Group 1	5,087,156.82	22.99%	15,261.47	0.30%	5,071,895.35	-	-	-	-	-
- Group 2	158,168.56	0.71%	474.51	0.30%	157,694.05	1,038,667.80	4.26%	48,137.61	4.63%	990,530.19
Total	22,131,827.36	100.00%	15,735.98	0.07%	22,116,091.38	24,396,883.97	100.00%	48,137.61	0.20%	24,348,746.36

(b) Changes in bad debt provisions for other receivables

Item	2022			Total
	Expected credit losses within 12 months	Expected credit losses during the whole life (no credit impairment occurred)	Expected credit losses during the whole life (credit impairment occurred)	
January 1, 2022	48,137.61	-	-	48,137.61
Provisions for the year	15,735.98	-	-	15,735.98
Recovered or reversed for the year	(48,137.61)	-	-	(48,137.61)
December 31, 2022	15,735.98	-	-	15,735.98

(c) Top five debtors with the largest closing balances of other receivables

All of top five debtors with the largest closing balances were subsidiaries

Name of entity	Nature	Amount	Aging	Percentage to total other receivables	Closing balance of provisions
Yangjiang Nuclear	Advances	5,032,393.71	Within 1 year	22.75%	-
Ningde Nuclear	Advances	3,391,437.88	Within 1 year	15.33%	-
Fangchenggang Nuclear	Advances	3,375,513.57	Within 1 year	15.26%	-
GNPJVC	Advances	1,695,718.94	Within 1 year	7.67%	-
Lingdong Nuclear	Advances	1,695,718.94	Within 1 year	7.67%	-
Total		15,190,783.04		68.68%	-

(d) Other receivables by nature

Item	December 31, 2022	December 31, 2021
Related party payments	21,973,658.80	23,358,216.17
Others	158,168.56	1,038,667.80
Total	22,131,827.36	24,396,883.97
Less: Bad debt provisions	15,735.98	48,137.61
Carrying value	22,116,091.38	24,348,746.36

3. Other current assets

Item	December 31, 2022	December 31, 2021
VAT retained at the end of the year	42,699,215.88	39,104,204.36
Loans entrusted to subsidiaries	14,791,499,999.99	18,415,000,000.00
Interest receivable for entrusted loans	12,675,918.06	16,625,155.57
Total	14,846,875,133.93	18,470,729,359.93

4. Debt investment

Item	December 31, 2022	December 31, 2021
Entrusted loans	11,449,963,326.36	14,190,963,326.36
Others	48,917,096.53	37,739,834.23
Less: Debt investment due within one year	3,992,500,000.00	5,691,000,000.00
Net	7,506,380,422.89	8,537,703,160.59

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

5. Long-term equity investments

(1) Long-term equity investments are classified as follows:

Item	December 31, 2022			December 31, 2021 (Restated)		
	Carrying balance	Impairment provisions	Carrying value	Carrying balance	Impairment provisions	Carrying value
Investments in subsidiaries	82,927,557,919.17	-	82,927,557,919.17	80,196,444,121.58	-	80,196,444,121.58
Investments in associates and joint ventures	3,676,751,394.86	-	3,676,751,394.86	2,769,221,434.63	-	2,769,221,434.63
Total	86,604,309,314.03	-	86,604,309,314.03	82,965,665,556.21	-	82,965,665,556.21

(2) Investment in subsidiaries

	Balance at January 1, 2022	Changes in the current year			Balance at December 31, 2022	Impairment provisions	Cash dividends announced to be distributed for the year
		Additional investment	Reduced investment	Other changes			
1. Subsidiaries							
GNIC	22,734,177,521.54	-	-	-	22,734,177,521.54	-	1,785,000,000.00
Ling'ao Nuclear	6,883,160,867.23	-	-	-	6,883,160,867.23	-	2,138,219,258.44
Lingdong Nuclear	2,195,503,954.06	-	-	-	2,195,503,954.06	-	-
Yangjiang Nuclear	6,162,481,639.48	-	-	-	6,162,481,639.48	-	1,854,349,979.11
CGN Operations	118,807,136.75	50,000,000.00	-	-	168,807,136.75	-	917,717,174.76
CNPRI	2,390,682,040.74	-	-	-	2,390,682,040.74	-	-
Guangdong Daya Bay Nuclear Power Environment Protection Company Co., Ltd. (廣東大亞灣核電環保有限公司)	99,602,305.72	-	-	-	99,602,305.72	-	-
CGN Nuclear Power Investment Co., Ltd. (中廣核電投資有限公司)	9,562,835,909.32	-	-	-	9,562,835,909.32	-	777,800,000.00
CGN Ninghe Investment Co., Ltd. (中廣核寧核投資有限公司)	3,306,159,962.85	-	-	-	3,306,159,962.85	-	551,917,800.00
SNPI	1,061,032,900.00	-	-	-	1,061,032,900.00	-	-
Taishan Nuclear	3,600,022,661.30	-	-	-	3,600,022,661.30	-	-
Taishan Investment	8,769,244,739.87	-	-	-	8,769,244,739.87	-	-
CGN Engineering	3,619,094,819.39	1,000,000,000.00	-	-	4,619,094,819.39	-	-
Lufeng Nuclear	4,338,000,000.00	920,000,000.00	-	-	5,258,000,000.00	-	-
Fangchenggang Investment	4,655,911,100.00	-	-	-	4,655,911,100.00	-	300,000,000.00
Ocean Power	130,147,205.02	195,200,000.00	-	-	325,347,205.02	-	-
Hebei Thermal Power	10,086,202.41	-	(10,086,202.41)	-	-	-	-
Power Sales Company	214,754,017.55	75,000,000.00	-	-	289,754,017.55	-	-
Hepeng Supervision Company	3,039,138.35	-	-	-	3,039,138.35	-	-
Shandong Zhaoyuan Nuclear Power Co., Ltd. (山東招遠核電有限公司)	100,000,000.00	360,000,000.00	-	-	460,000,000.00	-	-
Guizhou Yuping Clean Thermal Energy Co., Ltd. (貴州玉屏清潔熱能有限公司)	241,700,000.00	80,000,000.00	-	-	321,700,000.00	-	-
Guangxi Fangchenggang Third Nuclear Power Co., Ltd. (廣西防城港第三核電有限公司)	-	61,000,000.00	-	-	61,000,000.00	-	-
Total	80,196,444,121.58	2,741,200,000.00	(10,086,202.41)	-	82,927,557,919.17	-	8,325,004,212.31

Other explanations:

The Company pledged its long-term equity investment in Lingdong Nuclear and Taishan Nuclear as security for its subsidiaries' loans, and thus the ownership of which was restricted. As at December 31, 2022 and December 31, 2021, the Company's net long-term equity investment with restricted ownership in Lingdong Nuclear was RMB2,195,503,954.06. As at December 31, 2022 and December 31, 2021, the Company's long-term equity investment with restricted ownership in Taishan Nuclear was RMB3,600,022,661.30.

(3) Investment in associates

Investee	Changes in the current year							Balance at December 31, 2022	Closing balance of impairment provisions
	Balance at January 1, 2022 (Restated)	Additional investment	Reduced investment	Investment income recognized under the equity method	Adjustment of other comprehensive income	Declared cash dividends or profits			
CGN Fund Phase I	2,749,221,434.63	809,711,221.70	-	431,659,558.53	-	(333,840,820.00)	3,656,751,394.86	-	
Xiong'an Xingrong Nuclear Power Innovation Center Co., Ltd. (雄安興融核電創新中心有限公司)	20,000,000.00	-	-	-	-	-	20,000,000.00	-	
Total	2,769,221,434.63	809,711,221.70	-	431,659,558.53	-	(333,840,820.00)	3,676,751,394.86	-	

6. Long-term loans

Item	December 31, 2022	December 31, 2021
Credit loans	1,210,000,000.00	800,000,000.00
Total	1,210,000,000.00	800,000,000.00
Less: Long-term loans due within one year	-	-
Long-term loans due after one year	1,210,000,000.00	800,000,000.00

7. Operating revenue and operating costs

Item	2022		2021	
	Revenue	Cost	Revenue	Cost
From other operations	225,990,731.73	170,859,790.46	816,601,748.69	721,771,037.37

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

8. Investment income

Details of investment income

Item	2022	2021 (Restated)
Income from long-term equity investments accounted for using the cost method	8,325,004,212.31	5,413,922,067.86
Income from long-term equity investments accounted for using the equity method	431,659,558.53	341,455,617.85
Interest income from entrusted loans	893,939,014.66	1,064,224,539.18
Others	11,520,259.82	–
Total	9,662,123,045.32	6,819,602,224.89

9. Supplementary information to cash flow statements

(1) Supplementary information to cash flow statements

Supplementary information	2022	2021 (Restated)
1. Reconciliation of net profits to cash flow from operating activities:		
Net profit	8,386,423,530.67	5,551,629,800.99
Add: Losses from credit impairment	979,100.95	1,638,913.88
Depreciation of fixed assets	33,079,204.75	29,244,109.39
Amortization of intangible assets	96,813,580.21	97,072,255.21
Depreciation of right-of-use assets	71,090,759.16	79,213,855.09
(Gains)/losses from changes in fair value	(9,220,720.27)	15,889,732.55
Gains on disposal of fixed assets, intangible asset and other long-term assets	(1,866,063.07)	(3,554.26)
Finance costs	628,058,491.56	669,419,615.87
Investment income	(9,662,123,045.32)	(6,819,602,224.89)
Decrease/(increase) in operating receivables	805,329,650.82	(322,050,691.44)
Increase in operating payables	201,828,097.89	106,199,214.62
Net cash flows used in operating activities	550,392,587.35	(591,348,972.99)
2. Net change in cash and cash equivalents:		
Closing balance of cash and cash equivalents	6,275,618,531.96	9,732,690,649.20
Less: Opening balance of cash and cash equivalents	9,732,690,649.20	6,694,196,723.37
Net (decrease)/increase in cash and cash equivalents	(3,457,072,117.24)	3,038,493,925.83

(XVI) Supplementary information**1. Breakdown of non-recurring gains or losses**

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 and available-for-sale financial assets	(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

2. Return on equity and earnings per share

The statements for return on equity and earnings per share have been prepared by the Company in accordance with the relevant requirements under the Rules on the Preparation and Report of Information Disclosure for Companies Publicly Issuing Securities No. 9 – Calculation and Disclosure of Return on Equity and Earnings Per Share (2010 Revision) issued by China Securities Regulatory Commission.

	Earnings per share		
	Weighted average return on equity	Basic earnings per share	Diluted earnings per share
Profit for the reporting period (2022)			
Net profit attributable to holders of ordinary shares of the Company	9.63%	0.197	0.197
Net profit attributable to holders of ordinary shares of the Company (excluding the non-recurring gains or losses)	9.44%	0.193	0.193

Notes to the Financial Statements

(All amounts in RMB unless otherwise stated)

Profit for the reporting period (2021) (Restated)	Weighted average return on equity	Earnings per share	
		Basic earnings per share	Diluted earnings per share
Net profit attributable to holders of ordinary shares of the Company	9.99%	0.193	0.193
Net profit attributable to holders of ordinary shares of the Company (excluding the non-recurring gains or losses)	9.98%	0.193	0.193

Note: In 2022 and 2021, the Group did not have any dilutive potential ordinary shares. Therefore, diluted earnings per share was the same as the basic earnings per share.

(1) Calculation of basic earnings per share

(a) Basic earnings per share

Please refer to Note (V) 59 for details of the calculation of basic earnings per share.

(b) Basic earnings per share (excluding non-recurring gains or losses)

Basic earnings per share (excluding non-recurring gains or losses) is calculated by dividing the consolidated net profit attributable to holders of ordinary shares of the Company (excluding non-recurring gains or losses) by the weighted average number of ordinary shares of the Company in issue:

	2022	2021 (Restated)
Consolidated net profit attributable to holders of ordinary shares of the Company	9,964,854,412.04	9,764,174,706.56
Non-recurring gains or losses attributable to holders of ordinary shares of the Company	195,208,318.63	2,686,237.01
Consolidated net profit attributable to holders of ordinary shares of the Company (excluding non-recurring gains or losses)	9,769,646,093.41	9,761,488,469.55
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 (excluding non-recurring gains or losses) (RMB/share)	0.193	0.193

(2) Calculation of weighted average return on equity**(a) Weighted average return on equity**

Weighted average return on equity is calculated by dividing the consolidated net profit attributable to holders of ordinary shares of the Company by the weighted average consolidated net assets attributable to holders of ordinary shares of the Company:

	2022	2021 (Restated)
Consolidated net profit attributable to holders of ordinary shares of the Company	9,964,854,412.04	9,764,174,706.56
Weighted average consolidated net assets attributable to holders of ordinary shares of the Company	103,466,952,098.02	97,776,365,311.72
Weighted average return on equity	9.63%	9.99%

(b) Weighted average return on equity (excluding non-recurring gains or losses)

Weighted average return on equity (excluding non-recurring gains or losses) is calculated by dividing the consolidated net profit attributable to holders of ordinary shares of the Company (excluding non-recurring gains or losses) by the weighted average consolidated net assets attributable to holders of ordinary shares of the Company:

	2022	2021 (Restated)
Consolidated net profit attributable to holders of ordinary shares of the Company (excluding non-recurring gains or losses)	9,769,646,093.41	9,761,488,469.55
Weighted average consolidated net assets attributable to holders of ordinary shares of the Company	103,466,952,098.02	97,776,365,311.72
Weighted average return on equity (excluding non-recurring gains or losses)	9.44%	9.98%

Company Information

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Ms. Ng Sau Mei

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Contact Us

Annual Report

This report was available on the website of the SZSE at www.szse.cn, the website of the Hong Kong Stock Exchange at www.hkexnews.hk and our website at www.cgnp.com.cn by April 6, 2023 and posted by April 11, 2023 to Shareholders who have elected to receive corporate communications from the Company in printed form.

In response to environmental protection, the Company encourages and recommends H shareholders to receive this report electronically.

Those Shareholders who (a) received this report electronically and would like to receive a printed copy or vice versa; or (b) received a printed copy of this report in either English or Chinese language only and would like to receive a printed copy of the other language version or to receive printed copies of both language versions in the future, are requested to write to the Company or the Company's Registrar or via email to the Company.

Shareholders may at any time change their choice of the language version or means of receipt of the Company's corporate communications free of charge by notice in writing to the Company or the Company's Registrar or via email to the Company.

Annual General Meeting

The 2022 AGM is scheduled to be held in May 2023, and the relevant details (including shareholders' right to demand a poll) are set out in the circular to be despatched together with a proxy form to the Shareholders.

Transfer of Shares

For the purposes of receiving final cash dividends and attending the AGM, the details of the procedures of registration of shares and book closure dates are set out in the circular to be despatched to shareholders of the Company.

Share Registrar

H Shares

Computershare Hong Kong Investor Services Limited
Address: Shops 1712-1716, 17th Floor,
Hopewell Centre, 183 Queen's Road East, Wan Chai,
Hong Kong, China

A Shares

Shenzhen Branch of China Securities Depository and Clearing Corporation Limited
Address: 25th Floor, Shenzhen Stock Exchange Building,
2012 Shennan Boulevard, Futian District, Shenzhen,
Guangdong Province, PRC

Our Stock Name and Stock Code

H Shares

Stock Name: CGN Power
Stock Code: HKSE 1816

A Shares

Stock Name: CGN
Stock Code: SZSE 003816

Contact Details

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You are welcomed to complete the following form and return the same to us by e-mail, fax or post. We would like to express our deepest gratitude for your valuable comments!

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	I can easily understand the contents				I can get useful information			
	Strongly agree	Agree	Disagree	Strongly Disagree	Strongly agree	Agree	Disagree	Strongly Disagree
Business at a glance for the year								
Chairman’s Statement								
President’s Review								
Shareholder Value								
Finance, Assets and Investment								
Financial Performance and Analysis								
Assets and Investment								
Business Performance and Outlook								
Industry Overview								
Business Performance and Analysis								
Future Outlook								
Capitals								
Production Capital								
Intellectual Capital								
Human Capital								
Financial Capital								
Environmental Capital								
Social and Relationship Capital								
Corporate Governance								
Board of Directors, Supervisory Committee and Senior Management								
Corporate Governance Report								
Directors’ Report								
Audit and Risk Management Committee Report								
Remuneration Committee Report								
Nomination Committee Report								
Nuclear Safety Committee Report								
Supervisory Committee Report								
Risk Management Report								
Financial Report								
Company Information								
Overall Rating of the Annual Report								

2. Which parts of the Annual Report are you most interested in?
3. What additional information do you expect to be provided in the Annual Report?
4. Any other comments/suggestions?

Please provide your information* below if you so wish:

Name:

Work Unit:

Tel:

E-mail:

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A world-class nuclear power supplier and service provider
with international competitiveness



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