

中广核  CGN

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)

H-share Stock Code:1816

A-share Stock Code:003816



2023

CGN Power Co., Ltd\*

Environmental, Social and Governance Report

\*For identification purpose only

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# About This Report

This is the ninth Environmental, Social and Governance (ESG) report published by CGN Power Co., Ltd. (the "**Report**"). We aim to disclose our sustainability vision, strategy and practices as well as ESG performance in 2023 to stakeholders in a more open, transparent, comprehensive and objective manner, and facilitate their understanding of our thoughts and practices on corporate social responsibility.

## Reporting Period

This Report covers data and information of the Company and our subsidiaries from January 1, 2023 to December 31, 2023 (the "**Reporting Period**"). The reporting scope is consistent with 2023 annual report.

With regard to continuity and comparability, certain information in this Report will be appropriately extended when necessary, and if applicable, historical data will also be presented for comparison.

## Reporting Standards

This Report is prepared in accordance with the Appendix C2 Environmental, Social and Governance Reporting Guide of the Rules Governing the Listing of Securities ("**Listing Rules**") on the Stock Exchange of Hong Kong Limited ("**SEHK**"), and the Shenzhen Stock Exchange ("**SZSE**")'s Guidelines No. 1 for Self-Regulation of Listed Companies - Standardized Operation of Companies Listed on the Main Board ("**Standardized Operation of Companies Listed on the Main Board**"), Shenzhen Stock Exchange's Self-discipline Supervision Guide for Listed Companies No. 1 - Business Handling and Shenzhen Stock Exchange's Self-discipline Supervision Guide for Listed Companies No. 3 - Industry Information Disclosure. We strictly comply with all "comply or explain" provisions in the Environmental, Social and Governance Reporting Guide, and prepare this Report based on reporting principles of materiality, quantitative, balance and consistency and disclose climate related issues with reference to the Guidance on Climate Disclosure of the SEHK. This Report also strictly adheres to the relevant requirements of SZSE and discloses our fulfillment of social responsibility. In preparing this Report, we also refer to the reporting standards or principles, including the GRI Sustainability Reporting Standards ("**GRI Standards**") issued by Global Reporting Initiative, the United Nations Global Compact, ISO 26000: 2010 Guidance on Social Responsibility of the International Organization for Standardization, the Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities (Draft for Comments) of the State-owned Assets Supervision and Administration Commission of the State Council ("**SASAC**"), Study on ESG Special Report Compilation for Listed Companies Controlled by Central State-owned Enterprises and the Basic Framework of the Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG5.0) of Chinese Academy of Social Sciences.

## Name Description

For ease of expression, CGN Power Co., Ltd. in this Report is also expressed as "**CGN Power**", "**the Company**", or "**we/our**". CGN Power and its subsidiaries are also expressed as "**the Group**". Subsidiaries and major associated companies are also expressed as "**subsidiaries**". Unless otherwise defined, the terms used in this Report shall have the same meanings as those defined in the H-share Annual Report 2022 published by the Company on April 4, 2023.

## Reliability and Assurance

The contents of this Report are compiled from internal documents, statistical reports or relevant public information of the Company. The Company assures that the contents of this Report, for which the Company accepts full responsibility for, are true, accurate and complete and are free of any false statement, misleading representations or material omissions.

To ensure its truthfulness and reliability, this Report has been submitted to Ernst & Young Hua Ming LLP (Special General Partnership) for a third-party assurance, which was conducted in accordance with the International Standard on Assurance Engagements 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information ("**ISAE3000**") with an independent assurance report and statement provided on pages 149 of this Report.

## Access to This Report

This Report is available in simplified Chinese, traditional Chinese and English. The electronic copy can be downloaded from the websites of SEHK ([www.hkexnews.hk](http://www.hkexnews.hk)), SZSE ([www.szse.cn](http://www.szse.cn)), CNINFO ([www.cninfo.com.cn](http://www.cninfo.com.cn)) and the investor relations section of our website ([www.cgnp.com.cn](http://www.cgnp.com.cn)). For any discrepancy between different versions, the simplified Chinese version shall prevail.

For the names of major laws and regulations that the Company complies with in relation to ESG topics, please refer to the "ESG Policies" section in the Company's *Environmental, Social and Governance Report 2022*.

## Feedback

Your precious opinions and suggestions are critical to our sustainable development. If you have any comments and suggestions, please contact us via the ways provided in the feedback form at the end of the Report.

## Board Statement

CGN Power Co., Ltd. attaches great importance to sustainable corporate development. Environmental, Social and Governance (ESG) lies at the core of our operation. We have incorporated the philosophy into our development strategies, major decisions and production operations, to actively promote the coordination among our business, the environment and the society. The Company and the Board of Directors (the Board) have adhered to the requirements of the *Governance Rules for Listed Companies issued by the China Securities Regulatory Commission, the Environmental, Social, and Governance Reporting Guide issued by the SEHK and the Guidelines for Standardized Operation of Main Board of SZSE*, continuously improved our ESG governance system, strengthened the supervision and participation of the Board in ESG-related issues, and effectively managed ESG-related risks. Through these efforts, we have constantly improved our corporate governance.

### ESG Supervision

As the superior decision-making body on ESG-related issues, the Board is responsible for improving the Company's regulation and governance system, setting and supervising objectives of long-term performance and management, evaluating business performance, supervising management performance, and identifying risks to maintain a high level of governance. As an important element of corporate governance, ESG is integrated into the Company's overall governance system and risk management. The Board regularly receives briefings of ESG-related issues including the operational management and safety management of the Company and puts forward ESG requirements at the Board meetings. During the recess of the Board, Board members are provided with monthly corporate management reports, including ESG-related issues.

In 2023, our ESG governance system were optimized through the establishment of a four-tier structure integrating governance, management, organizing and implementation, making our ESG governance more standardized and professional. On the governance level, we set up the Audit and Risk Management Committee under the Board to review major ESG-related issues and ESG reports and report directly to the Board. The Board shall make decisions after deliberation. Other specialized committees are responsible for relevant ESG supervision in specialized areas.

### ESG Management Principles and Strategies

Committed to the concept of "Natural Energy Powering Nature", the Board and its subordinate committees have integrated ESG topics such as corporate governance, operation, nuclear safety, climate change and community development into our management, deliberation and decision-making processes. The responsibilities of the Audit and Risk Management Committee of the Board involve the management of ESG risks including construction safety, employee occupational health, industrial safety and fire risks, climate change risks and natural disasters affecting nuclear safety, as well as the identification and management of relevant risks. The annual Internal Control Evaluation Report shall be submitted to the Board for approval after being reviewed by the Audit and Risk Management Committee of the Board. An accounting firm is also hired to audit the effectiveness of the Company's internal control to ensure an effective and reliable internal control system. In addition, the agenda of the Audit and Risk Management Committee of the Board, along with those concerns and recommendations made by the Board members, also covers climate related issues, such as actionable steps to deal with high temperature and extreme weather and the continuous improvement of safety management of cooling water in NPPs, etc., which shall be reported to the Board.

In addition, the Board participates in the material topics questionnaire survey through the approach of "identification- assessment-prioritization- approval". The final analysis results are reviewed and confirmed by the senior management of the Company, which will then be submitted together with this Report to the Audit and Risk Management Committee and the Board of Directors for approval. More details are provided in the "Materiality Analysis" section of this Report.

### ESG Progress Review

CGN Power sets ESG key performance indicators based on the actual situation of the Company. The Board holds five regular meetings during the Reporting Period to track, monitor and review important ESG-related issues, including the risk management, the internal control evaluation, the ESG Report, schemes of remuneration packages and contracts of performance for senior management members. The Board also reviews the Board's structure, examines and confirms candidates for the Board directors and senior management members, and monitors the implementation of the Company's Action Plan for Safety and Quality Improvement in the Nuclear Power Industry (2022-2025) etc., so as to comprehensively promote the achievement of ESG key performance objectives. It will take relevant actions to make our development higher-quality, more efficient, fairer, more sustainable and safer.

Our 2023 Environmental, Social and Governance Report was approved by the Board on March 27, 2024.

## About Us

### Our Business

CGN Power (SEHK stock code: 1816, SZSE stock code: 003816) was incorporated on March 25, 2014. After it was officially listed on the Main Board of SEHK on December 10, 2014, CGN Power was listed on SZSE on August 26, 2019. Its primary businesses include construction, operation and management of nuclear power plants (NPPs), nuclear power sales, and organizing the design and scientific research of the development of NPPs.

Upon the completion of Daya Bay NPP, the Company has accumulated rich experiences through introduction, digestion, assimilation and innovation in nuclear power construction and operation. The Company has established professional systems in nuclear power maintenance and operation, design and construction, R&D and personnel training in line with international practices. As of the end of the Reporting Period, the Company had managed 9 nuclear power bases, 27 units in service and 11 units approved for FCD or under construction<sup>1</sup>, with a total installed capacity of more than 43 GW.

CGN Power continues to develop nuclear power efficiently on the basis of safety. With safe, economical and reliable power supply, we strive to become a leader in the development and application of new nuclear energy technologies, maintain a leading position in domestic nuclear power generation, and improve our competitiveness in the international nuclear power market.

### Equity Structure<sup>2</sup>



### Main Subsidiaries

Name	China Nuclear Power Operations Co., Ltd. (CGN Operations)	China Nuclear Power Engineering Co., Ltd. (CGN Engineering)	China Nuclear Power Technology Research Institute Co., Ltd. (CNPRI)	Suzhou Nuclear Power Research Institute (SNPI)	Ling Ao Nuclear Power Co., Ltd. (Ling'ao Nuclear)	CGN Lufeng Nuclear Power Co., Ltd. (Lufeng Nuclear)	Power Sales Company	Lingdong Nuclear Power Co., Ltd. (Lingdong Nuclear)
Shareholding ratio	100%	100%	100%	100%	100%	100%	100%	93.88%

Name	Daya Bay Nuclear Power Operations and Management Co., Ltd. (DNMC)	Guangdong Nuclear Power Joint Venture Co., Ltd. (GNP-JVC)	Yangjiang Nuclear Power Co., Ltd. (Yangjiang Nuclear)	Taishan Nuclear Power Joint Ventures Co., Ltd. (Taishan Nuclear)	Fujian Ningde Second Nuclear Power Co., Ltd. (Ningde No.2 Nuclear)	Liaoning Hongyanhe Nuclear Power Co., Ltd. (Hongyanhe Nuclear)	Guangxi Fangchenggang Nuclear Power Co., Ltd. (Fangchenggang Nuclear)	Fujian Ningde Nuclear Power Co., Ltd. (Ningde Nuclear)
Shareholding ratio	87.5%	75%	61.72%	51%	43%	38.88%	36.6%	33.76%

<sup>1</sup> Including 6 units approved for FCD or under construction, entrusted by the controlling shareholder of the Company. FCD: First Concrete Date, the date of pouring the first tank of concrete. It marks the commencement of civil engineering on the nuclear power site, and has milestone significance in the construction of nuclear power projects.

<sup>2</sup> Equity structure of the Company as of December 31, 2023

**Business Presence<sup>3</sup>**

CGN Power keeps investing in the construction of safe and efficient nuclear power units and develops clean nuclear power energy. On March 25, 2023, Fangchenggang Unit 3 completed all commissioning work, and was put into commercial operation. On July 31, 2023, Ningde Unit 5 and Unit 6 were approved by the State Council. The First Concrete Date (FCD) of Lufeng Unit 6 was on August 26, 2023. On December 29, 2023, Huizhou Unit 3 and Unit 4 were approved by the State Council. As of the end of 2023, our businesses are as follow.

Nuclear Power Base	Gigawatt-level units in operation / unit	1.75GW units in operation / unit	Gigawatt-level units <sup>4</sup> under construction / unit
Daya Bay Nuclear Power Base	6	\	\
Lufeng Nuclear Power Base	\	\	2
Yangjiang Nuclear Power Base	6	\	\
Taishan Nuclear Power Base	\	2	\
Hongyanhe Nuclear Power Base	6	\	\
Fangchenggang Nuclear Power Base	3	\	1
Ningde Nuclear Power Base	4	\	2
Huizhou Nuclear Power Base	\	\	4
Cangnan Nuclear Power Base	\	\	2

Nuclear power units in operation <b>27</b>	Nuclear power units under construction <sup>5</sup> <b>11</b>	In-service installed capacity <b>30,568<sub>MW</sub></b>
Installed capacity of units under construction <sup>6</sup> <b>13,246<sub>MW</sub></b>	CGN Power's share of installed in-service in China <b>53.6%</b>	Total installed capacity in operation and under construction <b>43,814<sub>MW</sub>, 43.5%</b> CGN Power's share of installed in-service and under-construction in China

<sup>3</sup> For more details on our businesses (excluding nuclear power projects entrusted by the controlling shareholders), please refer to the section "Production Capital" of the H-Share Annual Report 2023.

<sup>4, 5, 6</sup> Including units under entrusted management and units that have been approved for FCD or under construction

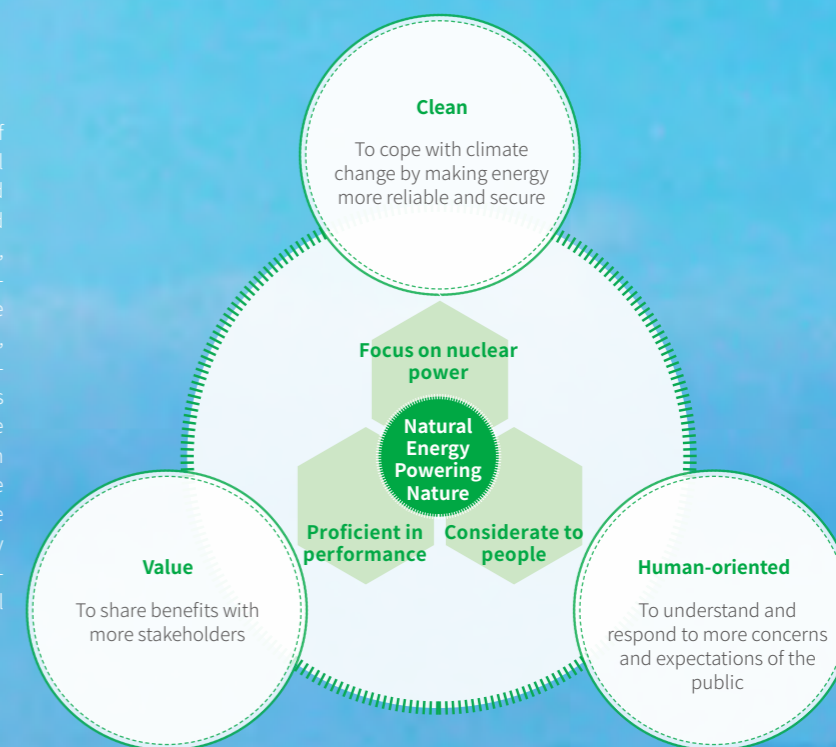
**Units in Operation and Under Construction**

Company	Shareholding	Unit	Model	Commercial Operation date	Installed Capacity(MW)
<b>Consolidated Subsidiaries</b>					
Ling'ao Nuclear	100%	Ling'ao Unit 1	M310	May 2002	990
		Ling'ao Unit 2	M310	January 2003	990
Lufeng Nuclear	100%	Lufeng Unit 5	HPR 1000	Under Construction	1,200
		Lufeng Unit 6	HPR 1000	Under Construction	1,200
Lingdong Nuclear	93.88%	Lingdong Unit 1	CPR1000	September 2010	1,087
		Lingdong Unit 2	CPR1000	August 2011	1,087
GNPJVC	75%	Daya Bay Unit 1	M310	February 1994	984
		Daya Bay Unit 2	M310	May 1994	984
Yangjiang Nuclear	61.72%	Yangjiang Unit 1	CPR1000	March 2014	1,086
		Yangjiang Unit 2	CPR1000	June 2015	1,086
		Yangjiang Unit 3	CPR1000+	January 2016	1,086
		Yangjiang Unit 4	CPR1000+	March 2017	1,086
		Yangjiang Unit 5	ACPR1000	July 2018	1,086
		Yangjiang Unit 6	ACPR1000	July 2019	1,086
Taishan Nuclear	51%	Taishan Unit 1	EPR	December 2018	1,750
		Taishan Unit 2	EPR	September 2019	1,750
Fangchenggang Nuclear	36.6%	Fangchenggang Unit 1	CPR1000	January 2016	1,086
		Fangchenggang Unit 2	CPR1000	October 2016	1,086
		Fangchenggang Unit 3	HPR 1000	March 2023	1,188
		Fangchenggang Unit 4	HPR 1000	Under Construction	1,188
Ningde Nuclear	33.76%	Ningde Unit 1	CPR1000	April 2013	1,089
		Ningde Unit 2	CPR1000	May 2014	1,089
		Ningde Unit 3	CPR1000	June 2015	1,089
		Ningde Unit 4	CPR1000	July 2016	1,089

Company	Shareholding	Unit	Model	Commercial Operation date	Installed Capacity(MW)
<b>Associated companies</b>					
Hongyanhe Nuclear	38.88%	Hongyanhe Unit 1	CPR1000	June 2013	1,119
		Hongyanhe Unit 2	CPR1000	May 2014	1,119
		Hongyanhe Unit 3	CPR1000	August 2015	1,119
		Hongyanhe Unit 4	CPR1000	June 2016	1,119
		Hongyanhe Unit 5	ACPR1000	July 2021	1,119
		Hongyanhe Unit 6	ACPR1000	June 2022	1,119
Ningde No.2 Nuclear	43%	Ningde Unit 5	HPR 1000	Approved for FCD	1,210
		Ningde Unit 6	HPR 1000	Approved for FCD	1,210
<b>Companies entrusted by the controlling shareholders</b>					
Huizhou Nuclear	Not applicable	Huizhou Unit 1	HPR 1000	Under Construction	1,202
		Huizhou Unit 2	HPR 1000	Under Construction	1,202
Cangnan Nuclear	Not applicable	Cangnan Unit 1	HPR 1000	Under Construction	1,208
		Cangnan Unit 2	HPR 1000	Under Construction	1,208
Huizhou No.2 Nuclear	Not applicable	Huizhou Unit 3	HPR 1000	Approved for FCD	1,209
		Huizhou Unit 4	HPR 1000	Approved for FCD	1,209

## Our Culture

Holding onto the brand positioning of safe energy, CGN Power takes "Natural Energy Powering Nature" as the brand slogan and fully practices the brand development concept of "safe, green, innovative and responsible development". We operate on the basis of safe and steady nuclear power operation, and incorporate sustainable development in the decision-making process and daily operations based on the brand characteristics of low-carbon and green nuclear power. With these efforts, we strive to build a responsible concept model to develop clean energy that facilitates economic and environmental development as well as social progress.



### Mission

#### Developing Clean Energy to Benefit Mankind

Committed to power supply and services focusing on nuclear power generation, we follow the principles of "safety first, quality foremost and pursuit of excellence" and work style of "strict compliance, prudent decision-making, detail-oriented and fact-based approach" to create the best values for customers, shareholders, employees and the society.

### Vision

#### A World-class Nuclear Power Supplier and Service Provider with Global Competitiveness

Targeting the domestic and international markets, we pursue a higher level of public trust, responsibility, technology, strength, sustainable development and value to become a well-respected world-class nuclear power company.

### Basic Principles

#### Safety First, Quality Foremost and Pursuit of Excellence

We adhere to the basic principles of "safety first, quality foremost and pursuit of excellence" and make them the guiding principle of all decision-making in production and operation management.

### Work Style

#### Strict Compliance, Prudent Decision-making, Detail-oriented and Fact-based Approach

"Strict compliance, prudent decision-making, detail-oriented and fact-based approach" is our work style and attitude. Only in this way can we ensure safety, quality, excellence, and realize our mission and vision.

## Our Strategy



### Excellence

We pursue excellent safety performance and improve the safety performance of nuclear power plants (NPPs) benchmarking with international first-class indicators of World Association of Nuclear Operators ("WANO"). Our "Standardization, Centralization, and Specialization" (SCS) management strategy is practiced diligently to increase the control of multiple units. We implement lean management to optimize the costs of operation and project building.



### Stability

Based on the development characteristics of the nuclear power industry, we adhere to high standards, pursue high quality, and ensure stable production, operation, and engineering construction performance. We seek stable profitability, insist on sound financial policies, and constantly optimize the capital structure and financing costs to assure fund security. We provide long-term and stable returns to shareholders and implement long-term and stable dividend policies.



### Cleanness

We are always committed to developing clean energy, concentrate on the comprehensive utilization of nuclear power and nuclear energy, and strictly control the discharge of radioactive substances during NPPs operation to protect the environment with every effort. We reasonably use resources, continuously improve resource utilization, reduce resource consumption in the Company's business activities, and actively implement corporate social responsibility.



### Growth

We keep improving our core competitiveness, grasp the strategic opportunities of nuclear power development, and promote the approval and commencement of new nuclear power projects to strive to maintain the leading business size in China. Guiding the Company's development through technological innovation, we insist on innovation-driven development, continuously promote the development and application of new technologies, and maintain the potential and competitiveness of development.

## Long-Term Development Goals Through the Year 2035

Building a World-class Nuclear Power Enterprise with Global Competitiveness.



To greatly enhance the comprehensive competitiveness of the industry, with the world's largest total installed capacity in operation and under construction, and world-class safety operation performance; boast a well-known brand influence; achieve high-level technological self-reliance and self-improvement; become a benchmark for building a modern enterprise system with Chinese characteristics.

## Key development goals set for the "14th Five-Year Plan" period

### Five "first-class" goals

First-class safety and quality

First-class engineering construction

First-class scientific and technological innovation

First-class operating effectiveness

First-class corporate management

We focus on consolidating the foundation, promoting advantages, remedying our weakness, and expanding the industry to achieve higher quality, more efficient, more equitable, more sustainable, and safer development.

## CGN Power in 2023

### Major Awards of the Year

- #### Governance
- ★ CGN Power was granted the highest Grade A on the Information Disclosure Assessment of Shenzhen Stock Exchange for 3 consecutive years.
  - ★ CGN Power was awarded 2023 Best Practice Case of Governance, Best ESG Practice Case, and Excellent Case of the Board of Directors by China Association for Public Companies.
  - ★ CGN Power Annual Report received the Gold Award of ARC Awards for the first time, and its Annual Report and ESG Report received LACP Platinum Award, the highest award, for the first time.
  - ★ CGN Power was recognized as an "Outstanding Listed Company of High-quality Development" by the 13th China Securities Golden Bauhinia Awards.
  - ★ CGN Power won the 6th New Fortune Best IR Hong Kong Listed Company (A + H) award.
  - ★ CGN Power was awarded the "the Most Valuable Investment", "Top 50 ESG · Carbon Neutral Companies" and "Golden Information Disclosure Award" in the 25th Golden Bull Award for Listed Companies.
  - ★ CGN Power won the Annual Excellent Enterprise for Sustainable Development in China ESG Golden Awards 2023.
  - ★ CNPRI won the Second Prize in the Compliance Management of Electric Power Enterprise.

- #### SQE
- ★ Yangjiang Nuclear won the 20th National Quality Award of China Association for Quality.
  - ★ Team One of Ningde Nuclear was awarded Standardized Safety Management Team by the China Association of Work Safety.
  - ★ Two achievements of CGN Operations won the Demonstration Award and the Professional Award respectively in the Second 2023 National QC Group Work Competition of China Association for Quality.
  - ★ CGN Operations won the Grand Prize of 2022 National Power Industry Equipment Management Innovation.
  - ★ Yangjiang Nuclear was selected as the 2023 Provincial Model Enterprise of Water Conservation.
  - ★ A technological application of SNPI was awarded 2022 Excellent Practice Case for Green Low-carbon Enterprise Development.

- #### Technology
- ★ A project of SNPI won the Second Prize of Technological Progress of the 2023 Science and Technology Award.
  - ★ CNPRI received the Second Prize of the "Ingenuity Cup" National Artificial Intelligence Innovation Application Competition sponsored by the Ministry of Industry and Information Technology of the PRC and the Ministry of Science and Technology of the PRC.
  - ★ Two invention patents of CNPRI won the 24th China Patent Gold and Excellence Awards respectively. CGN Operations, CGN Engineering, and SNPI each has a patent that won the 24th China Patent Excellence Awards.
  - ★ Two technological achievements of SNPI were awarded the First Prize of Technology Progress by the China Industry Anti-corrosion Technology Association.
  - ★ Two patents of Ningde Nuclear were ranked among the First High Value Patents (Technology) Achievement in the Energy Industry.

- #### Employee
- ★ Four teams and seven employees of CGN Power received the titles of 2023 Provincial Model Worker, May 1 Labor Awards, Advanced Women, and pioneer worker titles.
  - ★ Three youth teams of CGN Power received the National Youth Model Unit Award.
  - ★ Five youth teams of CGN Power received the 21st Guangdong Province Youth Model Unit Award.
  - ★ CGN Operations was awarded Demonstration Site of Industrial Workers Training in Industrial System of Guangdong Province.

- #### Society
- ★ Two assistance projects of CGN Power were awarded the Best Practice Case of Rural Vitalization of Listed Companies.
  - ★ CGN Operations won the First Prize of the Enterprise Group in the Fourth National Supply Chain Competition.
  - ★ CGN Operations was awarded the Leading Central SOE of E-commerce Procurement Operating Mode.
  - ★ Yangjiang Nuclear won the Silver Cup in the "Guangdong Hongmian Cup for Poverty Alleviation".

### Major annual ESG ratings

Domestic				
CNI ESG	CSI ESG	Wind ESG	IIGF	SynTao Green Finance
AAA	AAA	AA	A+	A-

Overseas			
S&P Global CSA Rating	FTSE ESG Rating	MSCI ESG Rating	Sustainalytics ESG Risk Rating
43	2.4	BB	30.6





Overview of Annual Key Figures

On-grid Power Generation

**214,146.46**<sub>GWh</sub>

Installed Capacity of Units in Operation

**30,568**<sub>MW</sub>

Financial Data

Approximately  
**415,250.36**  
million yuan Total Assets

Approximately  
**82,548.64**  
million yuan Operating Revenue

Approximately  
**20,530.56**  
million yuan Total Profit

Approximately  
**11,833.81**  
million yuan Tax Payment

Approximately  
**4,175.89**  
million yuan R & D Investment

Safe and Stable Operation

**77.47%**  
Proportion of units whose WANO indicators achieve<sup>7</sup> the world's advanced level (the world's top quartile)

Nuclear incidents of level-2 or above

**0**  
Nuclear engineering construction safety accident rate

**0**  
Patents  
**985**

Green Development

Approximately  
**64.6722**  
million tons Standard coal consumption reduced converted from on-grid nuclear power generation

Approximately  
**176.4567**  
million tons Total CO<sub>2</sub> emissions reduction equivalent

Approximately  
**17,800** tons  
SO<sub>2</sub> emission reduction equivalent

Approximately  
**28,500** tons  
NO<sub>x</sub> emission reduction equivalent

Employee Development

Employees in total  
**19,038**

Average training hours per employee  
**138.5** hours

Training coverage  
**100%**

Win-win Cooperation

Suppliers introduced  
**762**

Qualified suppliers in total  
**4,215**

Harmonious Communities

Approximately  
**25.5696**  
million yuan for public welfare

Approximately  
**6,591**  
Participants in charitable activities for  
**18,615**  
hours in total

**60,000+**  
Participants in "popularization of nuclear science in schools" activities

<sup>7</sup> Compared with all 12 yearly performance indicators of WANO peers.

# CSR Feature Accelerating Digital Transformation to Unleash New Momentum for Development

Following the strategy of "innovation is the primary driving force behind development", CGN Power deploys the development of digital economy, data governance, transformation of industrial digitization, etc. and a series of achievements in digitalization development have been achieved. We fully integrate digital technology and data elements to construct a digital promotion and results conversion mechanism of "scenario, data and technology". We empower the high-quality development of nuclear power by using digital technology to boost the digital transformation of the industry. In doing so, we enable the generating units to be safer and the organization to be more efficient. Thus the Chinese path to modernization in the nuclear power industry will be upgraded in an orderly and agile manner.

## Creating a Digital System to Normalize Scientific Decision-making

With data governance and application governance as the focus, CGN Power concentrates on the digital transformation of its business to promote the deep integration of digital technology and industry. We also coordinate the pilot data governance to empower operational decision-making with data.

### Case Deepening the application of state-owned assets supervision to build an "integrated supervision" pattern featuring nuclear power

Focusing on the business areas of safety, quality and environment (SQE), finance and capital, institutional governance, and supervision and accountability, we have built a unified supervision platform and sorted out 134 indicators and 13 supervision models. In doing so, the digital controlling capability has been effectively enhanced. Meanwhile, by integrating the characteristics of each production business, we explore the establishment of special regulatory platforms such as the nuclear power production command center, the operation command center, and the supervision and prediction of sensitive equipment, etc. The integrated design of indexes, operations, and regulatory rules helps us achieve intelligent supervision and prediction and analysis of safety, quality, and equipment, thus empowering the business.

### Case Using technology empowerment to build the first integrated platform for auditing information systems

Combined with the new concepts, technologies and methods in the field of auditing, we have established an audit informationization plan that integrates with the business information system, and built the first integrated platform of audit information systems. On one hand, the platform has developed three modules of audit process management, audit template management and audit resource management. Covering 16 detailed management functions such as audit plan and audit project, it enables auditing to be more standardized and regulated. On the other hand, the in-depth application of "big data" has been realized. A total of 73 data analysis models covering key areas such as financial management, contract procurement and engineering projects have been built to further support the auditing business through information technology. These models also strengthen the ability of auditing to address current problems and prevent potential problems.

## Building a Solid Shield for Design with Safety as the Foundation

CGN Power firmly guards nuclear safety to ensure energy security and stability in China. We put safety first and leverage digital technology for design collaboration, simulation and calculation, trend analysis, intelligent identification and situational awareness. This approach enhances the intrinsic safety of nuclear power and ensures the absolute safety and security of nuclear power.

### Starting digital design

We have built a mega three-dimensional design platform with multi-regional and multi-disciplinary cooperation and constructed a complete system of three-dimensional layout design. We have also independently developed a complete set of systems and tools, and radiated its influence to whole business chain related to the design of model data applications, driving the development of relevant technologies of the nuclear power engineering industry chain.

We have carried out research on digital and automatic design of corridor, and established a parametric and automatic modelling system for corridor civil construction, bridges and frames, pipelines and frames. This method increases the design efficiency by more than 20 times. The research results have been applied to several nuclear power projects under construction, contributing to the high-quality construction of the projects as planned.

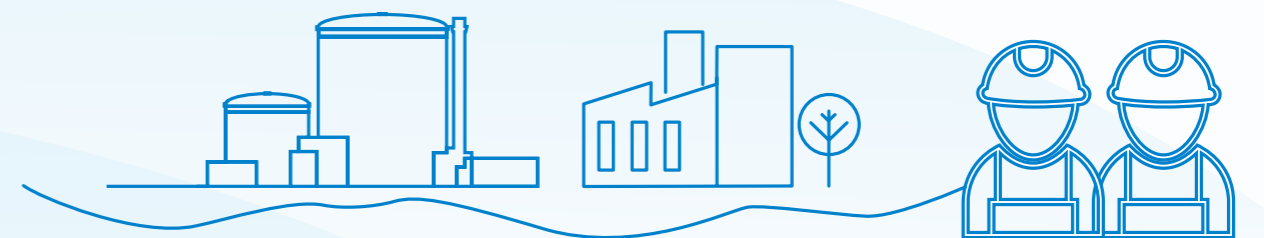
### Building a smart site

Based on the key elements of "people, machines, materials, methods and environment" at the construction site, we establish "end-to-end" intelligent connection and control to build a digital platform for the nuclear energy industry - Smart Site. The application of digital and intelligent technologies enhances the SQE and occupational health management of nuclear power project sites, and create typical digital application scenarios of "nuclear power project site-wide visual management". In addition, we build a new system of "monitoring - early warning - response - evaluation" for the management of nuclear power project sites, promoting nuclear power construction management performance effectively.

The smart site users include about **20,000** people, such as project supervision unit, owner's unit, project department and contractors

The platform has accumulated more than **20 million pieces** of data

Enabled digital management of more than **23,000** people, **9,000** items of work equipment, **2,142** facilities and **214** types of work sheets



## Boosting Development to Enable the Data Flow through Operations

CGN Power adheres to the path of specialized operation to support the efficient and agile operation of the core business. An all-area, whole-life-cycle modern digital nuclear power industry ecosystem is established, ranging from R&D, design, construction, operation and maintenance to decommissioning. The new system will accelerate the intelligent nuclear power production and operation.

### Digital transformation of plants

The multi-plant digital development is coordinated based on the concept of "Standardization, Centralization, and Specialization (SCS)" management. Through multi-plant work safety remote monitoring system, the mobile application system for multi-plant work process, the dedicated informatization system for multi-plant outage activities of the nuclear island, the digitalization system for multi-plant nuclear fuel operation, the management system for multi-plant important and sensitive parameters of instrumentation and control and multi-plant fuel management system, we have realized the ability to manage work safety visually and enabled lean management of outage for plants. For the first time, we achieve the whole-process informatization and automation of important and sensitive parameter of instrumentation and control.



### Digital outage management services

We build a digital operation platform for outage management that integrates safety and quality management, employee qualification and authorization management, contractor qualification and authorization management, human resource planning and post-evaluation of outage projects, outage data management, maintenance work process management, management of technical support centers, and other outage management services. The platform comprehensively improves the efficiency of outage management. The outage human resource planning efficiency, participant evaluation, participant status and manpower investment statistics is improved by more than 30%, and the efficiency of industrial safety hazard investigation and management as well as the high-risk safety management are increased by 40%.

### Digital transformation of the entire supply chain

To promote the digital transformation of the spare parts supply chain, we build the first digital spare parts operation platform in the nuclear power field that integrates spare parts demand management, spare parts procurement, quality control supervision and manufacturing, transportation and customs clearance, intelligent warehousing, shared distribution, item substitution, spare parts quality management, main data management of spare parts, inventory strategy model management, and other whole-process operations in the spare parts supply chain of plants. This platform has enabled the digital transformation, visualization, and intelligent operation of the business.

The efficiency of spare parts demand planning and procurement has improved by more than **30%**. The arrival rate of spare parts for outage activities has exceeded **98%**. The efficiency of spare parts deployment across power plants has improved by more than **80%**. The efficiency of data analysis and application has improved by more than **80%**.

## Charting a New Course for Business Development with New Technologies Empowerment

New technology empowers new business development. CGN Power comprehensively introduces new digital technologies such as intelligent sensing and execution, intelligent control and optimization, intelligent management and decision-making, forming a control and management mode with self-sensing, self-diagnosis, self-optimization, self-adaptation, and self-learning. This effectively reduces the intervention and workload of the operators, improves the operational efficiency, and boosts the high-quality development.

### Functional area

We have carried out a series of research and exploration based on finance, process automation and other scenarios. A series of applications are developed, including AI Finance Intelligent Robot, Intelligent Bill Collecting Robot, Intelligent Audit Robot, RPA Robot Cluster, etc. All of these efforts have contributed to the construction of the finance sharing digital staff team and promoted the digital and intelligent transformation of finance, providing a solid foundation for the efficient running of the business.

### Business area

We have explored the application of industrial meta-universe technology for the first time to build an intelligent AR helmet project (intelligent outage platform). The first phase of the project has been concluded. Through sound platform management, we have achieved intelligent outage, remote guidance, intelligent teaching and training, intelligent inspection, remote acceptance and other functions, improving 30-50% of the work efficiency while freeing the hands. The project also effectively reduced human errors.

### Case Developing the "digital staff" to effectively unleash "mental" and "physical" energies

As a new generation of digital workforce, Robotic Process Automation (RPA) technology breaks down data barriers among systems and automatically executes a series of business processes by imitating human operations, significantly improving work efficiency. CGN Power has developed and introduced "digital staff" by utilizing RPA technology for automation and intelligence of human-computer interaction. The "digital staff" has been successively adopted in the finance and engineering fields, DNMC, Fangchenggang Nuclear, Yangjiang Nuclear, Cangnan Nuclear, Huizhou Nuclear, and so on. It realizes automated control in such working scenarios as bank account maintenance, monitoring of procurement process compliance, and refined intelligent patrol of operation manipulators, which enables employees to get rid of inefficient and repetitive work, and increases their efficiency by nearly 15 times compared with the original.



Nuclear RPA Robot Workflow

Opportunities and Challenges

Corporate governance and compliance management are important foundations for the stable operation of the Company. We need to keep improving our governance mechanism while adhering to business ethics and the compliance bottom line. Efforts are made to prevent various business risks and carry out operations in a responsible manner to ensure the long-term sustainable development of the Company.

Our Strategies

Committed to establishing a sound corporate governance system, CGN Power conducts honest and law-abiding operations, strengthens risk prevention and control, and adheres to business ethics, in order to continuously consolidate the foundation of sustainable development and protect the rights and interests of investors. Meanwhile, the Company continues to optimize its ESG governance structure and operational mechanism, actively responds to environmental and social challenges, and works together with all parties to pursue sustainable development.

Main Achievements in 2023

- Upgraded to **four-tier ESG governance** system to optimize distribution of responsibilities.
- **One female non-executive director and one female independent director** were included to the Board at the election of the new session of the Board to further enhance gender diversity.
- **100%** Coverage of anti-corruption and business ethics training

2024 Outlook

- Comply with laws and regulations and optimize internal governance to enhance the Company's standardized governance ability.
- Improve risk management, compliance management, and anti-corruption management to ensure the stable operation of the Company.



# Stable Development and Compliance Operation With Integrity



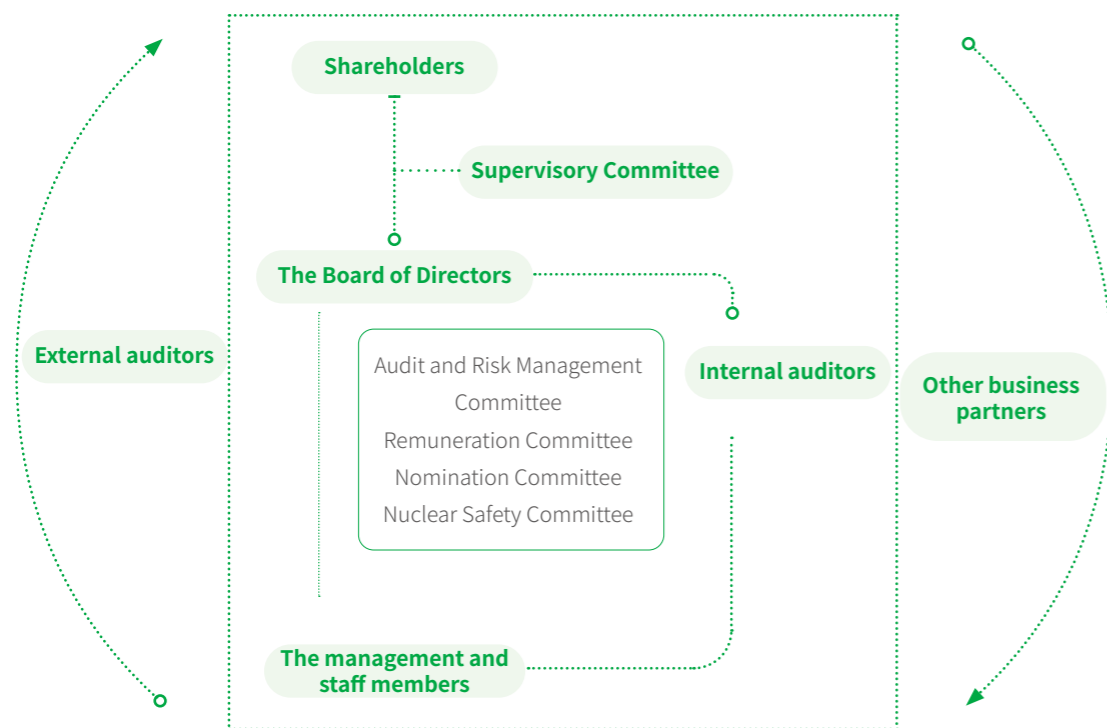
## Corporate Governance

The sustainable development and value creation of enterprises cannot be separated from a sound corporate governance system. CGN Power adheres to relevant laws and regulations, continuously builds a sound governance mechanism, and improves the governance structure. We have established a diligent, professional and diverse board of directors, to continuously improve the level of corporate governance.

### Governance framework

CGN Power strictly complies with the *Company Law of the People's Republic of China*, *Securities Law of the People's Republic of China*, *Corporate Governance Code set out in Appendix C1 of the Listing Rules of SEHK*, and the *Governance Rules for Listed Companies* issued by China Securities Regulatory Commission(CSRC). We have developed a series of policies, including the CGN Power Articles of Association, to continuously optimize our management system, improve internal governance and effectively safeguard the rights and interests of shareholders and other stakeholders. Since the listing of A-share in 2019, we have been continuously improving the institutional system for corporate governance in accordance with the relevant regulatory requirements of SEHK and SSE, meeting regulatory requirements in both regions.

Our internal governance framework mainly consists of the General Meeting of Shareholders, the Board and specialized committees, the Supervisory Committee, internal auditors as well as the management and staff members. In addition, external auditors are engaged to conduct independent reviews of the Company's governance performance to assist in continuously improving its governance level. At the same time, we maintain long-term cooperative relationships with other business partners (including customers, partners, media, regulatory agencies, communities and the public etc.) to promote efficient governance and stable operations.



## Governance mechanism

CGN Power attaches great importance to the operability of documents for standardized governance and ensures they are in line with actual conditions, so as to effectively guide the Company's corporate governance practices. The Company complies with the requirements of relevant laws, regulations and regulatory rules, pays close attention to their updates, and revises and updates important documents based on the actual conditions, thus continuously improving its corporate governance.

### Important governance documents of CGN Power<sup>8</sup>

- Articles of Association of CGN Power Co., Ltd.*
- Procedural Rules of General Meeting of Shareholders of CGN Power Co., Ltd.*
- Procedural Rules of the Board of Directors of CGN Power Co., Ltd.*
- Procedural Rules of the Supervisory Committee of CGN Power Co., Ltd.*
- 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.*
- Terms of Reference for Independent Directors of CGN Power Co., Ltd.*
- Director Nomination Policy of CGN Power Co., Ltd.*
- Corporate Governance Code of CGN Power Co., Ltd.*
- Shareholder Communication Policy of CGN Power Co., Ltd.*
- Code for Securities Transactions by Directors and Specific Persons of CGN Power Co., Ltd.*

During the Reporting Period, the Company has revised documents in accordance with relevant laws, regulations and domestic regulatory requirements based on the actual conditions, including *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 Nuclear Safety Committee under the Board of Directors of CGN Power Co., Ltd.*, *Management Rules on Enterprise Risk Management of CGN Power Co., Ltd.*, *Management Rules on Internal Auditing of CGN Power Co., Ltd.*, *Management Rules on Accounting of CGN Power Co., Ltd.*, *Management Measures on Guarantees of CGN Power Co., Ltd.* and *Management Rules on Capital Flows to and from Related Parties of CGN Power Co., Ltd.*, so as to ensure the effectiveness of policies.

During the Reporting Period, our practices in relation to corporate governance met the regulatory requirements set by Chinese laws and regulations, CSRC, SZSE and SEHK. We also made adjustments in line with the latest laws and regulations. The Company, the directors, the supervisors and the senior management did not receive any administrative penalty, public criticism or denunciation.

<sup>8</sup> For more governance documents, please visit the official website of CGN Power

## Board of Directors

The Board is responsible for formulating and reviewing the Company's policies and regulations in corporate governance and compliance practices, developing strategies and principles, and setting long-term performance and management targets. The Board also takes charge in assessing business performance, monitoring the management's performance and reviewing risks. In doing so, we can ensure a prudent and effective regulatory structure. Based on the Company's corporate governance standard, structure, and practices, the Board has formulated the *Corporate Governance Code of CGN Power Co., Ltd.* in accordance with the *Corporate Governance Code* set out in *Appendix C1 of the Listing Rules of SEHK* and the *Governance Rules for Listed Companies* issued by CSRC. The Code explains how we maintain good practices to ensure that the corporate governance meet requirements and expectations through the organizational structure, and a range of policies, procedures and measures relating to corporate governance.

In accordance with the *Articles of Association*, the Board has established the Audit and Risk Management Committee, the Remuneration Committee and the Nomination Committee. According to the characteristics of the industry, we also set up the Nuclear Safety Committee to ensure safe and stable operation of the Company. Directors shall be elected at the General Meeting of Shareholders for a three-year term. Upon expiration, the term is renewable through re-election. The term of an independent director<sup>9</sup> is the same with that of other directors in the Company and the term is renewable through re-election but the term of office shall not exceed a consecutive of six years. The list of candidates for directors shall be submitted to the General Meeting of Shareholders for resolution in the form of proposal. Candidates for directors other than independent directors shall be nominated by the Board, the Supervisory Committee, or Shareholders who individually or jointly holding more than 3% of the Company's voting share, and be elected at the General Meeting of Shareholders. On October 9, 2023, the Company held the Second Extraordinary General Meeting of Shareholders to elect members of the fourth session of the Board and the fourth session of the Supervisory Committee. The first meeting of the fourth session of the Board and the first meeting of the fourth session of the Supervisory Committee were also held then on that day. Mr. Yang Changli was appointed as chairman of the Board and members of board committees were decided in this meeting. Mr. Shi Weiqi was appointed as chairman of the Supervisory Committee.

### The independence of the Board

The chairmen of the Audit and Risk Management Committee, the Remuneration Committee, and the Nomination Committee of the Board are independent directors, while the chairman of the Nuclear Safety Committee is a non-executive director. The arrangement clearly separates supervisory and executive functions, thus enhancing the Company's corporate governance. The Company works to establish the independent director system of state-owned listed companies aiming to enable directors to better perform their duties. By integrating the regulatory rules and making reference to the practices of the industry, the Company has formulated the *Evaluation Measures for the Duty Performance of Independent Directors of CGN Power Co., Ltd (Trial)* which was approved by the First Extraordinary General Meeting of Shareholders in 2023. The measures clarify the performance evaluation mechanism of independent directors and improve their performance efficiency. It will help them provide professional advice on major issues such as standardized corporate operation and management, and internal control of risks by leveraging their advantages and experience, and ensure scientific, effective and independent board decision-making.

In October 2023, we renewed the Board. All the members of the new session of the Audit and Risk Management Committee were independent directors, giving full play to the role of independent directors in decision-making, oversight, checks and balances, and professional counseling. The independence of the Audit and Risk Management Committee was further enhanced, which would promote supervision on internal audit, risk management and other work.

By the end of the Reporting Period, the Board

was composed of **9** directors,

with **3** independent directors,

**5** non-executive directors and

**1** executive director.

Audit and Risk Management Committee		Remuneration Committee		
independent directors 3		non-executive director 1	independent directors 2	
Nomination Committee		Nuclear Safety Committee		
non-executive director 1	independent directors 2	non-executive directors 3	executive director 1	independent director 1

## Board diversity

CGN Power attaches importance to Board diversity and the reasons for that include but not limited to industrial knowledge, professional background, occupational experience, gender, etc. The Company has formulated and published the *Board Diversity Policy of the Company and the Terms of Reference for the Nomination Committee*, and authorizes the Nomination Committee to regularly review the implementation and effectiveness of the policy.

During the Reporting Period, the Company added 2 female directors, with 1 non-executive director and 1 independent director. The current Board members have backgrounds in power industry management, financial accounting management, laws, safety management and supervision and management of state-owned enterprises with over 20 years of experience in their respective industries. The professional structure of the Board is reasonable, contributing to higher operational effectiveness of the Board and helping the Company make best strategic decision.

### Board members and their professional backgrounds

Name	Age	Gender	Educational background	Title	Area of expertise
Yang Changli	59	Male	Master's degree	Chairman of the Board, Non-executive Director, Chairman of Nuclear Safety Committee of the Board	30 years of management experience in nuclear power, nuclear fuel, science and technology R&D, safety and quality, etc.
Gao Ligang	58	Male	Master's degree	Executive Director and President	30 years of experience in nuclear power industry
Li Li	54	Female	Master's degree	Non-executive Director	30 years of experience in macroeconomics, administrative management, law, and corporate supervision
Pang Songtao	52	Male	Master's degree	Non-executive Director	30 years of experience in nuclear power industry
Feng Jian	56	Male	Master's degree	Non-executive Director	Rich experience in enterprise management, financial management, investment management, etc.
Liu Huanbing	50	Male	Master's degree	Non-executive Director	25 years of experience in finance and investment and financing management
Wong Ming Fung	52	Male	Doctor's degree	Independent Director, Chairman of Remuneration Committee of the Board	Rich legal and management experience
Li Fuyou	68	Male	Bachelor's degree	Independent Director, Chairman of Nomination Committee of the Board	Rich experience in energy, coal, and safety management
Xu Hua	63	Female	Master's degree	Independent Director, Chairman of Audit and Risk Management Committee of the Board	Rich experience in financial management, enterprise management, and supervision

<sup>9</sup> The term "independent director" in the report refers to the "independent non-executive director" mentioned in the Listing Rules of the SEHK.

### Training for Board members

During the Reporting Period, the Company actively engaged members of the Board in relevant training program to keep improving their professional competence and optimizing governance and efficiency of the Board.

- April 26, 2023**  
We invited the chief economist of an investment bank to lecture on the future of China's macro economy.
- From June 29 to July 28, 2023**  
Mr. Feng Jian, a non-executive director, attended the first training session in 2023 for directors, supervisors and senior management of listed companies organized by the SZSE.
- August 18, 2023**  
Independent directors attended the online training on Independent Directors Information Database and interpretation of the reform of the independent director system organized by the China Association for Public Companies.
- August 23, 2023 and September 12, 2023**  
Two independent directors, Ms. Xu Hua and Mr. Wong Ming Fung, attended the pre-appointment training for independent directors of listed companies organized by SZSE and obtained the Independent Director Qualification.
- October 25, 2023**  
We invited technology industry experts to deliver a course primarily covering thinking and practice on the digital transformation of electric power enterprises.
- December 8 to December 14, 2023**  
Mr. Li Fuyou, the independent director, participated in the 137th Training Course for Independent Directors of Listed Companies (Follow-up Training) hosted by SZSE.

### Investor communication

Committed to maximizing the value of shareholders as well as open and transparent business, CGN Power continues to enhance interaction with investors to receive their opinions and suggestions, thus getting the recognition from the market and investors on the Company's value.

CGN Power highly values investor relationship management and has formulated systems such as the *Management Rules of Investor Relations of CGN Power Co., Ltd* and the *Information Disclosure Management System of CGN Power Co., Ltd* to standardize related work. We keep communication with shareholders and investors through roadshows, reverse roadshow, teleconferences and results announcement conferences. These efforts help us know more about their suggestions or opinions with respect to the Company's development strategy, production and operation. Later, we provide feedback to the Board, management and related departments through our briefings, special reports and other methods, promoting the unity between the Company's development and shareholder value, and achieving smooth two-way communication.

According to the rights of decision-making prescribed by the *Articles of Association*, the General Meeting of Shareholders is entitled to legally exercise its decision-making rights on major matters such as operation policies and profit distribution of the Company. All general meetings of shareholders held by the Company have met the requirements of relevant laws and regulations and the Articles of Association. In terms of profit distribution, the Company comprehensively considers current-year business performance, future development plans, relevant commitments and other factors, and approves them at the General Meeting of Shareholders in the financial year to provide stable dividend returns for the Company's shareholders. Since the Company went public in December 2014, the cumulative dividend payout has exceeded 27.2 billion yuan.

In 2023, we held the First Extraordinary General Meeting of Shareholders for 2023, the 2022 Annual General Meeting of Shareholders/ the 2023 first General Meeting of H-share Shareholders/ the 2023 first General Meeting of A-share Shareholders, and the Second Extraordinary General Meeting of Shareholders for 2023.



## ESG Governance

A complete and effective ESG governance system can help advance ESG strategic objectives effectively, improve the Company's sustainability in operation, and create a good influence on the society and environment. Committed to implementing ESG policies, CGN Power has worked to establish a sound top-down ESG governance framework and management system to realize ESG goals.

### ESG governance system

During the Reporting Period, CGN Power optimized the ESG governance framework in accordance with its actual situation, further clarified distribution of responsibilities to make ESG governance more standardized and more professional.

The optimized ESG management system is as follows:

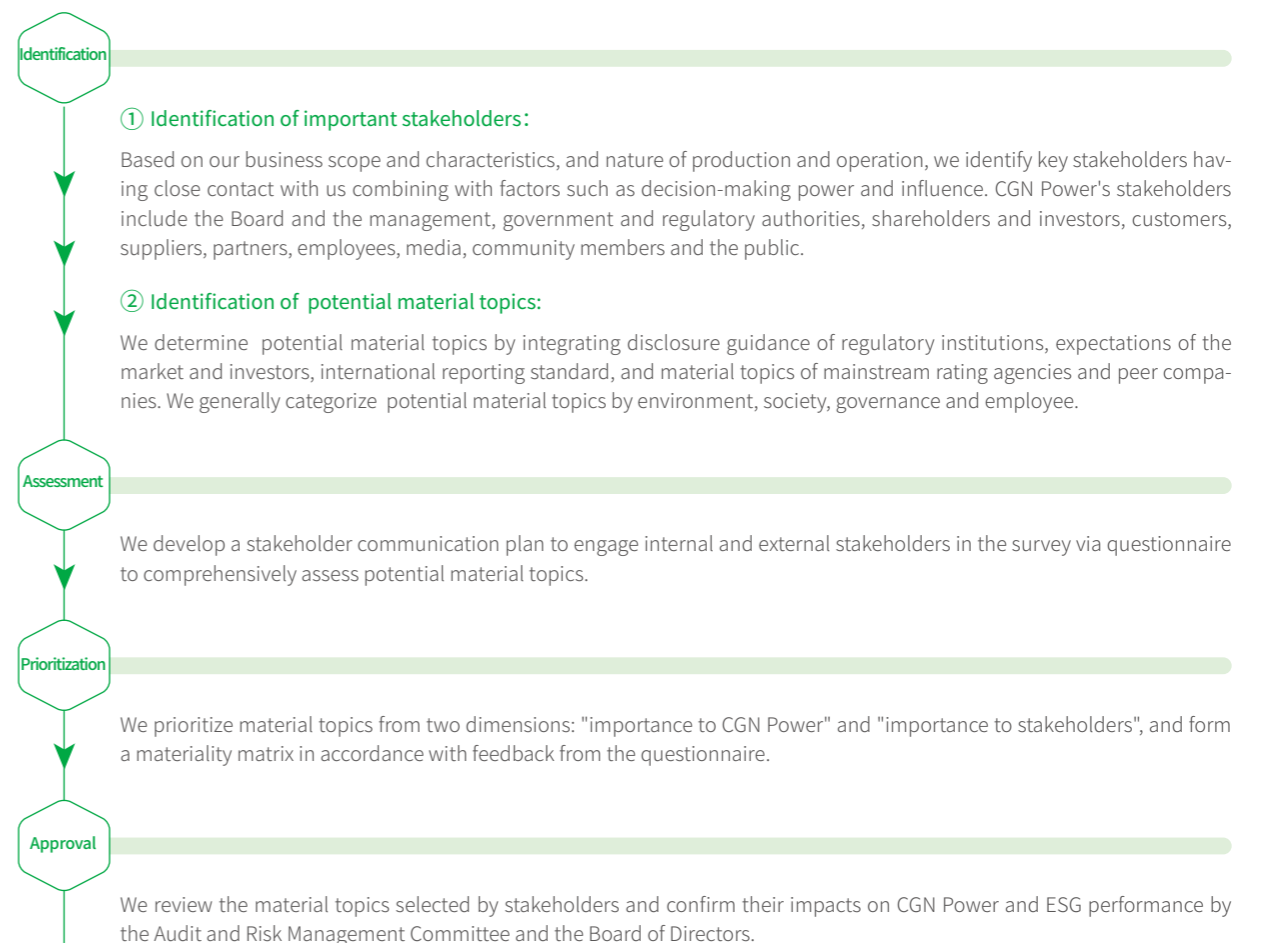


During the Reporting Period, we added members to ESG improvement team and transformed it into ESG working group. By clarifying the operating mechanism and scope of responsibilities of the working group, and refining duties of departments relating to ESG issues management, we ensured effective ESG management. ESG working group organizes regular and irregular meetings annually to promote relevant work and ensure effective implementation of ESG issues. The main responsibilities of the working group include: identify major ESG factors and judge ESG risks and opportunities; establish and regularly review the Company's vision and strategy and set ESG goals and indicators; improve ESG information collection system and keep tracking progress of ESG goals; organize internal ESG promotion and training to promote integration of ESG concepts and requirements; continue peer benchmarking to improve ESG performance; implement ESG disclosure and strengthen external communication.

## Materiality analysis

Following the materiality principle, CGN Power continuously optimizes the process of identifying ESG topics and determining their importance, and fully discloses material ESG topics. The Company aims to respond to the concerns of stakeholders timely and strengthens the ESG management and fulfillment in daily operations to realize sound progress.

During the Reporting Period, the Company conducted research on material topics for internal and external stakeholders through questionnaire and collecting 2,457 valid questionnaires. We analyzed the survey results and identified the material topics of the year. As nuclear power safety is vital to the Company, it is directly listed as a material topic, and thus is excluded in the scope of the materiality survey. In the evaluation process, we not only consider the impact of topics on the Company and stakeholders, but also take into consideration of their impacts on the economy, environment and society. The results are reviewed by the senior management of the Company, and then submitted together with the report to the Audit and Risk Management Committee and the Board of Directors for approval.





We categorize potential material topics by environment, society, governance and employee, and identify the following material topics after analyzing the survey results. Among them, the importance of "network and data security", "intellectual property protection", and "employment and labor rights protection" has increased, while the importance of "formulation and implementation of corporate environmental policies", "risk management of investment projects", and "employee incentive mechanism" has slightly decreased. The analysis results of other material topics were basically consistent with those of 2022.

**Environmental**

- Radioactive material management
- Non-radioactive discharge and management
- Resource utilization

**Social**

- Transparency and accuracy of public information
- Product responsibility
- Supply chain management
- Network and data security
- Intellectual property protection

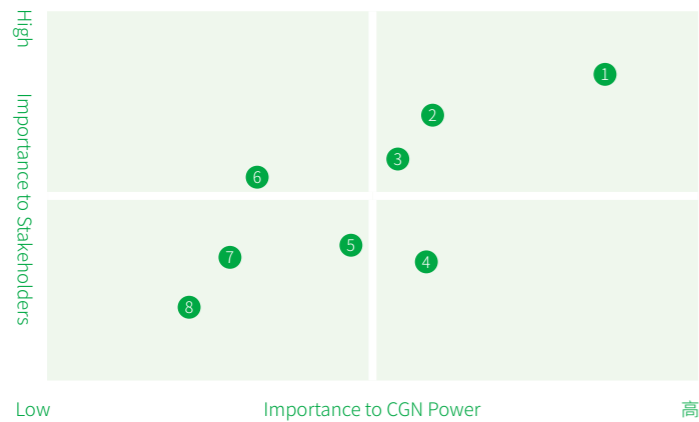
**Governance**

- Risk, compliance management, and internal control
- Corporate governance

**Employee**

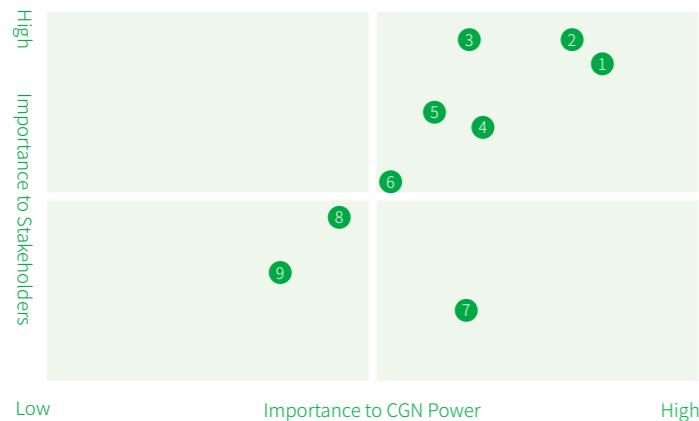
- Employee compensation and benefits
- Occupational health and safety
- Employee incentive mechanism
- Employment and labor rights protection

**Environmental**



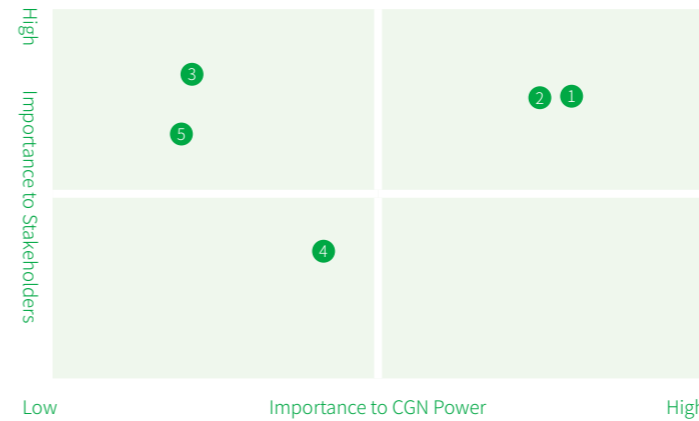
1. Radioactive material management
2. Non-radioactive discharge and management
3. Resource utilization
4. Addressing climate change
5. Green and low-carbon investment opportunities
6. Biodiversity protection
7. Formulation and implementation of corporate environmental policies
8. Taking responsibility for environmental protection

**Social**



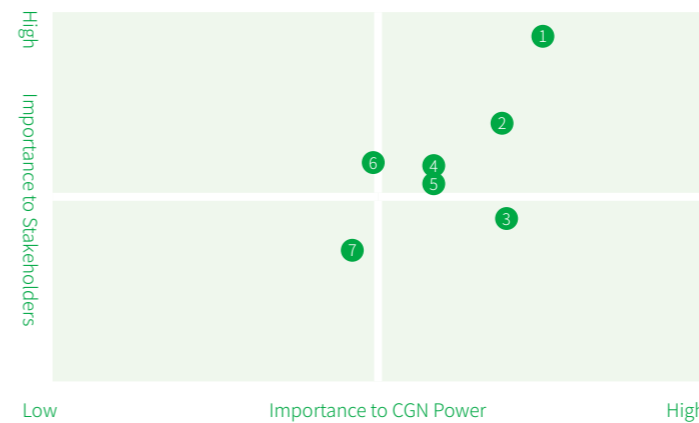
1. Product responsibility
2. Transparency and accuracy of public information
3. Supply chain management
4. Network and data security
5. Intellectual property protection
6. Community relations
7. The public communication and media opinion
8. Exchanges and cooperation
9. Rural vitalization and public welfare charity

**Governance**



1. Risk, compliance management, and internal control
2. Corporate governance
3. Business ethics
4. Strengthening independent innovations
5. Investor relations

**Employee**



1. Employee compensation and benefits
2. Occupational health and safety
3. Employee incentive mechanism
4. Employment and labor rights protection
5. Employee development and training
6. Work-life balance
7. Labor standards



## Stakeholder communication

We value the daily communication with stakeholders, and have established a normalized communication mechanism. In daily communication, we keep two-way communication with various stakeholders through multiple channels, to solicit and respond to their expectations and concerns. We also timely disclose our information on production, operation and development strategy to enhance stakeholders' understanding and recognition of the Company. In addition to daily communication, we also understand the expectations of various stakeholders through questionnaires, interviews, and other forms, and integrate their expectations and concerns into our strategy and operation management, striving to win their support for CGN Power.

Stakeholders	Expectations and Concerns	Methods of Communication and Response
 <b>Government and Regulatory Authorities</b>	Ensuring nuclear safety Optimizing energy structure Legal compliance and tax payment Value preservation and appreciation of state-owned assets Energy conservation and emission reduction	Compliance with laws and regulations Execution of national energy policies Improvement of corporate governance Acceptance of regulatory audit Regular reporting
 <b>Shareholders and Investors</b>	Constant and steady return Transparent information disclosure Protection of shareholder's rights Enhanced communication	Timely information disclosure Regular reporting of operating information Improvement in daily management A variety of communication activities held from time to time
 <b>Customers</b>	Stable supply Quality management and service guarantee	Effective communication Active cooperation for power grid dispatching
 <b>Suppliers and Partners</b>	Commitment fulfillment Open, fair and just procurement Experience sharing	Strategic cooperation Public disclosure of procurement information Regular communication activities
 <b>Employees</b>	Competitive remuneration package Employee health and safety Fair promotion and development Employee care	A healthy working environment Fair promotion channels More employee trainings Caring for distressed employees
 <b>Media</b>	Transparent information disclosure Enhanced communication	Regular press conferences Interview by reporters Timely disclosure of public information
 <b>Community Residents</b>	Environmental protection in the community Nuclear power operation safety Promoting community development	Community communication meetings Enhancement of environmental monitoring and protection Participation in community development
 <b>The Public</b>	Charity Public relations Popularization of nuclear power science	Participation in rural vitalization Promotion of employment Education and promotion of nuclear power

## Business Ethics

CGN Power engages in business activities in a professional and sincere attitude, and strictly adheres to applicable laws and regulations and business ethics standards through strengthening organizational guarantee, improving institutional systems, implementing supervision and oversight mechanisms, and carrying out training on publicity and implementation, we build a high-standard and high-demand business ethics management system.

### Anti-corruption policy system

CGN Power has zero tolerance for corruption. In strict compliance with laws and regulations, including the *Law for Countering Unfair Competition* and the *Anti-money Laundering Law*, and regulatory documents including *Several Suggestions Concerning the Applicable Law in Handling Criminal Commercial Bribery Cases Issued by the Supreme People's Court and the Supreme People's Procuratorate*, etc., the Company continues to improve anti-corruption system to prevent, discover and stop corruption.

In terms of organizational management, the Company has set up an anti-corruption coordination group with clear operating rules and defined responsibilities of all parties. The group is to realize the joint supervision by discipline inspection, audit, finance, and human resources departments, to share supervision information timely, and to strengthen coordination on major and difficult corruption issues. In terms of institutional building, the Company has formulated the group-wide *Discipline Handbook of Listed Companies* and the *Implementation Rules of Eight-Point Decision Made by the CPC Central Committee on Improving the Party and Government Conduct*. The two documents clearly stipulate the rules and methods for handling violations of regulations and disciplines. The Company has also formulated the *Gift Reporting Regulation*, requiring employees to declare gifts that they cannot refuse or return for any reasons at work to the Company within 15 days upon the receipt of gifts in order to reduce the risk of corruption. In 2023, the Company revised systems and procedures concerning travel management, official business vehicles, and conference management, etc. The long-term mechanism for improving conduct was further enhanced. *The Measures for the Management of Briber Black List (Trial)* was formulated to investigate and detain improper benefits from bribery. We thus further standardized the legal and compliant participation of external units and natural persons in the production and operation activities of the Group while deepening the management from the source to improve employees' conduct.

During the Reporting Period, we found a total of 10 violations of regulations and disciplines, all of which were handled in strict accordance with relevant procedures. The punishment included warning, demerit on employment records, demotion, removal from office, and dismissal. These violations had no significant impact on the Company's financial statements and overall operations.

We continue to strengthen the prevention, control and punishment of corruption in the supply chain, and strive to build a clean and honest environment for procurement. For more information about supplier anti-corruption management measures, please refer to the "Supplier ESG risk management" section of this Report.

#### Case Yangjiang Nuclear publishes the *Integrity Risk Prevention and Control Manual*

In July 2023, Yangjiang Nuclear published the *Integrity Risk Manual in Procurement* (hereinafter referred to as "**Manual**") to the heads of departments of the Company and employees in key sensitive positions. The Manual selects the rules and the provisions related to integrity in the *Criminal Law*, the *Chinese Communist Party Disciplinary Regulations*, and the *Regulation on the Disciplinary Actions for Employee Violations of the China General Nuclear Power Group*. In addition, it sorted out 35 risk points in procurement, and enacted targeted prevention and control measures consistent with the Company's procedures. Over 30 typical cases of violations in procurement in the Group were listed in the precautionary education, so as to promote leaders and employees to strictly comply with the Company's procurement system, required process and requirements of integrity practices.

**Case** Holding symposium on centralized procurement integrity and quality management optimization

In July 2023, CGN Engineering held a symposium on centralized procurement integrity and quality management optimization. The symposium summarized outcomes in centralized procurement, reported quality issues in centralized procurement and analyzed the root causes. In addition, the symposium made suggestions based on requirements of managing business, features of centralized procurement platform, and requirements and status quo of integrity management, such as establishing guidelines to improve business processes, setting assessment indicators to see whether responsibilities are fulfilled, and cultivating core competencies to improve performance quality. A clear agreement on how to improve integrity practice is reached.

## Culture of integrity

The Company fully acts upon the *Opinions on Strengthening the Building of a Culture of Integrity in the New Era*, actively organizes regular integrity education targeting at all employees, and introduces its achievements in relation to integrity building to internal and external stakeholders. For relevant persons and employees in key positions, we carry out targeted integrity training. These efforts are aimed to build an integrity atmosphere.

**For directors**



- Actively learning about materials and requirements on integrity through various channels online and offline.

**For all employees**



**Primary-level employees**

The Company strengthens the notification of typical violations of regulations and disciplines through various means such as launching the Discipline Education Month campaign, visiting local prisons, holding precautionary and education conferences, organizing typical case studies, and producing education videos, which achieved significant warning and deterrent effects. For example, regarding the violation of a department manager of SNPI, the Company dismissed him in accordance with relevant procedures. The employee has been held criminally responsible by the judicial authorities and sentenced to three years and seven months in prison, according to follow-up tracking of the case. The Company made education videos and materials of the case and conducted 25 education activities for 13,000 participants. In September 2023, the Company launched a Discipline Education Month activity with the theme of "integrity practices in work, exercise of power, self-cultivation and family management". Throughout 2023, more than 1,100 discipline education locations were established, more than 70 public lectures on disciplines and laws were carried out, and 1,400 precautionary and education activities were organized. The anti-corruption education covered all employees.

**Management**

The Company carries out integrity education targeting the management in various forms, including studying documents related to integrity together, deeply analyzing cases of disciplinary violations, watching precautionary education videos, conducting home visits themed on integrity, and signing integrity commitment letters, etc. As for the management in charge of anti-corruption such as members of discipline inspection commission, we carry out professional training and exchanges on experience, and assess their knowledge of discipline inspection.

**For suppliers and partners**



- Key suppliers and other partners are included in integrity education and training, and integrity risk guidelines are issued to persons in charge of key positions. Procedures and regulations, and integrity risks and corresponding prevention and control measures in procurement are clarified while institutional guarantees are strengthened for integrity. During the Discipline Education Month, the Company held several sessions of public classes on disciplines and laws for employees in key and sensitive positions and partners, which covers China's supervision law, common job-related crimes in the Criminal Law, impacts of criminal punishments, and plea leniency system. More than 110 integrity-building activities were carried out with partners to enhance the awareness among business partners.

**Case** CGN Engineering conducts monthly integrity training program

In September 2023, CGN Engineering shifted integrity education down to subordinate units with the theme of "integrity practices in work, exercise of power, self-cultivation and family management". The Testing Center organized and required suppliers to make joint efforts to promote integrity, share educational resources of integrity, and strengthen exchanges of culture of integrity. Fangchenggang project department introduced integrity education activities into families and organized employees' family members to watch precautionary education films. Through precautionary education, they had a deeper understanding of importance of good family traditions. Huizhou project department organized members of discipline inspection commission, disciplinary inspection officials, employees in key and sensitive positions, and family members of employees' representatives to engage in integrity training, so as to enhance employees' sense of discipline and build a solid defense line for discipline.

**Case** Holding an integrity seminar with partners

In June 2023, together with 11 major partners, DNMC held an integrity seminar titled "Building a Platform for Win-Win Cooperation and Fostering a Clean Government-Enterprise Relationship", aiming to jointly cultivate a cordial and clean partnership. In the meeting, they studied regulations related to integrity and watched precautionary videos. Department managers of DNMC and partners attending the meeting signed *Letter of Commitment to Jointly Building Integrity* and issued the *Notification on Prevention of Job-related Crimes*. DNMC made the following integrity requirements on partners: regard integrity building and prevention of job-related crimes as a part of primary duties; prevent and tackle corruption at its source through improved systems, clarified responsibilities, and internal supervision; enhance cooperation on integrity building and mutual supervision and whistleblow any misconducts in cooperation, such as violations of discipline and using their positions to demand bribes.



## Whistleblowing mechanism and whistleblower protection

The Company has formulated the regulations on oversight, discipline, and accountability, improved working procedures for receiving and handling whistle-blowing, and set up secure whistle-blowing channels protected by the law. In doing so, our employees and related third parties can report any violations to the disciplinary investigation department through calls, in-person visits, or emails with confidentiality. After receiving whistleblowing reports, the disciplinary investigation department shall proceed with proper recording and initiate an internal investigation process while keeping relevant information confidential. If the reported object involves the management personnel of the Company, the disciplinary investigation department shall handle the matter in accordance with relevant procedures. If the reported person is an employee of our subsidiary, he or she will be referred to the disciplinary investigation department of the subsidiary according to procedures.

According to the Company's confidentiality policy, information of whistle-blowing and reporting parties is confidential. Disclosure on privacy of the informant is prohibited. The Company further clarifies response requirements and protection provisions for real-name informants in relevant systems and procedures. We will prioritize the handling of real-name informants, and strictly protect real-name informants. As for false accusation or retaliate, we will firmly and seriously hold such informants accountable.

Whistleblowing mailbox: jtjubao@cgnpc.com.cn  
 Whistleblowing telephone and fax: (86) 755 83671077

## Strengthening audit supervision on Business Ethics

In order to prevent risks in business ethics or other areas, CGN Power has established a reliable internal control and supervision mechanism for carrying out business ethics supervision. The Company's internal audit department conducts regular special audits on the implementation of operations, procedures, expenses and internal controls in the Company's functional departments, business centers, and subsidiaries. In 2023, the Company's internal audit department carried out special audits in key management areas such as internal control, scientific research management, project surplus material management, audit rectification management, risk management and financial management, as well as special inspections on matters concerned by the management. The results were sent to the senior management. They made specific suggestions to persons in charge to solve problems exposed in the inspection and promoted rectification.



## Risk and Compliance Management

Adequate risk management and internal monitoring system play a key role in guaranteeing the Company's sustainable operation. CGN Power is committed to incorporating risk management throughout all steps of business processes. With a focus on the Company's development strategy and management theme, we improve risk management system, and cultivate a robust risk management culture, so as to make all staff more conscious of risk, and ensure stable and healthy development of the Company.

### Risk management

Based on the risk management provisions of IAEA-TECDOC-1209, the risk management framework of Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and ISO 21000:2009 Risk Management-Principles and Guidance, CGN Power keeps improving its risk management system, making it meet the leading standard in the industry and in line with the reality. The Company closely follows updates of national policies as well as domestic and foreign economic and financial environments, and takes major factors such as environment, society, and future development into account, thus building a risk management system under "Unified Leadership and Hierarchical Management". In doing so, risk management strategy is implemented in a standardized and orderly manner, the risk management organizational function system is improved and the risk management information system is optimized.

The Company has formulated and published *the Enterprise Risk Management System* and set a risk management group to analyze and rank identified risks and allocate resources appropriately. Through dynamic identification, regular evaluation, and dynamic management based on a combination of qualitative and quantitative methods, we integrate ESG factors into risk management procedure, and set out corresponding measures in accordance with the possibility and influence of risk occurrence. By synthesizing risk management strategies such as reduction, evasion, transfer and control, and continuing to introduce advanced risk management methods and tools, we realize centralized management of risks and effectively guide each subsidiary to predict risk in advance during its business process, thus transforming early warning risks into proactive risk management, and consolidating the first line of defense for risk management.

At the end of each year, we summarize and review risk management of the previous year. Based on internal and external changes, and the Company's strategies, we set up risk management goals and countermeasures of the next year, covering stable and safe operations of NPPs, electricity sales, and control of nuclear power projects under construction. Results and relevant indicators of risk assessment will be reviewed by the Audit and Risk Management Committee of the Board, and be submitted to the Board for approval, ensuring the Board's clear understanding of and direct participation in the Company's risk management.

Reasonable risks that are acceptable to the Company must be in line with its development strategy, be fully recognized and managed, and will not cause the following risk situations to the Company:

- Subversive impact on the development of the Company
- Serious accidents that result in the interruption of operation/supply
- Incidents affecting safety and health of employees, contractors and the society
- Significant financial loss that results in a damage on the Company's ability on business development or a serious impact on the Company's ability on financial management
- Serious violations of laws and external regulations that result in suspension of operations or licenses, or substantial fines
- Some behaviors affecting the Company's reputation and brand

For Details on the Company's risk management, please refer to the corresponding annual report.

## Compliance management

The compliance management system of CGN Power focuses on the working principle of "comprehensive coverage, enhanced responsibility, collaboration, independent and objective judgment". Based on a sound organizational structure, institutional system, review mechanism and supporting cultural cultivation, we strictly implement the requirements of relevant documents such as the *Measures for the Compliance Management of Central State-owned Enterprises* and upgrade from "key compliance" to "comprehensive compliance". Our compliance management provides strong support for the Company's high-quality development and legal operation.

### Compliance structure



We have established a comprehensive organizational system for compliance covering all business departments of the Company from governance to execution. The governance refers to the Company's Board of Directors and the Supervisory Committee, the management is the Company's operating senior managers, and the execution is the legal affairs departments.

All business departments of the Company are responsible for compliance management, and the head of each department is the first person held responsible for compliance management of the department. Managers, departments and employees at different levels shall, according to respective powers, perform the implementation and supervision of compliance management.

During the Reporting Period, the Company vigorously promoted the establishment of the organizational system for compliance. We guided all major subsidiaries to set up the chief compliance officer. The headquarters and major subsidiaries appointed business backbones as compliance administrators in all business and functional departments.

### Compliance system



We have established a compliance management system composed of compliance management measures, special compliance management regulations, compliance code of conduct and compliance management procedures. Based on that, we conduct compliance management for employees, suppliers, customers, and external consultants, etc.

During the Reporting Period, departments of the Company sorted out 241 laws and regulations and other external documents based on the company's actual situation, forming a common compliance obligation database which covered 72 business areas, 252 business activities, 692 themes and 1,067 specific compliance obligations. Besides, we carried out monthly compliance risk investigation. For businesses with high compliance risks, the Company coordinated with several departments of the headquarters and several subsidiaries to jointly formulate a special compliance promotion plan to further strengthen compliance in key areas.

### Compliance culture



We organize different online and offline compliance courses for different training participants, striving to root compliance culture in the mind of every employee. For all employees, the Company conducted law popularization and promotion activities by establishing legal education columns, making special posters and videos, organizing knowledge contest, and designing special promotional pages. For managers, new employees, and compliance administrators, we develop compliance training courses and conduct training to enhance the professional capabilities of compliance management personnel. During the Reporting Period, the Company's headquarters conducted a total of 27 compliance training sessions for personnel in key areas and high-risk positions.

### Compliance review mechanism



We have established and implemented a compliance review mechanism to effectively control compliance risks and regularly evaluate and improve compliance management, ensuring the sound operation of the compliance management mechanism.

### Case Efficiency of legal and compliance work soars with digital management

To make the Company's compliance work more standardized and intelligent, CGN Power developed a legal and compliance management information system covering legal and compliance work of the whole company. As a platform unifying legal and compliance management, the system boasts 7 important functions, including legal service, case management, lawyer management, legal counselor, and compliance management, covering all work related to legal and compliance businesses, and functional management. By hierarchical and tiered authorization, the system realizes platform sharing and data integration among subsidiaries on the basis of business independence. Management efficiency is greatly improved through the intelligent aggregation analysis and trend charts of data of legal services, dispute cases, external lawyers and other related data.

### Honor

The compliance management achievement of CNPRI, **"Enhancing Early Warning Capacity of Compliance Risk and Safeguarding High-quality Development of Electric Power R&D Companies"** won the second prize in the Second Electric Power Company Compliance Management Achievements.



Opportunities and Challenges

As China has been actively developing nuclear power in a safe and orderly manner and taking solid steps toward the carbon peak and carbon neutrality, the development of nuclear power and the comprehensive utilization of nuclear energy are still in an important period of strategic opportunity. At the same time, to maintain a high-level safe operation of nuclear power, it is necessary to continuously strengthen innovation in management and technology.

Our Strategies

Adhering to the basic principles of "safety first, quality foremost and pursuit of excellence", CGN Power prioritizes nuclear safety, develops a sound safety management system and enhances digital empowerment. We make every effort to ensure that nuclear power is perfectly safe. We also firmly uphold innovation-driven development, and improve the technological innovation system to achieve breakthroughs in core technologies, contributing to the high-quality development of nuclear energy.

Main Achievements in 2023

- 0 Industrial safety accident rate of employees per 200,000 man hours in nuclear power operation area
- 74.69% WANO indicators achieving the world's excellent level (the world's top decile), 77.47% WANO indicators achieving the world's advanced level (the world's top quartile)
- 1,668 Patents applied, 20.26% Year-on-year increase
- Guaranteeing energy supply with high quality; giving full play to the important role of nuclear energy in the national energy strategy, and continuously practicing social responsibility.

2024 Outlook

- Strengthen nuclear safety culture, carry out special actions on nuclear safety management, and continuously enhance everyone's awareness of nuclear safety
- Keep optimizing the SQE management system, and strengthen the safety risk management and control of major projects
- Keep building a digital nuclear power ecosystem to help improve the intrinsic safety of nuclear power

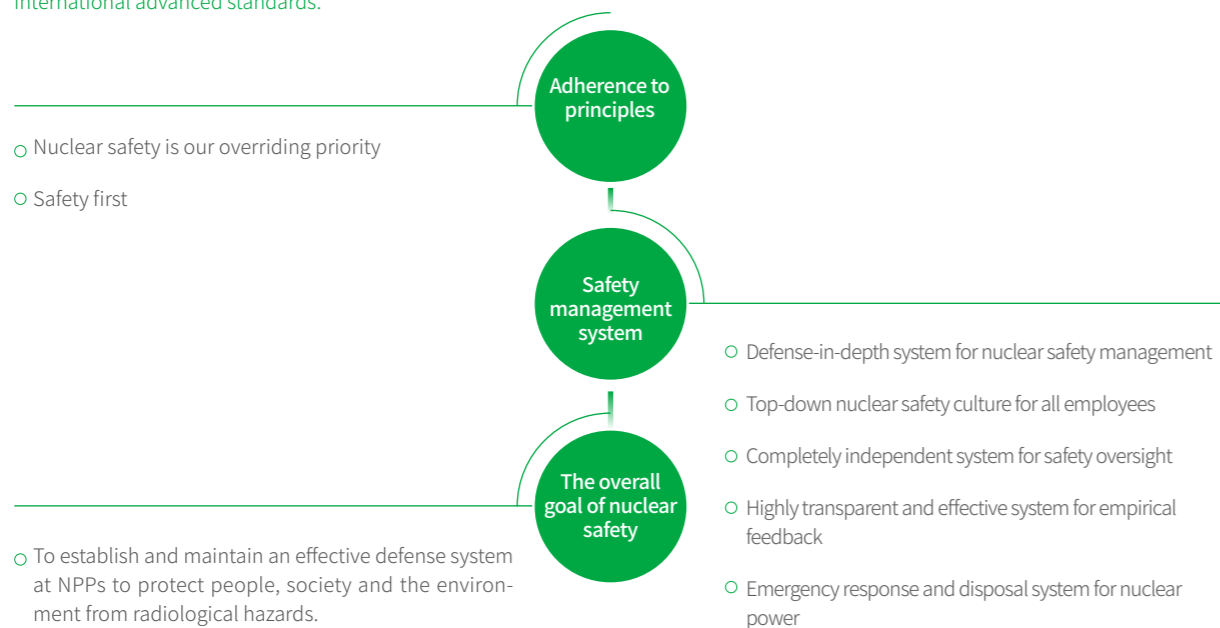
# Exemplary Operation with Safe Development



## Safety Management

Nuclear safety is our overriding priority, and it is the bottom line that we will always stick to. CGN Power has always placed nuclear safety in the highest position, and strictly abides by the Chinese nuclear safety regulations such as the Nuclear Safety Law of the People's Republic of China ("Nuclear Safety Law"), the Regulations on Civil Nuclear Facility Safety Supervision and Administration, the Regulations on the Safety of Site Selection for Nuclear Power Plants, the Safety Requirements for Nuclear Power Plant Operation, the Regulations on Safety of Management Systems of Nuclear Power Plants, etc. CGN Power has also implemented the Opinions of Communist Party of China Central Committee and State Council on Promoting Reform and Development of Work Safety, the Three-year Action Plan for the Rectification of National Work Safety and other requirements of regulatory authorities on work safety. More information about laws and regulations can be referred to "Laws and Regulations of the Nuclear Power Industry" in "Section 6 Business and Technology" of the A-share prospectus published by the Company in August 2019.

By introducing and absorbing the world's advanced safety management experience, we have established and improved the Company's safety management system. To achieve the goal of nuclear safety, we implement it in the design, manufacturing, construction and operation of NPPs. All commercial operation units have maintained safe and stable operations for years, meeting the requirements of international advanced standards.



### Safety management system

Nuclear safety is the lifeline of the Company, while a sound nuclear power safety system is the basis for nuclear power safety. With the objective of "Zero Injury, Zero Defect, and Zero Violation", CGN Power strives to establish a comprehensive management system for nuclear power safety, consolidating the foundation for nuclear power safety management.

#### Defense-in-depth system for nuclear safety management

CGN Power follows the principles of defense-in-depth and multiple redundancy in the design, equipment layout, safety measures, equipment measurement, management system, and employee performance of NPPs. As for equipment, personnel, and organizational structure, we have established a nuclear safety management system that includes prevention, monitoring, and correction. We also consider the establishment of defense-in-depth barriers and their effectiveness in our operational procedures to achieve work safety, control, and supervision.

We have further promoted the "SCS" Management, and operate our NPPs in a professional, intensive, and standardized way to maintain their stable operation. During the Reporting Period, CGN Power carried out all-round self-inspection of nuclear safety management and further improved the safety and quality management system. The Company also established a hierarchical supervision mechanism for hidden operational safety hazards, clarified the responsibilities of all employees for work safety, and constantly strengthened the supporting role of scientific and technological innovation in operation safety and performance improvement, continuously improving work safety management.

Standardization	Centralization	Specialization
Standardized organization Standardized management system Standardized operating procedures	Centralized resources allocation Centralized technical support Centralized information sharing	Specialized work division Specialized talent team Specialized capability building

#### Top-down nuclear safety culture for all employees

CGN Power has developed a top-down nuclear safety culture for all employees, and advocates that "everyone is a safety barrier". In an effort to continuously cultivate our nuclear safety culture, we conduct a work style of "strict compliance, prudent decision-making, detail-oriented and fact-based approach". To strengthen all employees' awareness of nuclear safety, we carry out regular, standardized, and long-term activities such as "managers on site", "abiding by procedures and no violations", "nuclear safety precautionary education", "nuclear safety culture promotion", "SQE benchmark evaluation", and "five-star plant evaluation".

**5.76** times per person per month  
On-site visits and problem-solving by the chairmen and general managers of the subsidiaries

The Company stays focused on the major risks and key areas of SQE. For example, teams led by our Chairman and senior executives have conducted safety inspections at the nuclear power bases for four consecutive years. We carry out investigations at the frontline to solve problems and eliminate hidden hazards, ensuring nuclear safety. In 2023, we combined both centralized and random inspection. The first batch of centralized inspections covered all nuclear power bases in operation and under construction. Follow-up safety or special inspections were carried out at irregular intervals based on the safety hazard management of each NPP, regulatory requirements, and feedbacks from external events, etc. As of June 2023, we have completed the annual safety inspection of all nuclear power bases in operation and under construction.

#### Honors

Hongyanhe Nuclear was awarded **Excellent Organizing Unit for the Case Collection of 2023 Nuclear Safety Culture Building** by the China Nuclear Energy Association

Ningde Nuclear's paper won the first prize of the **4th Outstanding Corporate Safety Culture Paper- Electric Power Industry**



Case Regular safety inspection

In May 2023, a team of experts from various fields, with Chairman Yang Changli as the leader and Vice President Zhou Jianping as the deputy leader, visited the Yangjiang Nuclear Power Base for a major safety inspection. Meanwhile, a team of experts from various fields led by President Gao Ligang visited the Daya Bay Nuclear Power Base. The two teams conducted comprehensive and in-depth inspections respectively in the five areas of dual-prevention mechanism, nuclear fuel and radioactive waste safety, instrument control safety, radiation safety and fire safety.



Inspection led by Chairman Yang Changli at Yangjiang Nuclear Power Base



Inspection led by President Gao Ligang at Daya Bay Nuclear Power Base



On-site inspection led by Cai Zhen, General Manager of Fangchenggang Nuclear



On-site inspection led by Liu Dan, General Manager of Taishan Nuclear

Case Lufeng Nuclear's WANO-MSM Event themed on "Nuclear Safety Culture Cultivation"

From November 13 to 17, 2023, Lufeng Nuclear invited four WANO experts to conduct a World Association of Nuclear Operators Member Support Mission with a theme of "Nuclear Safety Culture Cultivation". The four experts gave detailed explanations and training on topics including basic knowledge of nuclear safety culture, case studies on nuclear safety culture cultivation, and the building of nuclear safety culture among contractors. They conducted deep discussions on related issues such as "the difference between industrial safety and nuclear safety", "the difference between security and safety", "the deep understanding of human error", and "the correlation between employees' psychological safety and nuclear safety culture". The event has inspired the building of nuclear safety culture at Lufeng Nuclear and further improved the overall understanding of nuclear safety culture among employees.



Completely independent system for safety oversight

Complying with relevant international and national nuclear safety regulatory requirements, CGN Power establishes an independent internal safety supervision system, and accepts irregular inspections and supervision of NPPs by national regulatory agencies. We also fully take advantage of internal and external supervision to promote the implementation of various actions in the independent supervision and improvement plan at all NPPs, and ensure that the indicators of units fulfill or exceed the regulatory requirements.

Inside the Company, we set up the Nuclear Safety Supervision and Assessment Department to supervise and assess the safety of all NPPs operated and managed by CGN Power. We have established the Center of Independent Supervision and Assessment for Nuclear Safety ("Nuclear Safety Supervision Center") to independently monitor and assess the safety management of nuclear power bases, covering safety culture cultivation, unit safety management, equipment reliability, project safety and quality control, cyber security, NPP security and emergency management. The Nuclear Safety Supervision Center reports directly to the President and is completely independent from operations departments. We also develop and implement safety improvement plans with all our NPPs.

Outside the Company, our NPPs accept the national nuclear safety regulators' irregular and targeted inspection, and the regular independent safety assessments by international industry organizations, including IAEA and WANO. Through experience exchange with peers, we keep improving our safety management of nuclear power.

During the Reporting Period, we accepted more than 80 inspections and/or reviews carried out by national nuclear safety regulatory authorities for the various NPPs in operation and under construction; and we received as planned WANO's corporate peer reviews (CPR) for the headquarters of CGN Power, the operating power plants of Taishan Nuclear, Fangchenggang Nuclear, and Hongyanhe Nuclear, as well as the Unit 4 of Fangchenggang Nuclear before operation.

	Level	Scope of Supervision
Internal safety supervision system	<ul style="list-style-type: none"> <li>On-site safety supervision team with NPP safety engineers as the core</li> <li>Safety management authorities with the basic functions of the safety and quality management of NPPs</li> <li>Nuclear Safety Supervision Center to monitor plants</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring the effectiveness of NPP daily production in terms of safety</li> <li>Ensuring and overseeing the effectiveness of safety management system at the organizational level</li> <li>Carrying out independent safety supervision and assessment at each nuclear power base</li> </ul>
External supervisions	<ul style="list-style-type: none"> <li>National Nuclear Safety Administration</li> <li>International peers' independent safety assessments (including IAEA &amp; WANO)</li> </ul>	<ul style="list-style-type: none"> <li>Supervising and inspecting compliance with nuclear safety regulations</li> <li>Assessing and supervising the safe operation in NPPs</li> </ul>





### Highly transparent and effective system for empirical feedback

The experience feedback system is an important part of safe operation of NPPs. We continue the collection of internal and external historical experiences to analyze the root causes of accidents, develop plans to correct our actions, and form a dynamic and transparent experience feedback system to prevent any recurrence of accidents. We have established a system that encourages the reporting of operational incidents relating to nuclear power. Management and supervisory departments are required to report the incidents with the transparency measurement indicators in place. Meanwhile, we manage feedbacks on operational incidents intensively, analyze the root causes of the incidents and deviations for taking corresponding corrections, summarize best practices, and publicize them in all NPPs.

**Feedback between engineering and operations departments**

The two-way experience feedback mechanism between the engineering and operations departments helps both parties share and use experiences, promoting nuclear power unit improvement in areas such as design, supplier process, equipment replacement, construction and commissioning management, operation optimization, maintenance strategy and regular safety reviews.

**Feedback among power plants**

We actively conduct experience feedback analysis among NPPs, regularly organize the screening of experience feedback and arrange professionals from power plants to learn from each other. At the same time, we have compiled a series of historical experiences and lessons in industrial safety, fire safety, environmental safety, operation and maintenance, etc. into publications.

**External feedback**

We carry out SOER (Significant Operating Experience Report) and WANO performance analysis. We timely track the issues related to safety of nuclear operation in WANO assessment results, and continuously verify and optimize the improvement measures, so as to provide support for managers to make reliable decisions. Meanwhile, we organize a comparative analysis of SOER among plants to identify common issues and improvement directions, with an aim to enhance the management's awareness of risk management and improve their risk management capabilities.

### Emergency response and disposal system for nuclear power

CGN Power attaches great importance to the emergency response capabilities of nuclear power plants. The Company continuously improves the organizational systems for nuclear emergency response, and has developed a comprehensive emergency response system centering on nuclear emergencies and a multi-line emergency defense mechanism. The mechanism is supported by specialized emergency equipment and facilities, as well as sufficient and qualified personnel who participate in emergency drills on a regular basis. Based on regular emergency drills, a sound and vigilant nuclear emergency response system, nuclear emergencies can be handled in time, thus safeguarding the residents around.

In 2023, we optimized the emergency response system, emergency technical support and supporting capabilities. We continued to implement the 24-hour standby duty system, enhance measures for emergency response, and improve the preparation and all-weather response of organizations for nuclear emergency. The on-duty rate of nuclear emergency organizations maintained over 99% throughout 2023. 17 basic nuclear emergency training sessions were carried out, and all authorized emergency personnel received retraining. Six comprehensive nuclear emergency drills were organized, covering all of the Company's NPPs in operation. We thus remained good capabilities of nuclear emergency response.

#### Improving the emergency response system

- We have completed the standards of emergency response for second-generation and second-generation improved NPPs, and also standardized the emergency response for second-generation and second-generation improved NPPs under both French and Chinese technical specifications, thus improving the accuracy of emergency response.
- We finished the preparation and application of the operation guidelines of diagnosis and prediction for the three barriers of EPR and HPR 1000, which was conducive to improving the ability of checking the integrity of the three barriers of units in case of nuclear accidents.
- We formulated the standard three-prevention plans (flood, typhoon and drought) for NPPs in operation and under construction, based on the experience of typhoon prevention.

#### Enhancing emergency response capabilities

- We improved the Scenario Construction Standard of Emergency Drills based on its actual application. Specifically, we expanded the scope of application to subsidiaries, optimized the content of scenario templates, further enhancing the practicality of the standard.
- The headquarters' emergency command center was put into operation in 2023 after renovation. It boasts four major functional modules, namely, emergency command, technical support, emergency decision-making and comprehensive support, which further contributed to the informationization and modernization of the nuclear accident emergency command system.
- Each NPP organizes regular emergency training and drills in different scenarios, and carries out regular inspections and tests of emergency facilities and equipment to continuously improve their reliability and response capabilities of emergency personnel.

#### Strengthening nuclear emergency preparedness and performance

- Since the summer of 2023, we have responded to 6 typhoons affecting China, including Doksuri, Talim, Saola, Haikui, Khanun, and Koinu, and some of them like Doksuri were super typhoons. No casualties or major property loss was caused.
- During the fight against the super typhoon Saola, we launched a first-level emergency response. President Gao Ligang served as the general emergency commander to coordinate the work and respond effectively to the strike of the super typhoon.

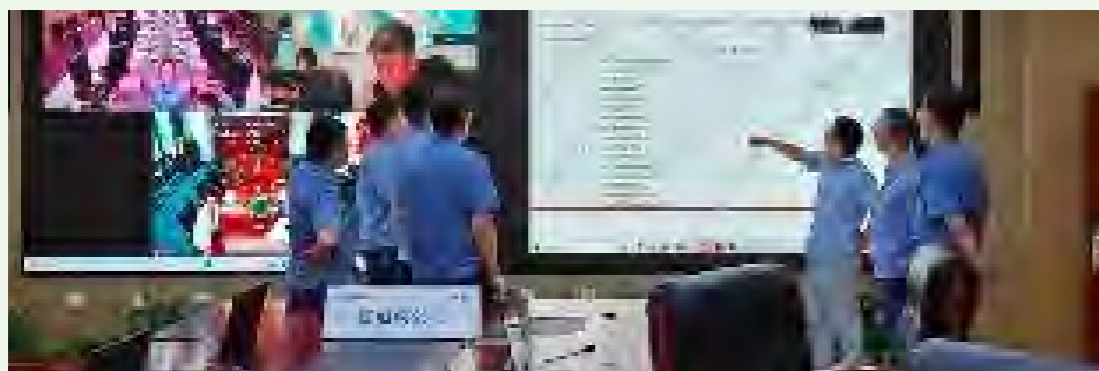
### Case Fangchenggang Nuclear's innovative technological solution improves emergency response efficiency

In April 2023, Fangchenggang Nuclear's project of Alternative Lightweight Design and Development of NPP Emergency Water Pipeline won the first prize of the 2022 National Equipment Management and Technological Innovation Achievement in Electric Power Industry. This project adopts an alternative lightweight technological improvement plan for NPP emergency water pipelines. It can reduce water supply manpower from 40 to 8 persons, and shorten emergency response time from 6 to 3 hours. It will greatly save manpower and material costs while improving the economical level and ensuring the safe operation of NPPs. The project has obtained 3 national invention patents, and it is the first of its kind in the nuclear power industry in China.



**Case** Hongyuanhe Nuclear's first participation into the international nuclear emergency convention exercise

In June 2023, Hongyanhe Nuclear participated in the international nuclear emergency convention exercise (ConveX-2a) for the first time. The exercise was organized by the IAEA, and was participated by the National Nuclear Accident Emergency Coordination Committee and the Nuclear Emergency Response Coordination Committee of Liaoning Province. The exercise was conducted without a script and included several scenarios set up by the IAEA, and the participants responded independently according to the scenarios. The emergency personnel of Hongyanhe Nuclear responded quickly. They provided various types of information such as unit status diagnosis, accident effect evaluation, environmental radiation monitoring, etc., and proposed a series of proper response actions such as suggestions for off-site protection actions, etc. It was an all-round test of emergency response capabilities.



## SQE management

SQE management requires strong professional competence and a holistic view. We believe that we should advance towards excellence with a mentality of "always on the way", placing equal focus on both system development and implementation of responsibilities.

In 2023, we conducted for the first time a quality management system assessment covering all subsidiaries and companies entrusted by controlling shareholders, urging them to optimize the integrity and improve the effectiveness of their SQE management system. We further promoted the Action Plan for Improving Safety and Quality in the Nuclear Power Industry (2022-2025), clarified safety responsibilities, and facilitated the implementation of the dual prevention mechanism of risk classification and control as well as potential hazards investigation and management. We made quick response to and strictly followed the country's Special Action Plan to Comprehensively Strengthen Nuclear Safety Management in the Nuclear Power Industry. We hope to improve SQE management and performance and report it to the Board and the Nuclear Safety Committee of the Board.

During the Reporting Period, the goal of "two eliminations and six zeros" was successfully achieved, which refers to the elimination of level-2 nuclear incidents, the elimination of major and serious personal casualties, and the realization of zero serious injuries, zero fire accidents, and zero major radiation protection incidents, zero major equipment damage accidents, zero concealment and false report, and zero social responsibility incidents with serious adverse impact. The SQE management work and key projects in 2023 were all carried out as planned. Over 90% hidden hazards detected in our nuclear power projects in operation and under construction were rectified.

In 2024, the Company will continue to thoroughly implement the instructions from the state and relevant regulatory authorities, and promote the implementation of special actions on nuclear safety management according to the plan. We will strengthen the application of advanced technologies to continuously improve the effectiveness of supervision and intrinsic safety, enhance the effectiveness of the quality assurance system, ensure SQE work in key areas, and promote the building of nuclear safety culture as well. The Company will adhere to the bottom line of safety and quality to ensure "absolute safety" and achieve "two elimination and six zeros", striving to get better SQE monitoring performance on a year-on-year basis and consolidate the foundation for development.

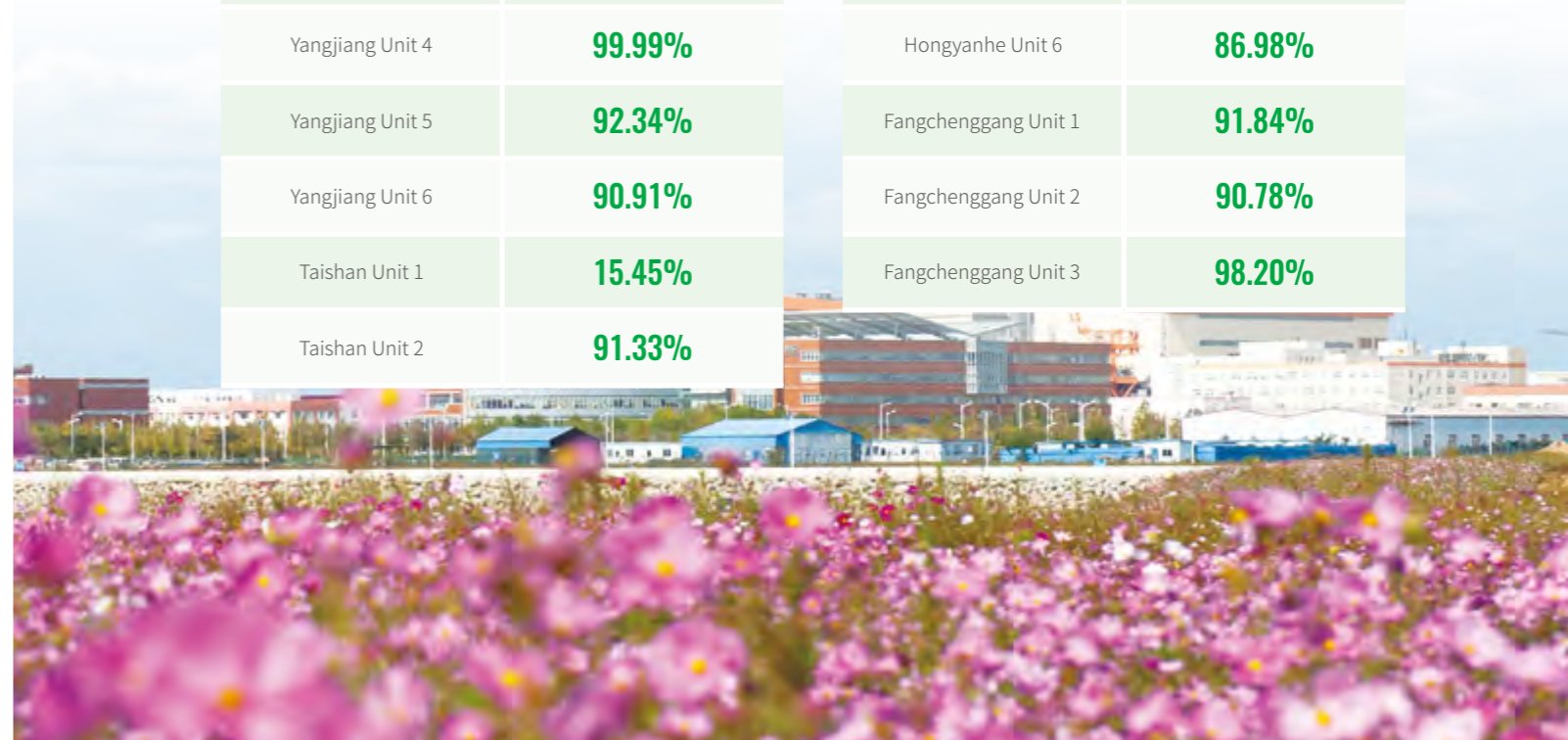
## Outstanding safety performance

We believe that "a safe nuclear power plant is and only a safe nuclear power plant can be an economical nuclear power plant with which the Company can achieve sustainable development". All operational units have maintained safe and stable operation for years, meeting the requirements of international advanced standards with an average capacity factor of more than 89% for several consecutive years.

### 2023 CGN Power Unit Capacity Factor

"Unit Capacity Factor" is mainly used to measure the availability of nuclear power units. It is an important indicator that reflects the electricity generation capacity of nuclear power units. It is also recognized by the international nuclear power industry as the indicator that can best reflect the business performance of nuclear power operation and the level of nuclear power safety management.

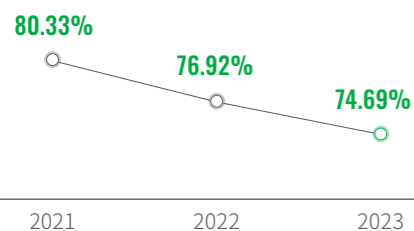
Daya Bay Unit 1	<b>99.64%</b>	Ningde Unit 1	<b>84.07%</b>
Daya Bay Unit 2	<b>74.25%</b>	Ningde Unit 2	<b>99.63%</b>
Ling'ao Unit 1	<b>95.53%</b>	Ningde Unit 3	<b>96.42%</b>
Ling'ao Unit 2	<b>84.56%</b>	Ningde Unit 4	<b>91.48%</b>
Lingdong Unit 1	<b>99.99%</b>	Hongyanhe Unit 1	<b>80.53%</b>
Lingdong Unit 2	<b>93.15%</b>	Hongyanhe Unit 2	<b>92.47%</b>
Yangjiang Unit 1	<b>99.61%</b>	Hongyanhe Unit 3	<b>90.83%</b>
Yangjiang Unit 2	<b>94.04%</b>	Hongyanhe Unit 4	<b>88.80%</b>
Yangjiang Unit 3	<b>91.93%</b>	Hongyanhe Unit 5	<b>99.86%</b>
Yangjiang Unit 4	<b>99.99%</b>	Hongyanhe Unit 6	<b>86.98%</b>
Yangjiang Unit 5	<b>92.34%</b>	Fangchenggang Unit 1	<b>91.84%</b>
Yangjiang Unit 6	<b>90.91%</b>	Fangchenggang Unit 2	<b>90.78%</b>
Taishan Unit 1	<b>15.45%</b>	Fangchenggang Unit 3	<b>98.20%</b>
Taishan Unit 2	<b>91.33%</b>		



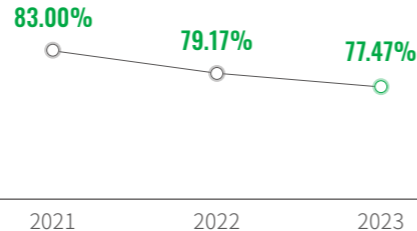
CGN Power Annual Comparisons in WANO Indicators (2021-2023)

The WANO indicator is an important international statistical indicator for nuclear power operation performance and an important reference for evaluating the safety and reliability of nuclear power project operations. The dozens of assessment indicators directly reflect the nuclear power unit's operation safety level. Members of WANO organization formulate internationally accepted performance indicators for unified management and coordination, which is conducive to strengthening the exchange on nuclear power technology, experience and accident information, and continuously improving the safety and reliability of NPPs worldwide.

Ratio of units achieving the world's excellent level (the world's top decile) in WANO indicators



Ratio of units achieving the world's advanced level (the world's top quartile) in WANO indicators



Nuclear power units in operation	Average capacity factor of units in operation, reaching the world's advanced level	
<b>27</b>	<b>89.43%</b>	
Operational incidents at level-2 or above in INES <sup>10</sup> occurred at our NPPs	Safe operation period of Daya Bay Unit 1, the first nuclear power unit of CGN Power by now	Customer complaints on our products and services received during the Reporting Period
<b>0</b>	<b>30</b> years	<b>0</b>

NPP	Industrial safety accident rate of employees per 200,000 man hours <sup>11</sup>			Industrial safety accident rate of contractors per 200,000 man hours <sup>12</sup>		
	2021	2022	2023	2021	2022	2023
Daya Bay NPP	0	0	0	0	0	0
Ling'ao NPP	0	0	0	0	0.074	0.11
Lingdong NPP	0	0	0	0	0	0
Yangjiang NPP	0	0	0	0	0	0
Fangchenggang NPP	0	0	0	0	0.05	0
Ningde NPP	0	0	0	0	0	0
Hongyanhe NPP	0	0	0	0	0.035	0
Taishan NPP	0	0	0	0	0	0

<sup>10</sup> According to the International Nuclear Event Scale (INES), there is a 7-level event classification system. Events of lesser safety significance (Levels 1 or above) are termed "incidents" or "accidents". Events without safety significance are termed "deviations" and not classified.

<sup>11</sup> Industrial safety accident rate of employees per 200,000 man hours=200,000×(Annual employee accidents/annual employee hours)

<sup>12</sup> Industrial safety accident rate of contractors per 200,000 man hours=200,000×(Annual contractor accidents/annual contractor hours)

Case Ling'ao Unit 1 sets a new record after 6,000 consecutive days of safe operation

On March 16, 2023, Ling'ao Unit 1 achieved safe operation for 6,000 consecutive days, extending the record for the longest safe operation of its kind globally. The Daya Bay Nuclear Power Base houses six gigawatt-level units. It has maintained safe and stable operation since the first unit was put into commercial operation in 1994. It has won 39 first prizes in the international nuclear power safety performance challenge, making it the nuclear power base with the most championships over the world. In 2023, among all 72 performance indicators of the six units of the Daya Bay Nuclear Power Base, 87.5% of them achieved the world's advanced level in WANO indicators. It was the best result ever reached since the full commercial operation and the Daya Bay Nuclear Power Base remained as one of the top NPPs globally.



## Stable Operation

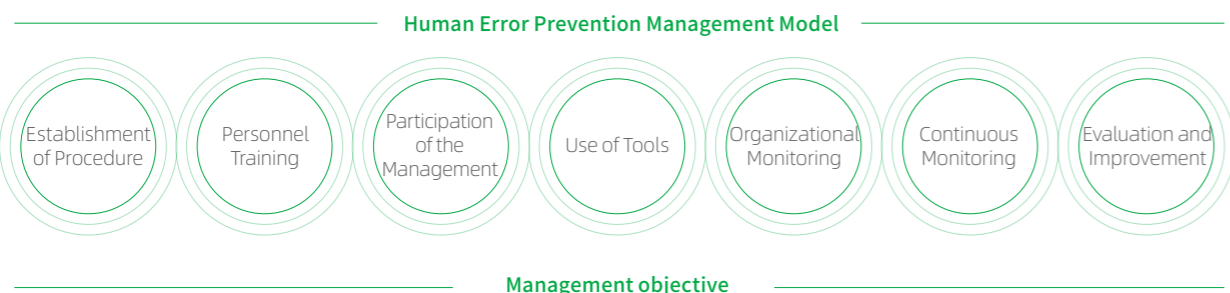
Safe and stable operation is the basis for corporate development. Adhering to the work requirements of "Always act based on rules, Always have someone to be held accountable, Always have someone to supervise, Always have documentation to check", CGN Power strictly implements operating procedures, and maintains equipment in a regular and orderly manner. We implement effective plants management to provide safe, stable and reliable power for economic and social development.

### Standardized operation

Human error is a vital factor that results in unit safety issues. In order to reduce human error, we have established a human error prevention management model. In this model, we set up the management objective, continuously enhance staff skill training and incorporate safety and quality requirements into staff management on violations of rules and regulations. At the same time, we implement the accountability system and the reporting system, thereby ensuring the timely revelation of fraud and concealment and have continuously improved the human error management.

#### Human error prevention management mechanism

In our human error prevention management model, we carry out special rectification, improve the mechanism for admission, selection, training and assessment for operating personnel, and organize job training for production and operation personnel to strengthen their operational skills, thus reducing the safety impacts caused by human error greatly.



Driven by the vision of "Zero Human Error", we improve the human error performance of plants in three stages, from passive defense to proactive management.



- |  |  |   |                                     |
|--|--|---|-------------------------------------|
| <b>1 Remedy Shortcomings</b> <ul style="list-style-type: none"> <li>○ Improving management organization for human performance</li> <li>○ Introducing new theories and technologies</li> <li>○ Reducing human error of contractors</li> </ul> | <b>2 Improve the System</b> <ul style="list-style-type: none"> <li>○ Identifying single-point failure and repairing barriers</li> <li>○ Applying and popularizing new technologies for prevention of human errors</li> </ul> | <b>3 Keep Improvement</b> <ul style="list-style-type: none"> <li>○ Integrating into daily work</li> <li>○ Regular benchmarking, check and evaluation</li> </ul> | <b>4 Vision of Zero Human Error</b> |
|--|--|---|-------------------------------------|

### Key actions on human error prevention

During the Reporting Period, we continued to improve the human performance of zero single-point failure, strengthened the human management system for departments and partners, and enhanced publicity of human error prevention and the digital management platform, and promoted new concepts of human error performance.

In 2023, there were 9 operational incidents caused by human errors at the Daya Bay Nuclear Power Base, a decrease of **55%** from 2022, the best results in the history of the Daya Bay Nuclear Power Base.

#### Unified Planning

We formulate the Improvement Plan for Human Performance in the Field of Operation with the goal of zero human error, promote good practices of human error prevention among plants, and publish guidelines for human error prevention management. We also organize annual inspections and exchanges on the maturity of human error prevention, utilize new technologies and tools and develop a special Zero Human Error Incident course. Preliminary results are achieved in the improvement of human performance.

#### Culture cultivation

For frontline employees, human error prevention education is carried out to strengthen the awareness of employees and contractors to abide by procedures and code of conduct. Human performance skills competition is organized to improve employees' code of conduct and skills of human error prevention. Besides, the first Management of Responsibility for Human Error Incidents has been compiled to strengthen compliance with procedures and prohibit violations. It encourages proactive reporting to promote honesty and transparency.

#### Procedure as the core

We apply advanced zero-error concepts and technologies, and have finished the identification of single-point failure and the repairing of barriers of over 5,000 work procedures. This has improved the comprehensiveness, completeness and effectiveness of the procedures greatly.

#### Digital improvement

We have developed and launched the human error risk information management system for NPPs, with four functions including on-site observation and guidance and human error tracking. The system standardizes the on-site observation of NPPs and serves as an important digital platform for improving human performance.

#### Case The first skills competition for NPP human performance

In July 2023, the Group's first skills competition for NPP human performance was completed at the Daya Bay NPP. The competition covered the three major areas of operation, maintenance, and technology, and 21 teams of outstanding employees from 6 major nuclear power bases in operation participated in the competition. They answered questions related to human performance theory, tools for human error prevention, codes of conduct, safety culture, etc. The competition was a good platform for horizontal exchanges, benchmarking, and learning from each NPP, creating a good atmosphere for improving human performance.

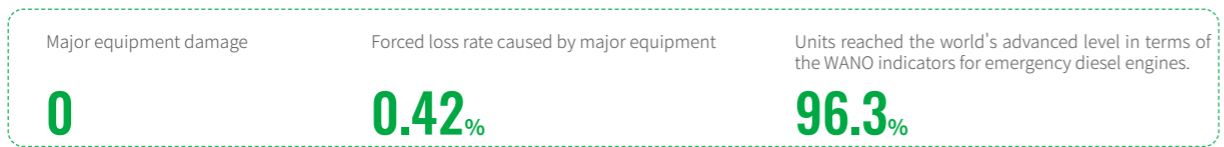


## Equipment operation and maintenance

The reliability of equipment is vital to NPP operation. In order to ensure that nuclear power equipment operates in high stability, CGN Power fully ensures reliable operation in design, operation and other stages. At the design stage, we make full consideration for installation of NPP equipment; during operation, we follow the regulatory requirements including NPP operation technical specifications, strengthen risk prevention management of major sensitive equipment, and regularly monitor and maintain nuclear power equipment to achieve normalized, programmed and standardized equipment management.

### Equipment management

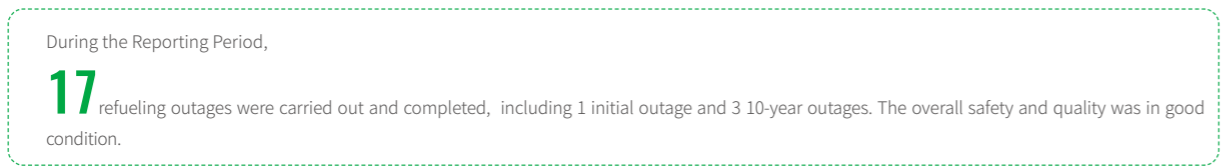
During the Reporting Period, we focused on "8+1" major equipment in NPPs (steam generators, main feedwater pumps, steam turbines, main transformers, condensers, important pumps, generators, emergency diesel engines, cooling sources) to develop functions, such as, one-click access to equipment information, accurate notification of abnormal information, and the informatization of expert workstation. We provide a collaborative platform for NPP equipment engineers and "8+1" major equipment experts for efficient communication, problem solving, follow-up tracking and closed-loop management. It improves work efficiency while also forming a standard knowledge base. The big data application system for "8+1" major equipment integrates relevant system data of 9 types of business and 56 sets of equipment management field from the 6 NPPs in operation, CGN Operations, CGN Engineering, SNPI and the CGN headquarters. Based on a unified big data platform, it breaks through data barriers between various information systems, and provides solutions to massive data storage, multi-source heterogeneous data extraction, and joint treatment of equipment abnormal information, etc., realizing the interconnection of all major equipment information.



### Refueling outage

Based on the design of PWR NPPs, the nuclear reactor of each unit in operation must be shut down for refueling after a certain period. Taking safety and economic factors of NPPs into consideration, nuclear power operators usually arrange some preventive and corrective repairs, inspections, tests and partial modification projects of the unit during the refueling period, which is commonly referred to as the refueling outage. We usually uniformly plan and rationally deploy personnel to perform outage activities. Meanwhile, NPP equipment is categorized and analyzed to continuously improve the efficiency of refueling, detect equipment abnormalities in real time and ensure that outage activities are carried out in an orderly manner.

In 2023, we continued to promote the digital transformation of NPP refueling outage. We realized the change from paper documents to digital approval process, from single-line operations to collaborative operations on Internet, and from form data to intelligent and visualized data. This transformation significantly improved the efficiency of outage management in various business fields. We also achieved collaborative decision-making by both front and back ends through managing support centers, leading the industry in terms of refueling outage performance.



### Case The first digital planning engineer participates in the fifth refueling outage of Fangchenggang Unit 1

The first RPA digital planning engineer took up the job in the fifth refueling outage of Fangchenggang Unit 1 in April 2023. For 24/7 standby, it can be activated accurately on time. The application of the RPA digital planning engineer covers the entire process of outage preparation, implementation, and summarization. It can achieve automated and intelligent scenarios such as the export, screening, collection, statistics, and format arrangement of data. It thus enables the transformation from "pure manual" work model to "human-computer collaboration", which can replace manual work in time-consuming data capture and complicated operation. With 100% operation accuracy and an increase of overall work efficiency by over 80%, it is estimated to save 1,200 man hours per year, and the accuracy and safety of data capture is also fully guaranteed.



## Plant management

Based on the characteristics of our multi-technology platform and multi-site operations, we have established the standardized, centralized and specialized, plants management system, to ensure efficient management of plants.



### Standardized

Based on the OPST model (the operation standard management system) in the core areas of operations, we achieve the unified organizational management system, the unified technical standards and procedures system, the unified post qualifications and the authorized training system, as well as the unified operation management tools.



### Centralized

We continue to maximize the economical efficiency and overall value in centralized management like resource allocation, effective platform operation and information sharing. We set up a unified bidding center to continuously promote the standardized and informatized bidding management and spare parts management, make full use of big data to improve management efficiency, and gradually expand the scope of centralized procurement of spare parts and public materials. It also helps implement the overall allocation of resources, enhance the bargaining power of centralized procurement, and optimize procurement channels, thus achieving significant cost-effectiveness.



### Specialized

We have specialized subsidiaries such as CGN Operations, CNPRI, SNPI, CGN Engineering, providing professional services for NPPs in refueling outage, engineering modification, equipment management, spare parts management, and NPP design and construction. According to the characteristics of the production and operation management of NPPs, we have gathered the superior resources of NPPs and specialized subsidiaries, and established a number of functional field peer groups ("PG groups"). Each PG group is composed of professional and technical managers of the Company, NPPs and specialized subsidiaries. The PG groups focus on cross-organizational overall planning and coordination management in terms of sharing and communication, problem orientation, capacity building, etc. Targeting the common technical problems of each NPP, they concentrate professional forces to promote and apply new tools, new technologies and good practices, and enhance the professional capabilities in various fields, pursuing excellence in each NPP.

In 2023, we continued with the SCS (Specialization, Centralization and Standardization) management strategy, and maintained excellent work safety. For example, we promoted the R&D of domestically-produced spare parts, such as the application of the first (set) grease for nuclear island certification and steam turbine oil filter, as well as the expansion joint for service-water system in NPPs, which reduced supply chain risks; we also boosted the digitization of NPPs and aimed to achieve intelligent nuclear power production and operation by developing NPP system based on the plant management system.

<b>Remote monitoring system for NPP work safety</b>	A total of over 6,000 production-related video cameras have been connected to 12 video surveillance systems in 6 nuclear power bases, thus achieving visualized management of key equipment and operation scenarios in NPPs.
<b>Mobile application system for NPP work process</b>	It realizes fully digital and mobile maintenance process and marks a new model of NPP work process.
<b>Special digital system for NPP refueling outage and nuclear island</b>	The system realizes remote monitoring and operation of the outage headquarters and the main control room. It enables us to know the real-time on-site high risks and key work progress, contributing to the lean management of refueling outage.
<b>Digital operation system for NPP nuclear fuel</b>	The system completed its first trial operation in the 18th refueling outage of Ling'ao Unit 2 and achieved the expected results, which marked a key step in digitizing the refueling operation of NPPs.
<b>Key sensitive parameter management system for NPP instrument control</b>	It has been launched in 5 nuclear power bases in operation simultaneously, digitizing and automating the entire process of instrument control and key sensitive parameters for the first time.
<b>NPP fuel management system</b>	

**Case Yangjiang Nuclear wins the second prize of the "Electric Power Science and Technology Innovation Award 2023"**

In 2023, the multi-reactor management system developed by Yangjiang Nuclear's Production Command Center was optimized to further standardize the company's hidden hazard classification and incident response. It will also help optimize the daily production risk management, establish a physical operation mechanism for major equipment groups, and make clear the entire work process. It facilitates the establishment of a one-stop service platform, introducing and upgrading monitoring methods such as intelligent monitoring and the online vibration monitoring system. It significantly promotes the company's key performance indicators, enabling the company to lead the industry in SQE, on-grid power generation, average capacity factor, and WANO indicators. The project won the second prize of the Electric Power Science and Technology Innovation Award 2023 by the China Electricity Council, the third prize of the 4th China Industrial Internet Contest and the first Professional SOE Digital Scenario Innovation Contest. It was also selected as a good practice in the China Nuclear Energy Association's Annual Comprehensive Report on China's Nuclear Power Operation 2022. The Yangjiang Nuclear's Production Command Center has become the Group's demonstration base for multi-reactor management. The project is applied by the Group's other operating nuclear power bases. The company also carries out exchanges on project construction and operation with several companies outside the Group.

## Exemplary Projects

The quality of the unit under construction is of great importance for the safe and stable operation of the unit after it is put into operation. To realize the goal of "Zero Behavior Violation, Zero Quality Defect", CGN Power insists on building projects with the highest standards and requirements. We actively implement the quality management measure, and continuously strengthen our management capability to ensure the safety and quality of engineering construction.

### Engineering management

CGN Power continues to improve the engineering safety and quality management. We adopt various initiatives such as optimizing the system, strengthening supervision and standardizing operations to comprehensively improve the safety and quality management of engineering construction. These initiatives elevate our safety and quality performance of nuclear power projects to the world's leading level.

<b>Conducting comprehensive evaluation on QMS effectiveness for the first time to drive continuous improvement in QMS effectiveness</b>	In 2023, we released the Quality Management System (QMS) Effectiveness Evaluation Standard (Trial), and conducted the inspection and evaluation on the effectiveness of the QMS within all the nuclear power business owners and specialized subsidiaries under our management. By evaluating QMS effectiveness, taking corrective actions and inter-company benchmarking, we tried to help improve their management and performance.
<b>On-site quality director mechanism functioning with effective on-site oversight over nuclear power projects</b>	In 2023, our quality directors stationed at the project sites continued the on-site quality oversight over nuclear power projects under construction, identifying existing management loopholes and taking corrective action. The on-site quality directors undertaking succeeded in improving the project quality management, and no construction site incidents, major quality incidents or quality accidents occurred for the projects under construction in 2023.
<b>Stepping up efforts in oversight and accountability for SQE accidents and incidents</b>	We released the <i>Safety, Quality and Environmental (SQE) Accidents and Incidents Reporting Template and Instructions</i> , specifying that the incident investigation reports shall be made and shall reflect the accountability. We also promoted the inclusion of accountability into the management systems such as the quality and experience feedback systems, and urged all subsidiaries to carry out incident investigation and create the accountability.
<b>Optimizing quality indicators to accurately measure the impact of quality events</b>	We released the <i>Quality Indicator Set (Trial Version)</i> , which optimized the quality indicators, definitions, and the criteria for quality accidents and incidents. It specified that direct economic losses shall be taken as the criteria to enable the visual demonstration of the impact of quality accidents and incidents, so as to facilitate the accident and incident analysis by the subsidiaries, and thus improve their handling and ensure the effectiveness.

Focusing on potential risks with classified management over the potential safety hazards at different levels, and improving the dual prevention mechanism

We developed a hierarchical management and control mechanism with the functional departments of the headquarters and the subsidiaries as the main body for overseeing the handling of safety risks and hidden dangers. We implemented the classified management of safety risks and hidden dangers from the three dimensions - personal injuries, economic loss and social impact to establish an institutional framework fit for the Company. By doing so, we strengthened our capacity of risk control and hidden danger identification, so as to help improve the intrinsic safety.

Pushing ahead with the evaluation on work safety standardization and benchmarking

We pushed ahead with the standardization and benchmarking of work safety in nuclear power projects under construction. Through constant evaluation and continuous improvement, we promoted the in-depth integration of standardization and benchmarking with daily work, so as to ensure the stability of on-site work safety.

## Quality projects

Quality nuclear power projects ensure our stable growth and sustainable development. Therefore, CGN Power is making every effort to steadily and efficiently promote the construction of quality nuclear power projects.

### Overall SQE benchmarking rating of nuclear power projects under construction

For nuclear power projects under construction, the regulatory authority conducts a comprehensive assessment on project safety, quality, and environmental impact in terms of performance standards, site selection, and management based on the QHSE Standardized Management and World-class Benchmarking Assessment Manual for Nuclear Power Engineering. The rating system is divided into ten levels, of which levels 5 and 6 are good, levels 7 and 8 are advanced, levels 9 and 10 are international benchmark.

	Fangchenggang NPP	Cangnan NPP Phase I Project	Huizhou NPP Phase I Project	Lufeng <sup>13</sup> NPP Units 5 and Unit 6
2021	6	5	5	NA
2022	8	6	6	5
2023	8	7	7	6

<sup>13</sup> Unit 5 was approved for FCD in 2022 and Unit 6 was approved for FCD in 2023.

### 2014-2023 Industrial Safety Accident Rate Per 200,000 Man Hours in Engineering Construction<sup>14</sup>

2014	0.0112
2015	0.0109
2016	0.0094
2017	0.0113
2018	0.0051
2019	0.0088
2020	0.013
2021	0.007
2022	0.007
2023	0.002

## Key projects

We value both quality and progress, and have developed special optimization measures to ensure the completion of project construction goals. As of the end of 2023, we had 11 units that we managed and that were approved for FCD or under construction. Among them, four were in the FCD preparation stage, two in the civil construction stage, three in the equipment installation stage, and two in the commissioning stage.

### Case The first HPR 1000 nuclear power unit in western China put into high-quality operation

On March 25, 2023, Fangchenggang Unit 3, the first HPR 1000 nuclear power unit in western China, was put into operation, achieving zero unplanned shutdowns, zero personnel injuries, zero damage to important equipment, and zero human errors. It set a new record of the optimal construction period and four "zeros" high-quality operation for third-generation NPPs, fully demonstrating the safety, maturity and advanced nature of HPR 1000. Our independent nuclear power development and forward design capabilities have been fully verified, which serve as a solid foundation for the Group's nuclear power development. Fangchenggang Unit 4 is currently in the commissioning stage.



<sup>14</sup> Industrial Safety Accident Rate Per 200,000 Man Hours=200,000× (number of accidents for both employees and contractors per year / total man hour of both employees and contractors per year).



## Information Security

Cyber information security is critical to the operation and development of NPPs. CGN Power complies with laws and regulation such as the Cybersecurity Law, the Data Security Law, and the Personal Information Protection Law. The Company has built strong network security barriers in reference to the best practices of IAEA and obtained the information security system certification (GB/T22080-2016/ISO/IEC 27001:2013).

CGN Power has established a cyber information security protection mechanism. In terms of organizational structure, the cyber security and information technology committee has been established to coordinate and promote digital transformation and prevent information leakage, by strengthening cyber security inspections, notification and early warning; in terms of technological improvement, the safe operation management system for computers and related equipment has been launched to strengthen the confidentiality and integrity of information and effectively prevent internal and customer information leakage; in terms of management, a special emergency plan for cyber security incidents has been prepared so that employees can promptly report any suspicious network vulnerabilities through various ways to the Company for disposal in terms of awareness, regular information security training is organized for all employees to popularize common information security risks in work and corresponding prevention and emergency response, so as to raise employees' cyber security awareness and professional skills. Meanwhile, information security is included into the scope of the Company's security assessment, which indirectly affects the performance of the Company and employees.

During the Reporting Period, the Company completed the review of the special plan for digitization and cybersecurity, which was then determined by the Company's management. There was no serious cybersecurity incident at Level III or above or large-scale computer virus infection occurred within the Company, which ensured the safe, stable and reliable operation of our cyber, communication and information systems, and prevented information leakage as well.



CGN Power and its three subsidiaries obtained the information security management system certification (GB/T22080-2016/ISO/IEC 27001:2013).

## A Leader in Nuclear Power Innovation

Innovation is the primary driving force for development. Therefore, CGN Power adheres to the innovation-driven development strategy, deepens the reform of scientific research systems and mechanisms, and continuously improves our technological edges. We make every effort to strengthen independent innovation, and strive to achieve self-reliance of core technologies, continuously forming new momentum and advantages for development.

### Technological innovation system

CGN Power has adhered to the path of "Introduction, Digestion, Assimilation and Innovation", and deployed and implemented the key task of "achieving the complete self-reliance and control of core equipment in key fields of nuclear power". The technological innovation system has been continuously improved in terms of innovation layout, institutional mechanisms, platform construction, and IP protection etc. These efforts have allowed us to consolidate the foundation of independent technological innovation.

#### Layout of technological innovation

In accordance with the "four-in-one" layout of scientific and technological innovation, we have developed and implemented four key tasks, including the implementation of specific strategies, the enhancement of technological independence, Peak Program, and digital transformation. In pursuit of the world's technological frontiers, we focus on cutting-edge nuclear technologies and technological innovations. We have established the China Southern Institute of Atomic Energy ("the Southern Center") in the Guangdong-Hong Kong-Macao Greater Bay Area and set up three R&D bases in Shenzhen, Yangjiang and Zhongshan to attract top researchers and sci-tech innovation talents, accelerate key technological R&D and innovation, and continuously consolidate our strength in science and technology. The three R&D bases of the South Center were under construction in 2023 as planned.

#### Technological innovation mechanism

CGN Power continues to optimize technological innovation mechanisms and comprehensively enhance technological innovation capabilities. During the Reporting Period, we further improved the assessment plan for subsidiaries, highlighted the supporting role of technological innovation in their intrinsic and long-term values, and supported them to make greater efforts in technological innovation; we improved management requirements for the entire process of scientific research projects and introduced policies and systems such as the certification and application of scientific and technological achievements and the post-evaluation management of scientific research projects, aiming to further improve the commercialization and application of achievements and their evaluation management.



Platforms of technological innovation

We have established the R&D platform system at state, group and company levels. At present, we have one state-level engineering technology center, one state-level key laboratory and five state-level energy R&D centers. In addition, we have applied for two new national R&D centers, and built multiple large-scale advanced laboratories in the industry, including thermal-hydraulic and safety research laboratories and material performance analysis laboratories. The independent R&D platforms are conducive to shortening the commercialization cycle of technological achievements, improving the maturity, compatibility and engineering level of existing technologies, and promoting technological transformation and upgrading. They provide basic technical support for improving R&D capabilities.

CGN Power's Seven State-level R&D Centers and Key Laboratories	
State Energy Nuclear-grade Equipment R&D Center	State Key Laboratory of Nuclear Power Safety Monitoring Technology and Equipment
State Energy Advanced Nuclear Fuel Elements R&D (Experiment) Center	State Energy Ocean Nuclear Power Platform Technology R&D Center
State Energy Nuclear Power Engineering & Construction Technology R&D (Experiment) Center	State Energy Nuclear Power Operation and Life-cycle Management Technology R&D Center
State Nuclear Power Plant Safety and Reliability Engineering Technology Research Center	

Case CNPRI's Digital Collaborative Design Laboratory put into operation

In August 2023, CNPRI's Digital Collaborative Design Laboratory was completed and put into operation. It includes three parts: a collaborative design platform for reactor R&D, a simulation and verification platform for reactor R&D, and a digital twin O&M system. The laboratory utilizes advanced digital systems, equipment and technologies to improve the collaboration, consistency and transmission efficiency of new reactor R&D, design, simulation and O&M data. It is designed to solve problems such as the difference between design drawings, file data and actual construction deviations, isolated field data island, functional space simulation and verification, etc., and will significantly improve the efficiency and quality of reactor R&D.

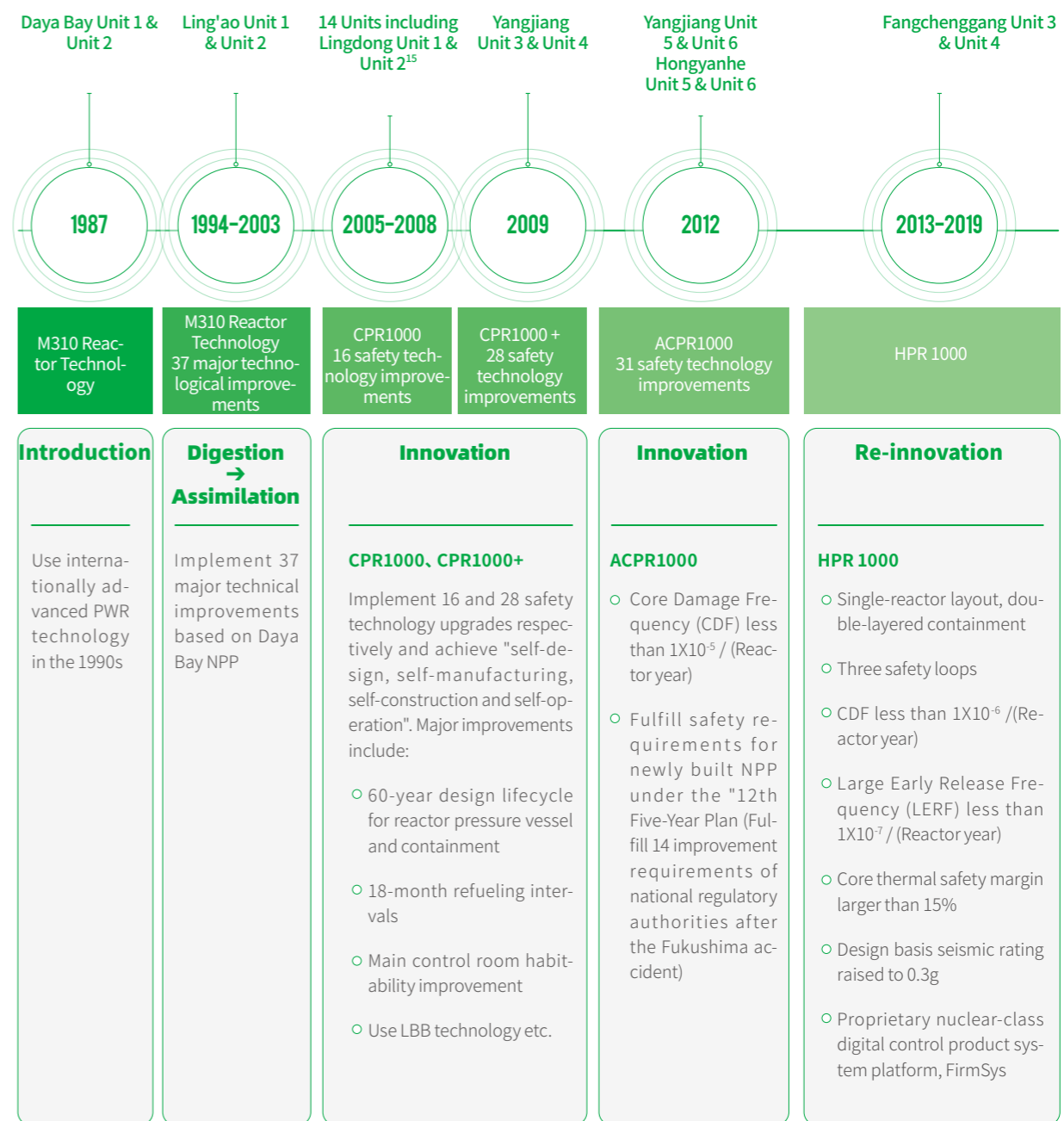


The laboratory

Innovative R&D of nuclear power technology

Strong technical foundation and independent R&D capability are the keys for CGN Power to achieve high-quality development. Since the adoption of M310 reactor technology at Daya Bay NPP in the 1980s, we have followed the technical guidelines of "Introduction, Digestion, Assimilation and Innovation", and promoted the nuclear power technological improvement and independent R&D in line with the technological development roadmap "Leading Plan".

Based on the HPR 1000 technology demonstration project and on the premise of ensuring safety, we continuously optimize our design and upgrade our technology to improve the economics, self-reliance and advanced nature of our nuclear power technology and equipment. This has laid a foundation for enhancing the technical competitiveness and ensuring high-quality production of the HPR 1000 nuclear power project.



<sup>15</sup> Including Lingdong Unit 1 & Unit 2, Hongyanhe Unit 1-4, Ningde Unit 1-4, Yangjiang Unit 1 & Unit 2, Fangchenggang Unit 1 & Unit 2.

### Collaborative innovation

CGN Power actively deepens scientific research cooperation, and has established long-term partnerships with domestic and foreign R&D institutions, industry organizations, and universities. We are committed to working together with all parties to promote innovation and crack the hard nut in the industry.

CGN Power maintains good cooperative relationships with various institutions, including the Chinese Academy of Sciences, China Academy of Engineering Physics, National Natural Science Foundation of China, Tsinghua University, Harbin Institute of Technology, and Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA), and has built closer ties with them through various channels.

CGN Power has been releasing research needs to scientific research institutions across China through the Enterprise Innovation and Development Joint Fund of the National Natural Science Foundation of China. Currently, multiple top domestic teams are working on our primary research issues.

CGN Power further promotes technical cooperation, subject co-construction, and talent cooperation with many universities such as Tsinghua University, Northeast Electric Power University, Harbin Institute of Technology, and Fudan University.

### Intellectual property rights protection

Intellectual property is a core element of international competitiveness. CGN Power attaches great weight to intellectual property right (IPR) protection, and strictly complies with Chinese laws and regulations such as the Patent Law, Trademark Law, and Copyright Law. The Company implements the instructions of key documents such as the Outline for Building a Strong Country in Intellectual Property (2021-2035) and the Guiding Opinions on Promoting the High-Quality Development of Central SOE's Intellectual Property Work. We also have formulated regulations on proprietary technology management, and upgraded the intellectual property management system to standardize the activities of creating, using, protecting, and managing IP rights.

Focusing on technological innovation achievements in key systems or equipment, the Company explored intellectual property (IP) and formed a number of high-quality patents and software copyrights. We actively promoted the protection of patents and proprietary technologies, while facilitating the registration and certification of proprietary technologies. Besides, we promoted the application of intellectual property rights, and explored and enhanced their values through out-licensing, transfer, and pledge financing. We also sorted out key parts and areas with a high risk of IP infringement in production and operation to strengthen IP risk prevention. Furthermore, promotion and education on IP protection have been strengthened to enhance employees' awareness of respecting and protecting intellectual property rights.

#### Case CNPRI wins the 24th China Patent Gold Award

To achieve high-precision and real-time monitoring of the three-dimensional power distribution of NPP cores, CNPRI developed an online method for measuring the three-dimensional power distribution of the cores, which won the 24th China Patent Gold Award in July 2023. By the end of 2023, CNPRI's total number of valid patents was leading among other domestic nuclear power research companies.

**Honors**

CNPRI won the **24th China Patent Gold Award and Excellence Award** issued by the China National Intellectual Property Administration (CNIPA) with two invention patents.

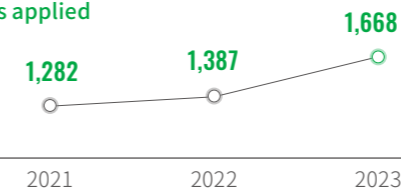
CGN Operations, CGN Engineering and SNPI won the **24th China Patent Excellence Award** with one invention patent respectively.

Ningde Nuclear won the first High-value Patent (Technology) Achievement in the Energy Industry with two patents.

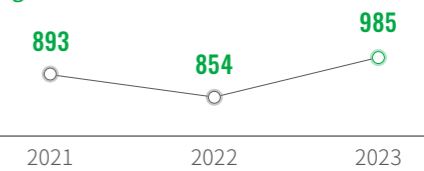
### Scientific and technological advances

With independently developed research platforms, CGN Power has always maintained and stimulated our innovation vitality with increasing sci-tech advances.

#### Patents applied



#### Patents granted

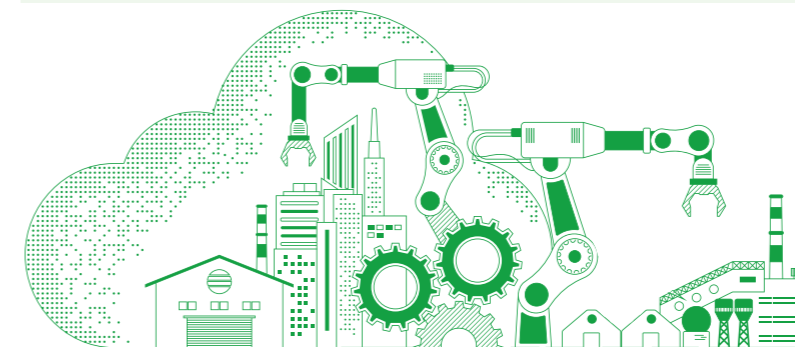


#### Case One year anniversary of the launch of Chinese standards of technical specification at the DNMC

November 25, 2023 marked one year since the launch of the Chinese standards of technical specification of DNMC. The applicability of the Chinese standards of technical specification system to French NPPs was fully verified, after a year of practical testing and successful application in three outages. There were no operation incidents related to the technical specifications, and the stable operation of units was better guaranteed. By summarizing operation and management experience, DNMC has formed a number of summary documents such as a compilation of difficulties in Chinese standards of technical specifications and implementation guidelines for operation configuration and risk management. DNMC has prepared a replicable and promotable plan to share practical experience with China's nuclear power companies and contribute to the high-quality development of China's nuclear power industry.



Special training on the Chinese standards of technical specification



#### Honors

CNPRI won the second prize in the "Ingenuity Cup" National Artificial Intelligence Innovation Application Competition organized by the Ministry of Industry and Information Technology and the Ministry of Science and Technology.

An achievement of CGN Power won the second prize for technological progress of the Guangdong Province Science and Technology Award.

A project of CGN Operations won the first prize of the Energy Innovation Award by the China Energy Research Society.

Fangchenggang Nuclear won the first prize for electric power technology management innovation of the first National Electric Power Industry Technological Innovation Conference.

SNPI and Ningde Nuclear respectively won the grand prize and second prize of the National Electric Power Industry Equipment Management and Technological Innovation Achievement 2023.

Two technological achievements of SNPI won the first prize of the Science and Technology Progress Award of the China Industry Anti-corrosion Technology Association (CIATA).

Ningde Nuclear won the first prize in the Digital China Innovation Contest-Industrial Metaverse Track.



## Digital transformation

Driven by the new round of technological revolution and industrial transformation, digital transformation has become an inherent requirement driving the high-quality corporate development. Therefore, CGN Power has formulated strategies targeting digital economy, data governance, and digital transformation of the nuclear power industry, and steadily implemented various tasks to stimulate new momentum for digital transformation. More information can be referred to our "CSR Feature" section.

## Key technologies

### HPR 1000

With independent intellectual property right, HPR 1000 completed the Generic Design Assessment (GDA) in January 2022 and the European Utility Requirement (EUR) certification in October 2020, laying an important foundation for the nuclear power technology to enter the European electricity market.

By the end of 2023, HPR 1000 has been adopted by Fangchenggang Unit 3 and Unit 4, Huizhou Phase I and Phase II Projects, Cangnan Phase I Project, Lufeng Units 5 and Unit 6, Ningde Units 5 and Unit 6, and the Unit 1 and Unit 2 of Huaneng Shidao Bay Nuclear Power Expansion Project Unit 1 and Unit 2 had adopted our HPR 100.

### Case HPR 1000 batch construction in steady progress

In July 2023, Ningde Units 5 and Unit 6 using China's independently developed third-generation nuclear power technology "HPR 1000" were approved by the state, marking a further step in the batch construction of CGN Power's HPR 1000. The localization rate of equipment for Ningde Unit 5 and Unit 6 is expected to exceed 90%, with a rated power of 1,210 MW for a single unit.



### NATENE®, reactor engineering design software package

The reactor engineering design software is the most critical and core tool for nuclear power engineering design. The NATENE® software package contains more than 40 pieces of special software for nuclear energy, covering various key design fields such as reactor physics, fuel design, thermal hydraulics, and safety analysis. It builds a complete reactor design and safety analysis software system.

As the "core" of HPR 1000, the NATENE® software package supported HPR 1000 to pass the EUR and the GDA certification, with its technology reaching the international advanced level.

## Robots for nuclear power plants

Focusing on the operation and management of NPPs in operation and the need for building new intelligent reactors, we have conducted research on core technologies in key fields, and made an effort to develop robots for special nuclear power operations. These efforts will make NPPs safer, more economical, friendly and intelligent, and meet the urgent demand for intelligent robots in China's nuclear power sector.

We boast nearly 100 robot products used in nuclear island main equipment overhaul, fuel assembly operation and repair, conventional island and cooling source system maintenance, nuclear emergency exploration and operation, etc. Many of them are the first of their kind in China and even over the world. They have already been adopted by Daya Bay, Yangjiang, Hongyanhe and Fangchenggang nuclear power bases, etc.

We have built world-leading sci-tech facilities and an open R & D system and test platform, covering core processes such as R & D of smart robots for NPPs, key technological research, test and verification.

### Case The nuclear power robot team unveiled at Shenzhen Nuclear Expo 2023

In November 2023, 6 robots from CGN Power's nuclear power robot team, including a cleaning robot for secondary side foreign objects of steam generators and an multiple stud tensioning machine (MSTM), were unveiled at the Shenzhen International Nuclear Energy Industry Innovation Expo 2023. The cleaning robot for secondary side foreign objects is able to crawl up walls with stability in confined spaces. Equipped with a six-meter-long flexible and extendable mechanical arm and a HD camera, it can undertake efficient video inspection and cleaning tasks for foreign objects between the steam generator's secondary side and the 8mm heat transfer tubes, achieving an overall coverage rate of up to 95%.



### The Chinese standards of technical specification

The Chinese standards of technical specification absorbed the advantages of French and American standards to form a more scientific and complete nuclear safety management plan based on China's practical experience in nuclear power.

It marks China's first move to develop operating technical specification on its own, contributing to the independent development of China's improved second-generation nuclear power units, the formulations of Daya Bay plans and Chinese standards, the going global of China's nuclear power, and the high-quality Belt and Road development.



### Honors

Intelligent nuclear power equipment and robots developed by CNPRI are widely used in various nuclear power bases, winning **more than 30 provincial and ministerial level science and technology awards, including the first prize for Technological Progress of Guangdong Province, the China Patent Silver Award, and the China Patent Excellence Award.**



Opportunities and Challenges

The active development of clean energy and the promotion of a green and low-carbon economic and social transformation have been a general consensus of the international community in addressing global climate change. With the mature application of China's third-generation nuclear power technology, nuclear power and the development and utilization of nuclear energy have great potential for development under the guidance of guaranteeing energy security, accelerating energy transition and realizing China's 30·60 Decarbonization Goal.

Our Strategies

CGN Power takes the initiative to implement the nation's carbon peak and carbon neutrality strategy. To this end, the Company actively promotes the development of nuclear power and the comprehensive utilization of nuclear energy. We continuously improve the environmental management system, and take strong actions to promote pollution control and emission reduction, continuously improving the resource management capacity. Meanwhile, we make steady progress in ecological and biodiversity protection, and practice the concept of low-carbon and green development with practical actions, making greater contributions to the building of a Beautiful China.

Main Achievements in 2023

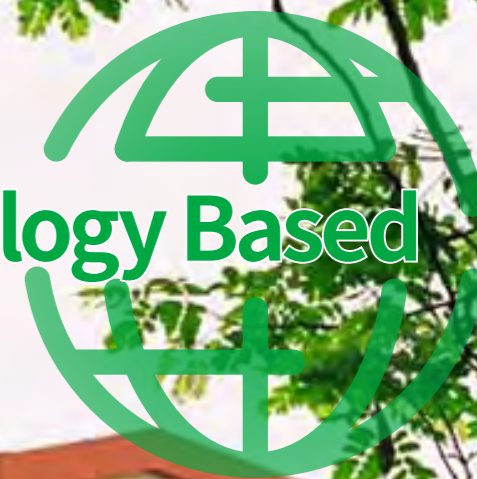
- **64.6722 million tons** standard coal consumption equivalent reduced by on-grid nuclear power generation, **176.4567 million tons** Carbon dioxide reduced
- **0.15 tons** of standard coal comprehensive energy consumption per 10,000 yuan of output value, decreased by **24.52%** compared to 2020
- **0** Major environmental pollution and ecological damage incidents

2024 Outlook

- Continue to promote the safe and efficient use of nuclear energy, actively carry out research on the comprehensive utilization of nuclear energy, promote the high-quality development of the nuclear power industry, thus helping realize China's 30·60 Decarbonization Goal.

Actively apply digital means to strengthen the standardized management of environmental risks and environmental indicators.

# Nuclear Power Ecology Based on Green Development



## Response to Climate Change

CGN Power, a specialist in clean energy, gives full play to our industrial strength for high-quality nuclear power development and comprehensive nuclear energy utilization. This also enables us to provide safe, efficient, and clean energy for economic and social development. We proactively reduce carbon emissions in construction and operation, making our contributions to China's 30·60 Decarbonization Goal.

### Climate governance

To enhance its response to climate change, CGN Power identifies climate change risks in accordance with the Guidance on Climate Disclosures issued by the Stock Exchange of Hong Kong Limited. Furthermore, we keep improving climate risk prevention strategies to support climate actions.

As an important topic, climate change has been incorporated into the discussions, reviews, and supervision of the Board. During the Reporting Period, the Audit and Risk Management Committee of the Board reviewed proposals on climate related risks, such as the 2023 Risk Management Evaluation Plan and ESG Report. When reviewing relevant proposals, members of the Nuclear Safety Committee of the Board suggested the Company to continue to improve its climate-related risk prevention mechanisms and capabilities. In addition to reports of the Audit and Risk Management Committee and the Nuclear Safety Committee of the Board, the Board also reviewed the regular safety management report (including but not limited to climate and environment-related management) by senior managers and raised management requirements. The Board and the Audit and its Risk Management Committee were also briefed on the latest regulatory trends on ESG issues at home and abroad that include climate topics.

Board of Directors    The Management

The President of CGN Power is the highest position responsible for obtaining and managing climate-related risks and opportunities. The President facilitates the implementation of the Company's strategies (including but not limited to climate and environment-related content) by holding monthly meetings, executive meetings, and the Company's SQE and Committee meetings attended by all senior management and relevant departments on a regular or irregular basis. The Risk Management Department is responsible for evaluating, monitoring and managing climate-related risks, and incorporating the identified major climate risks into the Company's risk management process. The Strategic Planning and Management Department works with various SQE departments to formulate the Company's carbon peak, carbon neutrality, and development goals, paths and strategies, while promoting the implementation of various strategic initiatives and regularly evaluating the progress of each goal.

## Climate strategy

Nuclear energy may be further developed as a clean power production mode in the context of accelerated global energy transitions. The nuclear energy industry embraces important strategic opportunities now and this will continue in the long run. Based on the features of clean energy industry now, CGN Power has formulated our goals of carbon peak and neutrality. The Company has clarified a pathway and strategy of carbon peak and neutrality to contribute to transitions to low-carbon energy at home and abroad.

### CGN Power's pathway and strategy of carbon peak and carbon neutrality

- Steadily increasing nuclear power installed capacity, improving the quality and efficiency of unit equipment, and upgrading nuclear energy technology to achieve carbon peak and carbon neutrality in China.
- Developing nuclear power projects in a safe and orderly manner, accelerating the approval process of projects and expanding the pool of potential nuclear power plant sites to steadily increase the installed capacity of nuclear energy.
- Giving full play to the advantages of nuclear power as a clean and low-carbon energy and exploring more possibilities in its comprehensive utilization.
- Steadily upgrading the overall power generation capacity of nuclear power projects, improving refueling outage management to an industry leading level, and strengthening the management of major equipment to enhance reliability.
- Following the latest nuclear energy technology trend in the world, actively implementing the national strategic requirements, and accelerating the R&D and pilot application of nuclear energy technology.

### Clean energy

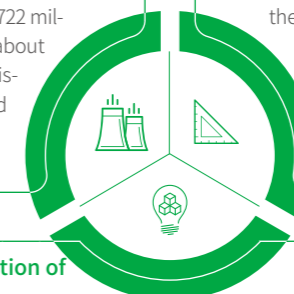
Guided by the requirements of developing nuclear power in a proactive, safe, and orderly manner, we seize new opportunities for clean energy development, promote nuclear power projects, and maintain nuclear power safe operations. Tapping into our technical and operational expertise, we promote the high-quality development of nuclear power.

#### Developing nuclear power projects in an orderly manner

We accelerate the approval process of projects and expanding the pool of potential NPP sites to steadily increase the installed capacity of nuclear energy. By the end of 2023, the Company managed 27 in-service nuclear power units with an installed capacity of 30,568 MW, equivalent to reducing about 64.6722 million tons of standard coal consumption, or about 176.4567 million tons of carbon dioxide emissions every year. The Company also managed 11 approved units or units under construction, with an installed capacity of 13,246 MW.

#### Steadily improving the quality and efficiency of nuclear power units

We have renovated in-service nuclear power units to improve the operating power of NPPs, and continued to improve refueling outage management. The number of safety index incidents per 100 outage days in 2023 dropped by 8.3% compared with that of 2022 and the 19th outage of Ling'ao Unit 1 set a record for the shortest outage period in China. In addition, we strengthened the management of major equipment to enhance reliability.



#### Accelerating the R&D and pilot application of technology

Following the latest nuclear energy technology trend in the world, we focus on advanced nuclear technologies and technological innovation, aiming to build a product system with a proper near-, medium- and long-term layout for different application scenarios and different power ranges. HPR 1000 continued to be more economical; a number of major digitization projects were applied in NPPs for more efficient and intelligent production and operation, thus empowering the carbon peak and neutrality goals with digital transformation.

### Comprehensive utilization of nuclear energy

Apart from the main business of nuclear power generation, the Company is also carrying out research on the comprehensive utilization of nuclear energy. By exploring new technologies and modes, we hope to develop diversified nuclear energy products, creating a nuclear-centered comprehensive utilization mode supplemented by multiple energy sources. We strive to contribute to the energy saving and emissions reduction of society with the clean and low-carbon nuclear energy.

#### Centralized heating

We learn lessons from nuclear energy heating demonstration projects, steadily expand the scale of heating while ensuring safety, and continue to explore the feasibility of expanding the comprehensive utilization of nuclear energy. The nuclear energy heating demonstration project of Hongyanhe Nuclear was in operation from the winter of 2022 to the spring of 2023. According to statistics, the utilization of nuclear energy heating could annually reduce standard coal consumption by 5,726 tons, CO<sub>2</sub> emission by 14,100 tons, soot emission by 209 tons, SO<sub>2</sub> emission by 60 tons, NO<sub>x</sub> emission by over 85 tons and ash residue by 2,621 tons. It benefited nearly 20,000 residents in Hongyanhe Town, Wafangdian, Dalian. The continuous operation of the project during the heating season has effectively improved the regional atmospheric environment and achieved significant environmental and social benefits.

#### Supporting energy storage

The Company is actively exploring the construction of energy storage projects of different modes in the provinces and regions where our NPPs are located. It is conducive to improving the energy efficiency of nuclear power units and helping in the energy saving and emission reduction of society. In 2023, the pumped storage hydropower (PSH) project, in which we are a shareholder, was under construction as scheduled. The pumped energy storage projects, in which we are a controlling shareholder, completed the pre-feasibility study, and we are trying to include them into the key national plans.

### Low-carbon operations

On top of our efforts to develop clean energy, energy conservation and emission reduction are taken into account. We continue to strengthen energy management and integrate the environmental protection philosophy of carbon and pollution reduction, greening and growth into the entire project construction and operation process. We work to achieve energy conservation and carbon reduction through technical and management measures.

**Strengthening the construction of energy management systems.** We encourage NPPs and specialized subsidiaries to establish systems in accordance with the ISO 50001:2018 GB/T23331 standards. We analyze current energy management and carry out electric power quality tests. After sorting out the energy input, storage, conversion, distribution, use, and recycling processes involved in production activities, we formulate energy policies and goals, organize training and promotion campaigns, and develop energy management manuals, procedure documents, energy review reports, compliance evaluation reports, internal audit reports, and management review reports. By carrying out certification and evaluation of energy management systems, we define the responsibilities for energy conservation and carbon reduction while improving the performance of each subsidiary.



Subsidiaries passing the ISO 50001:2018 GB/T23331 energy management system certification:

**CGN Operations**

**CNPRI**

**SNPI**

**DNMC**

**Yangjiang Nuclear**

**Ningde Nuclear**

**Hongyanhe Nuclear**

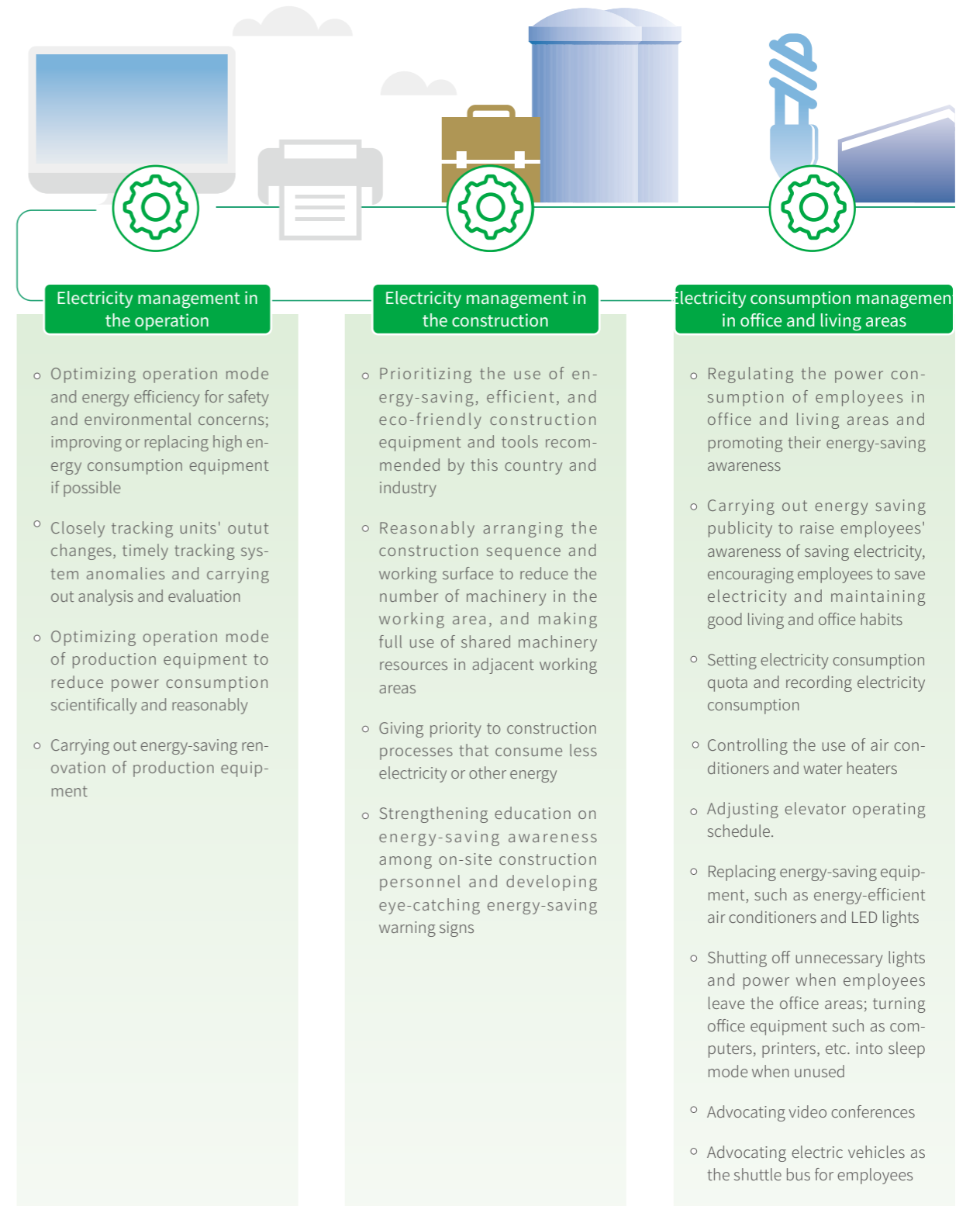
**Fangchenggang Nuclear**

**Taishan Nuclear**

**Huizhou Nuclear (entrusted by the controlling shareholders)**

**Cangnan Nuclear (entrusted by the controlling shareholders)**

**Promoting energy conservation and carbon reduction in an orderly manner.** In 2023, various NPPs and specialized subsidiaries in operation and under construction carried out internal carbon inventory and full-process evaluation of energy efficiency and energy use management. They tapped the potential for energy saving, efficiency improvement, and emission and carbon reduction. Systematic solutions were proposed for optimized energy utilization, energy-saving technological renovation, and carbon emission management. We followed the policy of "one policy for one plant" when formulating energy-saving renovation plans based on each company's operating and technical requirements, energy efficiency of process equipment, and safety assessments. We also accelerated the replacement with energy-saving products for energy-using facilities such as lighting, air conditioning, and cookware in plants and living areas. The replacement and renovation was promoted in batches based on the product's service life and energy consumption level. Efforts were made to reduce energy consumption in NPPs for office and household use through the adoption of energy-saving and emission-reducing equipment such as LED lamps, variable frequency air conditioners, and electrified cookware.



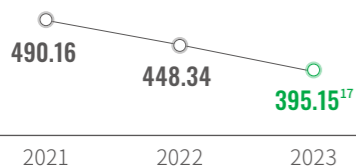
**Case** Energy conservation and carbon reduction actions in nuclear power project construction

In order to implement the technical and economic policy of "four savings and one protection" (energy saving, land saving, water saving, material saving and environmental protection) for construction sites proposed by the state, we have formulated the Management Rules for Green Construction to put forward energy conservation and carbon reduction requirements for construction in terms of management procedures. To meet the requirements, each construction company has issued corresponding management plans to save resources to the greatest extent possible and improve energy utilization. In 2023, we moved old street lights and replaced the original 400-watt street lights with 150-watt energy-saving and environmentally friendly ones. Over 240 street lights have been replaced in total, which can save over 2.6 GWh of electricity per year. At the same time, according to the shutdown catalogue of energy-consuming and outdated electromechanical equipment (product) issued by the Ministry of Industry and Information Technology, we called on each project under construction to sort out and replace those that could not meet the requirements.

**Case** DNMC's special actions for energy conservation, carbon reduction and recycling

DNMC has established an energy management center to carry out researches on topics such as steam turbine flow renovation and slight power improvement. With mature technical advantages and scientific management systems, DNMC has launched a series of energy-saving optimization projects such as the operational optimization of important energy-consuming equipment and replacement of energy-intensive equipment during outage and hot shutdown periods. It has got remarkable results in energy conservation. While ensuring the safe and stable operation of the units, DNMC reduced 15.316 GWh of electricity consumption through energy-saving measures such as carrying out regular tests and optimizing the operation of key power-consuming pumps during outages and hot shutdowns. Meanwhile, it actively promoted the use of green and clean energy in the office and living areas of bases; in 2015, all restaurants turned from oil to electricity; 287 charging piles have been installed and put into operation at 19 stations since 2019; 14 buses have been replaced with electric ones to reduce fuel by about 6,000 liters per month.

**Purchased electricity (GWh)<sup>16</sup>**



After preliminary verification, the purchased electricity in 2023 was 28.84 GWh as the electricity corresponding to the purchase of nuclear power and Green Electricity Certificate (GEC) was deducted.

**0.15 tons of standard coal<sup>18</sup>**

Comprehensive energy consumption per 10,000 yuan of output value in 2023

**Zero-carbon purchased electricity.** We have been making all-out efforts to increase the share of zero-carbon electricity since 2023. During the Reporting Period, all NPPs in operation and under construction managed by the Company and some specialized subsidiaries have purchased or used nuclear power or the Green Electricity Certificate.

**Case** The first phase of Fangchenggang Nuclear's "nuclear +PV +wind power" project starts construction

In addition to using self-supplied nuclear power, Fangchenggang Nuclear also made full use of its existing resources to invest in the construction of the first distributed PV power generation project in November 2023. Connecting to the nuclear power base for self-use, the project is the first one in western nuclear power bases that combines nuclear power with new energy sources. It is an important step for Fangchenggang Nuclear to achieve the goal of zero carbon through the green energy construction of "nuclear power +comprehensive smart energy". It devises development plans for solar power and wind power projects, etc., while constructing the international research and training base in Hongsha Bay. In the future, it will work with other companies to build a "nuclear +PV +wind power" green energy demonstration base.

**Risk Management**

CGN Power is fully aware of the impact of climate change on its own operations and society, and believes that it is inseparable from the company's supervision and operation. We regard climate-related risks such as rising temperatures and extreme weather events as an important part of operational risk assessment and management. The Audit and Risk Management Committee of the Board regularly monitors and evaluates these risks and issues and promptly reports to the Board.

**Physical risks**

- o **Risk identification:** Mainly acute (such as typhoons, torrential rain, and snowstorm) and chronic risks induced by climate change, which may affect the operational continuity of some NPPs and the construction of NPPs.
- o **Impact assessment:** Natural disasters and extreme weather may cause damage to nuclear power facilities, thereby increasing O&M costs and project costs, threatening personnel health and safety, potentially affecting the stability of the supply of goods or services required for NPPs under construction, and possibly weakening suppliers' fulfillment capability.
- o **Countermeasures:** We issued the Management Measures of Natural Disaster for NPPs, formulated emergency plans and organized regular drills for NPPs to prevent natural disasters such as typhoons, torrential rain, and thunderstorms; In accordance with China's nuclear safety regulations, we conduct safety assessments of NPPs in operation every ten years, and review all nuclear safety-related design parameters in each safety assessment to prevent and respond to climate risks caused by extreme weather and emergencies. In 2023, subsidiaries affected by typhoons launched response plans in time, held several meetings and carried out on-site inspections to eliminate hidden hazards. They organized equipment maintenance, site clean-up and inspection after typhoons in a timely manner. There were no casualties or major property loss. The Company has formulated the standard three-prevention (flood, wind and drought prevention) plans for NPPs in operation and under construction, based on the experience of typhoon prevention.

**Transitional risks**

- o **Risk identification:** Mainly risks brought by market and policy changes in the transition to a low-carbon economy.
- o **Impact assessment:** In the context of China's carbon peak and neutrality strategies, the nuclear energy industry is still in a key period of strategic opportunity, which may increase market opportunities and also affect revenue; faced with tighter regulatory requirements, the Company's misconduct for or delayed response to the environmental and climate change may affect our reputation and brand image, resulting in higher operating and project costs; the emergence of revolutionary new technologies may have an impact on the development, construction and operation of nuclear power projects and increase the Company's R&D investment.
- o **Countermeasures:** The 30·60 Decarbonization Goal in China ushers in a period of rapid development for clean energy but also fierce competition. In response to that, we develop nuclear power projects in a proactive, safe, and orderly manner. To expand the comprehensive utilization of nuclear energy, we explore projects supplemented by both nuclear and multiple energy sources and energy storage projects of different modes. We deepen nuclear power R&D and accelerate the transformation of technological innovation to stimulate new momentum for digital transformation. And we continuously reduce operational energy consumption to make greater contributions to carbon peak and carbon neutrality.

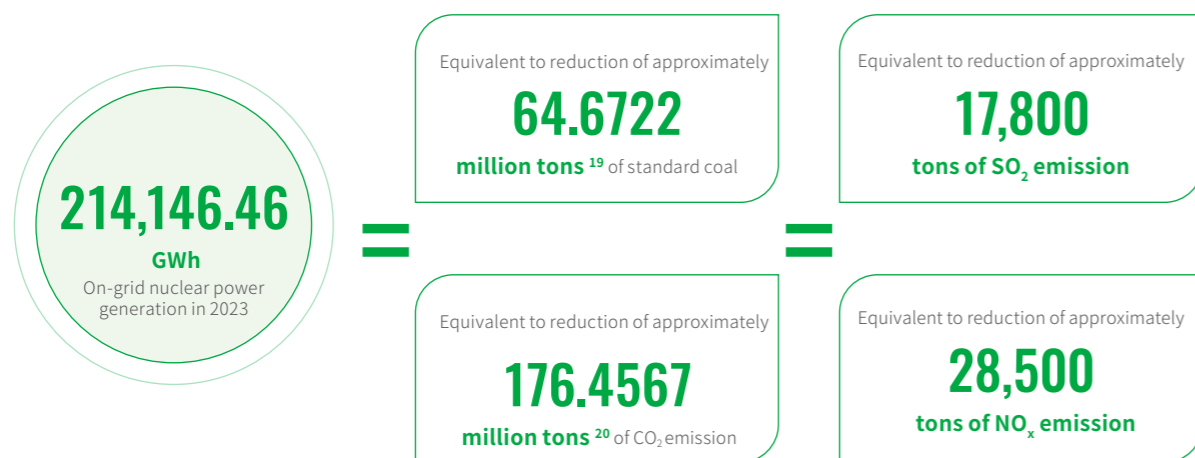
<sup>16</sup> Scope 2- Indirect GHG emissions mainly come from the engineering construction, refueling outage, and electricity consumption in office and living areas of CGN Power's NPPs.

<sup>17</sup> Since 2023, all purchased electricity has all been zero-carbon electricity (including the use of nuclear power and the purchase of the Green Electricity Certificate).

<sup>18</sup> Annual comprehensive energy consumption per 10,000 yuan of output value=Annual comprehensive energy consumption/ annual revenue.

## Metrics and targets

### Carbon reduction across society



### Carbon reduction across CGN Power

#### Scope 2 CO<sub>2</sub> emissions (ton)<sup>21</sup>



Since nuclear power is clean, its generation only produces a very small amount of greenhouse gases. In order to ensure safe operation, each NPP is equipped with the redundant system and backup power sources such as emergency diesel engines. Daily tests consume energy and vehicles used in the construction and operation of NPPs and the daily operation of each subsidiary also require diesel and gasoline. In 2023, the diesel consumption was 1,451.7 tons and gasoline consumption was 111.62 tons, a year-on-year decrease of 26.5% and 23.9%, respectively. The above CO<sub>2</sub> emissions from the use of diesel and gasoline are only about 3% of that from purchased electricity. The Scope 1 - direct greenhouse gas emissions by the Company and major subsidiaries were 4,820.85 tons in 2023.

Scope 2- emissions of indirect greenhouse gases, mainly come from purchased electricity for project construction, refueling outages, and offices, and living areas. In 2023, the carbon emissions of purchased electricity were reduced by purchasing self-supplied nuclear power and the green electricity certificate. Scope 3- greenhouse gas emissions are not considered.

<sup>19</sup> According to the 2023 National Electric Power Industry Statistics Express released by the China Electricity Council in January 2024, China's coal consumption for power supply was 302.0 g of standard coal per kilowatt-hour

<sup>20</sup> According to the China Power Industry Annual Development Report 2023 released by the China Electricity Council on July 7, 2023, nuclear power is calculated according to net zero carbon emissions, so 100 GWh on-grid electricity generated by nuclear power is equivalent to reducing CO<sub>2</sub> emissions of coal power by about 82,400 tons, reducing SO<sub>2</sub> emissions by about 8.3 tons, and reducing NO<sub>x</sub> emissions by 13.3 tons.

<sup>21</sup> According to the China Power Industry Annual Development Report 2023 released by the China Electricity Council on July 7, 2023, nuclear power is calculated according to net zero carbon emissions, so 100 GWh on-grid electricity generated by nuclear power is equivalent to reducing CO<sub>2</sub> emissions of coal power by about 82,400 tons, reducing SO<sub>2</sub> emissions by about 8.3 tons, and reducing NO<sub>x</sub> emissions by 13.3 tons. The data for 2022 and 2021 is calculated and updated based on the convert formulas disclosed in the Company's corresponding annual ESG reports.

<sup>22</sup> If the Company's purchased electricity was 28.8413 GWh after deducting the electricity related to the purchase of nuclear power and GEC, the Scope 2 CO<sub>2</sub> emissions were 23,800 tons using the same formula.

## Environmental Management

CGN Power strictly abides by Chinese environmental laws such as the Environmental Protection Law, the Law on Prevention and Control of Radioactive Contamination, the Atmospheric Pollution Prevention and Control Law, the Nuclear Safety Law, as well as local regulations. We uphold the concept of green development, and continuously improve the internal environmental management system to strictly control environmental compliance risks, continuously improving the capability of our environmental governance.

### Environmental management concepts

CGN Power adopts environmental management policies of "protecting the environment with prevention prioritized, reducing energy use and emissions in a technology-driven manner, reducing emissions with all members engaged, achieving harmonious development that benefits mankind". Following the basic principle of "combining prevention and control with prevention prioritized", we address prevention from the source, and deliver environmental protection throughout planning, construction, and production, and pursue environmental management goals of efficient resource utilization, less pollution and radioactive waste. By doing so, we aim to make ourselves an exemplary eco-friendly nuclear power company.

### Environmental management system

In strict accordance with ISO 14001 standards and national laws and regulations, CGN Power improves the environmental management system with better policies, integrates environmental management into production management, and ensures that safety, business, and environmental goals can all be achieved.

#### Network of environmental management

NPPs and major subsidiaries under CGN Power have established a network with designated departments and full-time personnel for environmental management improved environmental management systems with relevant manuals formulated, and coordinated environmental management among different units. NPPs regularly organize joint meetings to report the project progress, and analyze the environmental protection laws and regulations, important factors, and management measures. Such meetings coordinate the efforts of NPPs in environmental management and elevate it to a higher level.

#### Identification and control of environmental factors

Given changes in national laws and regional regulations, CGN Power regularly identifies and controls environmental factors at each NPP every year. Based on its business and the scope of influence of activities, each NPP department determines its identification and evaluation unit of environmental factors, including four units such as personnel, equipment, and workplace and activities. For each unit, environmental factors from eight dimensions such as atmosphere, water, raw materials, natural resources, and land (see the table below) are identified and evaluated. Each NPP department then assesses the impact of identified environmental factors and determines their risk levels. They screen out important link factors, and develop targeted control measures based on the principle of "eliminating risks+reducing risks+emergency plans". Those measures are implemented through a combination of management measures, technical measures, and daily training and education.





Identification and Evaluation Process of Environmental Factors

Determine the identification and evaluation unit of environmental factors in departments		Determine the identification and evaluation unit of environmental factors in departments
<p><b>Personnel</b> (all personnel entering the workplace, including employees, contractors and visitors)</p>	➤	Discharge to the atmosphere
		Discharge to water
<p><b>Equipment</b> (including all construction equipment, facilities and related equipment)</p>		Discharge to land
		Use of raw materials and natural resources
<p><b>Work activities</b> (including normal operation activities and temporary tasks)</p>		Energy use
		Energy release
<p><b>All workplaces and environment</b> (including office space and project construction site)</p>		Generation of waste or by-products
	Use of space	

Case China's first environmental risk map launched

As the first digital platform in China designed for the unified management and control of environmental risks at NPPs in operation, the CGN Power's environmental risk map utilizes technologies like data fusion and the geographic information system, etc., as well as the professional environmental management and risk assessment model to unblock the environmental risk information chain of "data collection, fusion, analysis, evaluation and decision-making". It is able to collect comprehensive and real-time environmental pollution and risk information of Daya Bay NPP, Fangchenggang NPP, Hongyanhe NPP, Ningde NPP, Taishan NPP and Yangjiang NPP. It provides science-based support for the decision making of environmental risk control by displaying and analyzing quantified data, and evaluating and tracking changes in environmental risk status.



Response to environmental emergencies

Responding to environmental incidents is also a priority in environmental protection. NPPs and major subsidiaries of CGN Power have set up systems and procedures for environmental management, compiled the Emergency Response Plan for Environmental Emergencies, and filed them with local governments. They conduct regular drills to improve the plan and environmental emergency response, thus continuously improving the environmental emergency response and disposal capabilities.

Environmental inspection and supervision

In 2023, to strictly implement ecological and environmental protection regulations and regulatory requirements of state ministries and commissions, the Company launched a series of environmental improvement actions, including special investigation and remedial action on the environmental protection approval and leftover issues of construction projects, the special investigation of environmental protection compliance management of construction projects, special investigation and reduction of radioactive waste and hazardous waste, special actions to improve the quality of monitoring statistics of energy conservation and environmental protection, etc. We further strengthened the investigation and rectification of hidden ecological safety hazards, and organized relevant experts within and outside the Company to support, supervise and improve management, greatly boosting ecological advancement while ensuring ecological safety.

0 Environmental violation from 2021 to 2023

0 yuan Environmental penalty



All NPPs of CGN Power have obtained the ISO 14001 environmental management system certification



Environmental management goals

During the Reporting Period, several campaigns for environmental protection proposed in the Company's three-year action plan for the rectification of work safety were concluded with 100% completion rate. In 2023, the actual comprehensive energy consumption per 10,000 yuan of output value was 0.15 tons of standard coal, with a decrease of 24.52% compared to 2020.

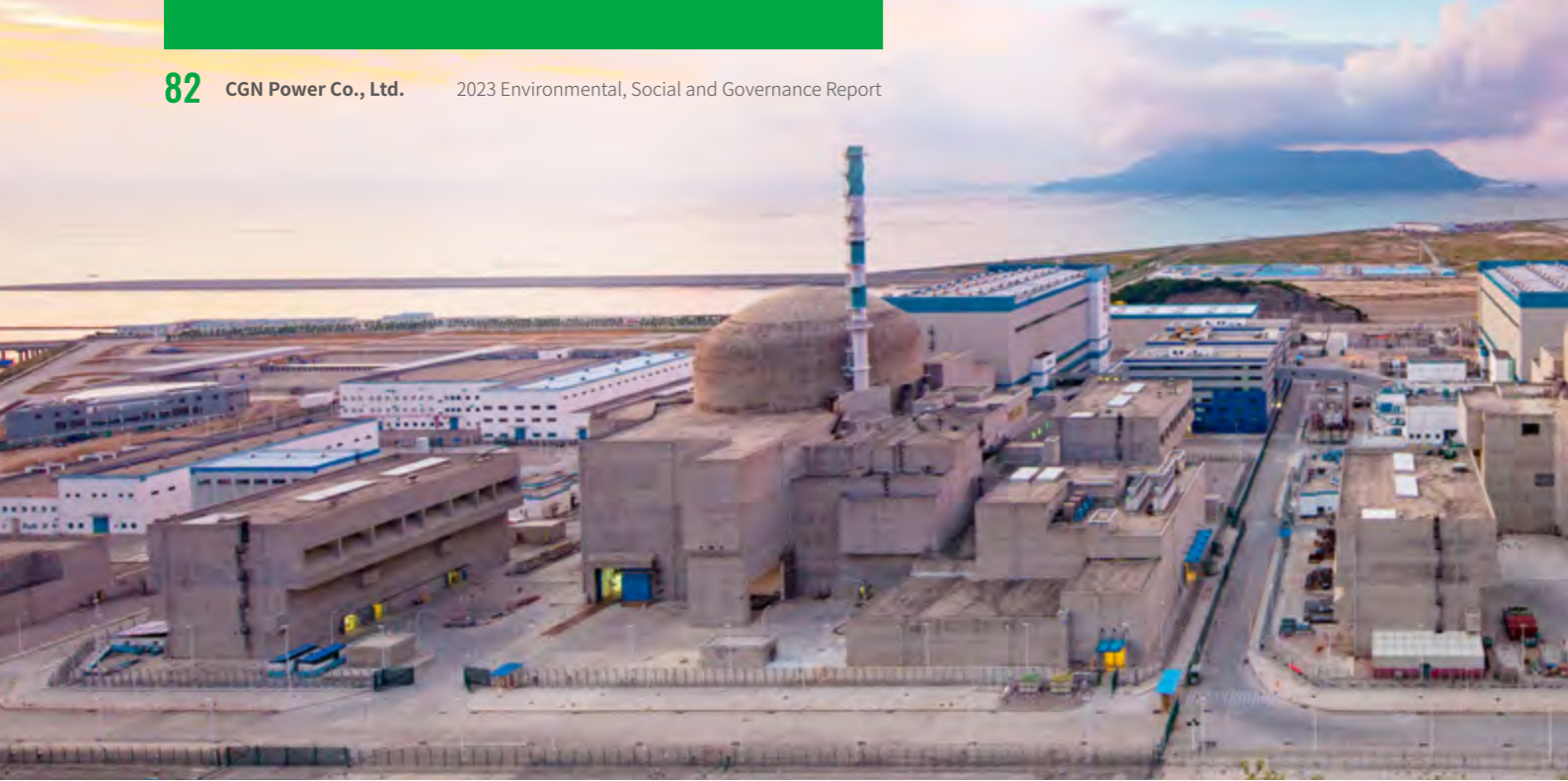
For a more scientific, standardized and specific environmental management, we set up short-, medium- and long-term environmental protection goals and make regular updates, to promote our environmental protection activities in a scientific and efficient way.



By 2025, the comprehensive energy consumption of output value per 10,000 yuan will be reduced by 15% compared to 2020.

By 2030, the comprehensive energy consumption of output value per 10,000 yuan will be 20% lower than that of 2020; the overall energy consumption and major pollutant emissions will be at the industry-leading level, and other emission indexes will be lower than the national limit value.

The overall energy efficiency and performance of major pollutant emissions are at the world's advanced level. Employees' awareness of energy conservation and ecological environmental protection will be greatly improved, becoming an industry benchmark.



## Waste Discharge Reduction

In strict accordance with national laws and regulations, CGN Power has established a complete set of mechanism to ensure that the radioactive waste produced in operation is properly and safely handled. At the same time, the Company disposed of non-radioactive waste and sewage generated in operation as required by laws to minimize the impact of NPP operation on the surrounding environment.

### Radioactive waste management

We strictly comply with the requirements of laws, regulations and industry standards such as the Law of Prevention and Control of Radioactive Contamination, Nuclear Safety Law, Regulations for Safe Radioactive Waste Management, Regulations for Environmental Radiation Protection of Nuclear Power Plant (GB 6249-2011), and Technical Requirements for Discharge of Radioactive Liquid Effluent from Nuclear Power Plant (GB 14587-2011) to control the discharge and disposal of radioactive wastes.

#### Radioactive waste targets

To reduce the generation of radioactive solid waste, CGN Power not only follows domestic laws but also tries to measure up to the standard amount of radioactive solid waste generated in other major nuclear energy countries. We also set long-term waste reduction goals and clarify the pathway to achieve them.

**The medium and long-term target set for the 14th Five-Year Plan period:** To further decrease the radioactive solid waste from plants and make the average annual radioactive waste production per unit reach the world-class standard.

**Approaches:** We analyze the generation of radioactive solid waste in plants from the perspective of life cycle and clarify the capacity reduction process for different categories of radioactive solid waste. We also integrate the studies on the external incineration of radioactive solid waste, the digital transformation of management process, the upgrading of concentrate waste disposal process, and the compaction of waste cartridge with high dose rate into the annual work plan before their implementation.

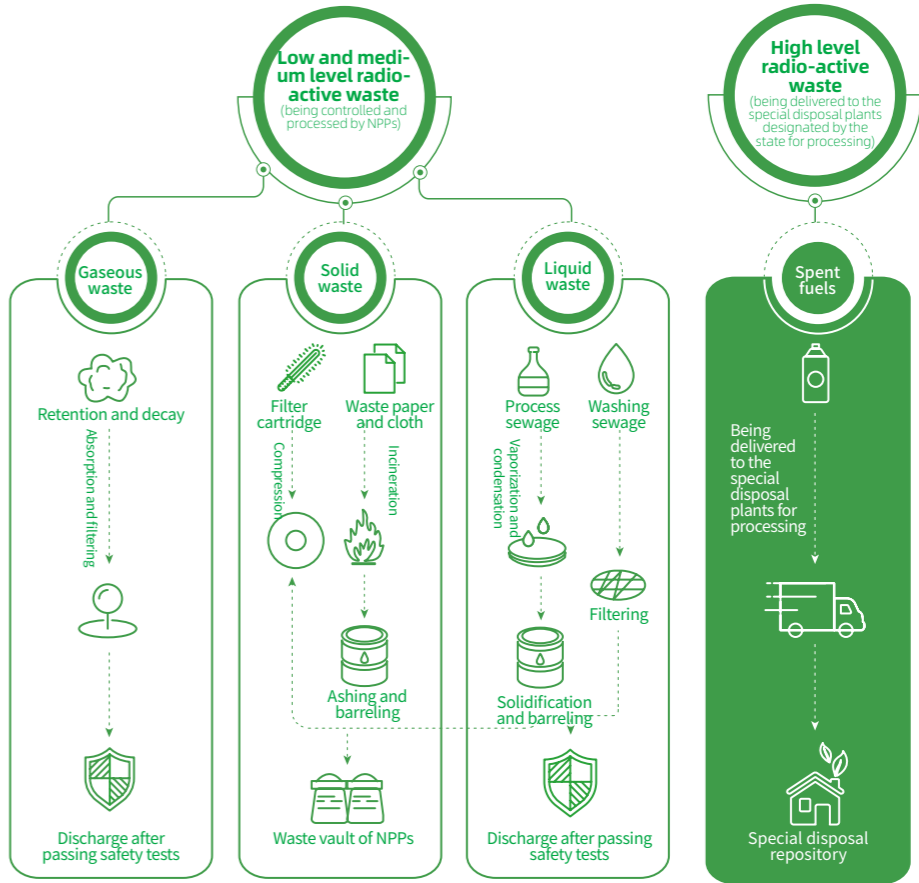
### Radioactive waste management methods

The operation and production activities of NPPs will produce solid, liquid and gaseous wastes ("three wastes"). Following the basic principles of radioactive substances management - ALARA (As Low As Reasonably Achievable), we have established a waste management organization structure, and formed a complete set of radioactive waste control and treatment mechanisms throughout the plants' production and operation.

We minimize the production of radioactive waste. While meeting national laws and regulations, we also actively benchmark ourselves against the annual output of radioactive solid waste in the world's major nuclear power countries. We have set clear long-term goals of waste reduction, formulate overall management strategy at NPPs, and reduce radioactive waste through source control and the application of volume reduction technology. In doing so, we continue improving our treatment capacity of "three wastes" and realize a far lower discharge than the national allowable emission limits. The Company signed a contract with qualified enterprises to ensure the unblocked disposal channel of combustible waste from the plants for outward transportation, incineration, and reduced volume.

Each power plant is equipped with advanced facilities for treatment of radioactive waste. The chart above outlines the treatment of each radioactive waste. According to relevant national regulations, spent fuel (used fuel assembly taken from reactors) is a highly radioactive waste, which cannot be disposed of by the NPP itself, and must be sent to a designated special disposal plant for further treatment. After treatment, most of the spent fuel can be reused. The "three wastes" management system of each plant has been designed, constructed and put into operation simultaneously with the main body construction. The whole process of storage, transportation and disposal of radioactive waste strictly follows the relevant provisions of national laws and regulations.

#### Radioactive Waste Treatment Process



**Radioactive waste management results**

During the Reporting Period, all NPPs strictly carried out discharge management of radioactive effluent in accordance with national laws, regulations and standards. The "three wastes" management system operated normally, and the total amount of radioactive effluent from NPPs was far below the applicable state annual limits.

	Year	Ratio of liquid effluent (nuclides but tritium and carbon-14) to state annual limit	Ratio of gaseous effluent (inert gases) to state annual limit	Generation of radioactive solid waste (m <sup>3</sup> )	Environmental monitoring results
Daya Bay Nuclear Power Base (including Daya Bay NPP, Ling'ao NPP and Lingdong NPP)	2022	0.22%	0.46%	186.1	Normal
	2023	0.19%	0.45%	112.0	Normal
Yangjiang NPP	2022	0.40%	0.19%	97.8	Normal
	2023	0.43%	0.19%	99.6	Normal
Fangchenggang Phase I (Unit 1 & Unit 2)	2022	0.34%	0.42%	64.5	Normal
	2023	0.46%	0.92%	46.8	Normal
Fangchenggang Phase II (Unit 3, and Unit 4 which is under construction)	2022	0.27%	0.38%	0	Normal
	2023	3.14%	3.06%	0	Normal
Ningde NPP	2022	0.31%	0.29%	70.0	Normal
	2023	0.29%	0.26%	55.2	Normal
Taishan NPP	2022	2.72%	2.50%	0	Normal
	2023	1.74%	2.90%	3.3	Normal
Hongyanhe Phase I (Unit 1-4)	2022	0.39%	3.29%	103.5	Normal
	2023	0.41%	3.08%	131.4	Normal
Hongyanhe Phase II (Unit 5 & Unit 6)	2022	0.44%	2.38%	16.1	Normal
	2023	0.34%	2.21%	17.4	Normal

Note: Different nuclear power projects in the same nuclear power base may have different effluent discharge limit values approved by the relevant national regulatory authorities, and the emission data among nuclear power projects are not comparable; the emission data of the same nuclear power project in different years are affected by the unit refueling outage and maintenance projects.

In response to NPPs' demand for minimized and harmless treatment of radioactive waste, the project of developing advanced treatment devices for NPP radioactive waste has improved the radioactive waste treatment process of NPPs through the independently developed waste reduction device, deep purification device for colloidal nuclide, inorganic treatment device for organic liquid waste, waste mixing and curing device, electrochemical decontamination device, and composite material device for waste treatment. Those have realized the reduction, deep purification and safe disposal of radioactive waste. The project proposed a combined solution to reducing radioactive waste in NPPs. It terminated the foreign technical monopoly, and was of great significance for self-independence.

We have signed contracts with qualified companies for the transportation and disposal of radioactive waste. A total of over 1,000 m<sup>3</sup> of radioactive waste was transported and disposed in 2023.

**Case DNMC's radioactive waste management practices included in the national report of joint convention**

DNMC improved radioactive waste management in an innovative way, and achieved remarkable results. Its practices have been included in the National Report of Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management. Taking the treatment of polluted waste oil and waste solvents as an example, DNMC uses the nuclide separation process combining oxidation aging and cyclic filtration for waste oil, and the nuclide separation process combining cyclic filtration and ion exchange for waste solvents. The radioactive activity and concentration of waste oil and waste solvents after treatment are less than the lowest limit detected by plant instrument. Thus it meets the requirements of Activity Concentration for Material not Requiring Radiological Regulation (GB27742-2011). DNMC uses laser technology to decontaminate the Daya Bay NPP RCP elbows. The metal contamination was reduced and the surface exposure dose after decontamination was all lower than 0.1 mSv/h. It can be melted and reused, which will reduce radioactive solid waste by about 10 m<sup>3</sup>.

**Case Ningde Nuclear minimizes waste production**

Ningde Nuclear has formulated management procedures such as the Regulations on the Minimization of Radioactive Waste in NPPs and a series of executable measures and systems, including a range of waste reduction measures, such as the registration system for material's entry into and exit from control zones and for the distribution of consumables, reward and punishment system for minimization, additional monitoring for key on-site scenarios, replacement with reusable materials, and special control of key materials. With the improving management measures for minimization, refueling outages continue to produce less radioactive waste.

**Case Fangchenggang Nuclear completes the first transfer of radioactive solid waste for national centralized disposal**

In 2023, the first batch of radioactive solid waste from Fangchenggang Nuclear arrived safely at the national centralized disposal site after 2,900 kilometers of transfer. Fangchenggang Nuclear became the first nuclear power company in China to transfer for disposal radioactive waste temporarily stored for more than 5 years. To transfer eligible waste as soon as possible, it has completed the signing of transfer and disposal contract, package dose testing, disposal certification, filing, package loading, etc., and gotten the approval for the transfer across provinces to ensure safe transfer. Plans will be made in the future for further transfer and disposal of radioactive waste to ensure the timely and safe disposal of radioactive waste generated by the company.



## Non-radioactive waste management

For compliant disposal of non-radioactive waste, including non-radioactive hazardous waste, we strictly comply with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, Pollution Control Standard for Storage and Landfill of General Industrial Solid Waste (GB 18599-2020), Pollution Control Standard for Hazardous Waste Storage (GB 18597-2001) and Regulations on Safety Management of Hazardous Chemicals.

### Non-radioactive waste management methods



#### Industrial solid waste management

- Our industrial solid waste mainly comes from construction materials, iron and steel, glass, plastics, wastepaper, wood, and consumables.
- All NPPs formulate the Regulations on Industrial Solid Waste Management to reduce waste from the source, and supervise and manage the entire process of classification, collection, storage, handling, transportation, utilization, and disposal. Wastes are entrusted to qualified and technically capable units for external transportation and disposal after on-site sorting and recycling. They also supervise the transportation of solid waste outside the site, ensuring that the entire process of solid waste generation, transfer, storage, transportation, and disposal is legal and compliant.



#### Non-radioactive hazardous waste management

- Our non-radioactive hazardous waste mainly comes from mineral oil, organic solvents, batteries, organic resins, developer, lamps, and hazardous chemicals.
- We strictly conform to regulations and their amendments, including the Regulations on Safety Management of Hazardous Chemicals and Pollution Control Standard for Hazardous Waste Storage (GB 18597-2001). We adopt hazardous waste storage containers that are resistant to wind, rain, sunshine, leakage, explosion with temperature and humidity monitoring functions. Leakage-proof pallets are purchased to prevent leakage of liquid hazardous waste. We standardize the disposal process to ensure that hazardous waste is generated, stored, transferred, recycled, and handled legally to guard against environmental risks brought by hazardous waste. At the same time, we conduct regular exchanges with local regulatory agencies on the standardized management of hazardous waste and keep ourselves updated on new requirements and policies of hazardous waste management.
- We organize plants to conduct research on hazardous waste capacity reduction and amount reduction in accordance with the principles of reduction, recycling, and harmless treatment. The Group took Ningde Nuclear as the pilot plant and established a special group to carry out feasibility analysis of waste reduction from three aspects: source control, process control, and result feedback. They have formulated a hazardous waste reduction plan including recycling by manufacturers, use of eco-friendly material, packaging improvement, recycling and reusing, etc. By promoting the implementation of the hazardous waste reduction plan, Ningde Nuclear reduced the annual hazardous waste by about 284.16 tons, accounting for 53% of the total hazardous waste production and generating revenue of over 700,000 yuan. The practice has reduced not only the cost of hazardous waste disposal, but also the on-site risk management.

### Case The digital monitoring platform for hazardous waste

In response to the Notice on Further Strengthening the Standardized Environmental Management of Hazardous Waste issued by the Ministry of Ecology and Environment, we built standard hazardous waste depots and temporary storage vaults at nuclear power bases in a standardized, intensive and IT-based way. CGN Power has promoted the digital monitoring platform for hazardous waste to achieve full-lifecycle dynamic tracking and management, so that we are able to trace the source and direction of hazardous waste, and locate the ones responsible for it.

### Non-radioactive waste management results

During the Reporting Period, each subsidiaries of CGN Power has collected hazardous wastes by classification and temporarily stored them in the hazardous waste vault of the plant. They have set up hazardous waste management ledgers, regularly handed them over to qualified delivery units for compliance management and implemented the requirements of hazardous waste transfer. The treatment of various types of non-radioactive wastes met the relevant regulatory standards and supervision requirements. In 2023, the Company produced 2,204 tons of waste and disposed of 1,891 tons of radioactive wastes (not disposed of in the year in which they were produced), with a disposal rate of 82.35%.

### Case CGN Power's initiatives to recycle and reuse spare masks

To avoid waste and lead a thrifty life, CGN Power encouraged employees to donate extra masks that they didn't need to their departments for sharing. The rest of them or those about to expire were donated to spare mask recycle stations for disinfection. Employees actively responded to the initiative and a total of 20,000 masks had been gathered by the end of December 2023, with a value of nearly 50,000 yuan.

### Non-radioactive waste management targets

In accordance with regulatory requirements, we will continue to implement standardized, intensive and IT-based management and carry out full-cycle, whole-process and comprehensive management of hazardous waste to achieve compliant storage and disposal. In order to continuously reduce non-radioactive hazardous waste, CGN Power has clarified key directions for future, that is, construction of a pilot green supply chain with zero packaging of hazardous waste; recycling of waste mineral oil and waste batteries by manufacturers; feasibility studies on recycling of ion exchange resins; replacement of lead storage battery with lithium battery; optimization of the replacement cycle of antifreeze and foam liquid; hazardous waste disposal plans and process solidification; and the set up of reward mechanism for hazardous waste reduction.



## Non-radioactive sewage discharge

We strictly manage and control the treatment and emission of sewage according to national laws and regulations and local standards including the Environmental Protection Law and the Marine Environmental Protection Law. During the Reporting Period, the non-radioactive wastewater treatment facilities of all NPPs were operating normally, and the treatment met the regulatory standards and requirements.

### Non-radioactive sewage treatment methods

All our NPPs have formulated non-radioactive sewage management procedures to provide detailed requirements for sewage collection, construction, operation, maintenance management, water quality analysis and testing. In each plant, professional sewage treatment facilities are set up to treat radioactive and non-radioactive wastewater separately through independent systems under online real-time monitoring. At the same time, we entrust specialized organizations to test the quality of the discharged water to make sure it meets relevant standards. For the treatment of radioactive liquid, please refer to the "Radioactive Waste Management" section of this Report.

According to the different requirements of the region or province, our NPPs adopt different control measures for non-radioactive sewage discharge.



The Hongyanhe Nuclear's domestic sewage treatment station is for plant sewage treatment and advanced treatment of reclaimed water. The treated domestic sewage from the plant is divided into two parts after reaching the reuse standard. One part is used for plant greening and toilet flushing, and the other is sent to the unit for the advanced treatment of reclaimed water. The advanced treatment unit uses ultrafiltration membrane and reverse osmosis membrane technology to further treat recycled water, which is then used for landscape watering or for production through the NPP's desalination system.



Some of the recycled water from the Ningde Nuclear's domestic sewage treatment station is used for toilet flushing of the office building in plant areas, and the other is for the greening and dust reduction in plant areas. All wastewater is reused and recycled within the plant.



Each plant area adopts centralized treatment and reuse of sewage to improve sewage treatment efficiency. It becomes easier to monitor and control domestic sewage in plant areas. While increasing the utilization rate of water resources, it also reduces water costs and equipment loss in many scenarios.

### Non-radioactive sewage treatment results

Discharge of wastewater with highest level of treatment by wastewater treatment plants

**1.694 million tons**

During the Reporting Period, the non-radioactive wastewater treatment facilities of each NPP were operating normally, and the treatment met the regulatory standards and requirements.

### Non-radioactive sewage treatment goals

All non-radioactive wastewater generated by each NPP is discharged in accordance with regulatory standards, and each subsidiary is encouraged to adopt water reuse method or carry out near-zero wastewater discharge.

## Efficient Resource Utilization

We abide by the Energy Conservation Law of the People's Republic of China and the Water Law of the People's Republic of China and attach great importance to the utilization of nuclear fuel and water resources. By adopting cutting-edge technologies at home and abroad and optimizing production management, we improve resource efficiency and consume less while making greater economic and social benefits, contributing to a resource-saving and environment-friendly society.

### Nuclear fuel utilization

As the main raw material for nuclear power generation, improving the efficiency of nuclear fuel utilization is a key task in elevating the resource utilization rate of nuclear power plants. By innovating in technologies and management approaches, we continuously improve the efficiency of nuclear fuel utilization, and enhance the safety, environmental and economic benefits of NPP operation.

#### Nuclear fuel usage management methods

##### Technological R&D

Continue to develop reliable and economical fuel cycling and refueling models, and cooperate with relevant institutions to carry out R&D and upgrading of nuclear fuel to improve the use efficiency of nuclear fuel.

##### Optimization management

New fuel assemblies with different enrichment levels were adopted in some NPPs to improve the use efficiency while increasing the economy of NPPs.

#### Nuclear fuel usage management results

After a series of technological development and upgrading, the current nuclear fuel cycle in our NPPs is 18 months. This has greatly reduced the number of refueling outages, and effectively improved the unit availability and utility rate of nuclear fuel.

#### Nuclear fuel usage management targets

To enhance the safety of NPPs and the economical efficiency, the Company has long been committed to promoting the efficient use of nuclear fuel, constantly improving the use efficiency.



## Water resources management

Water resource is one of the key risk factors in the nuclear power industry. Highlighting water resource management and utilization efficiency, we adhere to the principle of "giving priority to water conservation and strengthening water resources management". We highlight priority of water saving, resource balance and systematic governance. Accordingly, we apply advanced water-saving technology, launch water saving management and strengthen maintenance of water supply system to ensure the water use efficiency and sustainability water supply. CGN Power takes water risk assessment as an integral part of its established risk management framework. The CEO is responsible for obtaining and managing water-related risks and opportunities at management and reporting relevant information to the Audit and Risk Management Committee. Management indicators such as the water quality of freshwater reservoir have been included in the performance appraisal of each NPP and connected to the incentives of executives.

### More sustainable water supply

The water we use is sourced from municipal water supply, power plant reservoirs and sea water. Our NPPs are located in the coastal areas, so there is no problems in sourcing suitable water. In addition, the reservoirs are equipped with an automatic integrated video and satellite monitoring system to track water level, dam seepage, leakage pressure, and rainfall, ensuring their stable operation. In order to strictly manage reservoir water, the power plant reservoir has been managed in accordance with the Regulations on Water Saving Management of Bases and as the first-level water source protection area. We implement systems on water extraction permit, water use plans, water use declaration, and water use tracking system with statistics.

To further improve the sustainability of water supply, we regularly assess the safety and stability of water supply and have formulated water-related management regulations and emergency plans, including the Emergency Plan for Water Shutdown in Water Supply Pipeline and the Emergency Plan for Reservoir Collapse to ensure timely and effective handling of water source anomalies with standardized measures. Meanwhile, we rationally allocate water resources and implement comprehensive protection measures in exclusive freshwater reservoirs of the plants and adjacent water areas' ecological environment, further improving the stability and sustainability of water supply.

### Case Yangjiang Nuclear selected as a provincial water conservation benchmark enterprise

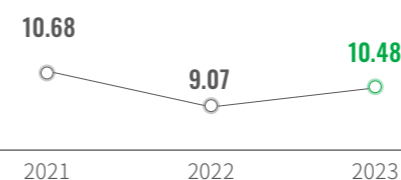
In December, 2023, the Department of Industry and Information Technology of Guangdong Province and the Water Resources Department of Guangdong Province jointly announced the Notice on List of the 2023 Provincial Water Conservation Benchmark Enterprises and Parks. Yangjiang Nuclear was selected into the list. In order to implement the strategies of "building a water-saving society" and "building a beautiful China", it has improved its water conservation management system, and formulated a scientific and reasonable water conservation management network and a post responsibility system. Yangjiang Nuclear carried out optimization and rectification of regional water supply networks, continuously improved water resource efficiency and thoroughly explored the potential of water resource reuse through the use of new equipment, processes and technologies; It actively carried out researches on topics such as IoT technology, new intelligent water meters and intelligent water services; the intelligent monitoring and early warning system for power plant water supply networks has been developed and built. The system can monitor and give early warning of unbalanced water volumes, which helps in improving the reliability of water supply facilities.

### Water use efficiency

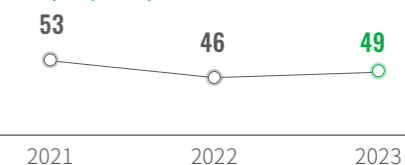
CGN Power continuously monitors water consumption, discharge, and recycling rates. When building and running projects, we encourage water recycling and efficient water management. For example, the reclaimed water is applied in irrigation and road cleaning. We implement a range of water-saving measures in nuclear power project construction. For example, the water use for construction must be equipped with water meters; the water used in the living area and the construction area are measured separately, and water-saving records are established, analyzed and compared to improve the water saving rate; the construction site and the living area are equipped with water-saving appliances; the construction site establishes a collection and treatment system for reusable water resources, so that water resources can be recycled in a trapezoidal manner; non-traditional water sources will be used in priority for on-site machines, equipment, vehicles, road cleaning, greening and watering, etc., instead of using municipal tap water. We strive to keep the utilization rate of non-traditional and recycled water sources higher than 30% in construction.

Water resources are mainly used for construction, production, operation, factory office, and living areas. During the Reporting Period, freshwater consumption increased by 15.48% from last year, and freshwater consumption per unit of on-grid electricity was up by 6.52% from last year, mainly due to the commissioning of Fangchenggang Unit 3 and Hongyanhe Unit 6, as well as the construction of under-construction projects and outage of units in operation.

Freshwater Consumption (million tons)



Water Consumption Per Unit of On-grid Power Generation (ton/GWh)



	2021	2022	2023
Total water intake (million tons)	10.68	12.19	13.43
Total water discharge (million tons)	/	3.09	2.95
Total water consumption (million tons)	10.68	9.07	10.48

### Water use goals

Although we have not set specific quantitative goals for water efficiency for the time being, we encourage all subsidiaries to actively take water-saving measures, carry out water-saving technological transformation and raise water-saving awareness by publicity to reduce water consumption.

## Green Nuclear Power Ecology

Upholding the philosophy of harmonious coexistence of nuclear power ecology, CGN Power has established a complete set of environmental monitoring systems and continuously monitored the environmental impact on project surrounding areas to avoid damage to the ecosystem. Moreover, we integrate biodiversity conservation into our development strategies, striving to achieve harmonious coexistence between nuclear power and the surrounding environment.

### Environmental impact assessment

Before each project construction, we will carry out the environmental impact assessment. The water, biodiversity, noise, solid waste and atmosphere were all researched and analyzed. Compensatory measures would be taken if necessary. The Company also surveys and analyzes the public opinion. The project site selection and construction program has been continuously optimized by marine experts. For example, in Cangnan Nuclear Construction Program, the Company relocated the project location from the shallow sea area close to the beach to the deep sea area far away from the beach in order to protect the natural shoreline. We carry out shoreline restoration and compensation with high standard to guard the natural length of the shoreline. All the sea area control indexes in land reclamation program have met the requirements.

### Environmental monitoring

In accordance with laws, regulations and other regulatory documents, including the Regulations for Environmental Radiation Protection of Nuclear Power Plants and Regulations for Environmental Radiation Monitoring of Nuclear Power Plants, we effectively monitor the surrounding environment of operating plants, track the environmental impact and take timely actions. We regularly submit the monthly and annual environmental monitoring reports, and disclose the monitoring data in time to accept the supervision of regulatory authorities at all levels and the public so as to ensure that the operation has no impact on the environment and the public.

#### Internal monitoring

Each nuclear power base has established stringent environmental monitoring systems and environmental survey recording systems according to the requirements of national regulators. We monitor the air, water, soil, terrestrial organisms and marine organisms within a ten-kilometer radius of the nuclear power plant by setting up a complete range of environmental monitoring systems, equipment, including KRT (Plant Radiation Monitoring System) and KRS (Plant Radiation and Meteorological Monitoring System). The environment within the nuclear power plant and in the vicinity is also monitored on a regular basis. We also timely disclose relevant data to accept the supervision of the public.

##### Sampling Monitoring

- We regularly sample and test air, soil, underground water and biological samples at Daya Bay Nuclear Power Base, including ten kinds of common food such as chicken, fish, litchi, vegetables, radishes, algae, and shellfish. No artificial radionuclides other than those consistent with background survey levels were detected.

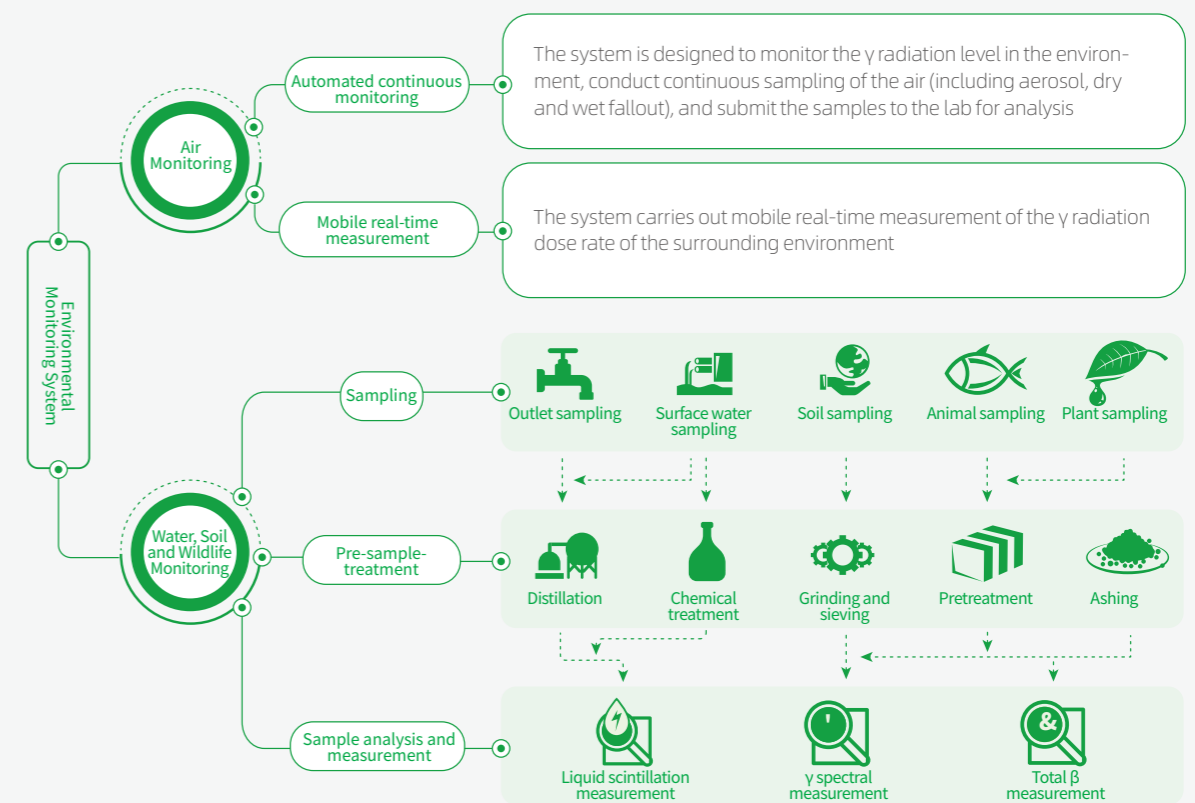
##### Real-time Monitoring

- Ten environmental monitoring points are set up within a ten-kilometer radius of Daya Bay Nuclear Power Base for continuous monitoring with real-time monitoring data displayed in the exhibition hall of CGN Power Building in Shenzhen. Long-term environmental monitoring found no change in environmental radioactivity levels around the base compared to background data before operation.
- Five sets of oceanographic buoy have been placed in the waters around Daya Bay Nuclear Power Base to realize real-time monitoring of the seawater quality. Result shows that the water quality was good, with 77.9% of the indicators meeting the Grade I national seawater quality standards, 84.1% meeting the Grade II national seawater quality standards, and all meeting the Grade III national seawater quality standards.

#### External supervision

CGN Power cooperates with external supervisory bodies to monitor environmental performance and disclose external supervision data to the public. Relevant state regulatory agencies strictly monitor the radioactive emissions from nuclear power plants, focusing on the "dual-track system" monitoring of gaseous and liquid effluents and the surrounding environment of nuclear power plants. The operating units of power plants and the environmental protection administration in the province where the power plants are located hold accountable for the monitoring and ensure the data range meets the standard.

According to the Hong Kong Observatory and other external monitoring departments, the environmental radioactivity levels in the surrounding areas of the Company's nuclear power plants in operation since their operation have not been abnormal, and the terrestrial and marine biological population within the area has not changed. We have not brought about any adverse impact on the environment. National regulator continuously monitors the air absorption rate in the vicinity of the nuclear power plant in operation. The monitoring data shows that the air absorption rate is within the range of local natural fluctuations.

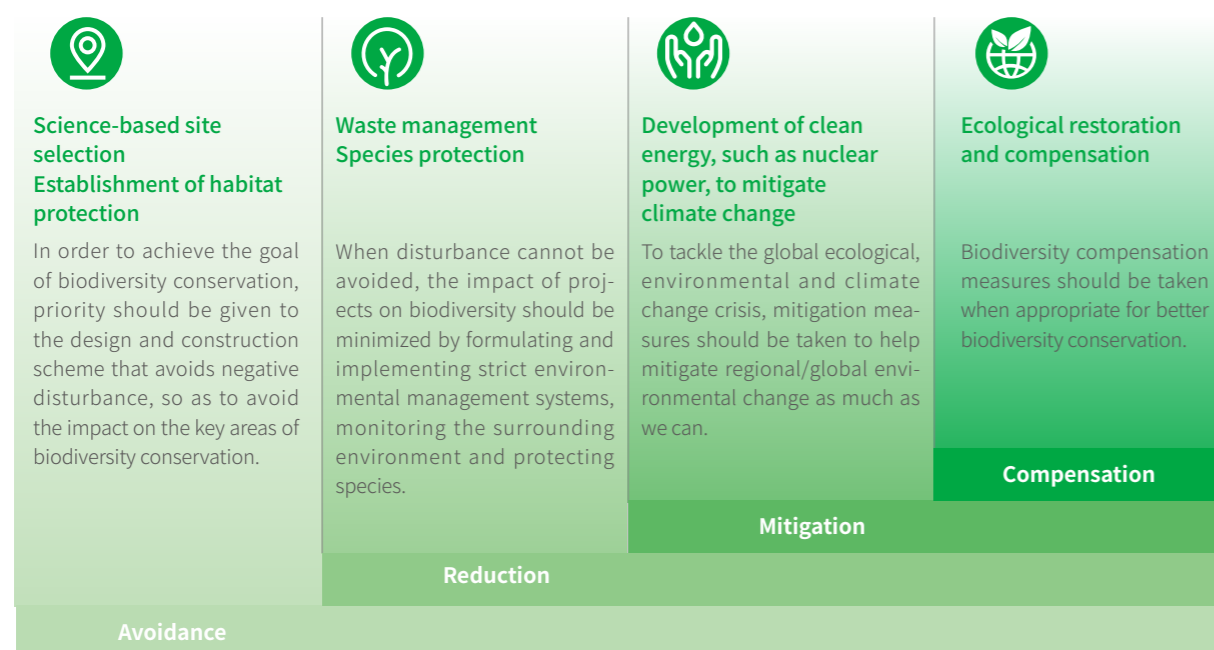


## Biodiversity conservation

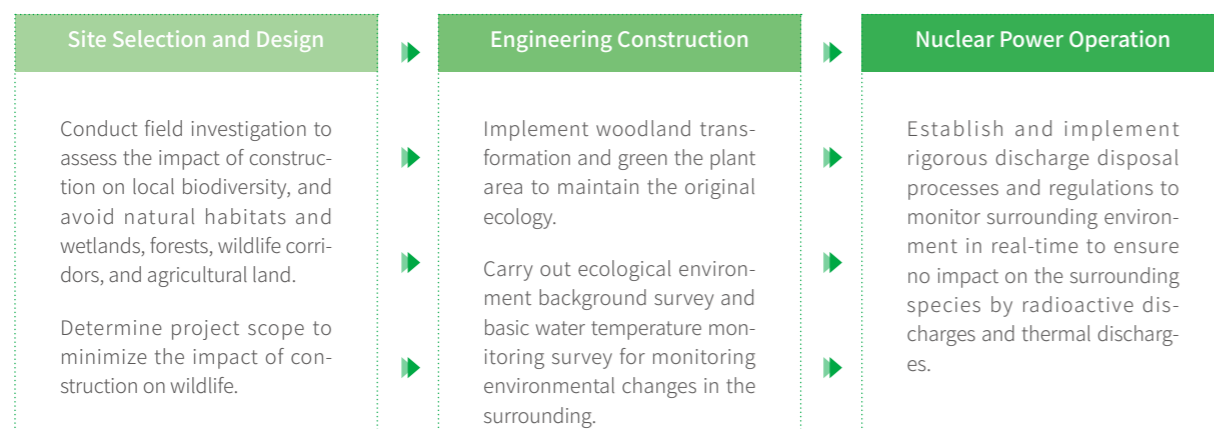
CGN Power strictly abides by the Marine Environmental Protection Law, the Environmental Protection Law, and other biodiversity-related laws. We adopt a step-by-step management approach of "avoidance-reduction-mitigation-compensation", and formulate systematic nature-based biodiversity conservation programs, blazing our trail of biodiversity protection with distinctive features. We actively respond to the challenges facing mankind today in an eco-friendly manner, and effectively improve well-being and biodiversity, contributing to a beautiful world of harmonious coexistence.

### Biodiversity management methods

#### Four-step Biodiversity Conservation Approach



### Biodiversity protection measures



## Ecological protection

In order to promote the concept of ecological and environmental protection, subsidiaries of CGN Power, joining with relevant external units, has formed CGN Environmental Protection Innovation Team and Environmental Protection Science Popularization Volunteer Team to let the public understand nuclear power, so as to create a better social atmosphere for clean energy development. Each nuclear power base organizes its staff to clean up waste near the base's coastline regularly, and the waste was classified, weighed, source-identified, counted and recorded so as to provide a realistic basis for the marine management department's future prevention and control policies.

#### Case Fishery resources restoration and proliferation by Hongyanhe Nuclear

In July 2023, together with Liaoning Provincial Law Enforcement Team of Aquatic Fingerlings, Dalian Ocean Development Bureau and other relevant units, Hongyanhe Nuclear carried out two fishery resources restoration and proliferation activities in the open waters of Jiangjunshi Fishing Harbor and in the Jinzhou offshore respectively. In the activities, the company released a total of 1,000 portunus trituberculatus, 1.6 million paralichthys olivaceus, and 600,000 barracudas to restore the sea area ecology and promote biodiversity protection.



#### Case Mangrove planting activities by Fangchenggang Nuclear

On August 15, 2023, the first national ecological day, Fangchenggang Nuclear organized a mangrove planting activity with the theme of "Lucid waters and lush mountains are invaluable assets". Youth volunteers planted mangroves at mangrove restoration area of Shaoluoliao Beach, protecting the ecological environment with practical actions.





A Beautiful Picture of Biodiversity Conservation

The Company continues to strengthen the biodiversity conservation mechanism and persists in the practice of biodiversity conservation for a long time. We have formed a species-rich ecosphere in the land area of the nuclear power base and the surrounding sea area, showing a beautiful scene of harmonious coexistence between human beings and nature.

There are more than 200 plant and animal species in the surrounding land and water of the Daya Bay Nuclear Power Base. 15 species of stony corals of state second-class protected animals are found in the surrounding sea.

At Ningde Nuclear Power Base, there are two state second-class protected animals, one state third-class protected animals, and 15 other species of animals with image data.



Chinese white dolphins, a state first-class protected animal, can be seen annually in the waters near the Yangjiang Nuclear Power Base.

Opportunities and Challenges

Nuclear power is a clean energy with broad room for development. As a technology intensive industry, the nuclear power industry requires the Company to strengthen talent reserves and training for the high-quality development, so as to consolidate core competitive advantages and seize new opportunities.

Our Strategies

Insisting on the philosophy of "prioritizing talent cultivation for enterprise development", CGN Power has formulated talent recruitment and reserve plans, established smooth channels for career development, and continuously improves the talent training system. It also creates an equal and diverse workplace, and helps employees realize their self-worth.

Main Achievements in 2023

- Training coverage for employees **100%**, Average training duration per employee **138.5 hours**
- Employee health check coverage **100%**, No occupational disease incidents occurred

2024 Outlook

- We value the occupational health and safety of employees, and protect their rights and benefits.
- We continuously improve the talent training system, emphasize the cultivation of professional skills and comprehensive qualities of employees, and expand career development channels to stimulate employee vitality.
- We strengthen the reserve of professional talents to inject talent vitality into the Company for its high-quality development.

# Joint Development Underpinned by Unleashing Employee Value



## Human Capital Consolidation

Talents hold key to the development of nuclear power industry so CGN Power attaches great importance to talent cultivation. It has formulated strategies for talent development and established standardized recruitment and reserve plans, providing sufficient talents to support its sustainable development.

### Talent development strategy

Based on national energy and company business development plans, after conducting surveys on human resources management, the Company organizes special seminars and individual interviews on human resources planning. We evaluate key indicators, organizational operations, talent structure, talent development, and human resources systems in a systematic manner. Then, we propose development strategies and management objectives, making human resources planning targets, key tasks, and management measures. In accordance with the dynamic mechanism of "planning - annual plan - implementation - evaluation - adjustment" in our human resource planning work, we strive to build a highland for talent development in the nuclear power industry by strengthening the planning and development of high-level talents and enhancing the cultivation of professional talents.

We conduct annual talent inventories, and make proactive predictions on talent needs based on comprehensive statistical analysis of data such as employee age, resignation, and key talent needs. This helps form a multi-level, all-round, and full-cycle talent reserve plan. At the same time, the Company regularly selects outstanding young officials, coordinates the employment of employees of all age groups, and constantly improves the age structure to adapt to the Company's development. We have established a high-potential management talent pool covering over a thousand personnel and over ten thousand high-quality graduates, ensuring a continuous supply of talents for the nuclear power industry and our sustained development.

## Talent recruitment and reserves

### Strengthen external talent recruitment

We adopt new approaches and take multiple measures to recruit talents. Through various channels such as social recruitment and campus recruitment, the Company recruits outstanding talents. Meanwhile, the Company ensures that the recruitment process is standardized, normalized, and systematic. During the recruitment process, strict scrutiny is applied to verify the identity of applicants, avoiding the participation of individuals under the age of sixteen and vehemently forbidding the use of child labor and any form of forced labor. During the Reporting Period, the Company did not encounter any cases of human rights violations, child labor, or forced labor.

In 2023, Newly recruited fresh graduates

**1,322**

Public recruitment

**100%**

We take an active part in building China's high-level talent bases by setting up specialized talent directories in cutting-edge technology, emerging industries, and key technological fields. For the first time, we globally recruit top-tier talents. We have signed contracts with several headhunting companies for high-level talent recruitment and have formulated flexible talent introduction management guidelines. This supports subsidiaries in attracting talent according to local conditions.

Greater efforts are made to recruit outstanding graduates. We completed the 2023 campus recruitment by organizing the CGN Power Executive University Tour. We recruited over 2,000 fresh graduates in 2023 and intended graduates in 2024. Over 60% of the recruits were from domestic and overseas top-tier universities. We also signed contracts with over 200 graduates from elite universities, strengthening the ranks of a young scientific and technological talent.

Introducing High-End Talents

Conducting Campus Recruitment

Enhancing Joint Training

Aligning with the Company's development, we are exploring modes of joint training between enterprises and universities through methods such as "joint training," "order + joint training," "engineer education," "engineering master and doctoral training," and post-doctoral workstations. In 2023, we initiated specialized pilot projects for engineering master and doctoral programs with over ten universities, recruiting more than 70 engineering master and doctoral candidates and completing the practice of introducing the first batch of engineering master's into our Company. An excellent engineer team has been reserved as a backup force for the Company.

### Case The second postdoctoral work platform of CNPRI goes operational

CNPRI, relying on Sun Yat-sen University, has completed the construction of the Postdoctoral Innovation Practice Base of China Southern Institute of Atomic Energy (the "Southern Center Postdoctoral Innovation Practice Base"). This initiative has made significant progress in establishing a high-level talent training platform for the Southern Center. In November 2023, the first postdoctoral researcher recruited by the Base became another important platform for CGN Power to attract, cultivate, retain, and empower scientific research talents and promote technological innovation.



## Employee Rights

We strictly comply with relevant Chinese laws and regulations such as the Company Law, Labor Law and Labor Contract Law, and have formulated internal rules and regulations, including the Labor Management System, Recruitment and Employment Staffing Management System, Professional and Technical Staff Recruitment Management System, Management Staff Selection and Appointment Management System, Salary Management System and Employee Performance Management System, better protecting employee rights.

## Diversity and equality

CGN Power is committed to promoting diversity and equality among employees. The Company actively upholds internationally acknowledged human rights norms, and strictly complies with relevant national laws and regulations and international labor standards. Committed to non-discriminatory employment, we put an end to differential treatment regardless of staff's gender, age, educational background, ethnicity, religious belief and marital status. We are eager for employees who are a good match for the Company's development, and strive to foster a diverse workplace embracing different opinions and beliefs.

### Gender diversity

CGN Power dedicates itself to creating a diverse, equal, and inclusive corporate culture. We support the career development and skill enhancement of all employees, especially female employees, and help them realize their personal value. As of the end of 2023, the proportion of women among junior/intermediate/senior managers was 5.0%, and the proportion of female employees and managers in STEM (Science/Technology/Engineering/Mathematics) positions reached 11.3%.

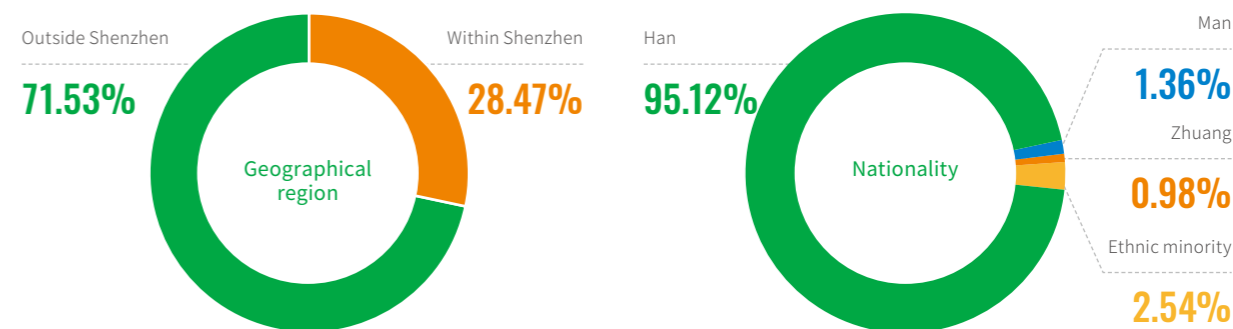
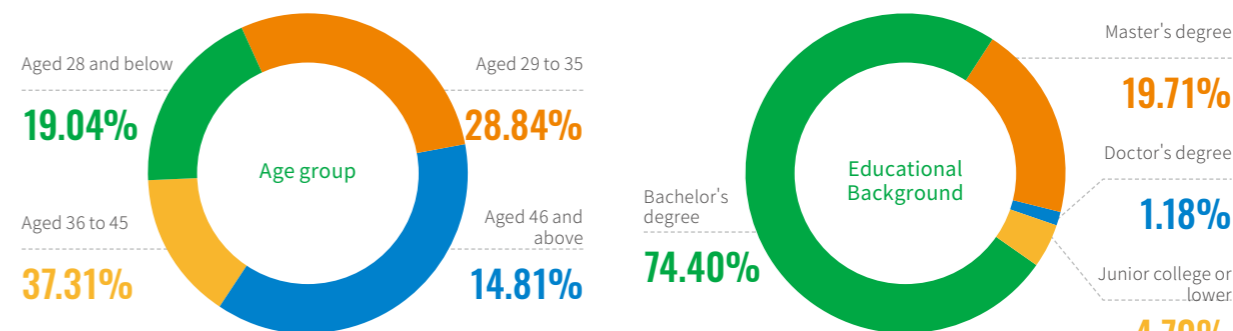
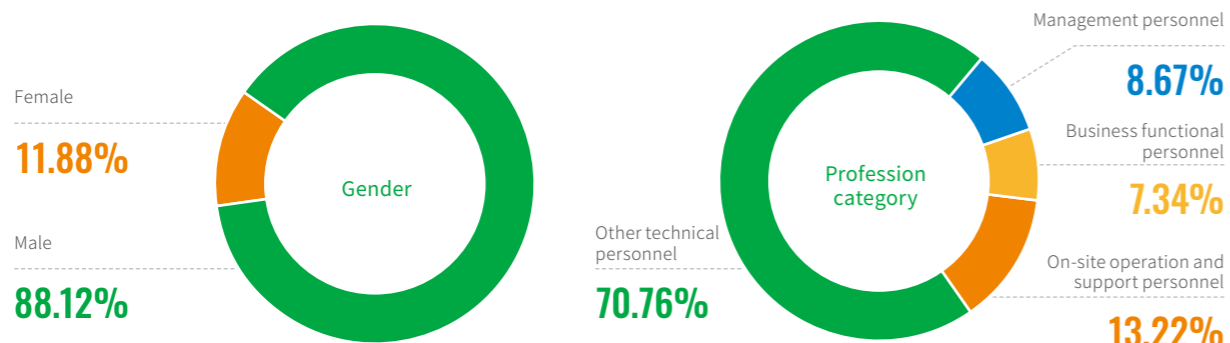
### Staff composition

Number of employees

**19,038**

Full-time employees

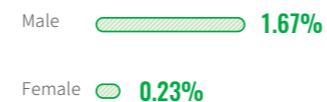
**19,038**



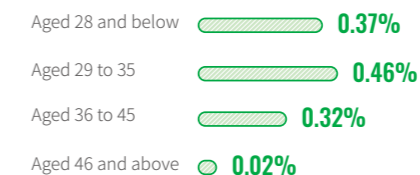
Employee turnover rate

**1.30%**

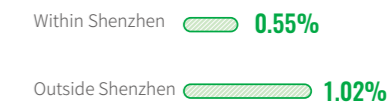
By gender



By age



By geographical region



## Employee communication mechanism

CGN Power fully guarantees employees' rights to know, participate, express and supervise. In compliance with the Regulations on Democratic Management of Enterprises, Regulations on Workers' Congress of Industrial Enterprises under the Ownership of the People and Notice on Regulations of the Grassroots Trade Union Member Conference issued by the All-China Federation of Trade Unions, etc. we have established a workers congress. Meanwhile, we constantly broaden the channels of democratic management, continuously improve the democratic management system, and implement the system of employee director and supervisor to encourage employees to make suggestions.

Our subsidiaries sign the collective contracts to protect the rights of employees through democratic procedures such as workers congress. By implementing the proposal system and incentive-suggestion system, the Labor Union opens up channels for employees to raise demands and solve their problems. By establishing special committees such as the labor dispute mediation committee and making collective contract negotiations, they establish and improve the mechanism to handle labor disputes. The above processes and related information are known only to the parties and necessary personnel to protect the rights of employees to the greatest extent.

Besides the communication channels, such as forum, leaders' mailbox, the Party Branch, Labor Union, and League branch, the Company regularly holds organizational meetings, democratic meetings for management team, etc., so that employees can provide their opinions or suggestions to their superiors. Employees can communicate with management about their personal plans and inquiries during the whole process of their performance target formulation, implementation and appraisal. The positive communication and feedbacks from both sides can help align the development goal of employees with that of the Company.

### Case CGN Power holds the First Meeting of the Third Session of the Workers Congress

CGN Power held the First Meeting of the Third Session of the Workers Congress. Each subsidiary held a total of 16 workers congresses, promoting the resolution of 69 workers congress proposals, achieving 100% attendance on major issues related to the vital interests of employees, and 100% progress on employee proposals. This solidly promotes democratic management work with the workers congress system as the main content.

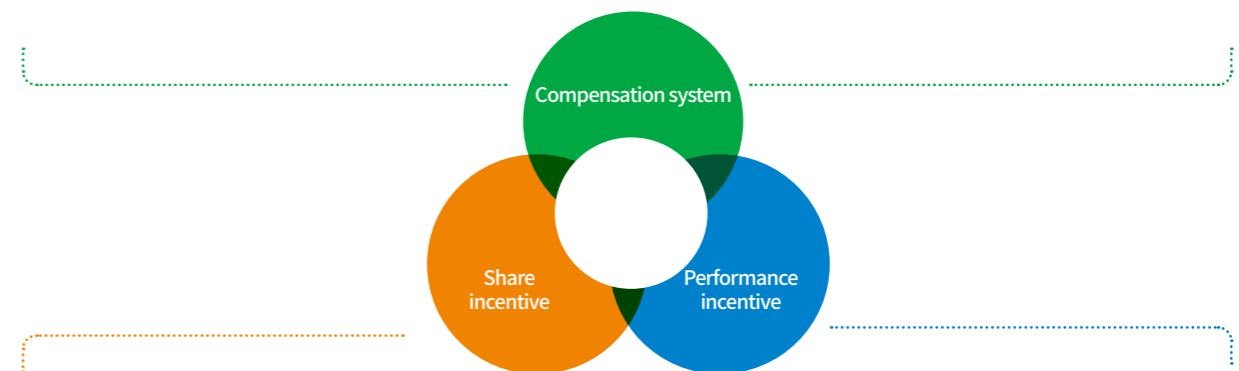


## Compensation and benefits system

CGN Power continuously improves its incentive system. By clarifying the concept of value creation, we regard responsibility, capability, and performance as the main criteria for evaluating employee value. This initiative will fully mobilize employees and inspire their potentials, helping employees realize their self-worth.

### Salary incentive mechanism

Following the market-oriented principle, we have formulated the Salary Management System, Employee Performance Management System, Management Staff Selection and Appointment Management System and other internal rules and regulations to optimize the performance management system and build a strategy-oriented and competitive salary management system. The salary management system is implemented based on the post wage system in which wage scale varies from ability to contributions, and those with good skills and performance can have higher salary or bonuses. For example, for employees who failed in SQE assessment, their annual performance bonus is zero.



To motivate key talents, the Company approved the H-share Appreciation Rights Plan at the 2014 Annual General Meeting of Shareholders. The Plan is expected to be granted in three phases with three tranches taking effect in each phase. For more details, please refer to the 2023 Annual Report of the Company.

The Company has formulated the Employee Performance Management Regulations, which have been reviewed and approved by the Company's Workers Congresses. Employee performance management is carried out in three steps: formulation, execution, and evaluation of performance plans. After sufficient communication between the assessors and the evaluated personnel, an annual performance plan is formulated, including work goal plans, ability plans, and personal development plans. Through continuous communication, feedback and coaching, and regular tracking of the execution of performance plans, performance evaluations are conducted at the end of the year. In line with the principle of integrating performance and incentives, the annual performance bonus is determined based on the individual's annual performance results. After the performance results are announced, employees can submit written complaints to the Company regarding the evaluation results and the evaluation process. For employees or organizations who have made outstanding contributions in various aspects such as technological innovation and safety, quality, and environmental management, the Company should develop and implement special incentive measures.



Employee welfare system

Basic welfare Guarantee

All employees are covered by social insurance, including pension, supplementary medical insurance, unemployment insurance, work-related injury insurance, housing provident fund, and corporate annuity. The coverage rate of social insurance reaches 100%, providing employees with basic security.

Work-life Balance

According to national regulations and enterprise realities, a holiday management system is formulated and paid leave policies is implemented to encourage employees to arrange their holidays reasonably. The labor union regularly organizes a variety of cultural and recreational activities such as holiday celebrations, cultural performances, sports competitions, and team-building activities. The facilities at the nuclear power bases are continuously improved to enrich employees' leisure time. In 2023, labor unions at all levels established 172 cultural and sports associations and interest groups, organizing activities 718 times with nearly 15,000 participants.

Caring for employee life

The "Taking Real Actions for the Masses" campaign was organized with 149 practical tasks completed in 2023. We focused on real matters such as medical treatment and school enrollment, parent-child summer camps, logistics housing, and matchmaking, genuine care and concern were provided to employees. 89 visits were made to care for the families of employees facing difficulties or on long-term business trips, involving 378 individuals.

Caring for female employees

We always care for the health of female employees. Activities such as the Women's Health Seminar are held irregularly, and female-specific medical examination items are added during health check to care for the physical and mental health of female employees. Labor unions at all levels organize activities for International Women's Day, sending festive blessings to female employees. Subsidiaries, like CNPRI, are upgrading nursing rooms and improving welfare benefits to provide solid support for female employees during pregnancy or childcare.

Employee social insurance coverage

100%

(covering medical, pension, unemployment, work-related injury, and maternity insurance)

Average paid annual leave for employees

13 working days

Breastfeeding leave for entitled female employees

121<sup>23</sup> days

Paid maternity leave for entitled female employees

162 days

Paid nursing leave for entitled male employees

14.8 days

Case CGN Engineering holds summer camp for employees' children

To help employees in caring for their children during the summer vacation, CGN Engineering organized two sessions of summer camps for employees' children and one supplementary session, with over 400 employees' children participating. The initiative was recognized as a model example of caring summer camps by the Guangdong Federation of Trade Unions. The summer camps aimed to ensure parents' assurance and children's happiness, offering special courses on popularization of nuclear power, traditional Chinese culture, and various recreational and interest-based activities. The camps provided a comfortable learning and entertainment environment along with professional training and education, allowing children to have a safe, joyful, and meaningful holiday experience and contributing to the creation of a harmonious family environment for employees.



Case Ningde Nuclear hold the second summer camp

In July and August 2023, Ningde Nuclear organized the second summer camp, with 116 children of employees enrolled and four classes offered. During the camp, in addition to regular courses, Ningde Nuclear offered special courses such as sports initiation, public speaking exercises, DIY handicrafts, and scientific experiments. Theme-based interactive activities such as the Parent-Child Sports Day and the Starlight Market for Children Special were also organized to cultivate trust among children, parents, and classmates.



Case DNMC organizes "Women's Full Lifecycle Health Management" Seminar

In March 2023, DNMC's labor union invited the professor and director of the Obstetrics and Gynecology Department at the Dapeng Maternal and Child Health Hospital of the Second People's Hospital of Shenzhen, to the Daya Bay Nuclear Power Base, delivered an online and offline seminar on "Women's Full Lifecycle Health Management" for employees and their families. During the seminar, Professor Zeng provided scientific knowledge on topics including pre-pregnancy preparation, prenatal care, childbirth and postpartum recovery, gynecological diseases, and cancer prevention and screening. The aim was to guide women in caring for themselves and paying attention to their health throughout their entire lifecycle.



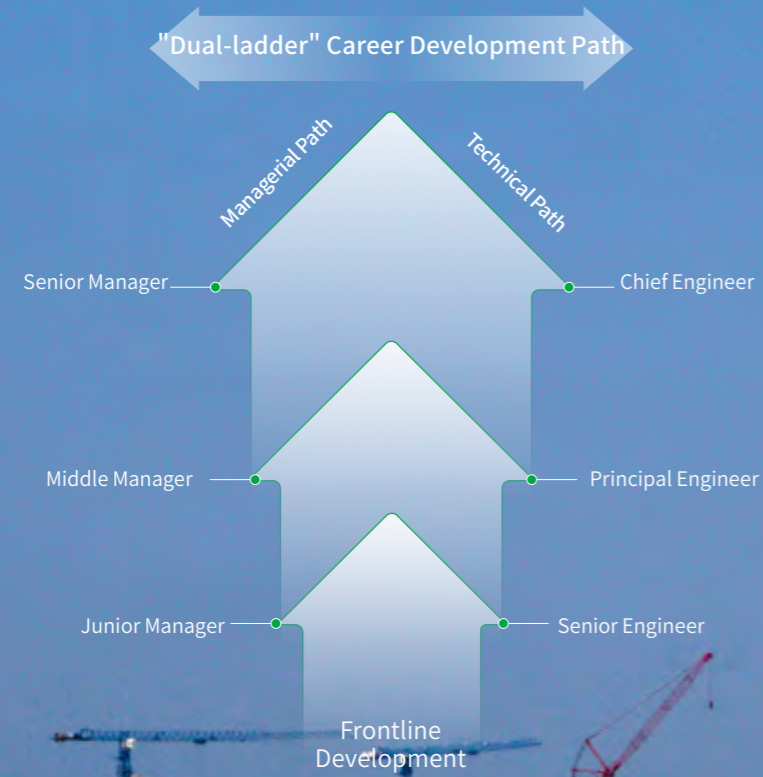
23 The number of female employees who is entitled to breastfeeding leave refers to the number of employees who take time off for breastfeeding. All female employees during the lactation period are entitled to one hour of breastfeeding leave per day.

## Talent Cultivation

CGN Power attaches great importance to talent training and development. We provide systematic and targeted training to every employee to help them improve their professional skills and comprehensive qualities, so as to achieve the shared growth with the Company.

### Talent development channel

Providing employees with clear development paths and broad career choices, we have established the dual-path career development of managerial path and technical path, which forms a comprehensive link of "Position Ladder - Development Path - Employee Aspiration - Employee Flow", and established a conversion mechanism for two channels. According to the needs of talent development, the Company focuses on strengthening the training of skilled talents, young leaders, and high potential talents within the Company, promoting long-term talent development, and strengthening the reserve of key talents.



### Broad development platforms

 <p><b>Skilled Personnel</b></p> <p>We have established a separate position ladder for skilled personnel, such as Chief Technicians, to remove the limit for skill personnel development. This is achieved through a combination of guidance and policy support to cultivate excellent skilled personnel.</p>	 <p><b>Young Managers</b></p> <p>We optimize talent selection mechanisms towards youthfulness and diversity and select outstanding young officials from various nuclear power bases to participate in full-time training programs. This aims to deepen theoretical learning, promote knowledge iteration, and broaden their work perspectives.</p>	 <p><b>High-Potential Talents</b></p> <p>We have established a hierarchical, categorized, and specialized talent pool for high-potential management and follow grassroots orientation. All newly promoted young managers are assigned to the frontline production of nuclear power bases, using special projects as a vital platform to train young managers.</p>
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## Talent training system

CGN Power continuously improves its independent talent training system and standardizes its efficient training management system. A team of experienced and high-quality instructors, a comprehensive curriculum system, and large-scale training facilities support employees to realize continuous and efficient learning and development.

### License training

CGN strictly complied with the requirements of the Nuclear Safety Law, actively carries out relevant training for licensed nuclear power personnel, and ensured that NPP operators are licensed to work. For the cultivation of reactor operators, we have formed a training ladder of "new employee - operator trainee - operator - senior operator - deputy shift supervisor - unit director - shift supervisor". New hires are provided with training of technical theory, basic safety authorization and on-the-job training before written test, interview, practical work ability evaluation, and psychological quality assessment. After passing those tests and evaluations, they can take operator practice test. In 2023, the Company had 68 licensed operators and 64 licensed senior operators. As of the end of 2023, the number had accumulated to 553 and 883 respectively. The Company has trained a total of 116 operators and 52 senior operators for "HPR 1000".

### Egret Program

A series of transformation training programs were designed and implemented based on the core competency model to address the problems faced by new hires, new managers at all levels, new reserve management members during the transition and reserve periods, aiming to comprehensively improve the professionalism of the talent team across the broad.

### Classified training

We have established standardized training systems for engineering and operation personnel, with nuclear power operation college, nuclear power engineering college, nuclear power science and technology college and management academy. The Company has formed a staff training system with the basic process of "training - assessment - authorization - induction".

### Contractor training

Each NPP of the Company provides contractors with basic safety authorization training, skill training, human error prevention training, special operation training, and other training. For contractors with independent training systems, their qualifications are certified by the training department of the NPP. After issuing certificates, they can independently carry out basic safety training and human error prevention training, and then submit training records and equivalent assessment applications to the training department of the NPP. For contractors without independent training systems, relevant training will be provided by NPPs.



### Honors

4 collective units and 7 employees from CGN Power were awarded the **National and Provincial Model Workers, May Day Labor Medal, Advanced Women, and Workers Pioneer** titles in 2023

3 youth collective units from CGN Power were awarded the **"National Youth Civilization"** title, and 5 youth collective units were awarded the **"Youth Civilization of Guangdong Province"** title

Sessions of online and offline training conducted.

**120**

Training hour per employee

**138.5** hours

Training time for male employees

**139.5** hours

Training time for female employees

**96.2** hours

Training time for mid-level management

**133.1** hours

Training time for senior management

**86.8** hours

Male employees receiving the training

**100%**

Female employees receiving the training

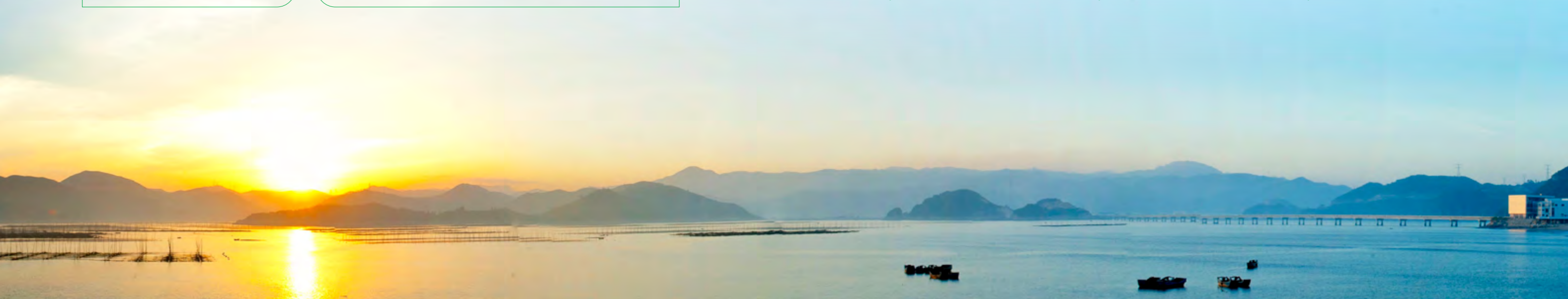
**100%**

Mid-level management receiving the training

**100%**

Senior management receiving the training

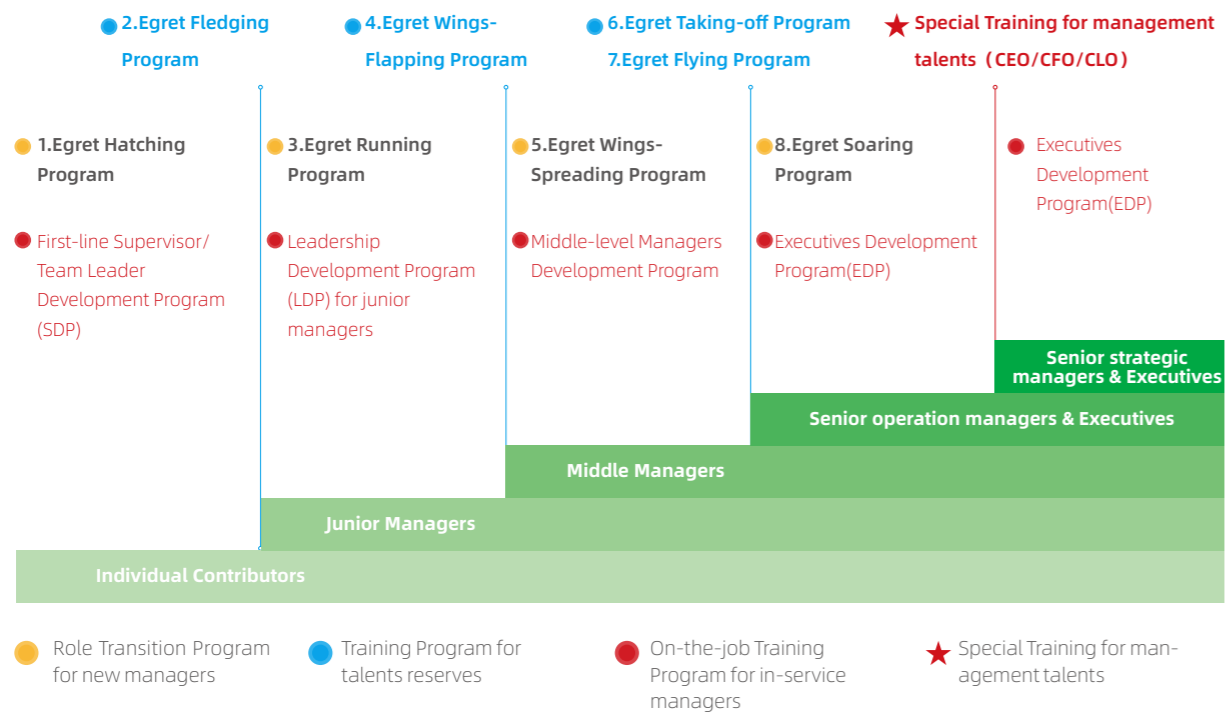
**100%**





### Egret Program - CGN Leadership Training

Aiming to help managers at all levels achieve career advancement, the Egret Program is launched, including subprograms such as the Egret Hatching Program (induction training for new hires), the Egret Running Program (transition training for new junior managers), the Egret Wings-Spreading Program (transition training for new middle managers), the Egret Taking-off Program (medium and long-term training for reserved senior managers), the Egret Flying Program (training for reserved senior managers), the Egret Soaring Program (transition training for new senior managers).



#### 2023 Egret Program Achievement

	Target	Progress
Egret Running Program	Improving the personnel management ability of new junior-level managers	10 sessions (413 people)
Egret Wings-Spreading Program	Improving the personnel management ability of new mid-level managers	6 sessions (189 people)
Egret Soaring Program	Improving the management skills of new operating executives and broadening their thinking and horizons	1 session (24 people)

### Case Launch of the Second Phase of the "Egret Running Program" Training Class at Hongyanhe Nuclear

In February 2023, the second phase of the "Egret Running Program" training class commenced at Hongyanhe Nuclear. The program is a crucial transitional training program aimed at assisting grassroots managers in transitioning from individual performance contributors to team performance contributors, with the objective of strengthening their managerial and leadership capabilities. This training class comprised 26 students and insisted on high standards, strict assessment. It strictly followed the "12345" class model, which includes 1 teaching framework, 2 featured courses, 3 executive participation, 4 team-building activities, and 5 assessment evaluations, thereby enhancing employees' overall development.



### Leadership development training

The Company organized the third phase of the Young Officials Training Program in 2023. It constantly assisted young officials in cementing their theoretical foundation, expanding their global perspectives, cultivating strategic thinking, and enhancing leadership abilities in a comprehensive, systematic manner. This initiative aimed to cultivate versatile talents with both virtue and talent for the high-quality development of the Company. 23 outstanding young officials graduated from the program. The Company systematically conducted on-the-job training for newly appointed management officials, with seven sessions held throughout the year, training over 250 individuals. Moreover, we continued to promote the training of functional talents, organizing training programs for key personnel such as full-time directors and supervisors, recruitment teams, SQE personnel, legal professionals, and more. In 2023, six training sessions were held, covering nearly 640 participants.

### Professional skills training

In terms of professional competence, we organize professional skills training based on employees' professional fields, job qualification to help employees improve their vocational skills and enhance their job competency.

#### Highlighting Key Position Development

The operator training plan set for the 14th Five-Year Plan period was released to plan operator reserve plans, career development, and incentive optimization, among other matters. Throughout the year, 68 new reactor operators (RO) and 64 senior reactor operators (SRO) were trained.

#### Enhancing Maintenance Skills Training

Four projects, including Refining, Cutting, and Polishing Elite Training Camp, Developing Elite for Shutdown Power Supply Panel Maintenance, In-core Instrumentation System (RIC) Core Thermocouple Maintenance Craftsman Training Camp, and Nuclear Grade Welding Craftsman Cultivation, were completed.

#### Strengthening Skill Level Assessment

The qualification accreditations for chief technicians and senior technicians in 22 profession category were applied. We took a lead in the establishment of new eight-level evaluation system for the national skill level assessment. We provide a comprehensive development path for the growth of skilled employees. The initial certification included 3 chief technicians and 15 senior technicians, achieving a breakthrough with zero chief technicians initially certified.

**Honors**

The Yangjiang Nuclear Operator Anti-Human Factor Training Model was awarded the **Excellent Quality and Technology Award** by China Association for Quality.

The CGN Operations was awarded the **Guangdong Industrial System Industry Worker Training Demonstration Site**.



**Case Fangchenggang Nuclear conducts excellent team leader training**

A training program of Benchmark Learning in Team Management was opened by Fangchenggang Nuclear in Changchun to further broaden the perspective of frontline team leaders and learn from the management experience of excellent enterprises. Participants visited national skill master studios, engaging in in-depth discussions with master craftsmen and national technical experts on issues such as the cultivation of high-skilled personnel in teams, incentives and ideological guidance for team members, team management, team culture, and technological innovation. They actively explored the path of their own team management, talent development, and cultivation, aiming to cultivate an outstanding team of team leaders who are competent, skilled, and adept in management.



**Case Training of innovative operators at Yangjiang Nuclear**

As operators are key personnel in nuclear power plants, Yangjiang Nuclear places great importance on the training and reserve of control room operators. It has regarded this as the core of its operational talents and optimized the training system for operational personnel. In 2023, after thorough research, Yangjiang Nuclear proposed standardized practices for the studying operators' self-study room and implemented a series of improvement measures, including the use of facial recognition for attendance in the self-study room, and regular evaluation activities such as selecting outstanding studying operators and ranking based on attendance records. Moreover, learning materials, computers, and internet access were provided to facilitate the study and usage of resources by the operators. The improvements have yielded visible results, with an average increase of 6.8% in the scores of simulated exams for control room operators.



**New employee development**

We attach great importance to the training of new hires and made special training plans for different positions and different sequences of employees to help them achieve rapid growth in the workplace.

To accelerate the role transition of new hires, promote the improvement of their professional skills, and help them better integrate into CGN, the Company adopted a model of headquarters design, local implementation in the training of new hires in 2023. It utilizes diverse learning methods, including online learning, classroom instruction, and on-the-job practice, covering topics such as corporate culture, role transformation, workplace skills, and professional technical skills. The number of new hires trained in 2023 was nearly 1,400 individuals.

**Innovative talent development**

CGN Power continuously innovates in training formats and content by collaborating with educational institutions, research organizations, and enterprises. The Company provides differentiated training courses for employees in different positions and levels. We actively engage in activities such as job skills training, labor competitions, technological innovation, inventions, and suggestions. These efforts support employees in making significant progress and achieving their career aspirations.

**Collaborative education between universities and enterprises**

As one of the first batch of enterprises integrating industry and education in China, our Company has signed talent development cooperation agreements with more than 20 domestic universities, including Tsinghua University, Shanghai Jiao Tong University, and Sun Yat-sen University. Additionally, we provide practical opportunities for graduates and interns majoring in nuclear power-related disciplines, aiming to improve their professional skills and employability, contribute to the cultivation of industry talents, and achieve a win-win result in talent development and employment promotion. 15 renowned universities, such as Harbin Institute of Technology, Xi'an Jiaotong University, and South China University of Technology, have established student internship bases in our Company as of 2023. In 2023, nuclear power bases and subsidiaries of our Company received over a hundred students from more than 10 universities, including Tsinghua University, Harbin Institute of Technology, Xiamen University, and Changsha University of Science and Technology, for on-site internships (excluding observation and learning visits).

**Supporting talent development**

Our company actively leverages its strengths to support talent development in the industry chain. In 2023, we continued the Quality Manager Training Program and promoted the upgrading of the China Nuclear Energy Association platform to an industry-level program. Throughout the year, we trained 313 project quality managers from 151 organizations and provided capacity-building training for 144 project quality managers from 79 organizations. Since 2018, we have developed 1,187 quality managers for the industry chain, effectively promoting talent development in the industry chain and fostering a culture of win-win collaboration in the nuclear power industry chain.

**Supporting employees' self-learning and development**

Our Company encourages employees to engage in self-learning and motivate them to enhance their overall capabilities through self-study. We aim to create a learning organization and have established processes to regulate employees' self-learning declaration and reward distribution, fostering mutual development between the Company and its employees. As early as 2017, we formulated and released the Management Process for Encouraging Employees' Self-Learning and Development. Through one-time rewards or limited reimbursements, we motivate employees to enhance their overall capabilities from on-the-job education, professional qualification attainment, foreign language learning, and other means. We also collaborate with partner universities to offer On-the-Job Degree Enhancement Programs and Online Preparatory Courses for National Postgraduate Entrance Examinations to assist employees in advancing their educational qualifications while working, thereby achieving mutual development between the Company and its employees.

## Safety and Health Protection

CGN Power always prioritizes the safety and health of its employees and adheres to the Work Safety Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, and other relevant laws and regulations. We implement the responsibility system for occupational health management, improve the occupational hygiene and health management system, and follow the guiding principle of the Health China Operation (2020-2030). All subsidiaries are encouraged to participate in the development of healthy enterprises, creating a healthy workplace to safeguard the safety and health of employees.

### Occupational safety



All NPPs under CGN Power have obtained the certification of the OHSAS 18000 occupational health and safety management system and the ISO 45001 occupational health and safety management system.

We advance safety standardization by establishing the Occupational Safety Management System and related management measures. All nuclear power plants have dedicated departments managing occupational health and safety. We employ a series of measures including technological, managerial, and individual physical protection, and set limits on on-site working hours based on occupational hazard assessments. This move will fully reduce occupational health and safety risks and ensure the occupational health and safety of employees.

The occupational health and safety management system of the Company also applies to contractors involved in various activities such as engineering construction, electricity production, and equipment maintenance at NPPs, as well as any other personnel entering operational sites for work. Additionally, the Company actively promotes the integrated management of occupational health between owners and contractors, thereby enhancing the standardization and coverage of occupational health check for contractors.

There are maximum radiation dose standards for personnel (including employees, contractors, and others) in the controlled zones of nuclear power plants, both internationally and domestically. During the Reporting Period, we maintained a good occupational health and safety performance. There were no cases of occupational diseases or suspected occupational diseases among our employees, outsourced personnel, or contractors. None of our subsidiaries were penalized by regulatory authorities for improper management of occupational health due to occupational diseases. The maximum radiation dose per person received is far below the standard requirements.

Occurrence rate of occupational disease for employees, outsourced personnel and contractor in 2023

0

Maximum individual radiation dose of all NPPs (Unit: millisieverts)

NPP/Unit	2023	2022	2021
Daya Bay NPP			
Ling'ao NPP	10.48	9.96	11.854 <sup>25</sup>
Lingdong NPP			
Yangjiang NPP	10.50	9.49	8.83
Hongyanhe NPP	10.50	8.00	5.98
Ningde NPP	10.21	8.27	7.33
Units 1-3 of Fangchenggang	7.26 <sup>26</sup>	3.69	3.61
Taishan NPP	2.24	3.88	8.50

### Closed-loop occupational health and safety management

#### Strengthening planning for standardized management

We developed the 2023 Key Work Plan for Occupational Health Management. With a focus on occupational health management, we formulated 14 specific tasks, and organized 2 seminars on occupational health management to build a communication platform for the occupational health management teams of subsidiaries.

We have developed an occupational health supervising system (OHSS) to promote the informatized, standardized work and standardized management throughout the entire process of occupational health monitoring. We also pilot the development of high-risk operation supervising system (NHSS), pre-work health monitoring systems, and online monitoring systems for occupational hazards in subsidiaries, improving the effectiveness of occupational health management across the board.

#### Identifying risks and strengthening governance

We identify and evaluate occupational hazards in various types of work, classify the risks of dangerous and hazardous factors for management, and adopt technical, management, and physical protection to ensure the safety of personnel during operation. For example, the Hongyanhe Nuclear utilized a cabinet-style exhaust hood to improve ventilation and automatic pump suction, reducing on-site ammonia concentration.

#### Continuous improvement based on supervision and inspection

We conduct occupational health management inspections on subsidiaries or project departments, and strengthen the assistance and supervision on the occupational health management of contractors conducted by owner companies. We also carry out inspections on the occupational health management system and occupational health audits upon recruitment of contractors, promoting the fulfillment of the main responsibility of contractors for occupational disease prevention and control.

For frontline employees in certain positions (including those involved in radiation, noise, high temperature, chemical toxins, electricians, high-altitude operations), a third-party professional organization is commissioned annually to conduct occupational health checks.

#### Raising awareness in proactive prevention

Occupational health training is organized on a regular basis to enhance employees' awareness of occupational disease prevention and control, disseminate basic knowledge of occupational health protection, and improve employees' skills, thus preventing occupational health and safety risks. We persist in conducting exchanges on occupational health and safety, and implement occupational health and safety promotion, training, and warnings, in order to ensure that the culture of occupational health is incorporated into all aspects of production and operation.

<sup>24</sup> The annual refueling outage is a key factor affecting the maximum individual radiation dose of all NPPs.

<sup>25</sup> Starting from 2021, the Daya Bay NPP, Ling'ao NPP and Lingdong NPP was aggregated.

<sup>26</sup> The scope of statistics is expanded to the Fangchenggang Unit 3 commenced operation in 2023.

## Employee physical health

In line with the principle of "full coverage, hierarchical management, full intervention, moving forward", we keep improving the health service system for all employees. We have formulated the Procedure for Employee Health Management, set up the health management committee and the part-time health management coordinator team to form a management mechanism of overall planning, hierarchical management and division of responsibilities to safeguard employees' health.

### Health management

Each subsidiary has established occupational health management institutions with dedicated occupational health management personnel to provide professional services. Annual routine health checks are arranged for all employees, and personal health records are established for tracking health management.

Health corners or health stations are set up at work sites to offer first aid, pre-work health confirmation, rest schedules, notification of occupational hazard monitoring results, and dissemination of occupational health knowledge. Moreover, traditional Chinese medicine therapy services are organized for health management among employees.

Smart health kiosks are set up at project sites to provide free medical examination services for on-site workers. Overall medical examinations are conducted for key populations such as older workers or those with abnormal indicators during pre-employment medical examinations, providing health warning for on-site safety management.

### Health knowledge

Health lectures and training are conducted on a regular basis and health science articles are released to help employees improve their health management ability.

### Healthy lifestyle awareness

A variety of recreational sports activities were organized to encourage employees to develop interests and hobbies, enhance their awareness of physical fitness, and promote a civilized and healthy lifestyle.

The Company's canteens at all levels pay attention to the healthy diet of employees. They introduce light dishes with less grease, sugar, and salt, making employees comfortable and reassured in at meals.



### Case DNMC launches "health care on Labor Day" campaign

In May 2023, DNMC launched the Health Care on Labor Day, inviting a team of experts from the Second People's Hospital of Shenzhen (Nan'ao People's Hospital) to the Daya Bay Nuclear Power Base to offer health care for employees. The event offered consultations, tests, ultrasound treatments, acupuncture, cupping therapy, and massage services by the personnel from departments of general medicine, orthopedics rehabilitation, neurorehabilitation, traditional Chinese medicine rehabilitation, and rehabilitation therapy, among others. Medical experts patiently diagnosed and explained common problems to employees, providing targeted health care and treatment based on each employee's reality.



### Case Lufeng Nuclear organizes health knowledge lectures and free medical consultations

In November 2023, Lufeng Nuclear invited 14 specialists from hospitals including Shenzhen People's Hospital and Shenzhen Luohu Hospital Group, who are rich in clinical experience and professional knowledge, to conduct health knowledge lectures and offer one-on-one free consultations for employees. The experts provided tailored medical advice to employees who sought consultation, demonstrating genuine concern and care for their physical and mental well-being.



**Case** CNPRI launches health room

In December 2023, the CNPRI inaugurated its Health Room, which offers various health services including traditional Chinese medicine consultations, acupuncture therapy, as well as exercise and nutrition guidance. It provides personalized health guidance and health-themed educational outreach to meet the health needs of employees.



**Case** Fangchenggang Nuclear installes self-service blood pressure monitoring points

On May 17, 2023, the 19th World Hypertension Day, to facilitate blood pressure monitoring for employees, Fangchenggang Nuclear set up three self-service blood pressure monitoring points. Employees can monitor their blood pressure independently. If any abnormalities are detected, they can follow the prompts to contact occupational medical professionals for medical advice. This proactive measure enables the timely detection of blood pressure abnormalities and implementation of health monitoring, thereby reducing on-site safety risks associated with individuals' health abnormalities.



**Case** Hongyanhe Nuclear introduces new fitness equipment

In 2023, Hongyanhe Nuclear regards employee physical and mental health as one of the initiatives under the special action of Warm Hongyanhe. The fitness equipment in the base's gymnasium underwent overall inspections, and outdated equipment was timely replaced to provide employees with a safe and comfortable fitness environment.

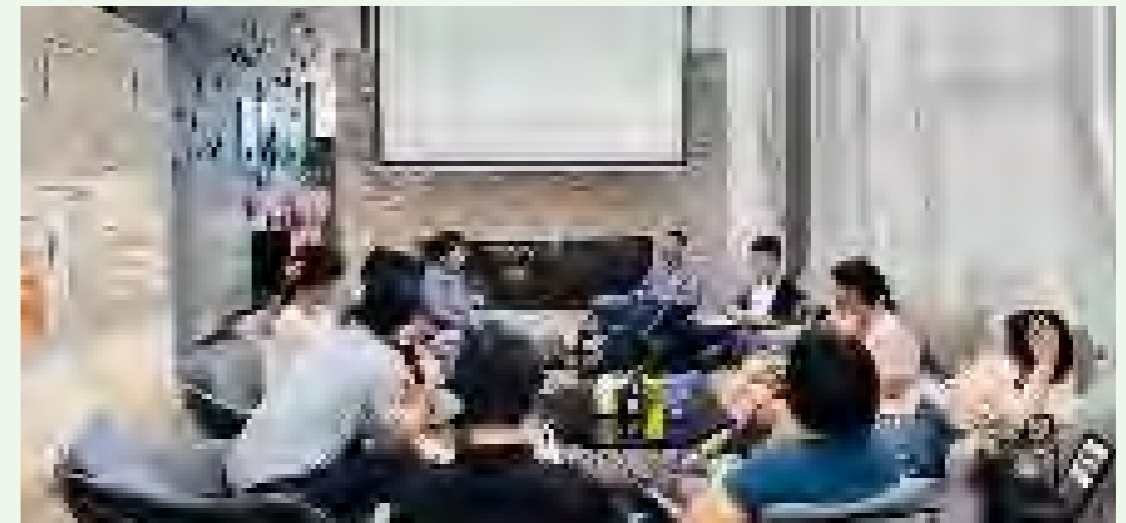


## Employee mental health

Believing that physical and mental health both matters, we have held the Employee Assistance Program (EAP) to provide employees with 7/24 counselling services. It helps to keep abreast of employees' mental health and therefore advocate a positive lifestyle.

**Case** EAP coordinator special training event at Ningde Nuclear

In September 2023, Ningde Nuclear organized a training event titled EAP Workshop: Empowering Happiness and Growth with Care. The event focused on EAP coordinators and invited national-level second-grade psychological counselors and corporate psychological trainers to introduce the value and significance of EAP work. Through interactive games, the coordinators were guided to master methods for identifying psychological states, encouraging self-care and care for others by leveraging the functions of EAP. The goal was to support the long-term healthy development of employees and the Company.



Employees participated in the annual psychological health survey	Proportion to the total	Activities held, including psychological health consultations and counseling sessions	Participants
<b>17,290</b>	<b>90.8%</b>	<b>143</b>	nearly <b>7,000</b>



Opportunities and Challenges

With a complete manufacturing system and a vast market, China is accelerating the industrial modernization nationwide by focusing on promoting technological innovation, facilitating the upstream and downstream circulation of industries, and creating new productivity. Meanwhile, the increasing uncertainties in the global economic environment pose challenges.

Our Strategies

To improve the resilience of the supply chain, CGN Power makes targeted efforts to build systems, introduce strict scrutiny system, and optimize management. We convey green concepts to the supply chains, and keep expanding the complementary advantages of industry-university-research partners, to improve the efficiency, quality, innovation capability, and safety of the industrial chain.

Main Achievements in 2023

- 762 New suppliers, 4,215 Qualified suppliers, 4,013 Domestic suppliers were introduced
- 176 Key tier-1 suppliers reviewed, 9.47% Proportion to the total reviews
- In collaboration with 5,400+ companies from upstream and downstream industrial chain, we jointly build the modern industrial chain for the "Hualong One" project.

2024 Outlook

- We integrate ESG elements such as environmental protection and business ethics into the supplier management system.
- We strengthen production cooperation and innovation collaboration with industry chain partners to improve supply chain resilience.

# Shared Development for Win-Win Partnership



## Building A Responsible Supply Chain

Supply chain resilience is crucial to the stable operation and healthy development of enterprises. CGN Power follows relevant laws and regulations such as the Law on Tenders and Bids and formulated policies such as the Supplier Management Measures and the Supplier Misconduct Management Process. We have built a unified supplier management platform to coordinate supplier management work, standardize supplier audit and management mechanisms, and improve supply chain sustainability. This platform has promoted a mutually beneficial and trustworthy partnership, and facilitated us move towards a sustainable future of the nuclear power industry together.

### Supplier management system

Following the principles of honesty and integrity, easy entry and strict management, overall planning and sharing, and win-win cooperation, we have formulated well-established supplier management policies with a focus on the five unifications (unified organization, unified system, unified process, unified platform and unified classification). Moreover, we have established a supplier management mechanism that covers the whole life cycle from procurement, access, tiered management, evaluation and withdrawal. It supports the establishment of tiered supplier management and incentive mechanisms, functioning as effective institutional measures for supplier management.

To improve management efficiency, we have established a dedicated integrated ECP (E-commerce Platform) for the Company. ECP includes the supplier business work platform and data platform, supplier online certification platform, and supplier intelligent push platform. It will achieve unified supplier management and standardized procurement categories, centralized and unified expert management, electronic bidding and procurement, as well as automatic contract management. By promoting intelligent retrieval of supplier information and integrating management information, we have effectively improved management efficiency and standardization.

New suppliers introduced

**762**

Qualified suppliers, including

**4,215**

Domestic suppliers

**4,013**

Overseas suppliers

**202**

#### Case Digital operations platform empowers efficient spare parts procurement

CGN Power is advancing the digital transformation of its spare parts supply chain by creating the first digital operations platform for plants covering the entire spare parts supply chain process in the nuclear power industry. This platform owns functions such as management of demand for spare parts and procurement of spare parts, enabling truly digitized, visualized, and intelligent operations. Leveraging this platform, the transition from manual experience-based spare parts demand planning to precise intelligent reporting based on "big data + mathematical models" is achieved. The ordering mode has been upgraded from traditional order-based to automatic rapid order-based, effectively enhancing the operational efficiency and quality of various links in the spare parts supply chain. The efficiency of spare parts requirement plan and procurement operations has improved by over 30%, with a spare parts delivery rate exceeding 98% for overhauls. The efficiency of cross-plant spare parts deployment has increased by over 80%, and the efficiency of data analysis application operations has also improved by over 80%.

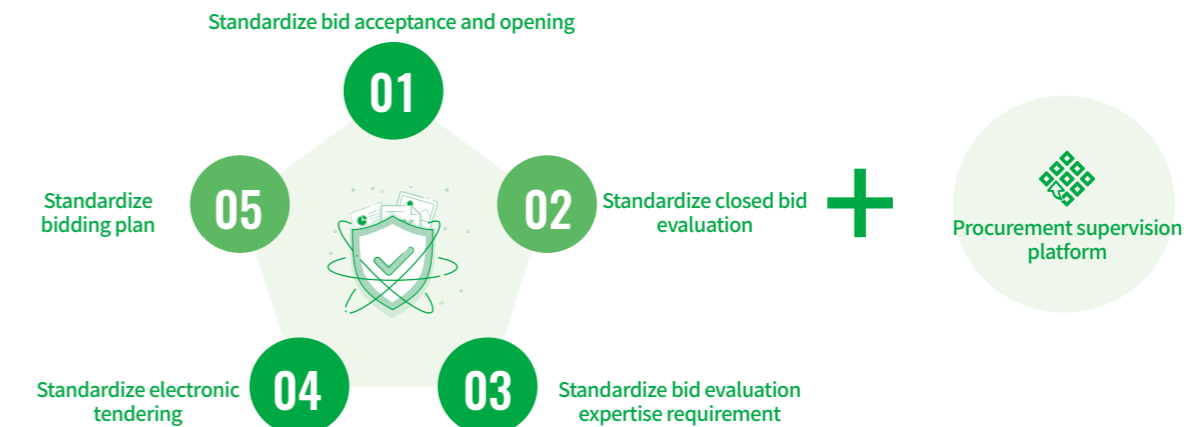
#### Case One-stop search supplier mitigates sourcing risks

CGN Power has launched a one-stop supplier search and recommendation system, consolidating the vast supplier information resources from the Electronic Contract Platform and the E-Mall. This system enables precise matching with 17,919 suppliers across 4,875 procurement categories. It effectively enhances procurement sourcing efficiency and mitigates risks associated with single sourcing, receiving recognition from 80% of the users.

### Transparent procurement

Based on the principles of fairness, openness and justice, CGN Power adheres to transparent procurement and has formed the "Five Standardizations and One Supervision" mechanism. We unify the acceptance and opening of bids through the electronic platform and conduct completely closed bidding evaluation. Continuous efforts are also made to enhance transparency in procurement through measures such as improving systems, standardizing criteria, and establishing smooth feedback channels.

#### Five Standardizations and One Supervision



During the Reporting Period, in order to further transparent procurement and improve procurement transparency, CGN Engineering adhered to the principle of "full disclosure." It promoted procurement transparency on all fronts. In addition to disclosing bidding and non-bidding procurement information on the ECP platform, some subsidiaries also added a "Procurement Transparency" section on their internal websites, providing synchronized updates on the transaction results of all procurement projects, and ensuring consistent disclosure of project transaction amounts internally and externally. By granting access to the procurement system to discipline inspection commission, inspection department, and audit department and other supervisory authorities, it strengthened oversight and effectively improved the standardization and transparency of procurement.

#### For publicly tendered procurement projects

- We advance related work in strict accordance with the *Bidding Law of the People's Republic of China* and the *Measures for the Administration of the Issuance of the Bidding Announcements and Publication Information* and other relevant laws and regulations, and clarify the specifications of the *Tender Notice and Publicity Data Interface Specification*. The bid submission and opening, publication of procurement notices, and shortlisted candidates are conducted through the electronic platform, and channels for objections and feedback are provided.

#### For non-tendered procurement projects

- Reference is made to the standards of publicly tendered procurement projects. Suppliers are allowed to voluntarily sign up for the projects. Procurement notices and transaction results are published on the electronic platform following a unified procedure. An online mechanism for objections and feedback is established to accept social supervision.

#### Case CGN Engineering launches procurement supervision digital tool to promote transparent procurement

To further enhance the supervision intensity and accuracy of contract procurement, CGN Engineering has launched the first phase of the "Digital Integrity Supervisor" project. This tool enables the identification of significant risks and hidden dangers such as intensive bidding, high-priced bids, and complaints against bidders. It creates a denser supervision network to advance the "Transparent Procurement" project and effectively enhance supervision effectiveness.

Strict access

In 2023,  
**3,679** Suppliers accessed

**557** Problematic suppliers removed

CGNPC actively seeks qualified potential suppliers and establishes a strict supplier review mechanism. Through document review, source review and other reviews, the technical, safety and quality assurance, and commercial personnel conduct qualification review on potential suppliers according to the four-tier procurement category, strengthening the standardized, necessary, rational review of suppliers in the stage of supplier introduction. The review results are mutually evaluated and recognized within the group. It achieved unified management and sharing of supplier resources, while ensuring that suppliers co-operating with the Company are in compliance with laws, regulations and various requirements. During this Reporting Period, the Company established a supplier qualification management team and formulated uniform standards. It conducts rigorous reviews of supplier introduction applications submitted by subsidiaries, rejects suppliers that clearly do not meet requirements, and eliminates untrustworthy or fraudulent suppliers.

Document Review

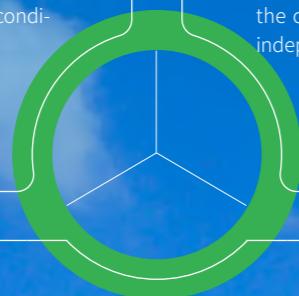
We send qualification documents to suppliers and determine whether they are qualified for bidding and performing the contract according to their returning documents. The main review factors include supplier's basic qualification, relevant performance, SQE and technical level, financial condition, etc.

Source Review

For suppliers that require source review, after passing the document review, source review will be conducted at the supplier's location as needed, including factors such as SQE, technology and business. According to the supplier's intended supply category, the corresponding review strategy is adopted and independent written opinions are issued.

Other Reviews

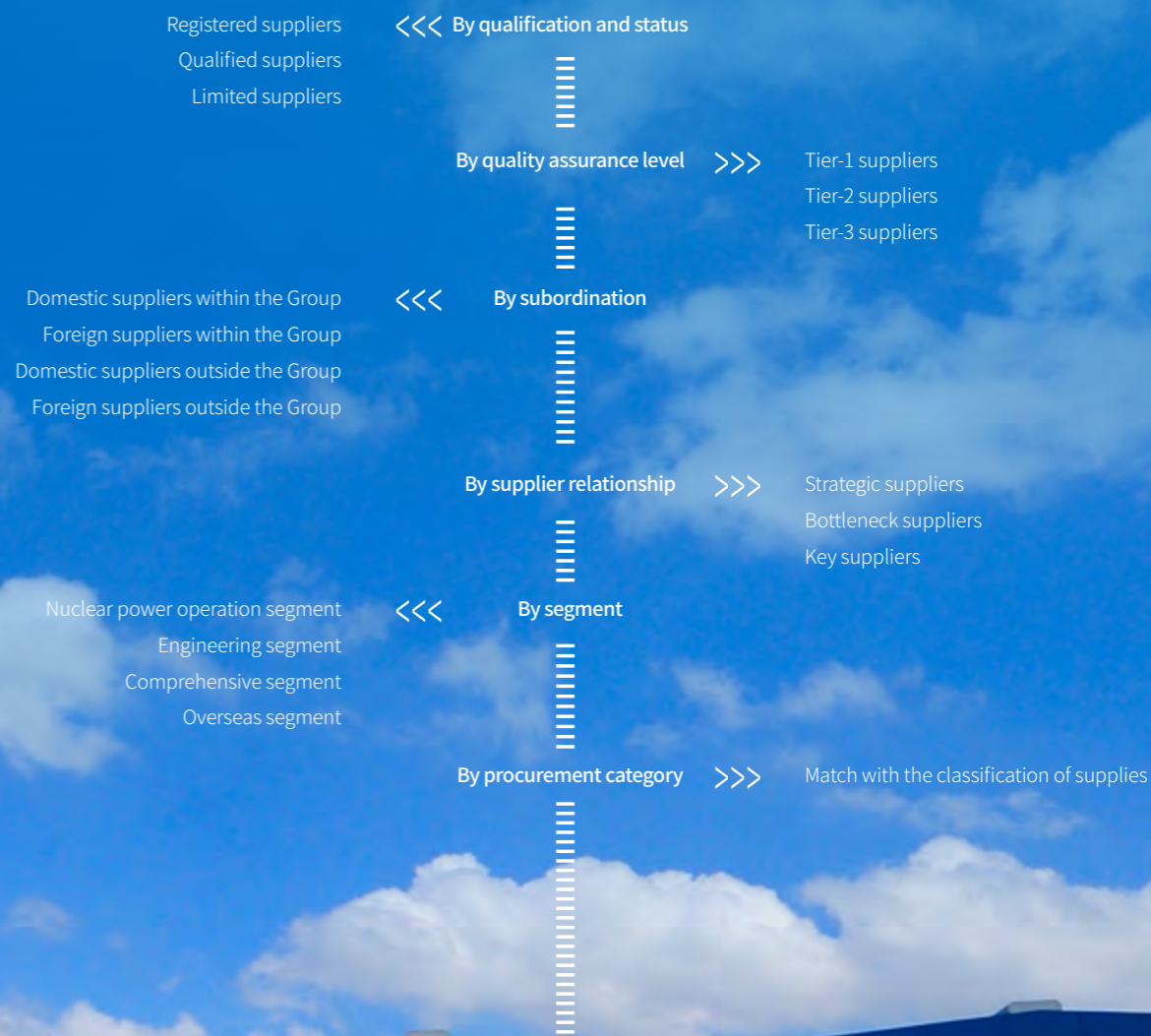
Due to the nature of different businesses, subsidiaries can freely choose to engage with external agencies to assess, simplify the process or use other special methods. Each subsidiary has clearly stipulated the corresponding provisions in the detailed implementation rules.



Supplier classification

To manage qualified suppliers by classification, CGN Power has built a supplier classification system that meets the business needs, adapts to a variety of management and statistical scenarios and is dynamically maintained. The Company continuously improves its classified control measures. During the Reporting Period, we implemented the latest Supplier Intelligent Grading System, which involved multidimensional screening, analysis, and summarization of supplier transaction data. Following the principle of "equal rights and responsibilities," the Company improved the supplier qualification grading management strategy. The supplier management module in the ECP system was comprehensively transformed, encompassing supplier introduction, qualification maintenance, and other processes. This transformation enabled precise supplier grading and efficient supplier management.

Supplier classification system





### Fulfilling capacity evaluation

In 2023,

**176**

Key tier-1 suppliers reviewed

**9.47%**

Proportion to the total reviews

**284**

Key non-tier-1 suppliers reviewed

**15.29%**

Proportion to the total reviews

To improve suppliers' capabilities for implementing contracts, performance evaluations are conducted by CGN Power for all suppliers at least once a year. The evaluation encompasses seven dimensions, including technical competence, quality, cost, delivery, and service, as well as environmental conservation and social responsibility, to establish a responsible supply chain.

All evaluation results are recorded and archived on the Supplier E-commerce Platform. All subsidiaries also conduct contract evaluations for suppliers on a regular basis to ensure a continuous record of evaluations throughout the contract execution cycle. For suppliers participating in operational maintenance and engineering construction of NPPs, a standardized performance evaluation system has been established, which is consistent with the Company's procurement strategy.

#### Case Conference for nuclear power operation spare parts supplier organized to honor excellent suppliers

In June 2023, CGN Power convened the 2023 conference for nuclear power operation spare parts suppliers, with representatives from 37 key spare parts suppliers in attendance. The conference recognized suppliers with outstanding performance in 2022 by presenting four awards: "Five-Star Rating," "Four-Star Rating," "Excellence in Performance Improvement," and "Outstanding Collaboration." These awards aimed to galvanize excellent suppliers to improve their performance in fulfilling contractual obligations.



### Withdrawal management

CGN Power has formulated the Supplier Misconduct Management Process to select and eliminate suppliers based on evaluation results, and has issued the lists of suppliers requiring special attention and blacklisted suppliers. Based on the supplier risk monitoring platform, the Company shares the misconduct of suppliers in real time within the Group, and punishes dishonest suppliers with China Electricity Council and China Nuclear Energy Association. Together, we work to build a credit and punishment pattern of "one misconduct behavior leading to restrictions in every aspect". For dishonest companies disclosed by industry associations, we monitor them through measures such as observation, warnings and registration interception.

During this Reporting Period, **350** incidents of supplier misconduct<sup>27</sup> were dealt with, with **71** suppliers listed on the Company-level blacklist and **15** severely untrustworthy enterprises reported to industry associations for joint punishment.

#### Removing suppliers without cooperation needs



- The supplier qualification is valid for 3 years. Evaluations on cooperation needs will be carried out regularly based on the procurement strategy of different categories. The supplier will not be reviewed without cooperation needs, and the supplier will eventually withdraw.

#### Eliminating suppliers with poorer performance



- Based on the procurement strategy of different categories, on the premise of meeting the competitive demand, suppliers with the poorest performance will be eliminated according to the supplier evaluation results.

#### Removing suppliers with serious misconduct



- Suppliers with serious misconduct or major business risks will be blacklisted after being reviewed and publicized, and their qualification will be automatically cancelled.

#### Prohibiting suppliers under special situations



- Suppliers that are punished or restricted by regulatory authorities, blacklisted by relevant government authorities or other departments, and included in the joint punishment list as well as those violating relevant political standards and with invalid or expired special qualification certificates will be prohibited.

<sup>27</sup> It mainly refers to suppliers who have not strictly fulfilled their contractual obligations.

## ESG risk management for suppliers

The Company pays close attention to the resilience of supply chain. It continuously tracks and assesses ESG risks within the supply chain to identify supplier risks in areas, including SQE and labor. The risk assessment will be incorporated into the processes of admission, procurement, and evaluation. Comprehensive risk prevention measures are implemented to ensure the safety of nuclear power operations. During the Reporting Period, the Company further strengthened suppliers' ESG performance by making targeted efforts to build systems, introduce strict scrutiny system, and optimize management, in accordance with the guiding principles of the *Action Plan for Safety and Quality Improvement in the Nuclear Power Industry (2022-2025)* issued by the National Development and Reform Commission and other four authorities.

### Risk prevention and control of corporate integrity

During the Reporting Period, in order to further prevent risks from suppliers, CGN Power optimized the supplier information platform by integrating it with the national enterprise procurement transaction sourcing and inquiry system. A risk inquiry module was added, and a historical credit database was established to identify supplier records of violations, penalties, and dishonesty in a short period. This enables unified information consolidation, intelligent queries, and high-risk alerts. As of the end of 2023, the Company utilized the system to conduct admission checks on 6,308 suppliers and identified 884 suppliers with risks, establishing an intelligent shield for integrity risk prevention.

Based on its reality, the Company carries out systematic planning on the management of supplier integrity. We analyze the integrity risks of suppliers, and implement multiple integrity-building measures in a multi-level and graded manner. All these efforts aim to promote integrity culture downstream in the industrial chain and foster a good trend of each party adhering to integrity and supervising each other, jointly creating a clean and positive ecosystem in the nuclear power equipment industry chain.

We thoroughly review supplier information in the equipment procurement field, classify integrity risks levels based on criteria such as company nature, duration of cooperation, historical evaluations, etc., and create a panoramic view of supplier integrity risks.

Based on the results of integrity risk classification, with a focus on private enterprises, we select 54 key units in the industrial chain, and advance integrity-building work comprehensively through activities such as signing cooperation agreements, conducting integrity exchanges, making joint integrity commitments, promoting integrity on a daily basis, and conducting reminder education talks.

We organize six collaborative units in the industrial chain to produce the promotional video "Integrity in the Industry Chain," jointly formulate and sign letters of commitment to integrity, and use contractual means to promote the implementation of subcontractors' integrity management responsibilities.

### Prevention of SQE risks

The safety, quality, and environmental(SQE) performance of suppliers hold key to the operation of nuclear power safety and environmental conservation. The joint efforts of suppliers are essential for the goals of SQE. To ensure quality management, along with regular quality control measures, the Company has developed a new system of Quality Responsibility Field. According to the system, all management personnel need to take up heavy responsibilities and assume full accountability. Each person takes responsibility for preventing risks from one key equipment supplier, ensuring that responsibilities are assigned and key equipment quality improvement and risk control are implemented as required, promoting the improvement of supply chain quality, and providing useful reference for supplier learning to subcontractor management.

### Case Strengthening quality control through the "Quality Responsibility Field" mechanism

Since the implementation of the "Quality Responsibility Field", CGN Engineering conducted 54 frontline equipment surveys. 44 key suppliers have been driven to strengthen their risk prevention. Moreover, 24 quality assurance supervision inspections have been conducted, supervising the handling of some issues. 32 quality awareness training sessions have been organized and nearly 500 quality improvement measures have been identified in collaboration with suppliers. Furthermore, efforts have been made to enforce subcontractor classification and control requirements among suppliers, reducing the quality risks associated with subcontracted items. As a result, subcontracted quality incidents have seen a year-on-year decrease.

The Company attaches great importance to occupational health and safety management of contractors. Contractors are required to strengthen their occupational health and safety management, cultivating a safety culture. It continuously supervises suppliers to carry out occupational health management in accordance with regulations to ensure ongoing safety. Specific management methods and measures can be found in the "Safety and Health Protection" section of this Report. For information on suppliers' environmental management methods and initiatives, please refer to the "Green Supply Chains" section of this Report.

## Green supply chains

Upholding the concept of green development, CGN Power conducts green procurement of raw materials. We spread the environmental protection concept through the supply value chain, in a bid to build green supply chain. Environmental protection factors are integrated into supplier management systems such as qualification review, bid evaluation, contract execution, supplier evaluation, spare parts management. By adopting responsible procurement, we promote suppliers to continuously improve the environmental protection performance.

### Qualification Reviews Phase



- CGN Power incorporates environmental factors in the qualification reviews for suppliers. In the tender document, we require bidders to include green nuclear power elements in the submitted technical proposals. The scoring criteria requires that design proposals, raw material selection, subcontractor selection, manufacturing processes, packaging, recycling and other aspects in green elements are newly included in the scoring criteria, which promotes suppliers to fulfill their environmental protection responsibilities at the source.

### Contract Execution Phase



- We have signed contracts with suppliers that require them to conduct green operation in compliance with relevant laws and regulations. Suppliers are required to operate in accordance with ISO 14001 and other the relevant standards, keeping the consumption of materials and resources and minimizing waste generation under control. They should employ eco-friendly techniques to improve efficiency in recycling and reuse. Utilization of green water sources such as rainwater, reclaimed water, and groundwater should be maximized. This includes recycling construction and domestic water, implementing water-saving measures to reduce unnecessary water usage, and comprehensively minimizing the impact on the environment throughout the operational process.

### Engineering Construction Phase



- We strictly follow the principle of green construction and have implemented the CGN Engineering Green Industrial Chain Management Rules. It requires each business center and project implementation unit to designate departments responsible for the green industry chain, arrange special personnel to promote the effective implementation of management rules and incorporate the green industry chain management requirements into departmental procedures or systems. These efforts will contribute to the standardized and procedural green industry chain management and realize the green industrial chain management in engineering construction.

During the Reporting Period, CGN Engineering conducted data collection and discussions, and summarized the experiential formulas for the design of ammonia nitrogen indicators. Moreover, in terms of sewage stations, road spraying, mixing stations, exhaust gas collection, hazardous waste collection, and general solid waste treatment, specialized teams were organized to develop environmental implementation plans.

## Supplier empowerment training

CGN Power actively develops a supplier management model features transparent communication and win-win cooperation to strengthen experience exchange with suppliers, and provided targeted and effective resource support. Our goal is to promote suppliers to improve their management and product quality and reduce supply chain costs. Meanwhile, we work to establish collaborative mechanisms with strategic suppliers to improve the efficiency, quality, and safety of the industrial chain.

### Providing regular supplier training



- We regularly provide training for suppliers, including corporate culture, supplier management, ECP implementation, CA application, procurement and bidding management, etc., with an aim to help suppliers understand the Company's requirements and culture, improve the quality of supply services, equipment and construction, and improve cooperation efficiency.

### Promoting the "quality coordination mechanism"



- In response to the current situation of numerous enterprises and uneven quality management levels in the nuclear power equipment industry chain, we actively promote the "quality coordination mechanism" of the equipment supply chain in bidding and procurement management, and strengthen the process control of equipment manufacturing quality, in a bid to build a win-win industrial chain ecological cycle.
- In the field of nuclear power engineering construction, through experience feedback platform, we timely feedback equipment problems during nuclear power engineering construction to similar equipment suppliers, and promote the effective implementation of experience feedback on nuclear power equipment quality along the supply chain.
- In the field of nuclear operation, each subsidiary has established a supplier management committee to promptly report safety and quality issues such as on-site operation and maintenance to suppliers, and track their implementation.

### Focusing on cultivating core suppliers



- We strengthen cooperation with first-time localized equipment suppliers and contractors by assigning full-time personnel, quality monitoring and business exchanges and other means. Besides, we provide training for suppliers to raise their quality awareness, and guide suppliers to improve their quality management capabilities for subcontractors. The Company has dispatched quality assurance experts to multiple partners such as CFHI, Shaanxi Diesel Heavy Industries, and Dongfang Heavy Machinery, with more than 130 person months stationed at the factory.
- CGN Power has set up the CGN Joint R & D Center for the localization of nuclear power equipment in CGN, and established supply chain cooperation with more than 70 domestic nuclear power equipment manufacturing and R & D organizations. The center holds regular exchange meetings on the improvement of localization capacity, builds an industrial chain of nuclear power equipment, and improve the overall equipment manufacturing of China's nuclear power industry.



## Case Building the modern "Hualong One" industrial chain in collaboration with Over 5,400 enterprises

To meet higher requirements in equipment supply guarantee and collaborative capabilities for the mass construction of "Hualong One" units, CGN Power relies on CGN Joint R&D Center and collaborates with over 5,400 upstream and downstream enterprises in the industrial chain to jointly develop new technologies and manufacture new equipment. New breakthrough has been made in the core technology of key equipment and a globally advanced independent nuclear power standard system has been established. This effort has essentially formed a complete nuclear power equipment industrial chain, enhancing the resilience of the nuclear power equipment industrial chain.

### Common quality objectives

#### In April 2023,

CGN Power, along with 13 domestic nuclear power industry chain enterprises, convened the "Hualong One Western First Pile Experience Summary and Batch Project High-Quality Construction Promotion Conference". Together, they reviewed the experience of constructing nuclear power plant units and discussed how to advance the construction of "Hualong One" batch projects effectively. They signed the "Hualong One Batch High-Quality Construction Commitment Letter". Participating units reached a clear consensus on cooperation, aiming for a position of "more secure, higher quality, more sustainable" and jointly achieving the production goal of continuous improvement and better units one after another.

#### In November 2023,

CGN Joint R&D Center held a plenary meeting alongside the conference on "Hualong One" industrial chain construction. Over 440 representatives from nuclear power equipment industry chain units attended the meeting. Under the consensus of joint construction, shared benefits, and mutual success, they aim to cement the foundation, enhance technological complementarity, strengthen integration, and promote optimization to improve the core competitiveness of industrial chain-related enterprises. This effort will advance the construction of the modern "Hualong One" industrial chain with high quality.



The CGN Hualong One first unit experience summary and batch project high-quality construction advancement meeting

### Shared innovation efforts for win-win results

The Company collaborates with industry chain units to tackle core technological challenges and promote the localization of key equipment. By the end of 2023, CGN Power, along with upstream and downstream enterprises, has conducted over 10,000 equipment assessments and evaluations, breaking through more than 400 critical core technologies. They have acquired over 300 invention patents, and their R&D and design achievements have garnered over 580 awards and patents internationally and domestically. They have achieved independent control over the core technology of more than 1,000 sets of high-end nuclear power equipment. The construction of the "Hualong One" drives industry chain enterprises to effectively leverage their advantages in the nuclear power industry chain, collectively enhancing the resilience of the industrial chain.

## Deepening Diverse Cooperation

CGN Power continues to engage in high-quality technical exchanges and strategic cooperation with government, industry partners, enterprises, universities, and other partners, establishing deep and high-level partnership. This enables the complementary and mutually beneficial utilization of resources.

### Case Participating in the 24th AESIEAP Conference

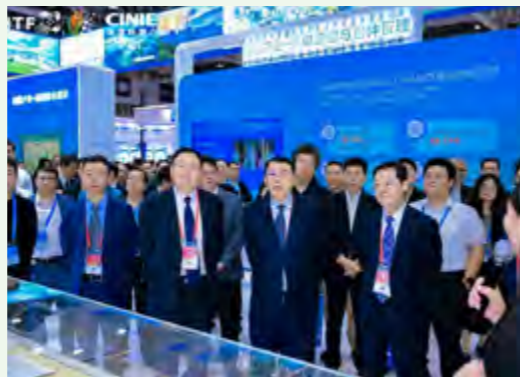
In October 2023, the 24th AESIEAP Conference with the theme of "green and low-carbon development lights up the future" was successfully held. Qin Yuxin, Vice President of CGN Power, delivered a keynote speech titled "Developing clean energy, Lighting up the Future of the Asia-Pacific Region". CGN Power's booth showcased numerous technological innovations, including China's indigenous third-generation nuclear power technology "Hualong One" and the country's first independently developed nuclear-grade digital instrumentation and control platform, known as the "FirmSys". These displays fully demonstrated the Company's industrial advantages and practices of deep involvement in global energy governance and energy structure transformation.



The public visits the booth to learn about technological achievements of the "Hualong One" and the "FirmSys".

### Case Attending the second China Nuclear Energy High-Quality Development Conference

In November 2023, the Second China Nuclear Energy High-Quality Development Conference and Shenzhen International Nuclear Energy Industry Innovation Expo were successfully held. This expo focused on the road to modernization of China's nuclear energy. Yang Changli, Chairman of CGN Power, delivered a speech at the opening ceremony of the conference. The conference featured a primary session titled China's Path to Innovative Development in Nuclear Energy, as well as 17 breakout sessions covering topics covering fusion research, high-temperature gas-cooled reactors, and advanced construction technologies for nuclear power. The Company, along with experts and scholars from the entire nuclear energy industry chain, shared their latest research achievements and insights from industry experts, collectively exploring the path for future development.



### Honors

In 2023, the project **Research and Industrialization of Key Technologies for the Impact of Fragment Source Terms on Core Cooling under LOCA Operating Conditions in Nuclear Power Plants** won the second prize of the Guangdong Provincial Science and Technology Award. The project was jointly conducted by CNPRI and CGN Engineering, domestic universities and equipment manufacturing enterprises through industry-university-research cooperation in the past over ten years.



## Contribution to Industry Development

CGN Power has been leveraging the leadership influence of the nuclear power industry chain. Through various forms such as participation in the establishment of industry standards, building of consortia, active engagement with international advanced experiences, and promotion of new industry technologies, we actively contribute to the development of the industry through open real actions.

### Case Gold award from China Patent Awards fills domestic technological gap

With the "Online Measurement Method for Three-Dimensional Power Distribution in Reactor Core" developed, CGN Power won the Chinese Patent Gold Award. This technology enables high-precision online monitoring of internal parameters within the reactor core, significantly enhancing the flexibility and economics of nuclear power plant operation. Its development supported CGN Power's "Hualong One" technology to pass the Generic Design Assessment (GDA) review by the UK Office for Nuclear Regulation (ONR) and certification by the European Utility Requirements (EUR). It removed the bottlenecks in online monitoring systems for exported reactor types and brings in similar domestic products.



### Honors

A paper from Ningde Nuclear was awarded the Best Paper at the China (International) Nuclear Power Instrumentation and Control Technology Conference. Shenzhen CGN Engineering Design Co., Ltd. and Ningde Nuclear respectively has 1 and 2 projects, which were awarded the **ICQCC International Silver Award and International Gold Award**. **The results of these projects have high value for promotion and have been applied to multiple ongoing projects of the "Hualong One"**



Opportunities and Challenges

As a responsible corporate citizen, practicing sustainable development requires not only our efforts to reduce negative impacts on the environment, but also our sharing of development achievements with the community for common development. Good community relationships will feed back enterprises with greater development space. For nuclear power enterprises, a sound community relationship management brings both challenges and opportunities.

Our Strategies

In line with the 3N harmonious community concept of "safe, friendly and warm neighbor", CGN Power maintains transparent communication with the public, integrates with the community where the project is located for shared development, and shares development achievements with local residents. Meanwhile, in active response to the national strategies of common prosperity and rural vitalization, we leverage our own advantages in facilitating rural prosperity and development.

Main Achievements in 2023

- 200,000 public visits to the nuclear power science exhibition hall, 60,000+ Students participated in "popularization of nuclear science in schools" campaign
- About 20.6 million yuan invested in rural vitalization assistance, 9 rural vitalization assistance projects implemented

2024 Outlook

- Maintain transparent information communication and continuously innovate in communication methods to enhance public understanding and trust in nuclear power.
- Deepen community participation, drive local employment, promote local economy, and build harmonious community relationships.
- Strengthen the integration of the Company's industrial development and rural vitalization, and promote and replicate successful experiences, to promote rural vitalization to a new level.



# Integrated Development for a Harmonious Society



## Enhancing Public Communication

Pursuing open and transparent operation, CGN Power creates the "3N Harmonious Community" model, and launches the 3N Community Development Action of "Safe Neighbor, Friendly Neighbor, and Warm Neighbor". In this way, we continuously broaden communication channels, strengthen interaction with the community, fully guarantee the community residents' right to know, and endeavor to enhance the public's understanding of and trust in the operation of nuclear power.

### Public communication and management

The development of nuclear power cannot be separated from public support. CGN Power always adheres to the attitude of sincere communication. With the philosophy of "building a project, driving the local economy, and benefiting the people", the Company plans public communication at all stages of nuclear power project planning, design, engineering construction, and production operation. In this way, we strive to strengthen information disclosure and public participation, and safeguard the public's right to know, participate, and supervise. Besides, we fully respect the demands of stakeholders, and establish specialized communication channels to respond to stakeholder concerns in a targeted manner. Through measures such as deepening cooperation and supporting rural vitalization, we promote integrated development, and strive for a positive integration of the national nuclear energy development strategy, local economic development policies, and the interests and demands of the people, thus laying a solid mass foundation for the development of the nuclear energy industry. In 2023, the Company did not receive any complaints from the surrounding communities of the nuclear power projects.

### Whole-Process Transparent Communication Mechanism

#### Planning and design stage

- **Establishing a communication and coordination mechanism.** We strengthen communication with government departments, neighboring residents and other stakeholders, balance the demands and expectations of all parties, and improve the transparency of project planning and design. We also timely communicate with the public and invite the public to participate in environmental impact assessment, publicly disclose project-related information, environmental impact, and safety distance, and invite surrounding residents to participate in activities such as questionnaire surveys, open experience days, and symposiums.
- **Protecting the legitimate rights and interests of residents.** Joining hands with the government, neighborhood committees (village committees) and other departments, we jointly publicize the national nuclear energy development strategies, nuclear power science knowledge, and compensation policies for land acquisition. Meanwhile, we actively get an understanding of the actual needs of the residents, moderately adjust the project planning and design scheme, and fully respect and safeguard the legitimate rights and interests of community residents. All important processes of the project are publicized.

#### Engineering construction stage

- **Strengthening the transparent management of core demands.** With regard to the core demands of the public, such as zero radiation, zero noise pollution, zero safety accidents, zero negative impact on the living environment, etc., we have strengthened the transparency management of the engineering construction stage. We have also publicly disclosed information on safety management measures and the impact of the radiation environment during the construction of the project, so as to eliminate public doubts and promote the smooth implementation of the project.
- **Inviting the public to visit the construction site.** Publicity on the environmental impact of nuclear power plants, green construction standards, policies and regulations is carried out on a regular basis. Information related to construction is made public at every important point of construction. In addition, we invite residents in the surrounding areas to visit the construction site to experience the safe construction, and the green construction standards and processes.

#### Production and operation stage

- **Publicizing safety information.** A public platform for nuclear and radiation safety information of the operating bases is set up so that the public can access monthly information on capacity factors, radiation protection, industrial safety, control over waste gas, wastewater, and solid waste, and environmental monitoring of nuclear power plants at any time. The incidents that occur after the loading of nuclear power units should be promptly disclosed on the platform for nuclear and radiation safety information of each nuclear power plant within 2 natural days (excluding the day of defining the incident) according to relevant regulations. This move fully safeguards the public's right to know about the operation of nuclear power units. Among them, the "Nuclear and Radiation Safety Information" public platform of Daya Bay NPP is the first platform of China's operating nuclear power plants dedicated to disclosing to the public information on the operation and safety of NPPs.
- **Responding to public concerns.** We regularly organize press conferences to proactively disclose the content of nuclear power safety, environmental protection and community development, and respond to the concerns of relevant parties. We also regularly organize "Public Experience Day" activities, open the nuclear power science exhibition hall to the public, and launch various forms of science popularization activities in the community to attract the participation of all sectors of the society, thus enhancing public rational knowledge about nuclear energy.



## Community communication activities

We continuously innovate in channels and methods of community communication. We build a platform for interaction with the public through press conferences, Weibo, WeChat, short-video platforms (such as Douyin, etc.), and public open days, etc. In doing so, we listen to and respond to the public's major concerns about the development of nuclear power in a timely manner. The Company has set up nuclear power science exhibition halls at all nuclear power bases to enable the public to understand the history of nuclear power development, and enhance their awareness of nuclear power safety, low-carbon initiatives and environmental protection in a variety of interesting forms. At the same time, we continue to promote the "popularization of nuclear science in schools" campaign to popularize nuclear power knowledge among primary and secondary school students. After years of efforts, this campaign has been promoted in the vicinity of nuclear power projects in a number of provinces.

9

Press conferences/media briefings held

18

Permanent science exhibition halls

200,000

Public visits

140

Schools involved in the "popularization of nuclear science in schools" campaign

60,000+

Student participants

### Case CGNRI's "Science Popularization for the Future" Action

In 2023, CGNRI, together with well-known schools in the surrounding area, continued the "Science Popularization for the Future" action, and deeply engaged in the popularization of clean energy science featuring nuclear energy. Through the compilation of a clean energy science popularization textbook, the creation of a clean energy science popularization course, the implementation of a clean energy teacher training, the completion of a set of clean energy experimental projects, and the organization of a clean energy base study, we have provided young people with a unique "first lesson of the beginning of the school year" on the popularization of nuclear energy science by interacting with students in classes. In this way, we raise their awareness of the high-quality development of nuclear energy.



### Case CGN Engineering carries out science popularization activities in schools

During the National Science Popularization Day in September 2023, CGN Engineering carried out science popularization activities in schools around the nuclear power projects under construction in Huizhou, Fangchenggang, and Lufeng, with the participation of about 2,000 teachers, students and parents. The science popularization lecturer team of the activity compiled a batch of science popularization courseware focusing on the basic principles of atomic energy and environmental protection, etc. Rich forms of exhibitions, lectures, interactive games, etc. were adopted to fully mobilize the students' interest and curiosity in learning, attracting extensive participation from the students.



### Case Taishan Nuclear invites Macao public to visit nuclear power plant

In 2023, in order to promote the scientific knowledge of the Macao public on nuclear power, Taishan Nuclear invited the Macao public to visit the nuclear power plant, so that the public could have an immersive experience on the nuclear power plant by means of science lectures, science popularization, site visits, and experience of nuclear safety culture, etc. In the course of the activities, each visit was explained by relevant experts, and a Q&A session was reserved for the public's concern about fuel rods, nuclear emergencies and other sensitive issues, and frank explanations were given to eliminate the public's misgivings. In 2023, a total of nearly 400 Macao compatriots visited Taishan NPP.



### Case Creating the "Cultural Journey" brand series of activities, a new way of communication for nuclear power projects

In August, 2023, CGN Engineering invited teachers of Artists Association in Huilai County of Jieyang City to Daya Bay Nuclear Power Base to carry out "cultural journey" field survey. Focusing on "lucid waters and lush mountains" in the nuclear power base, the teachers carried out on-site theme painting and calligraphy creation, with more than 30 pieces of exquisite paintings and calligraphy being created. This activity was publicized by more than ten platforms media, which achieved good results. In addition, CGN Engineering also organized a series of activities such as the "Departure Journey" of retirees from Huilai County and the "Journey of Journalists" of Jieyang Daily, etc. The display and sharing of artworks effectively shortened the distance between the public and the nuclear power plant, strongly promoting the understanding and support of local governments and the public for nuclear power.



Cultural Journey - Daya Bay Nuclear Power Base Field Survey Works Collection by Artists Association in Huilai County

**Major Honors**  
 Hongyanhe Nuclear was selected as One of the **Eighth Batch of National Ecological Environment Science Popularization Bases**

Ningde Nuclear was honored as one of the **"Top Ten Open Environmental Protection Facilities in Fujian Province"**.

## Driving Community Development

Committed to the vision of "boosting the economy and benefiting the people there in which we conduct a construction project", we attract industrial investment, create jobs, and contribute to local tax revenue. Meanwhile, charitable activities are launched to give back to the local community. Our efforts have energized the development of the local economy constantly.

### Conducting local procurement

- We regard the construction of each project as an opportunity to share development with the community. So we actively carry out local procurement to drive the development of the local industrial chain.
- Hongyanhe Nuclear built a platform for Hongyanhe town government and base contractors to exchange employment information. Through the platform, the company regularly releases labor employment information, and advocates contractors to give priority to hiring neighboring people under the same conditions. Meanwhile, it has joined hands with the labor union to provide assistance for the neighboring communities through the procurement of special agricultural products (apples), with the cumulative procurement of nearly 10,000 kg.

### Promoting local employment

- The nuclear power bases promote the local employment. They carry out strategic cooperation with local governments and communities, and provide employment opportunities for community residents in accordance with project needs. Working to increase the proportion of local workers, they share the fruits of development with local residents.
- Ningde Nuclear actively participated in the 2023 "Spring Breeze Action" Job Fair hosted by Fuding Human Resources and Social Security Bureau. Meanwhile, it organized a number of partners in the base to actively participate in the Job Fair, which provided more than 140 positions, including engineers, technicians, repairman, cooks, cleaners, and security guards.

### Improving infrastructure

- While providing clean energy to local communities, the Company also strives to improve community infrastructure conditions, and better the living environment and health of neighboring residents. Together with local people, we hope to share and build a better home.
- Fangchenggang Nuclear actively promotes the project of 1.4 kilometers of road hardening and facility improvement of the mulberry orchard of village collective economy, stimulating the development of local industry with improved facilities.
- Ningde Nuclear funded the construction of the walking path and park in Nanzhaoao, Niulanggang Village, Taimushan Town, and the road and public restroom in Dongcheng Village. It also assisted in the construction of the street lamps along the route from Yujingli to Changshiyuan in Yujingli Village, Xiamen Town, the fitness center of Nationality Park, and the fitness walkway in Nanshan Mountain of Zhuyang Village in Dieshi Town. In doing so, we have continued to improve the lives of the local residents.

### Case Yangjiang Nuclear sells lychee through live streaming

In 2023, Yangjiang Nuclear planned two periods of "Consumption-driven Assistance Helps Rural Vitalization" thematic activities, coordinating the labor union to purchase more than 1.3 million yuan of Dongping Town's special agricultural (fishery) products, and nearly 1.2 million yuan of agricultural products from Lingyun/Leye County, an area receiving paired assistance. On the eve of the Dragon Boat Festival, Yangjiang Nuclear also organized the "Running Lychee - 'Nuclear Power Base Makes Efforts to Help Farmers' rural vitalization live streaming. Joining hands with the partners in Yangjiang nuclear power base, Yangjiang Nuclear cumulatively helped lychee growers to sell more than 5,000 kg of lychee, with the sales of nearly 180,000 yuan.



### Case Fangchenggang Nuclear holds special job fair for rural vitalization

In December 2023, Fangchenggang Nuclear led several partners to carry out the special job fair in Jiayou Town, Lingyun County. The job fair was mainly for laborers who return hometown, college graduates, urban unemployed and other types of job seekers, attracting about 200 people, with 50 people having intentions for the jobs.



### Case Lufeng Nuclear helps Qian'ao village cope with typhoon disaster

In 2023, under the impact of Typhoon No. 4 "Talim", the shoulder of the coastal road in Qian'ao Village, which is adjacent to the Lufeng Nuclear Power Project, was washed away by the huge waves caused by the typhoon, exposing the villagers living along the road to the risk of personal safety. In order to ensure the safety of the villagers in Qian'ao Village, it is necessary to seize the limited time to urgently reinforce the road shoulder before the landfall of Super Typhoon No. 5 "Doksuri". After learning about the local government's request, Lufeng Nuclear immediately responded and inspected the disaster situation on the spot. The company therefore determined the emergency reinforcement plan, the number of specifications of the required stone, the transportation path and loading and unloading location, and quickly organized the stone transportation to solve the immediate needs of Qian'ao Village. When Typhoon "Doksuri" hit the coastline of Qian'ao Village, the road along the coastline withstood the test of huge waves.





## Giving Back to the Community

CGN Power encourages its employees to participate in charitable causes and volunteer activities in the neighboring communities. We carry out environmental protection activities, support local education development, and care for the local disadvantaged groups. We try our best to enhance the well-being of the community.

<b>12,230</b> Volunteers	<b>6,591</b> Employees participated in volunteer activities in 2023	<b>18,615</b> hours Volunteer service and social welfare activities	<b>25.5696</b> million yuan Invested in charity totally
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## Protecting the community environment

We protect the community environment and carry out environmental cleaning and tree planting activities every year to support the improvement of local environment. In doing so, tourists are attracted to visit the local area, promoting the transformation of natural resource into development advantages. The Company has invested funds in building the wastewater treatment project of the silkworm industrial park in Lingyun County, fundamentally solving the problem of industrial wastewater pollution in the silkworm industry and facilitating the green development of the local economy.

### Case **Daya Bay Nuclear Power Base launches "Reducing Carbon and Plastic to Build a Beautiful Bay Area that is Clean and Green" Campaign**

On the occasion of the 52nd World Environment Day on June 5, 2023, Daya Bay Nuclear Power Base organized a publicity campaign on the theme of "Reducing Carbon and Plastic to Build a Beautiful Bay Area that is Clean and Green". With a focus on the topic of "Building a Modernization of Harmonious Coexistence between Humans and Nature", the campaign exhibited a beautiful picture of the nuclear power bases of the company guarding the environment and biodiversity, and realizing human-nature harmony.



## Promoting human development

Respecting the cultural practices of the communities and the local living habits, we endeavor to promote the development of community cultural diversity, such as local customs, art, history etc., and protect them. We also actively support and participate in local cultural activities, in a bid to boost the humanistic development of the communities.

### Case **Lufeng Nuclear celebrates festivals together with local villagers**

When Mid-Autumn Festival in September 2023 was approaching, employees of Lufeng Nuclear were invited to participate in the Rural Vitalization Culture Show and Celebration Gala for Mid-Autumn Festival and National Day held in Shanglin Village. They carefully prepared programs such as cheerleading and solo singing. The employees not only created a joyful and festive atmosphere with the villagers, but also made themselves closer to the surrounding villagers, thus promoting harmonious development with the surrounding villages and towns.



## Supporting education

We support the development of education in the communities where we operate, and actively help local communities to improve their education, bringing the momentum of sustainable development to local communities.

### Case **100 primary and secondary school teachers participate in the "Training Program for Teacher Quality Enhancement"**

In September 2023, under the strong coordination of Yangjiang Nuclear, the quality improvement training course for primary and secondary school teachers in Dongping Town, which was organized by the School of Computer Science of South China Normal University, was successfully completed. 100 primary and secondary school teachers from Dongping Central Primary School, Dongping Middle School and other schools participated in the training. This training focused on the comprehensive quality improvement of teachers. Relevant experts from universities and primary and secondary schools were invited to give special tutoring on educational information technology and artificial intelligence, theoretical concepts of education and teaching, etc. This training aimed to enhance the ability of rural teachers in terms of education and comprehensive quality, promoting the development of local education.



## Caring for vulnerable groups

The Company cares about the elderly, children and other vulnerable groups in the community, and organizes its employees to carry out volunteer services, assistance in students' education to convey warmth and goodwill to the society.

### Case Ningde Nuclear carries out science popularization lectures and co-construction activities in the Taimushan Senior University

In November 2023, volunteers of Ningde Nuclear went to Fuding Taimushan Senior University to carry out the "Learning New Ideas Together and Promoting Vitalization Together" volunteer service activity. The company offered lectures on nuclear power science and technology for more than 80 senior university students. Volunteers also offered electrical repair, hairdressing, garbage cleaning and other services for the elderly.



## Carrying out charitable donations

Hongyanhe Nuclear donated 550,000 yuan to Wafangdian Charity Federation, which was used to support Hongyanhe Town to carry out assistance for people with serious illness, assistance for marginal families in difficulties, maintenance of kindergarten campus and purchase of teaching supplies in Hongyanhe Town, and maintenance of Party building activity room in Pingshan Village of Tuoshan Town, etc. In addition, a total of 150,000 yuan was donated to Project Hope of Dalian City, which was used to support the updating of teaching equipment and campus maintenance of Liaohe Hope Primary School in Hongyanhe Town.



Hongyanhe Nuclear donates 550,000 yuan to Wafangdian Charity Federation.

## Contributing to Rural Vitalization

In active response to the national rural vitalization strategy, the Company orderly carries out rural vitalization work in Guangxi Zhuang Autonomous Region, Guangdong Province, Fujian Province and other places. We continue to improve the lives of the local residents, and develop characteristic industries, comprehensively helping the villages move towards the fast track of rural vitalization.

### Lingyun and Leye counties of Baise City in Guangxi Zhuang Autonomous Region

- Strengthening educational support.** In Lingyun and Leye counties, CGN Power continues to offer "Egret Class" in elementary schools, junior high schools and senior high schools. Keeping the existing class size unchanged, a total of 20 classes have been set up. Specifically, 99 students of Class 2023 from "Egret Class" in senior high school achieved a record high in terms of undergraduate education. In Lingyun County, the "Rainbow Plan" educational program was promoted at the Lanjin Primary School, and 20 offline activities were carried out, such as relay teaching, dream experience, and dental protection lectures. In doing so, we have broadened students' horizons and inspired students in ethnic minority areas to love the CPC and the country.

### Dongping Town, Guangdong Province

- Carrying out diversified assistance activities.** Yangjiang Nuclear visited and expressed their concerns to 108 impoverished people and 398 elderly people in Dongping Town. It also awarded teaching and learning achievements. In 2023, a total of 176 teachers and students in Dongping Town won the "Yangjiang Nuclear Teaching and Learning Scholarship". Nine training courses for skilled personnel were organized, such as "Guangdong Skilled Workers" (for low-voltage electrician certification), "Southern Guangdong Housekeeping" (for intermediate baby-sitter certificate) and "Red Cross Emergency Worker". This has benefited 459 villagers.
- Developing local industry to enrich the residents.** Yangjiang Nuclear helps the scientific operation of Yangjiang Yunxing Environmental Protection Engineering Co., Ltd, which is a collective enterprise in Yunbo village of Dongping Town. On the basis of undertaking cleaning business of roads outside the Yangjiang NPP, we have explored the road cleaning and other businesses in Da'ao village of Dongping Town and Pearl Bay tourist attractions, achieving revenue of nearly 1.4 million yuan.

### Yu Jing Village, Xiamen She Township, Fuding City, Fujian Province

- Carrying out diversified co-construction activities.** A number of Party branches of Ningde Nuclear went to Yu Jing Village to carry out diversified co-construction activities, such as caring for young people in difficulty, assisting the elderly and the disabled, providing free haircuts, addressing employment issues, providing free maintenance, helping students and farmers, etc. We have carried out a total of more than 30 times of assistance activities.
- Developing village industries.** We have explored Yujing Village homestay and tourism resources, improved infrastructure, and enhanced the village appearance. Thus the village has won the "Gold Medal Tourism Village", "Beautiful Leisure Countryside", "Colorful Ningde - Most Beautiful Gold Medal Tourist Village" of Fujian Province. The village's characteristic homestay, such as Platinum Palace on the Sea, Yujingli, and Tinghai Station, have developed into new forms of rural tourism.
- Conducting consumption-driven assistance.** Ningde Nuclear has frequently organized the group purchase of tea, fruit and other characteristic agricultural products from villagers to help villagers handle sales difficulties. It assisted the rural vitalization with consumption assistance actions.

**20.6 million yuan**  
Invested in rural vitalization assistance

**9**  
Rural vitalization assistance projects implemented

**Honor**

Yangjiang Nuclear won the "Best Practice Case of Rural Vitalization for Listed Companies".

The "Rainbow Plan" educational public welfare program accompanies left-behind children", was selected as an excellent case in the **Bluebook on Supporting Rural Vitalization by Central State-owned Enterprises (2022)**



**Case** Fangchenggang Nuclear helps digital transformation of the countryside

In 2023, Fangchenggang Nuclear developed a medium- and long-term action plan for vitalization of the surrounding villages. Grouped with surrounding villages of Guangpo Township, the company carried out the village-based enterprise business cooperatives, education assistance, digital village construction, digital campus construction, Dapo community street light construction, basketball court construction for Longxing community and other projects. Through the improvement of digitization, it has improved the office conditions, capacity and service efficiency of the village committee. The company sent excellent First Secretary in the village to provide strong support for the construction of public facilities in Fangchenggang City, rural landscape enhancement and other areas. In this way, Fangchenggang City and the surrounding villagers share the development fruits of nuclear power. The company thus promoted high-quality economic and social development of the city.



## Independent Assurance Report



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### China General Nuclear Power Co., Ltd. 2023 Environmental, Social and Governance Report Independent Assurance Report

安永华明(2024)专字第 70017657\_H01 号

To the Board of China General Nuclear Power Corporation:

#### I. Scope of Our Engagement

The 2023 Environmental, Social and Governance Report (the "ESG Report") of China General Nuclear Power Co., Ltd. (the "Company") has been prepared by the Company, Management of the Company (the "Management") is responsible for the collection and presentation of information within the Appendix C2 *Environmental, Social and Governance Reporting Guide* of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and Shenzhen Stock Exchange's *Guidelines No. 1 for Self-Regulation of Listed Companies-Standardized Operation of Companies Listed on the Main Board*, and for maintaining adequate records and internal controls that are designed to support the ESG reporting process.

Our responsibility is to carry out limited assurance procedures in accordance with *International Standard on Assurance Engagements 3000 ("ISAE3000"): "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information"* issued by the International Federation of Accountants and issue the assurance statement for the key performance information in the ESG Report for 2023 in accordance with the Management's instructions and the terms of the Engagement Letter signed in January 2024.

According to the terms of the Engagement Letter, the Assurance Report is only prepared by the Board of the Company. Our work was limited to these stated above and our report is made solely to the Board, as a body, and for no other purpose. We do not therefore accept or assume any responsibility for any other purpose or any other person or organization. Any reliance any such third party may place on the ESG Report is entirely as its own risk.

#### II. Work Performed

Our review has been planned and performed in accordance with ISAE3000. In order to form our conclusions, we carried out the following procedures:

According to the Management's instructions, we performed limited assurance procedures in:

- China General Nuclear Power Co., Ltd. Headquarters

We did not perform limited assurance procedures on other sites.

The limited assurance procedures were performed over the following key performance indicators in the ESG Report for the year ended 31 December 2023:

#### Safety

- Level 2 or above Nuclear events



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- Percentage of WANO indicators entering the world's top 1/10 (excellent level)
- Percentage of WANO indicators entering the world's top 1/4 (advanced level)

**Environment**

- The installed capacity of nuclear power in operation (MW)
- On-grid nuclear power generation (GWh)
- On-grid nuclear power generation equivalent to reduction of standard coal consumption (million tons)
- On-grid nuclear power generation equivalent to carbon dioxide reduction (million tons)
- Purchased electricity (MWh)
- Purchased electricity equivalent to carbon dioxide emissions (ten thousand tons)
- Freshwater consumption (ten thousand tons)
- Water consumption per unit of on-grid power generation (ton/GWh)

**Social**

- Number of employees
- Number of ethnic minority employees
- Number of fresh graduate employees
- Percentage of employees by gender
  - Male*
  - Female*
- Percentage of employees by job type
  - Management personnel
  - Business functional personnel
  - On-site operation and support personnel
  - Other technical personnel
- Percentage of employees by age

- Aged 28 and below*
- Aged 29 to 35*
- Aged 36 to 45*
- Aged 46 and above*
- Percentage of employees by education
  - Undergraduate and below*
  - Undergraduate*
  - Postgraduate*
  - Doctorate*
- Percentage of employees by region
  - Within Shenzhen*
  - Outside Shenzhen*

In response to the above key performance indicators, the Company has applied the Environmental, Social and Governance reporting guidelines in the Appendix C2 *Environmental, Social and Governance Reporting Guide* of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and Shenzhen Stock Exchange's *Guidelines No. 1 for Self-Regulation of Listed Companies-Standardized Operation of Companies Listed on the Main Board* to prepare.

The limited assurance work includes perform analytical procedures and other limited assurance procedures, etc.

The limited assurance procedures we carried out are following:

- Performing analytical review procedures;
- Performing sample inspection on the selected key performance information;
- Performing recalculation procedures on the selected key performance information;
- Other procedures we considered necessary.

We believe that the evidence obtained is sufficient and appropriate as the basis for issuing limited assurance conclusions.



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**III. Limitations of Our Scope**

Our scope of work did not include:

- Assessing the accuracy or fairness of information (including financial information) other than the selected key performance information;
- Reviewing the forward-looking statements made by the Management;
- Reviewing and consequently providing assurance on historical data.

**IV. Level of Assurance**

Our evidence gathering procedures have been designed to obtain a limited level of assurance on which to base our conclusion. The procedures conducted do not provide all the evidence that would be required in a reasonable assurance engagement and, accordingly, we do not express a reasonable assurance opinion or an audit opinion. While we considered the effectiveness of the Management's internal controls when determining the nature and extent of our procedures, our review was not designed to provide assurance on internal controls.

**V. Our Conclusions**

Subject to the limitations of scope and based on the procedures specified above for this limited assurance engagement, we provided the following conclusions:  
Nothing has come to our attention that causes us to believe that the key performance indicators selected in the Company's 2023 ESG Report are unfairly expressed in any material respect according to the Reporting Criteria above.

**VI. Our Independence**

We are in compliance with the Ernst & Young Global Independence Policy which was designed to comply with the requirements of the IFAC Codes of Ethics for Professional

Accountants (the IFAC Code). We believe that there were no events or prohibited services provided which could impair our independence.

**VII. Our Assurance Team**

Our assurance team has been drawn from our ESG Report assurance service network, which undertakes similar engagements to this with a number of domestic or international businesses. Our assurance team has met the requirements of competence and work experience of this engagement.

Ernst & Young Hua Ming LLP

Beijing, China

27 March 2024

## Contribution to the UN SDGs

SDGs	CGN Power's Actions	Chapters
	Actively care about the socially disadvantaged groups to boost rural vitalization and create a harmonious and warm society	Integrated Development for a Harmonious Society
	Adhere to the management policy of "safety first, prevention foremost, comprehensive governance", and actively take measures to ensure employees' health and safety	Exemplary Operation With Safe Development
	Implement education alleviation to improve education resources and quality in underdeveloped areas	Integrated Development for a Harmonious Society
	Adhere to the principle of open, fair and equal competition, and implement gender equality	Joint Development Underpinned By Unleashing Employee Value
	Promote nuclear power development and access to clean energy and ensure the safe operation of nuclear power	Nuclear Power Ecology Based On Green Development
	Respect and protect employees' rights interests, and build a diversified workforce with adequate development support	Joint Development Underpinned By Unleashing Employee Value
	Construct power infrastructure, enhance innovation capabilities and optimize energy development technologies	Exemplary Operation With Safe Development Nuclear Power Ecology Based On Green Development
	Improve overall nuclear power efficiency, reduce resources consumption and waste discharge, ensure radioactive waste emissions meet national standards	Exemplary Operation With Safe Development Nuclear Power Ecology Based On Green Development
	Adhere to nuclear power development and promote low-carbon energy structure to reduce carbon emissions	Nuclear Power Ecology Based On Green Development
	Attach importance to the impacts of power plant construction and operation on surrounding life below water, and take measures to protect the life below water around the community	Nuclear Power Ecology Based On Green Development
	Attach importance to the impacts of power plant construction and operation on surrounding flora and fauna on land, and take measures to protect the life on land around the community	Nuclear Power Ecology Based On Green Development
	Enhance competitiveness and synergy in the nuclear power industry chain, establish a mutually beneficial strategic partnership with upstream and downstream companies	Shared Development for Win-Win Partnership

## Key Performance Indicators

### Key Performance Indicators

Item	Indicator	2021	2022	2023
<b>Nuclear Safety</b>	Number of nuclear power units in operation	25	26	27
	Ratio of WANO indicators achieving the world's advanced level (the top quarter)	83.00%	79.17%	77.47%
	Unplanned shutdowns (times)	1	2	3
	Number of nuclear events of level-2 or above <sup>28</sup>	0	0	0
<b>Personal Safety (including employees and contractors)</b>	Fatalities	0	0	0
	Fatality rate per 100,000 persons in engineering construction	0	0	0
	Number of serious injuries	0	0	0
<b>Fire Safety</b>	Number of fire accidents	0	0	0
	Accidental overexposures (times)	0	0	0
<b>Radiation Protection</b>	Loss of radiation sources (times)	0	0	0
	Number of internal contamination accidents (cases)	0	0	0

### Environmental

Indicator	2021	2022	2023
Equivalent to CO <sub>2</sub> emissions reduction from clean energy (10,000 tons)	16,735.75	16,425.43	17,645.67
Equivalent to SO <sub>2</sub> emissions reduction from clean energy (10,000 tons)	3.22	2.00	1.78
Equivalent to NO <sub>x</sub> emissions reduction from clean energy (10,000 tons)	3.60	3.02	2.85

### Water Resources Management

Indicator	2021	2022	2023
Fresh water consumption (10,000 tons)	1,068	907	1,048

<sup>28</sup> According to the International Nuclear Event Scale (INES), there is a 7-level event classification system. Events of greater safety significance (Levels 4-7) are termed "accidents" and events of lesser safety significance (Levels 1-3) are termed "incidents." Events without safety significance are termed "deviations" and not classified.

Social

Indicator		2021	2022	2023
Number of total employees		18,248	18,968	19,038
Number of ethnic minority employees		842	925	998
<b>Proportion of employees by different types</b>				
Gender	Female	11.57%	11.56%	11.88%
	Male	88.43%	88.44%	88.12%
Profession category <sup>29</sup>	Administration	8.06%	9.11%	8.67%
	Functional Personnel	6.19%	6.48%	7.34%
	Field operation and support staff	11.02%	11.15%	13.22%
	Other Technical personnel	74.73%	73.26%	70.76%
Employment category	Full-time	100%	100%	100%
	Part-time	0%	0%	0%
Age	Aged 28 and below	14.63%	15.09%	19.04%
	Aged 29 to 35	38.08%	32.53%	28.84%
	Aged 36 to 45	32.35%	36.50%	37.31%
	Aged 46 and above	14.94%	15.87%	14.81%
Educational background	Junior college or lower	5.79%	5.45%	4.70%
	Bachelor's degree	73.69%	73.96%	74.40%
	Master's degree	19.43%	19.39%	19.71%
	Doctor's degree	1.09%	1.20%	1.18%
Geographical region	Within Shenzhen	23.76%	23.29%	28.47%
	Outside Shenzhen	76.24%	76.71%	71.53%

<sup>29</sup> The statistics of Profession category are supplemented with the data of previous years.

Indicator		2021	2022	2023
<b>Employee training</b>				
Gender	Female	0.22%	0.24%	0.23%
	Male	1.37%	1.49%	1.67%
Age	Aged 28 and below	0.58%	0.50%	0.37%
	Aged 29 to 35	0.65%	0.68%	0.46%
	Aged 36 to 45	0.30%	0.39%	0.32%
	Aged 46 and above	0.07%	0.06%	0.02%
Geographical region	Within Shenzhen	0.43%	0.42%	0.55%
	Outside Shenzhen	1.16%	1.11%	1.02%
<b>Employee training</b>				
Average training hours per employee		109	139.5	138.5
Training rate of senior managers		100%	100%	100%
Training rate of middle managers		100%	100%	100%
Training rate for male		100%	100%	100%
Training rate for female		100%	100%	100%
<b>Public welfare and social communication</b>				
Total rural vitalization and other donations ( million yuan )		30.4412	40.3758	25.5696
Volunteering hours		48,000	More than 40,700	18,615
Sessions of press conference		9	5	9

## ESG Index

The Company has complied with the "Comply or Explain" provision set out in Appendix C2 Environmental, Social and Governance Reporting Guide of the Listing Rules of SEHK. The table below provides a summary of the report compliance.

Aspect	Indicator	Indicator description	Chapters/ Remarks
A1 Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Response to Climate Change Waste Discharge Reduction
	A1.1	The types of emissions and respective emissions data	Response to Climate Change Waste Discharge Reduction
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Response to Climate Change
	A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Response to Climate Change
	A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Response to Climate Change
	A1.5	Description of emission target(s) set and steps taken to achieve them	Response to Climate Change Waste Discharge Reduction
	A1.6	Description of how hazardous and nonhazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them	Response to Climate Change
A2 Use of Resources	General Disclosure	Policies on the efficient use of resources including energy, water and other raw materials	Efficient Resource Utilization
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	Response to Climate Change
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	Efficient Resource Utilization
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them	Efficient Resource Utilization Response to Climate Change
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them	Efficient Resource Utilization
	A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced	The product is electric power, it is not applicable.
A3 Environmental and Natural Resources	General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	Green Nuclear Power Ecology
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	Green Nuclear Power Ecology

Aspect	Indicator	Indicator description	Chapters/ Remarks
A4 Climate Change	General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issue	Response to Climate Change
	A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them	Response to Climate Change
B1 Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, antidiscrimination, and other benefits and welfare	Employee Rights
	B1.1	Total workforce by gender, employment type (for example, full or part-time), age group and geographical region	Employee Rights
	B1.2	Employee turnover rate by gender, age group and geographical region	Employee Rights
B2 Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	Safety and Health Protection
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	Performance Indicators
	B2.2	Lost days due to work injury	Outstanding safety performance Key Performance Indicators
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	Safety and Health Protection
B3 Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	Talent Cultivation
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	Talent Cultivation
	B3.2	The average training hours completed per employee by gender and employee category	Talent Cultivation
B4 Labor Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor	Human Capital Consolidation
	B4.1	Description of measures to review employment practices to avoid child and forced labor	Human Capital Consolidation
	B4.2	Description of steps taken to eliminate such practices when discovered	Human Capital Consolidation

Aspect	Indicator	Indicator description	Chapters/ Remarks
B5 Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain	Building A Responsible Supply Chain
	B5.1	Number of suppliers by geographical region	Building A Responsible Supply Chain
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Building A Responsible Supply Chain
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored	Building A Responsible Supply Chain
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Building A Responsible Supply Chain
B6 Product Responsibility	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Stable Operation Occupational safety Information Security The product is electric power, so advertising and labelling is not applicable.
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	The product is electric power, it is not applicable.
	B6.2	Number of products and service-related complaints received and how they are dealt with	Outstanding safety performance
	B6.3	Description of practices relating to observing and protecting intellectual property rights	Technological innovation system
	B6.4	Description of quality assurance process and recall procedures	The product is electric power, recall procedures is not applicable.
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	Information Security
B7 Anticorruption	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	Business Ethics
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the Reporting Period and the outcomes of the cases	Business Ethics
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	Business Ethics
	B7.3	Describe of the anti-corruption training provided to directors and employees	Business Ethics
B8 Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	Enhancing Public Communication
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	Driving Community Development Giving Back to society
	B8.2	Resources contributed (e.g. money or time) to the focus area	Giving Back to society

## Feedback Form

Dear readers,

Thank you for reading the 2023 Environmental, Social and Governance Report published by CGN Power. In order to provide you with more valuable information, continuously improve the level and effectiveness of the company's ESG work, and optimize the company's ability to fulfill social responsibilities, we sincerely invite you to fill out the following form and send us feedback by email, fax, post or online. We eagerly look forward to your precious opinions.

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Scan to fill in the online questionnaire

Read through the questions/statements and chose the response which from your point of view fits best to tell your impression on this report.

**1. The report highlights our efforts and impact on economic, environmental and social aspects highlighted**

Very good     Good     Fair     Poor     Very poor

**2. The information and indicators disclosed in this report is clear, accurate and complete**

Very good     Good     Fair     Poor     Very poor

**3. The content layout and design of this report is readable**

Very good     Good     Fair     Poor     Very poor

**4. Which part(s) of this report are you most interested in?**

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**5. What additional information would you expect to be disclosed in this Report?**

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**6. Do you have any suggestions for our future ESG reports?**

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