



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



2020

| Environmental, Social and  
Governance Report

\*For identification purpose only

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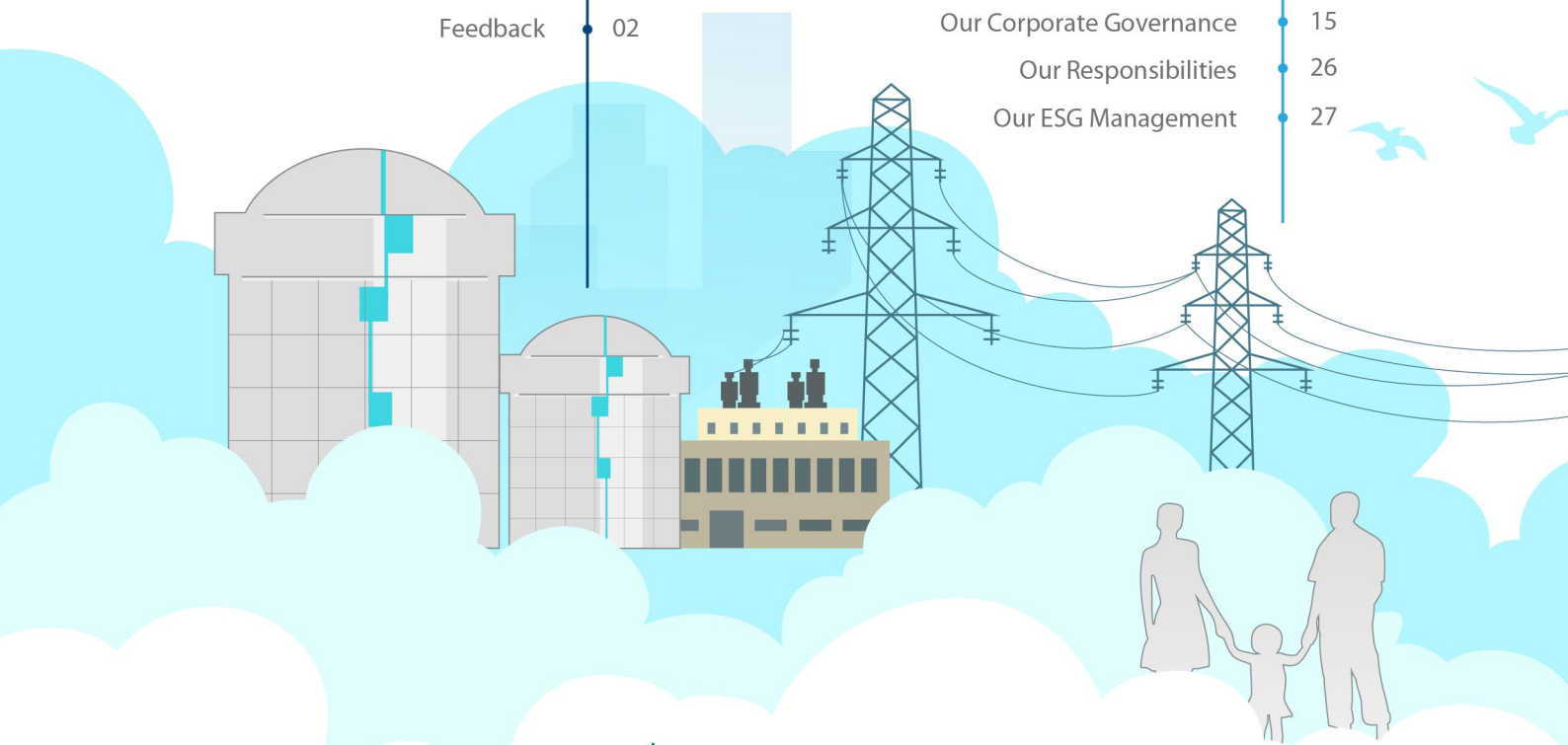
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## About This Report

This report is the sixth Environmental, Social and Governance report ("**this Report**") published by CGN Power Co., Ltd to openly and transparently highlight our environmental, social and governance ("**ESG**") performance in 2020. Through this Report, we aim to disclose the Company's vision, strategy and practices on sustainable development to stakeholders in a more comprehensive and objective manner, and further improve their understanding about the Company's thoughts and practices for corporate social responsibility.

This year, we invited various stakeholders to engage in surveys and in-depth interviews on material issues to gain insights of their opinions on the Company's sustainable development issues and help us further refine our sustainable development plan. To enhance the confidence of stakeholders in the Company's performance on sustainable development, this year, for the first time, we engaged Ernst & Young Hua Ming LLP (Special General Partnership) to conduct a third-party assurance for key operation, environment and safety data in this Report.

## Reporting Period

This Report covers data and information of the Company, its subsidiaries and its major affiliated companies from January 1, 2020 to December 31, 2020 ("**Reporting Period**"). Some of the information in this Report will be extended for continuity and comparability. If historical data are applicable, they will also be presented for comparison.

## Reporting Standards

This Report is prepared in accordance with the Appendix 27 *Environmental, Social and Governance Reporting Guide* of the *Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited* ("**SEHK**") ("**Listing Rules**") and the *Guidelines of the Shenzhen Stock Exchange* ("**SZSE**") for *Standardized Operation* (2020 Revision) ("**Guidelines for the Standardized Operation of Listed Companies**") and the *Guidelines of the Shenzhen Stock Exchange on Listed Companies' Handling of the Business No.2 — Matters Related to the Disclosure of Periodic Reports*. We strictly comply with all "comply or explain" provisions in the *Environmental, Social and Governance Reporting Guide* and this Report is prepared based on reporting principles of materiality, quantitative, balance and consistency. This Report also strictly adheres to the relevant requirements from the SZSE to disclose the Company's fulfillment of social responsibility. We also take into account reporting standards or principles including the *GRI Sustainability Reporting Standards* ("**GRI Standards**") issued by Global Reporting Initiative (GRI), 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* of the State-owned Assets Supervision and Administration Commission of the State Council, the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprise* (CASS-CSR3.0) for Electric Utilities and the *Basic Framework of the Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprise* (CASS-CSR4.0) of Chinese Academy of Social Sciences.



## Name Description

For convenience, CGN Power Co., Ltd. in this Report is also expressed as "**CGN Power**", the "**Company**", or "**We**". CGN Power and its subsidiaries are also expressed as the "**Group**". Unless otherwise defined, the terms used in this Report shall have the same meanings as defined in the H-share 2019 Annual Report published on April 2, 2020 by the Company.

## Reliability and Assurance

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

To ensure accuracy 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 limited assurance report and statement provided on pages 124 to 125 of this Report.

## Access to This Report

This Report is written in simplified Chinese, traditional Chinese and English. The electronic copy of this Report is available for download at 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 Company ([www.cgnp.com.cn](http://www.cgnp.com.cn)). In case of discrepancy between different versions, the simplified Chinese version shall prevail.

## Feedback

Your precious opinions and suggestions are very important for the continuous improvement of our sustainable development. Please contact [IR@cgnpc.com.cn](mailto:IR@cgnpc.com.cn) if you have further enquiries or any comments and suggestions regarding this Report and sustainable development of the Group.



About Us

## 2020 Major Awards



- CGN Power – 2020 China Top 100 Enterprises Award
- CGN Power – Sina Finance Golden Awards Best in Corporate Governance (G) and Best in Responsibility Progress



- DNMC and Ningde Nuclear – SHE Standardization and international benchmark 9 certificate
- Ningde Nuclear - Honorary Title of "National Quality Benchmark"
- Ningde Nuclear Phase I Project (4\*1,089MW) - National Soil and Water Conservation Ecological Civilization Engineering
- Hongyanhe Nuclear - Excellent Enterprise in the National "An'kang Cup" Competition



- Yangjiang Units 3 and 4 - National Gold Award for Quality Excellence and Outstanding Project Award of National Quality Award
- Yangjiang Nuclear Phase I Project (6\*1,086MW) – Nomination Award of the 6<sup>th</sup> China Industry Award



- CGN Engineering - Ecological Empowerment Award of China Talent Development Elite Award



- Fangchenggang Nuclear – "Advance Enterprise" in Science Popularization Award issued by Chinese Nuclear Society and recognition of National Advanced Collective for Poverty Alleviation
- Taishan Nuclear (the Party Committee) – Title of "Advanced Collective of Central Enterprises Against COVID-19 Pandemic"
- Yangjiang Nuclear – 2019 Gold Cup of "Hongmian Cup Poverty Alleviation in Guangdong Province"

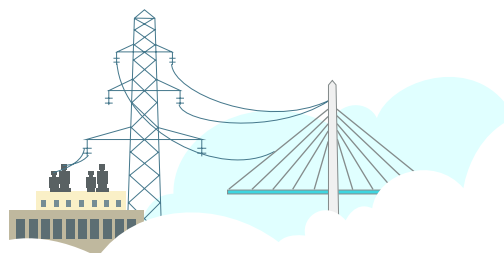


## Overview of 2020 Key Data

### On-grid Power Generation<sup>1</sup>



**186,487.40**<sup>GWh</sup>



### Financial Data<sup>2</sup>



Total Assets  
million RMB

**391,898.37**

Operation Revenue  
million RMB

**70,584.71**

Total Profit  
million RMB

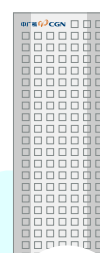
**16,850.12**

Tax Expenses  
million RMB

**6,096.08**

Research & development  
("R&D") Investment  
million RMB

**2,472.98**



### Stable Operation, Safety First



World Association of Nuclear  
Operators ("WANO") Indicators

**72.57%**

entering the world's top 1/4  
(advanced level)

Nuclear incident of  
level 2 or above

**0**

Nuclear engineering  
construction safety  
accident rate

**0.013**

<sup>1</sup> Including affiliated companies.

<sup>2</sup> Consolidated statement's scope.

## Environmental Protection, Low-carbon Development



Power generation equivalent to standard coal consumption reduction approximately

**56.97** million tons

Equivalent to carbon dioxide emission reduction approximately

**156.28** million tons

Equivalent to sulfur dioxide emission reduction approximately

**34.9** thousand tons

Equivalent to nitrogen oxides emission reduction approximately

**36.4** thousand tons

## Caring for Employees, Cherishing Talents



Total number of employees

**18,264<sup>3</sup>**

Number of fresh graduate employees

**387**

Average training hours per employee

**93** hours

## R&amp;D, Promoting Development



Number of patents

**789**

Total number of suppliers

**6,574**

Supplier's environmental performance review rate

**100%**

## Harmonious community, Public Welfare



Total investment in poverty alleviation

**40.37** million RMB

Live streaming

**9**

Employees participation in public welfare activities

Over **28,000** person-times

Over **43,000** hours

<sup>3</sup> Not including affiliated companies.



## Combating COVID-19

## Special Report of Combating COVID-19

“Facing the novel coronavirus pneumonia pandemic (“COVID-19” or “pandemic”) since the beginning of 2020, CGN Power has actively responded to the decisions and arrangements of the Party Central Committee and the State Council to implement a prevention and control of pandemic and work resumption strategy in accordance with the general principles of “upholding confidence, mutual-assistance, scientific prevention, and precise implementation of policies”, ensuring the stability of power energy supply and assisting regional governments in fighting the battle against the pandemic.”



### Safe and Stable Power Supply

After the outbreak of the pandemic, power supply was the basic guarantee. To ensure stable power supply, CGN Power has established the tight defense line of “everyone as a barrier”, and made all efforts to guarantee the safety and stable supply of nuclear power, ensuring power and energy supply for winning the battle against prevention of the pandemic. During the outbreak of the pandemic, each nuclear power base of the CGN Power earnestly implemented their responsibility for prevention and control of the pandemic and safe production. Their employees took turns to ensure the normal and efficient operation of nuclear power plants (“nuclear power plants” or “NPPs”).

#### Taishan Nuclear Ensures Power Supply

Facing the severe and complex situation of the pandemic, Taishan Nuclear promptly responded by establishing the prevention and control leading group and taskforce of the base, scientifically studied and formulated implementation plans of prevention and control for the base, organized emergency drills for the pandemic, and dynamically adjusted the implementation. Designated employees from key positions such as operation, maintenance and technology, were under key protections with implementation of fully enclosed management to prevent people’s cross-contact to the greatest extent. Taishan Nuclear coordinated and managed 97 cooperation units with over 4,000 employees to ensure stable power supply.





## Ensuring Employee Safety

During the outbreak of the pandemic, we actively fulfilled the responsibility of prevention and control of the pandemic, and made all efforts to ensure the health and safety of our employees. CGN Power has made full use of our years of experience and advantages in nuclear safety management, adhered to precise implementation, fine management and strict prevention and control, coordinated the sharing and deployment of protective materials and quarantine facilities, and resumed work and production on the basis of ensuring the health and safety of every employee. We have fully implemented closed management, achieving zero infection in the nuclear power production areas.

### Precise implementation

Through analyzing and determining network information in the early stage of the pandemic, timely issuing notice for pandemic prevention and control, purchasing materials for pandemic prevention in advance, and preventing cluster work that may cause infection in advance. Issuing the *Special Work Plan for Prevention and Control of COVID-19* and other measures for prevention and control of the pandemic, ensuring supervision and inspection, thereby ensuring the effective implementation of all prevention work related to pandemic.

### Fine management

Developing statistics system for pandemic information; checking, registering, and tracking employees, employees' family and contractors of the Company one by one every day, identified and focusing on control of the personnel involving in the pandemic in a timely manner, and ensuring the prevention and control of the pandemic in an orderly manner to resume work and production.

### Strict prevention and control

Strictly implementing the *CGN 14 Articles of Prevention and Control of COVID-19*, and the *CGN 12 Articles of Prevention and Control of COVID -19 for Overseas Subsidiaries*, to standardize the requirements of wearing masks, holding meetings, temperature measurement, etc., and conducting comprehensive disinfection in public areas such as office areas and elevators, thereby effectively protecting the health and safety of employees.



## Fighting the Pandemic Together

We have paid close attention to the prevention work to be done and the control of key areas where the pandemic broke out, and called on all subsidiaries to contribute to the battle against the pandemic by donating funds, distributing materials that were urgently needed such as protective gears, and providing technical supports.

As approved at the Company's 2019 annual general meeting, we donated RMB 30 million to support the prevention and control of the COVID-19 in Hubei Province. Our NPPs also actively supported the local governments, as well as their surrounding communities and overseas partners with anti-pandemic supplies which were scarce in supply, in order to contribute to the battle against the COVID-19 with a united will.



As approved at the Company's 2019 annual general meeting, we donated

RMB **30** million to support

the prevention and control of the COVID-19 in Hubei Province





In February 2020, DNMC provided a batch of urgently needed protective supplies to The First Affiliated Hospital of Sun Yat-sen University as emergency supports, including 2,000 pieces of KN95 medical antiviral masks and 1,000 sets of disposable paper suits.



In February 2020, under the guidance of chemical engineers, dozens of employee volunteers of Yangjiang Nuclear used the sodium hypochlorite in the reserve to produce more than 2,200 liters of disinfectant, totaling 1,700 bottles. After meeting the needs of the NPPs, the remaining disinfectant were given out to the designated poverty alleviation villages and their surrounding communities, hospitals and primary schools.



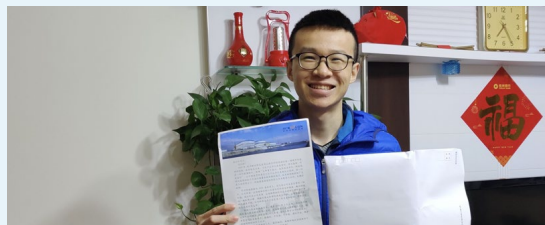
In February 2020, employees from Yangjiang Nuclear voluntarily donated RMB 40,000 for the fight of the pandemic in Wuhan.



In February 2020, Taishan Nuclear provided 3,000 sets of protective suits and 3,000 medical antiviral masks to the frontline medical team from Guangdong Province to aid Wuhan City, as well as the hospitals in Wuhan City.



In February 2020, Hongyanhe Nuclear provided 5,000 sets of protective gears and 10,000 pieces of masks to Liaoning Province, and donated coats to its poverty alleviation villages, which played a positive role in alleviating the material shortage of pandemic prevention and control in Liaoning Province.

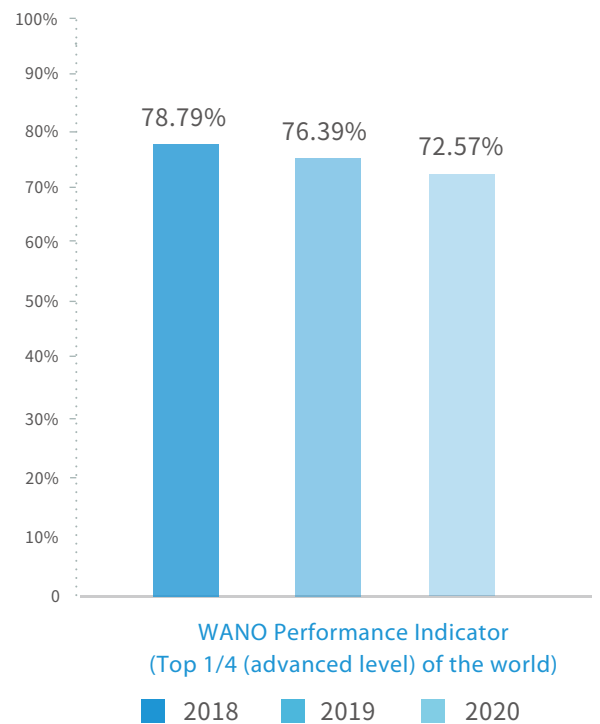
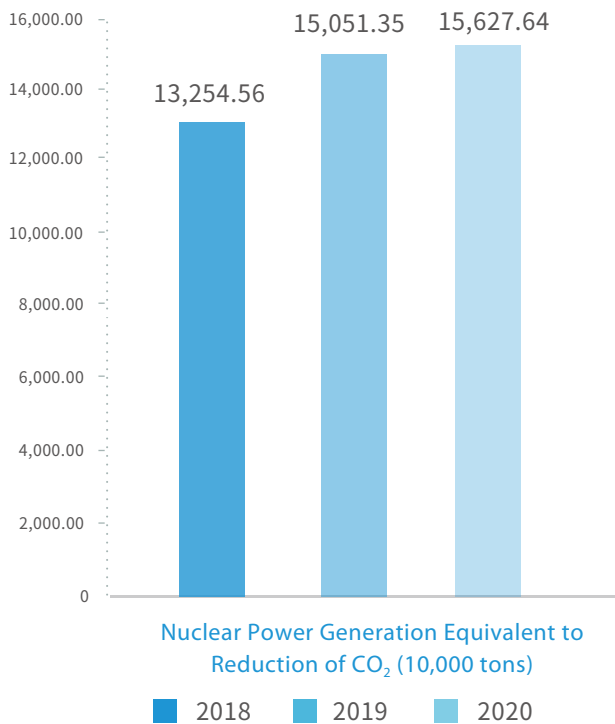
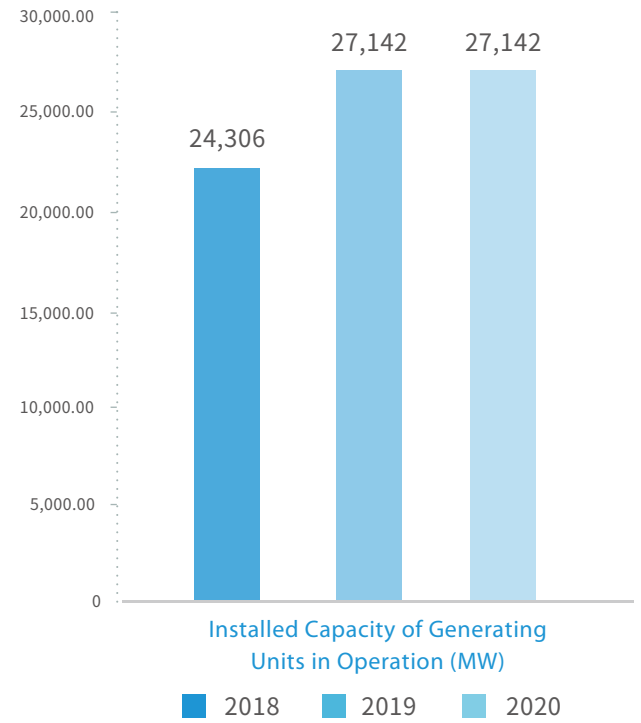
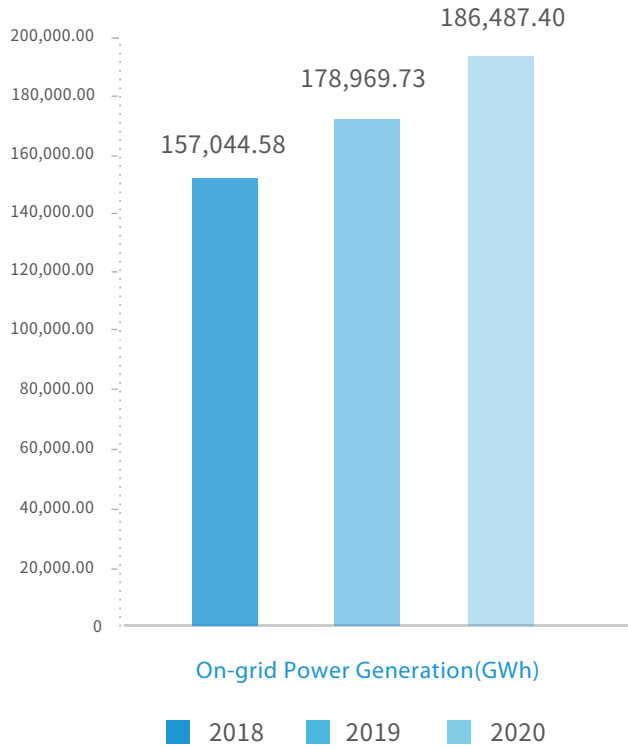


In March 2020, Fangchenggang Nuclear paid attention to the employees at the base, prospective employees and stranded employees from Hubei Province, and sent face masks and condolence letters to prospective employees in 17 provinces in the PRC.

NPPs operate around the clock, and there is no exception during the pandemic. It is a common issue for the global nuclear power industry to maintain operations during COVID-19. Being invited by WANO Paris Center, Su Liangliang, Chief of Radiation Protection Section of DNMC, joined the global nuclear power plant medical expert working group organized by WANO as a representative of CGN Power. In the video conference conducted on April 6, and April 30, 2020, respectively, he introduced CGN Power's pandemic prevention and control measures, providing practical experiences for the global nuclear power plant pandemic prevention.

## Our Performance

### Operation, Environment and Safety Performance



## Our Business

CGN Power (SEHK stock code: 1816, SZSE stock code: 003816) was established on March 25, 2014. Its main businesses include construction, operation and management of nuclear power plants, nuclear power sales, and management of design and R&D at nuclear power plants. After the Company's H-share were officially listed on the main board of SEHK in December, 2014, the Company issued its A-share and listed on SZSE in August, 2019, becoming the first nuclear power company dually listed in A-share and H-share markets. It is also the first listed company in the world with only nuclear power generation business.

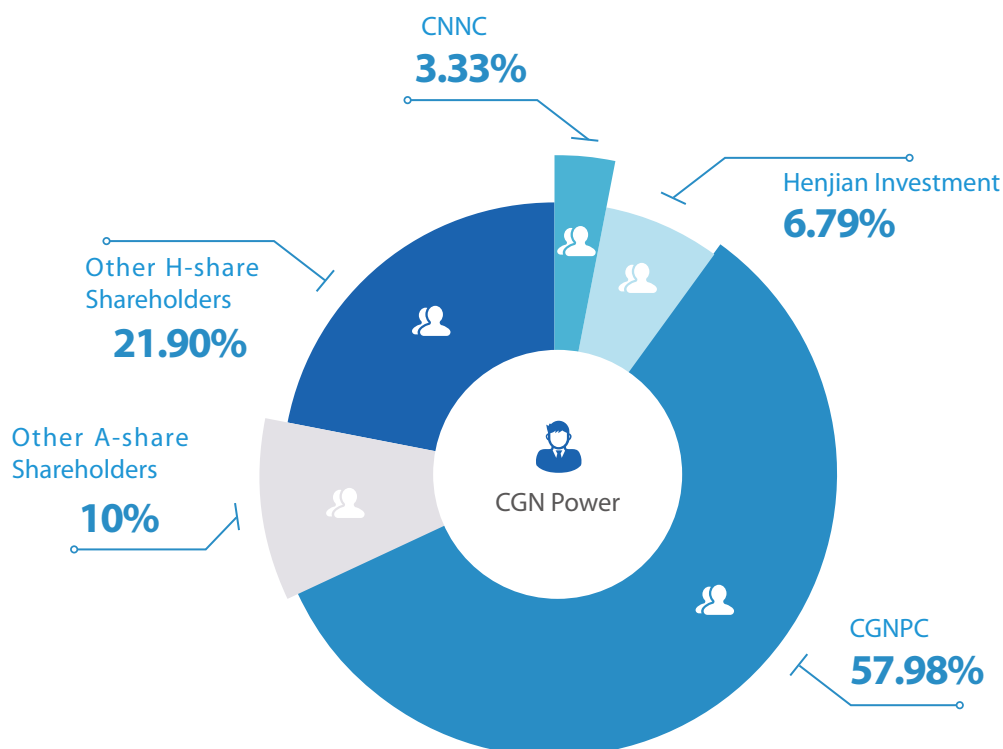
Upon the completion of Daya Bay Nuclear Power Station, the Company has accumulated rich experiences through introduction, digestion, assimilation and innovation in nuclear power construction and operation for more than 30 years. It established capacities in nuclear power maintenance and operation, construction, R&D and personnel training systems in line with international and professional practices and developed the ability to simultaneously and safely construct, operate and manage multiple nuclear power projects in different regions and bases across the PRC. The Company currently manages 8 nuclear bases, 24 units in operation and 7 units under construction<sup>4</sup>, with a total installed capacity of more than 35,000 MW.

On the basis of safety, CGN Power continues to adhere to the development of high-efficiency nuclear power. With a safe, economical and reliable power supply, it strives to become a leader in the development and application of new nuclear energy technologies, maintains a leading position in domestic nuclear power generation, and improves its competitiveness in the international nuclear power market.



## Equity Structure, Major Subsidiaries and Affiliated Companies

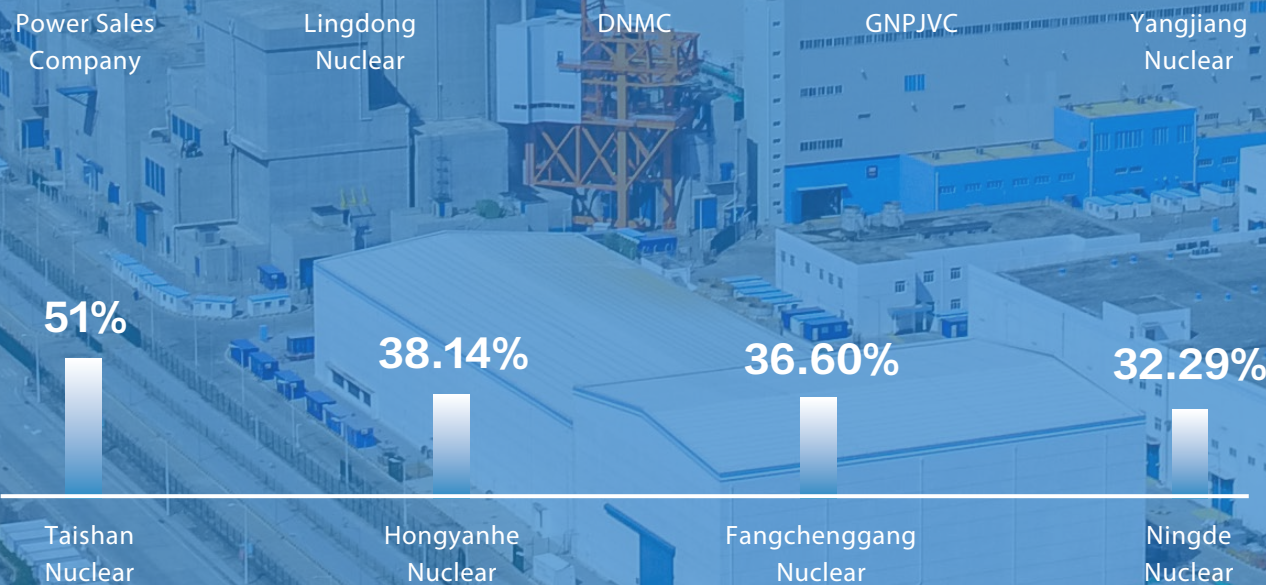
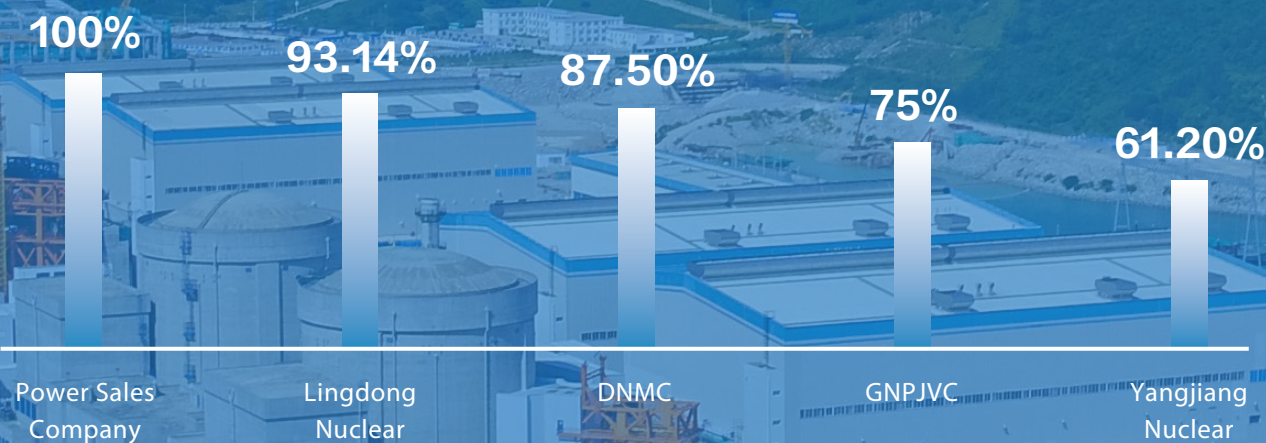
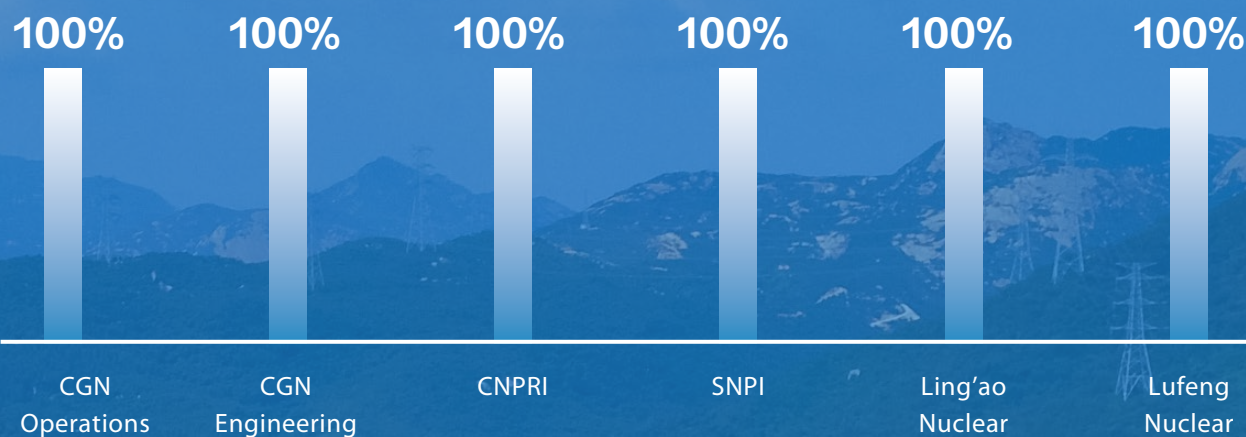
Shareholding Structure of the Company as of December 31, 2020



<sup>4</sup> Including units that are under entrusted management.



## CGN Power's Main Subsidiaries and Affiliated Companies





## Business Distribution

CGN Power continuously invests in the construction of nuclear power units and contributes to the development of nuclear power energy. As of the end of 2020, our business distribution is shown below.

Number of nuclear power units in operation: **24** units

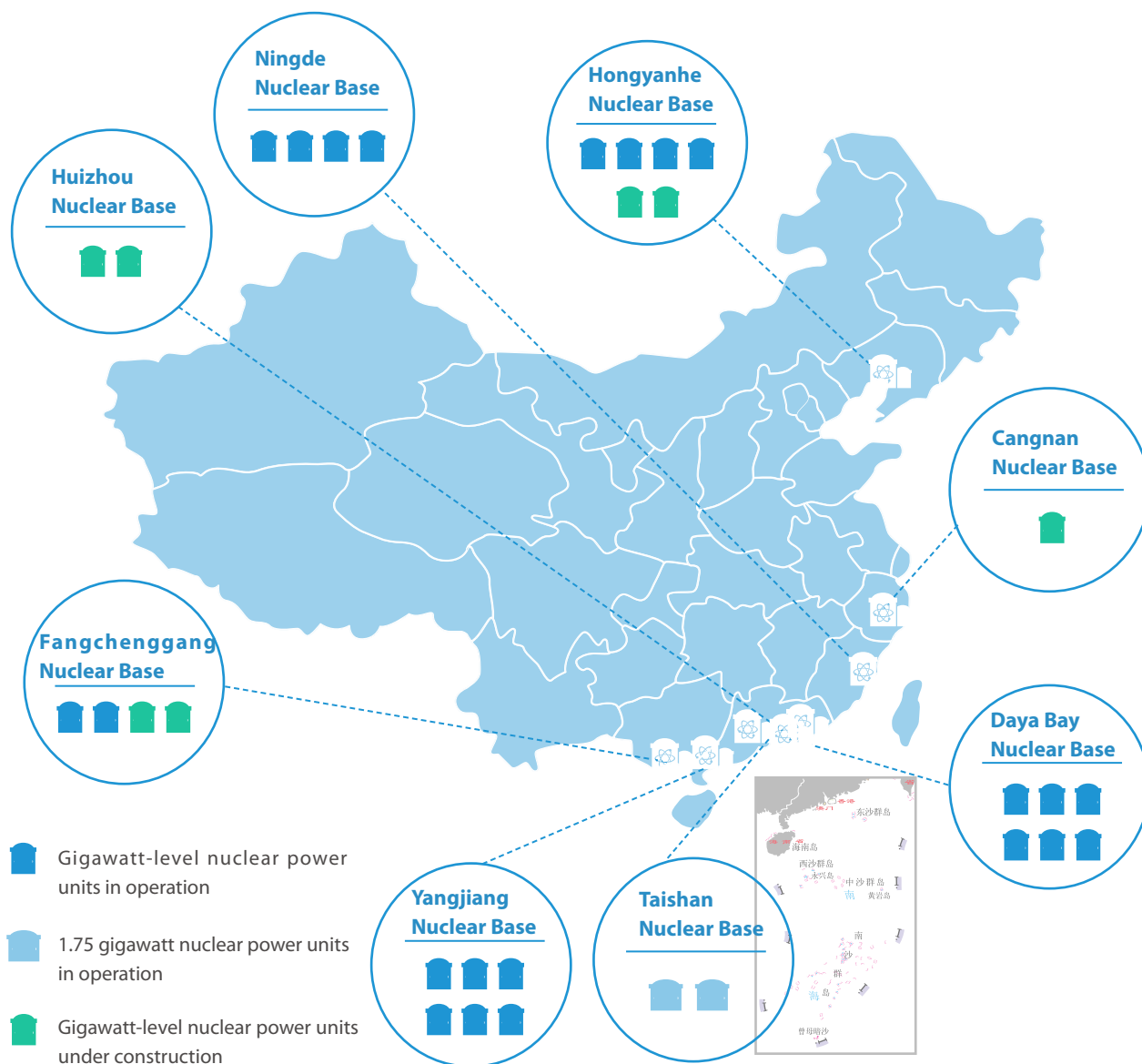
The installed capacity of nuclear power in operation: **27,142** MW

CGN Power's share of installed capacity in China: **54.42%**

Number of nuclear power units under construction: **7** units

The capacity of nuclear power under construction: **8,210** MW

CGN Power's share of capacity under construction in China: **47.31%**



## Nuclear Units in Operation and Under Construction

Company	Shareholding	Nuclear power unit	Model	Commercial Operation date	Installed Capacity(MW)
Consolidated Subsidiaries					
Ling'ao Nuclear	100%	Ling'ao Unit 1	M310	May 2002	990
		Ling'ao Unit 2	M310	Jan 2003	990
Lingdong Nuclear	93.14%	Lingdong Unit 1	CPR1000	Sep 2010	1,087
		Lingdong Unit 2	CPR1000	Aug 2011	1,087
GNPJVC	75%	Daya Bay Unit 1	M310	Feb 1994	984
		Daya Bay Unit 2	M310	May 1994	984
Yangjiang Nuclear	61.2%	Yangjiang Unit 1	CPR1000	Mar 2014	1,086
		Yangjiang Unit 2	CPR1000	Jun 2015	1,086
		Yangjiang Unit 3	CPR1000+	Jan 2016	1,086
		Yangjiang Unit 4	CPR1000+	Mar 2017	1,086
		Yangjiang Unit 5	ACPR1000	Jul 2018	1,086
		Yangjiang Unit 6	ACPR1000	Jul 2019	1,086
Taishan Nuclear	51%	Taishan Unit 1	EPR	Dec 2018	1,750
		Taishan Unit 2	EPR	Sep 2019	1,750
Fangchenggang Nuclear	36.6%	Fangchenggang Unit 1	CPR1000	Jan 2016	1,086
		Fangchenggang Unit 2	CPR1000	Oct 2016	1,086
		Fangchenggang Unit 3	HPR1000	Under Construction	1,180
		Fangchenggang Unit 4	HPR1000	Under Construction	1,180
Ningde Nuclear	32.29%	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
Associates					
Hongyanhe Nuclear	38.14%	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	Under Construction	1,119
		Hongyanhe Unit 6	ACPR1000	Under Construction	1,119
Huizhou Nuclear	0%	Huizhou Unit 1	HPR 1000	Under Construction	1,202
		Huizhou Unit 2	HPR 1000	Under Construction	1,202
Cangnan Nuclear	0%	Cangnan Unit 1	HPR 1000	Under Construction	1,208
Companies entrusted by the controlling shareholder					

For more details on business (excluding nuclear power projects entrusted by the controlling shareholder ) distribution, please refer to the section titled "Production Capital" of the H-Share 2020 Annual Report ("2020 Annual Report"), which will be published in April 2021.



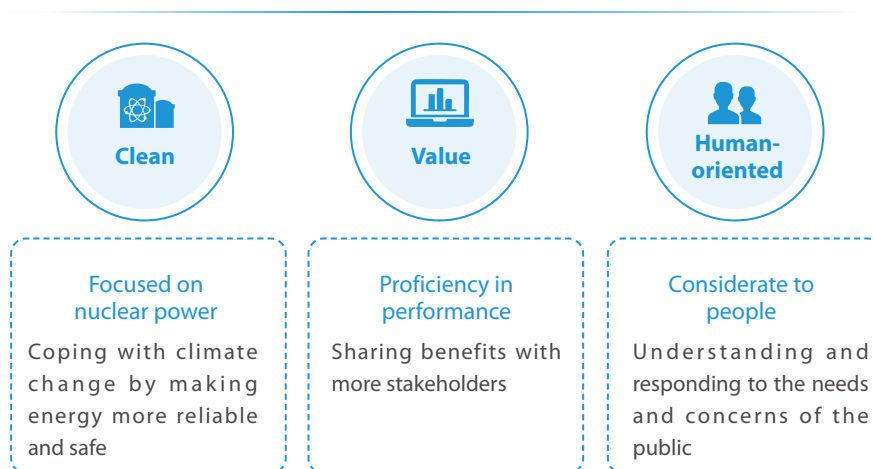
## Our Corporate Governance



### Corporate Philosophy

Guided by the idea of "Natural Energy Powering Nature" and on the basis of safe and steady nuclear power operation, the Company incorporates sustainable development and ESG principle in the decision-making process and daily operations, actively learns and responds to various stakeholders' expectations and requirements, combines low carbon green nuclear power with brand characteristics, and proceeds with its social responsibilities systematically under responsible management mode.

#### Natural Energy Powering Nature



#### Mission:

Developing Clean Energy to Benefit Mankind

Committed to nuclear power generation and power supply and services, based on the principles of "Safety First, Quality Foremost and Pursuit of Excellence", with the core value of "Doing Things Right in One Go", and creating the best values for customers, shareholders, employees and the society.

#### Vision:

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

Facing 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 always adhere to the basic principles of "Safety First, Quality Foremost and Pursuit of Excellence". All decision-making in production and operation management activities use these principles as the guiding standards and code of conduct.

#### Core Values:

Doing Things Right in One Go

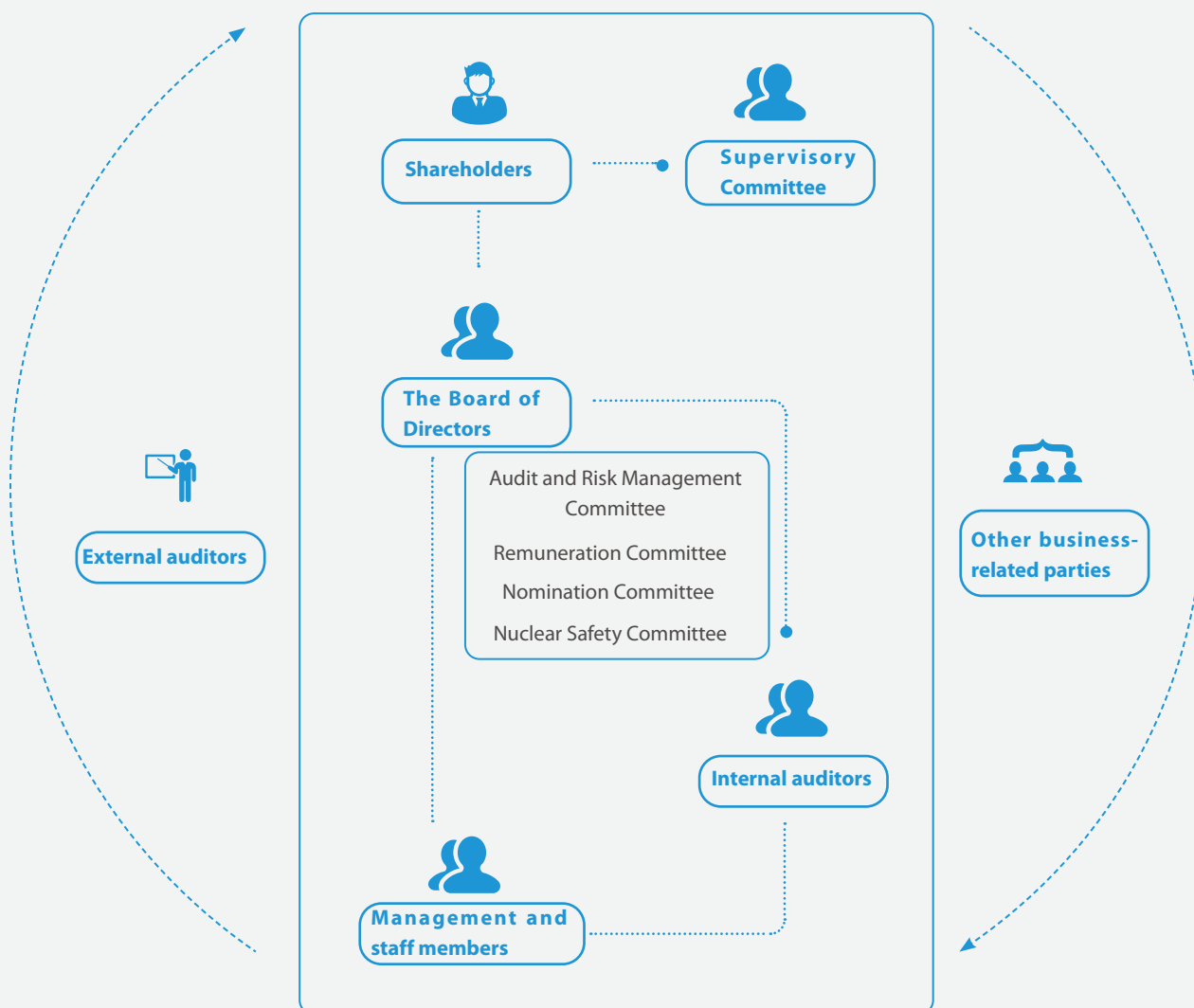
Getting things right in one go is the work attitude and goal we should adhere to. Only in this way can we ensure safety, achieve quality, pursue excellence, and realize our mission and vision.



## Governance Framework

A well-established corporate governance system is the important foundation for the Company to implement its sustainable development strategies. Observing the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, and the *Corporate Governance Code* set out in Appendix 14 of the *Listing Rules* of SEHK, CGN Power has developed a series of corporate governance structures and management systems, including the *CGN Power Co., Ltd Articles of Association (the "Articles of Association")*. We endeavor to continuously improve the corporate governance structure and management system, maintain a high level of corporate governance management, as well as transparency and effectiveness in our operations, to safeguard the rights and interests of the Shareholders and other stakeholders. Since the listing of A-share in 2019, the Company has continuously improved its corporate governance system and revised the governance system documents in accordance with the relevant regulatory requirements of SEHK and SZSE, fulfilling regulatory requirements of both stock exchanges.

The framework of our internal governance mainly consists of the general meeting, the Board of Directors and Board committees, the Supervisory Committee, internal auditors as well as management and employees. In addition, external auditors are engaged to conduct independent reviews of the Company's performance in governance to help improve its internal governance continuously; meanwhile, the Company maintains long-term cooperative relationships with our stakeholders (including customers, partners, media, regulatory bodies, etc.) to enable business development.







## Board of Directors

The Board of Directors is responsible for continuously improving the Company's governance system, formulating an overall strategic plan, setting long-term performance and management targets, assessing business performance and monitoring management's performance, identifying risks to maintain a high standard of governance. The Company has formulated the *Articles of Association* in accordance with relevant regulations such as the *Corporate Governance Code* set out in Appendix 14 of the *Listing Rules* of SEHK and the *Guidelines for the Standard Operation of Listed Companies* of SZSE. Based on the Company's corporate governance structure, we have formulated the *CGN Power Code of Corporate Governance* in accordance with the *Corporate Governance Code* set out in Appendix 14 of the *Listing Rules* of SEHK. This code explains how we ensure that the level of corporate governance meeting expectations through a range of systems, procedures and measures.

According to the *Articles of Association*, the Board of Directors established the Audit and Risk Management Committee, the Remuneration Committee and the Nomination Committee. According to the characteristics of the industry, we have also set up the Nuclear Safety Committee to ensure safe and stable operation of the Company, and to steadily improve the Company's ability of corporate governance. Chairmen from Audit and Risk Management Committee, Remuneration Committee and Nomination Committee are undertaken by independent non-executive Director, and Chairman from Nuclear Safety Committee is undertaken by non-executive Director. Each committee provides advice and suggestions on professional matters for decision-making of the Board of Directors. The composition of members of each of the Board committees as of December 31, 2020 is shown in the figures below.

### Audit and Risk Management Committee



Non-executive Director



Independent non-executive Director

### Remuneration Committee



Non-executive Director



Independent non-executive Director

### Nomination Committee



Non-executive Director



Independent non-executive Director

### Nuclear Safety Committee



Executive Director



Non-executive Director



Independent non-executive Director

According to the *Articles of Association*, Directors shall be elected at the general meeting and each of them serves for a term of three years. Upon expiration, the term is renewable through re-election. Candidates for Directors other than independent non-executive Directors shall be nominated by the Board of Directors, 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.

At the 2020 first extraordinary general meeting of the Company, Mr. Gao Ligang and Mr. Jiang Dajin were elected as the executive Director; Mr. Yang Changli, Mr. Shi Bing, Mr. Wang Wei and Mr. Gu Jian were elected as the non-executive Director; Mr. Li Fuyou, Mr. Yang Jiayi and Mr. Xia Ceming were elected as the independent non-executive Director. At the first meeting of the third session of the Board of Directors held on the same day, Mr. Yang Changli was elected as the Chairman of the Company.



### Composition of the Board

As of the end of 2020, the Company's Board of Directors consists of nine members, of which three are independent non-executive Director and four are non-executive Director, with a high degree of independence.

The Company is committed to the establishment of a Board of Directors with diverse backgrounds. It has formulated the *Diversity Policy for Board Members* and authorized the Nomination Committee to regularly review the policy. The current Board members have backgrounds in electric utility management, finance and accounting management, law, auditing, macroeconomics and safety management with over 20 years of experience in their respective industries. The Company takes their professional skills, industry experience, age and qualifications into consideration, which embodies the Company's efforts in promoting diversity in many aspects. The Company continuously adheres to the consideration of diversification and gender equality. Based on these criteria, it nominates candidates for the Board of Directors at the general meeting, which will be determined by the general meeting through elections. During the Reporting Period, the Board of Directors held 11 meetings, deliberated 48 resolutions and reviewed 15 resolutions. The specialized committee held 16 meetings, deliberated 29 resolutions and reviewed 16 resolutions. For more details on corporate governance, please refer to the section titled "Corporate Governance" of the *H-Share 2020 Annual Report*.

## Board Members<sup>5</sup>

Yang Changli	Chairman of the Board, non-executive Director, Chairman of the Nuclear Safety Committee and member of the Nomination Committee
Gao Ligang	Executive Director, President, and member of the Nuclear Safety Committee
Jiang Dajin	Executive Director and Vice President
Shi Bing	Non-executive Director
Wang Wei	Non-executive Director, member of the Remuneration Committee and member of the Nuclear Safety Committee
Gu Jian	Non-executive Director, member of the Audit and Risk Management Committee and member of the Nuclear Safety Committee
Li Fuyou	Independent non-executive Director, Chairman of the Nomination Committee, member of the Audit and Risk Management Committee and member of the Nuclear Safety Committee
Yang Jiayi	Independent non-executive Director, Chairman of the Audit and Risk Management Committee and member of the Remuneration Committee
Xia Ceming	Independent non-executive Director, Chairman of the Remuneration Committee and member of Chairman of the Nomination Committee

<sup>5</sup> The list of Board members is the list as of December 31, 2020.

## Training for Board Members

During the Reporting Period, the Company actively organized relevant training programs for Board members to improve the effectiveness of governance and efficiency of the Board operation,

01

On April 28, 2020, the Company's internal intellectual property experts gave lectures on legal risks related to intellectual property.

02

On August 6, 2020, the legal counsel of the Company gave a speech on *Responsibility and Duty of Directors and Supervisors*.

03

On October 27, 2020, the sponsor of the Company gave a speech on *Continuous Supervision and Training of Listed Company*; chief analyst of utility, environmental protection and coal industry of an investment bank gave a speech on *Suggestions on Market Value Management of Electric Power Industry*.

04

On November 19, 2020, the Board members participated in the *Conference on Improving the Quality of Listed Companies* held by Shenzhen Securities Regulatory Bureau of the China Securities Regulatory Commission which analyzed the capital market situation and regulatory policy orientation, interpreted the content of *Opinions of the State Council for Further Improving the Quality of Listed Companies*, announced the development and risks of Shenzhen listed companies, and announced further regulatory requirements to improve the quality of listed companies.

05

Yang Changli, Chairman of the Board, and Gao Ligang, executive Director, President, attended the *2020 Network Series Training for Chairman and General Manager of Listed Companies* held by China Association of Listed Companies, respectively.

06

In July 2020, Xia Ceming, independent non-executive Director, attended the training course for independent directors of listed companies held by SZSE, and obtained the *Qualification Certificate for Independent Directors of Listed Companies*.





## Standardized Governance

We attach great importance to effective implementation and operability of documents for standardized governance, which guide the Company's corporate governance practices. During the Reporting Period, we had revised and updated the following important documents related to governance to further improve the level of corporate governance.

The Company had revised the *Articles of Association*, the *Rules of Procedure for the General Meeting of Shareholders of CGN Power Co., Ltd.* and the *Rules of Procedure of the Board of Directors of CGN Power Co., Ltd.* which had been approved at the 2019 Annual General Meeting or the 2020 first extraordinary general meeting in accordance with relevant laws and regulations.

To further standardize the operation of the Company, and to improve the governance level, we had done the third revision on the *Code of Corporate Governance of the Company* in accordance with relevant requirements in the *Code of Governance for Listed Companies* issued by China Securities Regulatory Commission.



To ensure that Shareholders of the Company have access to corporate information and can exercise their rights in an informed manner, and to enhance communication between shareholders and the Company, the Company had made a second revision to the *Shareholder Communications Policy*.

To further provide guidance and assistance for Directors for their due diligence, the Company had revised the *CGN Power Director Performance Manual*.

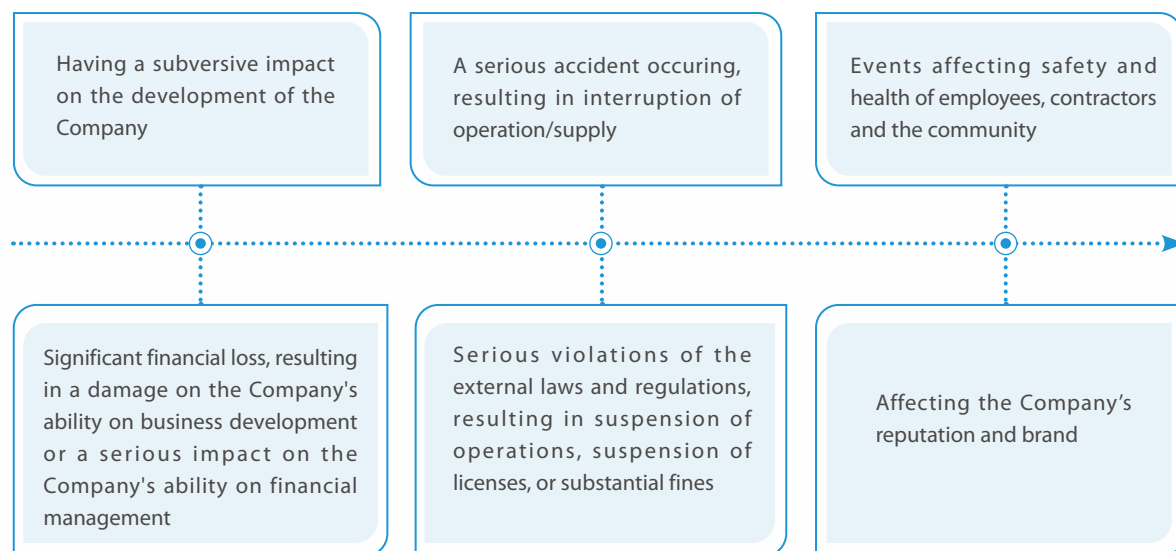


## Risk Management

The ever-changing market, regulatory requirements and other factors have put forward higher requirements for CGN Power on its risk management capability. We continue to closely focus on the corporate strategy and management theme, gradually enhanced our risk management ability, developed a robust risk management culture, and improved the risk management system. We have also been executing risk management throughout all steps of business processes in accordance with the IAEA-TECDOC-1209 risk management content and the Committee of Sponsoring Organizations of the Treadway Commission ("**COSO**") risk management framework, covering environmental, social, economic, development prospects and other important factors. With the concept of "Unified Leadership and Hierarchical Management", we have established a risk management system, including risk management strategies, risk management organizational function system and risk management information system. Through dynamic identification, regular evaluation, and active management, the Company has adopted a combination of qualitative and quantitative methods to establish a dedicated risk management team. According to the possibility and degree of risk occurrence, the identified risks are analyzed and categorized. We adopt risk management strategies such as reduction, evasion, transfer and control, improve operation efficiency, and guide each unit to implement risk prediction in advance during its business process to transform early warning risks into proactive risk management, consolidating the first line of defense for risk management to ensure healthy and sustainable development for the Company. In addition to risks related to the business and development of the Company, we have also paid great attention to ESG-related issues such as construction safety, employee occupational health, industrial safety and fire risks, and natural disasters affecting nuclear safety. In the annual *Comprehensive Risk Management Report*, we summarized the work of the past year and put forward ideas, goals, plans and major risk assessments for the next year. The *Comprehensive Risk Management Report* has been submitted to the Board of Directors for approval after being reviewed by the Audit and Risk Management Committee.



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



To effectively manage risks from various areas such as strategy, finance, market, operation and legality, we have established an effective and reliable internal control system. In accordance with basic specifications and evaluation guidelines, the internal audit department has been authorized to conduct internal audits for the Company's functional departments, businesses centers, subsidiaries and major affiliated companies in aspects of finance, commerce, engineering, production, information transfer, and economic responsibilities, and to check and evaluate the effectiveness of the internal control system's design and operation of various departments. Therefore, the internal control and management are continuously improved, realizing promotion of establishment and correction by evaluation. In 2020, the internal audit department conducted special audits on key management areas such as the Company's internal control, risk management, management on production and operation, business management, management on safety, quality and environment, engineering management and financial management, and conducted special audits on issues of concern raised by the management. While results of internal audits are delivered to senior managers, the annual internal control evaluation report is submitted to the Board of Directors for approval after being reviewed by the Audit and Risk Management Committee.

Regarding the major risks and countermeasures identified by CGN Power in business development during the Reporting Period, please refer to the "Risk Management Report" section in the H-share *2020 Annual Report*.







## Compliance Management

CGN Power has established a compliance management organizational system composed of governance level, management level and implementation level, for which the Board of Directors and the Supervisory Committee are the governance level, the operational management of the Company is the management level, and the legal affairs department is the implementation level of compliance management.

All business departments of the Company are responsible for compliance management, and the department head is the person responsible for compliance management of the department. Managers, departments and employees at different levels shall be divided according to their functions and positions into earnestly perform various functions for management, implementation and supervision of compliance. With the goal of "Comprehensive Coverage, Enhanced Responsibility, Cooperation, Independence and Objectivity" CGN Power has formed a "Top-down" compliance organizational system covering all business departments of the Company, from management level to implementation level.

CGN Power's compliance management system is composed of compliance management measures, special compliance management provisions, compliance code of duct and compliance management procedures, to manage the compliance of employees, suppliers, customers, external consultants, etc.

At the same time, the Company has established a compliance review mechanism to effectively control compliance risks related to formulation of rules and regulations, decision-making of major matters, signing of important contracts, and operation of major projects. We regularly evaluate the effectiveness of compliance management to ensure the proper operation of the compliance management operation mechanism through continuous improvement.

The Company has actively organized corresponding online and offline compliance training courses for different training targets. We have considered popular compliance issues, and carried out specialized, multi-level and multi-mode trainings for compliance personnel in the fields such as export control, civil law, corporate governance, Hong Kong National Security Law, Cyber Information Security Law, as well as for ordinary employees on publicity of compliance concepts. We are committed to creating a favorable atmosphere of compliance with rules and integrity through publicity of compliance concepts for employees. Through in-depth compliance publicity and training, the Company has enhanced the compliance culture, and made every effort to root compliance culture in the subconscious of every employee, laying a solid foundation for the comprehensive implementation of compliance management.



### Training on Compliance Management

On October 20, 2020, Lufeng Nuclear invited a lawyer from a law firm to carry out 2020 training on compliance management. The training introduced aspects such as the compliance risk, basic information of compliance management, classification of compliance risk, and the "trilogy" of compliance management. The training clearly pointed out that assessing compliance risks is the premise, building a management system is the tool, and controlling compliance risks is for implementation. Combined with cases, the training focused on six aspects of compliance policy, compliance organization, compliance system, compliance risk management, compliance review and compliance culture, to introduce the construction of compliance management system methods and experience. It further enhanced participants' understanding of the Company's compliance management, and improved the Company's compliance management level and compliance culture construction.





## Anti-corruption

Integrity construction is one of the indispensable elements for the stable development of enterprises. CGN Power focuses on institutional improvement and cultural development, and promotes the use of electronic information system, reinforcing the implementation system to completely eradicate suspected corruption violations. The Company strictly observes laws and regulations and other documents related to anti-bribery, extortion, fraud and money laundering including the *Criminal Law of the People's Republic of China*, the *Law for Countering Unfair Competition of the People's Republic of China*, the *Anti-money Laundering Law of the People's Republic of China*, the *Interim Provisions on Banning Commercial Bribery issued by State Administration for Industry and Commerce* as well as judicial interpretations including *Several Suggestions Concerning Applicable Law in Handling Criminal Commercial Bribery Cases issued by the Supreme People's Court* and the *Supreme People's Procuratorate* and the *Interpretation for 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 *Discipline Handbook of Listed Companies* and the *Implementation Rules of Eight-point Rules on Austerity* have covered employees from the Group, and have clearly stipulated the rules and methods for handling violations of regulations and disciplines.



CGN Power has established an employee "Integrity File Binder" and the *Gift Reporting System*, which records and dynamically monitors employees' integrity, violations of rules and disciplines during employment. The *Gift Reporting System* requires employees to declare gifts that they cannot refuse or return for various reasons at work to the Company within 15 days of such event.

The Company promotes and enhances the construction of risk prevention and control mechanism of corporate integrity, and comprehensively creates and enhances the atmosphere of corporate integrity by formulating a strict supervision system, carrying forward favorable culture of integrity, enhancing regular education through case studies, and establishing clear reporting channels. In order to promote employees' integrity, we have established regulations for supervision and discipline, and formulated working procedures for receiving and handling reports, and set up secure reporting channels allowing employees and related third parties to communicate with the disciplinary investigation department through calls, in-person visits, or writing with confidentiality to report any violations. According to the Company's confidentiality policy, information of petitioning reporting and appealing parties are confidential, that disclosure on privacy of the informant is prohibited. After receiving whistleblowing reports, the disciplinary investigation department properly proceeds with proper recording and initiates an internal investigation process while keeping relevant information confidential. If the reported object involves a person directly managed by the Company, the disciplinary investigation department shall handle the matter in accordance with relevant procedures. If the reported subject is an employee of a subsidiary, he or she will be referred to the disciplinary investigation department of the subsidiary for handling according to procedures. The Company has clarified response requirements and protection provisions for real-name informants in relevant systems and procedures, prioritized the handling and responding to real-name informants, and strictly protected real-name informants. If the informant is found to make false accusation or retaliate, the Company will firmly and seriously hold such informant accountable.

In accordance with related requirements of anti-corruption, with the goal of building a high-quality professional team, and with the theme of "Working with Integrity, Heart with Justice", the Company pays attention to fully excavating warning education materials from typical cases, deeply summarizes lessons and educational meaning, and organizes and develops courses of *Teaching Cases of Violation of Rules and Disciplines* to carry out hierarchical training for management from the Company, subsidiaries and affiliated companies. The Company held 35 training courses through the year, realizing the full coverage of management personnel of each subsidiary.



The Company held

**35**

training courses through  
the year

#### Case

#### Warning Record of Integrity Construction

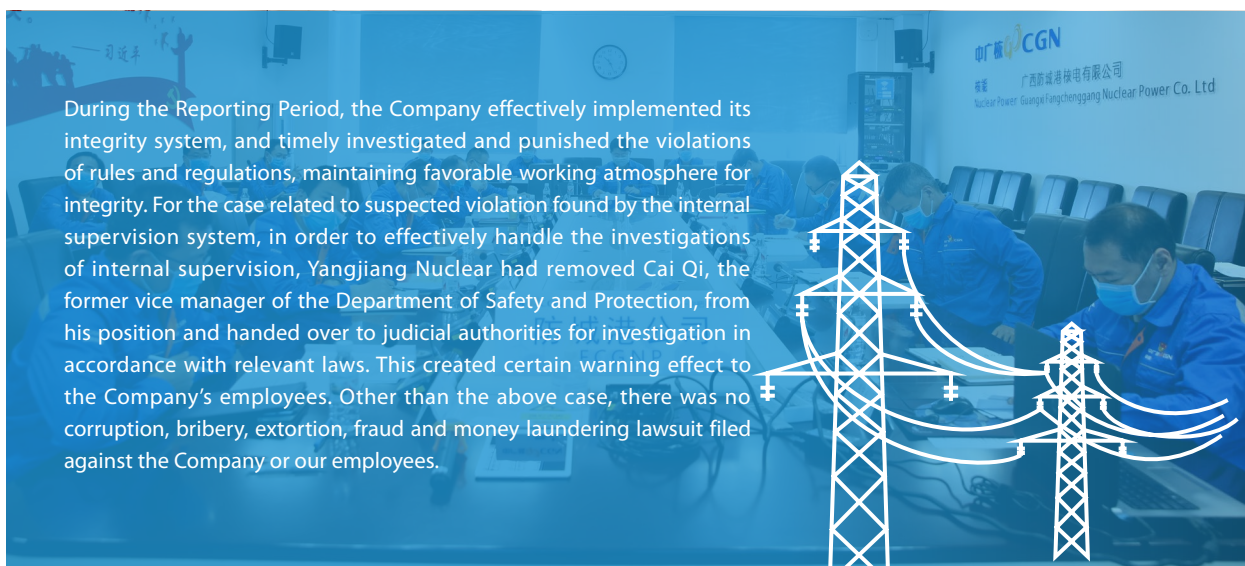
On October 18, 2020, the Company reproduced the scene of violation of discipline and law in Bamayao Autonomous County, Guangxi Zhuang Autonomous Region by playing the "Warming Record". Through analyzing the reason, the record showed that some leaders were held accountable for failing to implement their individual and supervision responsibility. It aimed to warn every employee to uphold their heart, shoulder main responsibility, and honestly do every task firmly.

#### Case

#### Conference for Party's Style and Clean Government Building and Anti-corruption

The 2020 Conference for Party's Style and Clean Government Building and Anti-corruption was held by various subsidiaries including CNPRI, CGN Engineering and CGN Operations. Guided by the *Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era*, the 2020 Conference for Party's Style and Clean Government Building and Anti-corruption aimed to fully and thoroughly implement the spirit of the 19<sup>th</sup> National Congress of the Communist Party of China and the Fourth Meeting of the 19<sup>th</sup> Central Commission for Discipline Inspection, conscientiously implements various tasks from the Conference for Party's Style and Clean Government Building and Anti-corruption of the State-owned Assets Supervision and Administration Commission of the State Council, and the 2020 Conference for Party's Style and Clean Government Building and Anti-corruption, and completed various tasks of Party's style and clean government building and anti-corruption.

During the Reporting Period, the Company effectively implemented its integrity system, and timely investigated and punished the violations of rules and regulations, maintaining favorable working atmosphere for integrity. For the case related to suspected violation found by the internal supervision system, in order to effectively handle the investigations of internal supervision, Yangjiang Nuclear had removed Cai Qi, the former vice manager of the Department of Safety and Protection, from his position and handed over to judicial authorities for investigation in accordance with relevant laws. This created certain warning effect to the Company's employees. Other than the above case, there was no corruption, bribery, extortion, fraud and money laundering lawsuit filed against the Company or our employees.





## Shareholder Communication

Adhering to the principle of maximizing value of shareholders, and the philosophy of open and transparent business, CGN Power actively protects the legitimate rights and interests of investors and creditors, continuously enhances communication and interaction with investors, and listens to the opinions and suggestions of all parties, to get the recognition from the market and investors on the Company's value, promoting healthy development of the capital market.

According to the rights of decision-making prescribed by the *Articles of Association*, the general meeting is entitled to legally exercise its voting rights on major matters such as operation policies and profit distribution of the Company. All general meetings 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 general meetings to provide stable dividend returns for the Company's shareholders. During the Reporting Period, we successively held the annual general meeting of 2019/ the first general meeting of H-share class of 2020/ the first general meeting of A-share class of 2020, and the first extraordinary general meeting of 2020, which were two general meetings in total.

Placing continuous emphasis on the opinions and feedback of shareholders and investors, we actively maintain ongoing and multiple ways of communication with shareholders and investors through roadshows, reverse roadshows, teleconferences and results announcement conferences. We take into account attentively their suggestions or opinions with respect to the Company's development strategy, production and operation, and provide feedback to the Board of Directors, management and related departments through briefings, presentations and other methods, promoting the unity between the Company's development and shareholder value.

During the Reporting Period, the Company promptly responded to the concerns of the capital market regarding the impact of the pandemic on the Company. We announced our annual performance through the Internet platform, and comprehensively communicated with small and medium investors to enhance the Company's brand, value and popularity. We simultaneously carried out telephone conference with analysts and used online text to enhance our communication with capital market in an all-round and multi-dimensional way.



The Company's annual results roadshow was conducted through teleconference for

**12** meetings



With

**30** investors

**35**

questions from small and medium investors were answered through online text communication

**22**

meetings were conducted for interim results roadshow



For which

**10**

were teleconference meetings

+



**12**

were on-site meetings

**40**

investors from domestic and overseas were communicated through the meeting



During the Reporting Period, the Company received investors about 500 person-times in total through investor hotline, Investor Relationships mailbox and field survey. We also actively organized online roadshows and participated in the event of online group reception day. The Board secretary and securities affairs representative of the Company conducted timely and complete communication through the *Interactive Easy* platform of SZSE. Through the platform, around 147 enquiries have been answered.



Received investors about

**500** person-times



around

**147** enquiries  
have been answered

## Online Investor Reception Day

In order to further strengthen interactions and communication with investors, on December 8, 2020, the Company participated in the 2020 Online Investor Reception Day Event for Shenzhen listed companies with the theme of "Entrepreneurship and Innovation" held by Shenzhen Public Companies Association. Yin Engang, the chief financial officer and Board secretary, and Wei Jin, securities affairs representative of the Company answered 18 questions from investors across the country by real-time texting through the network platform. Questions answered covered aspects such as development prospects, main business, new project approval of the Company.

## Our Responsibilities



### Responsible Reporting Disclosure

To convey to the internal and external stakeholders on progress of sustainable development of CGN Power in a complete, accurate and objective manner, we have been publishing the *Environmental, Social and Governance Report* annually since 2015. We actively implement ESG management and related actions, and comprehensively carry out the implementation and improvement of ESG issues.

To further improve the credibility of ESG-related data, the Company engaged Ernst & Young Hua Ming LLP (Special General Partnership) for third-party assurance during the Reporting Period on key data related to operation, environment and safety in this Report, so as to enhance the confidence of stakeholders on the Company's ESG performance.





## Practicing Responsible Communication

We attach great importance to daily communication with our stakeholders. The government and regulatory authorities, shareholders, customers, suppliers, employees, media, community residents and the public are all major stakeholders of CGN Power. We have established a stakeholder communication mechanism to communicate with stakeholders through various channels regularly and continuously, to understand and response their expectations and concerns. We disclose information on our production, operation and development strategies to stakeholders in a timely manner to enhance their understanding and recognition of the Company. In addition to daily communication, we also invited our stakeholders to complete the questionnaires and in-depth interview during the Reporting Period. We aimed to understand their expectations of the Company and integrate their expectations and concerns into corporate strategy and operation management, and get their support for CGN Power.

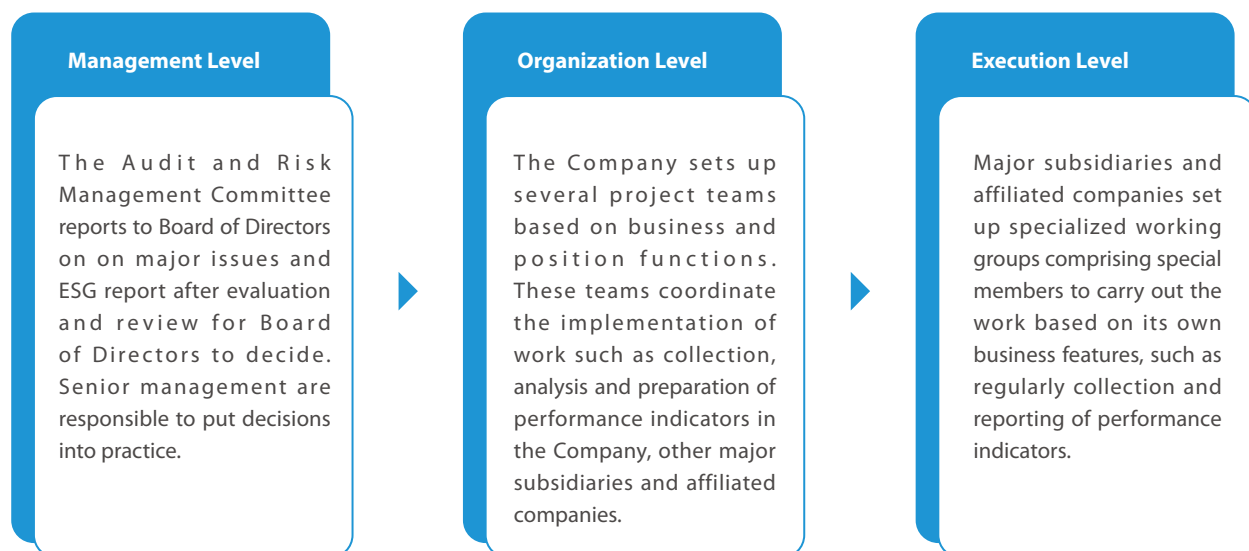
## Our ESG Management



### ESG Management System

ESG management is the important foundation for sustainable development. CGN Power has established the three-level management system to improve and enhance the strategic, standardized and institutionalized management of the Company's sustainable development. To further improve our ESG management, we have also invited experts to our Company to provide training on sustainable development trends, and have undertaken targeted measures to incorporate relevant disclosure into our daily operation and management according to characteristics of each department. We have consolidated the social responsibility management system comprising joint actions of staff at three levels, including the promotion of deep involvement at the management level, horizontal coordination between various business departments at the organization level and implementation of ESG indicators monitoring by subordinate units at the execution level.

The Company has established an ESG improvement team. The responsibilities of this team include conducting internal and external ESG materiality assessments, establishing ESG goals, analyzing goals, improving the ESG data collection system, promoting goal achievements, conducting peer benchmarking continuously, improving ESG management and implementing information disclosure on ESG matters.





## Major Stakeholders

We have established a stakeholder communication mechanism to communicate with stakeholders through various channels regularly and continuously, to understand their expectations and concerns.

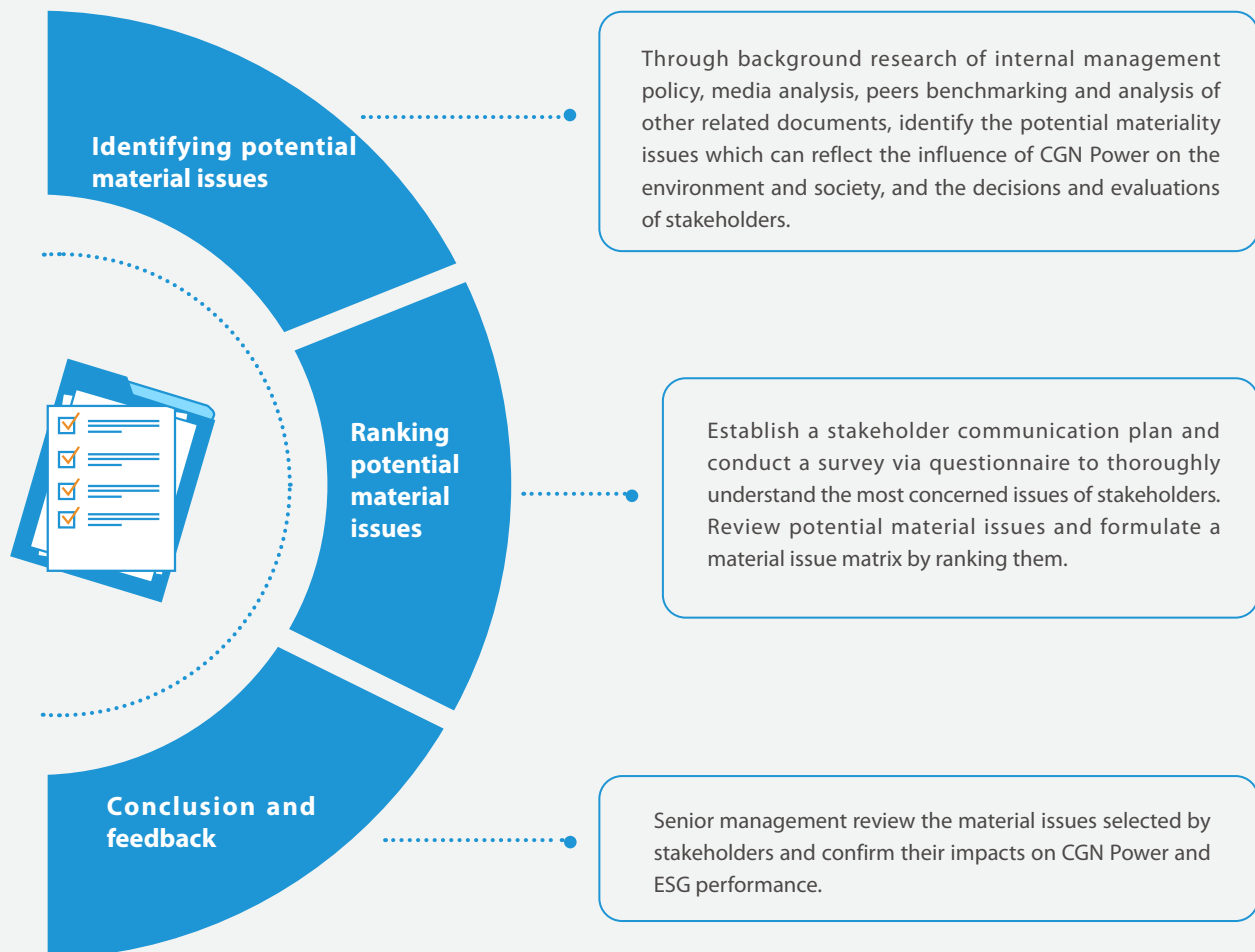
Stakeholders	Expectations and Concerns	Methods of Communication and Response
 Government and Regulatory Authorities	<ul style="list-style-type: none"> <li>Ensuring nuclear safety</li> <li>Optimization of energy structure</li> <li>Legal compliance and tax payment</li> <li>Value preservation and appreciation of state-owned assets</li> <li>Energy conservation and emission reduction</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with laws and regulations</li> <li>Execution of national energy policies</li> <li>Improvement of corporate governance</li> <li>Supervisory review</li> <li>Regular reporting</li> </ul>
 Shareholders and Investors	<ul style="list-style-type: none"> <li>Constant and steady return</li> <li>Transparent information disclosure</li> <li>Protection of shareholder's rights</li> <li>Enhancement of communication</li> </ul>	<ul style="list-style-type: none"> <li>Timely disclosure of information</li> <li>Regular reporting of operating information</li> <li>Improvement in daily management</li> <li>Various communications activities from time to time</li> </ul>
 Customers	<ul style="list-style-type: none"> <li>Stable supply</li> <li>Quality management and service guarantee</li> </ul>	<ul style="list-style-type: none"> <li>Effective communication</li> <li>Active cooperation for power grid dispatching</li> </ul>
 Suppliers and Partners	<ul style="list-style-type: none"> <li>Commitment fulfillment</li> <li>Openness, fairness and justice in procurement</li> <li>Experience sharing</li> </ul>	<ul style="list-style-type: none"> <li>Strategic cooperation</li> <li>Public disclosure of procurement information</li> <li>Regular communication activities</li> </ul>
 Employees	<ul style="list-style-type: none"> <li>Competitive remuneration package</li> <li>Employee health and safety</li> <li>Fair promotion and development</li> <li>Caring for employees</li> </ul>	<ul style="list-style-type: none"> <li>Building a healthy working environment</li> <li>Establishing fair promotion channels</li> <li>Strengthening training for employees</li> <li>Caring for distressed employees</li> </ul>
 Media	<ul style="list-style-type: none"> <li>Transparent information disclosure</li> <li>Enhancement of communication</li> </ul>	<ul style="list-style-type: none"> <li>Regular press conferences</li> <li>Interview arrangement</li> <li>Timely disclosure of public information</li> </ul>
 Community Residents	<ul style="list-style-type: none"> <li>Environmental protection in the community</li> <li>Nuclear power production and safety</li> <li>Promoting community development</li> </ul>	<ul style="list-style-type: none"> <li>Community communication meetings</li> <li>Enhancement of environmental monitoring and protection</li> <li>Participation in community construction</li> </ul>
 General Public	<ul style="list-style-type: none"> <li>Charity</li> <li>Public relations</li> <li>Popularization of nuclear power science</li> </ul>	<ul style="list-style-type: none"> <li>Participation in targeted poverty alleviation</li> <li>Promotion of employment</li> <li>Education and promotion of nuclear power</li> </ul>



## Materiality Assessment

Material issues are those that pose significant economic, environmental and social impacts resulting from the Company's business operations, and expectations from stakeholders. Based on development plans for the industry and for ourselves and the annual business plan, following the materiality principle, CGN Power continuously improves the process of identifying and determining ESG issues, fully discloses material ESG issues, responds to the concerns of various stakeholders regarding our fulfillment of social responsibility, and strengthens the management and fulfillment of material ESG issues in daily operations.

We reviewed and identified relevant ESG issues based on results of the past materiality assessment, with reference to the disclosure guidelines of SEHK, other international sustainability reporting standards and peer benchmarking analysis. Subsequently, the Company evaluated and selected potential material ESG issues in the Reporting Period by fully considering the nature of the Company's business and development strategy, collecting stakeholder opinions through questionnaires and in-depth interviews to get the materiality analysis results. As nuclear power safety is the most vital issue to the Company, it was directly listed as a material issue, and also was excluded in the scope of the materiality survey. In the evaluation process, we not only considered the impact of issues on the Company and stakeholders, but also took into consideration of their impacts on the economy, environment and society. The results of analysis were then reviewed by the senior management of the Company.

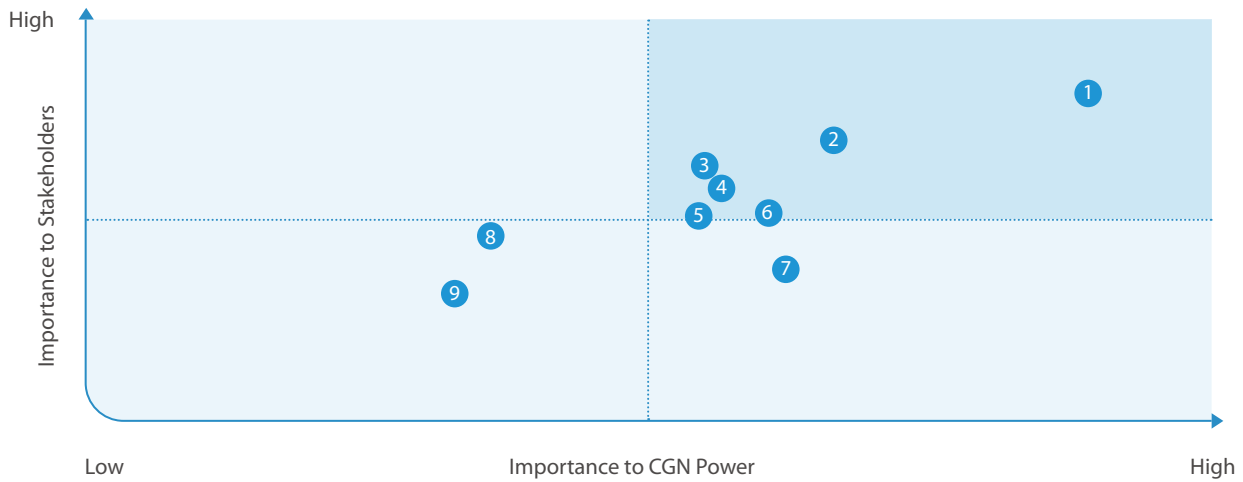




We categorized potentially material issues by four categories of environment, social, governance and employee, and identified the following material issues after analyzing the survey results:



### Materiality Assessment - Environmental



1. Radioactive Materials Management

2. Ecological Environment Protection

3. Non-radioactive Discharge and Management

4. Resource Utilization

5. Ability to Withstand Extreme Weather

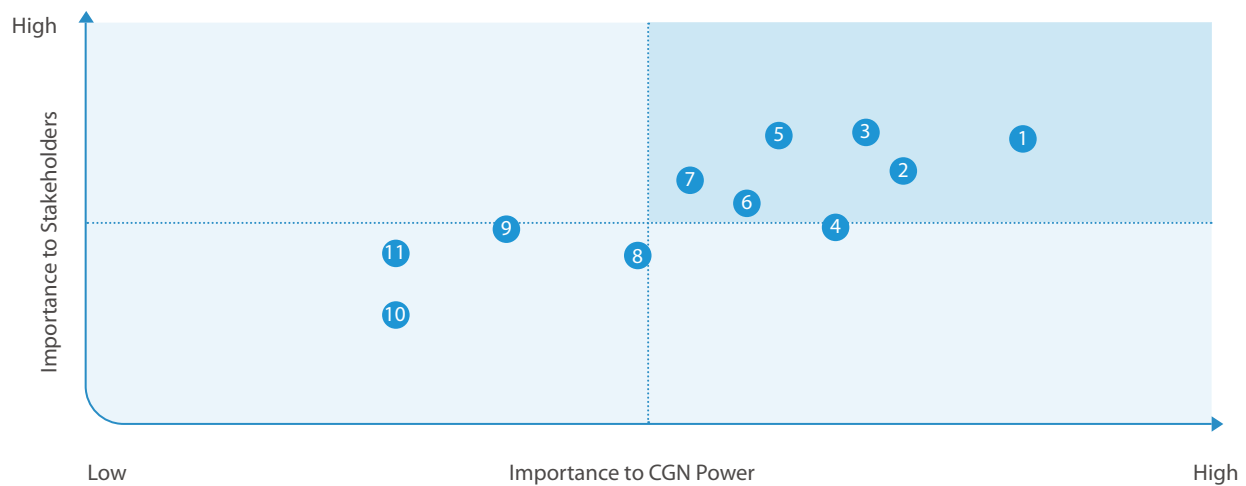
6. Green and Low-carbon Investment Opportunities

7. Formulate and Implement Internal Environmental Policies

8. Water Sourcing and Utilization Efficiency

9. Proactively Take on Environmental Responsibilities

### Materiality Assessment - Social



1. Product Responsibility

2. Supply Chain Management

3. Public Health and Safety

4. Corporate Wealth and Income

5. Transparency and Accuracy of Public Information

6. Intellectual Property Protection

7. Cyber and Data Security

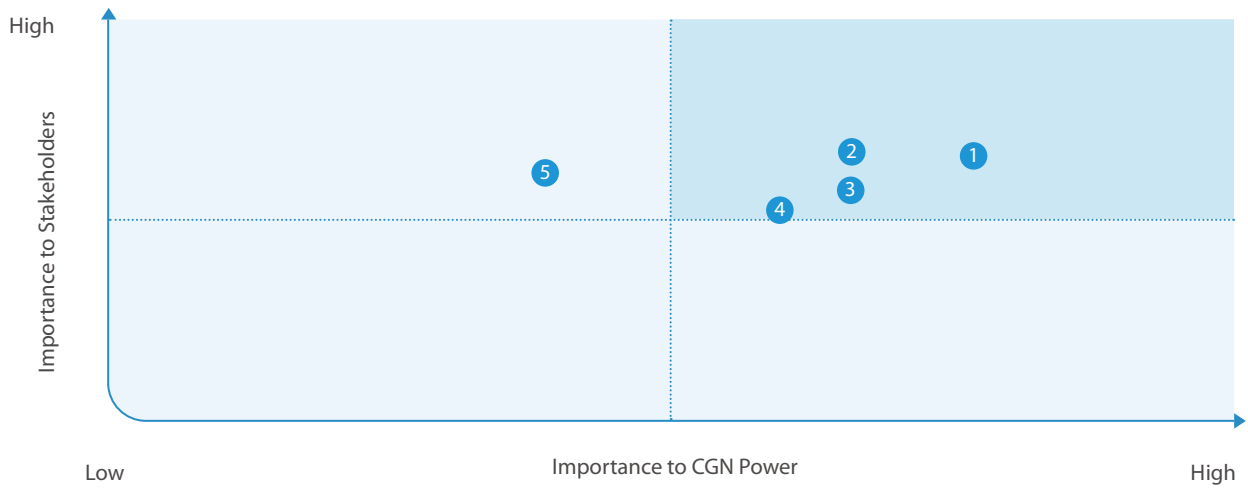
8. Public and Media Opinion

9. Community Participation and Contribution

10. International Exchange and Cooperation

11. Promote Community Economy

### Materiality Assessment - Governance



1. Corporate Governance and Enterprise Risk Management

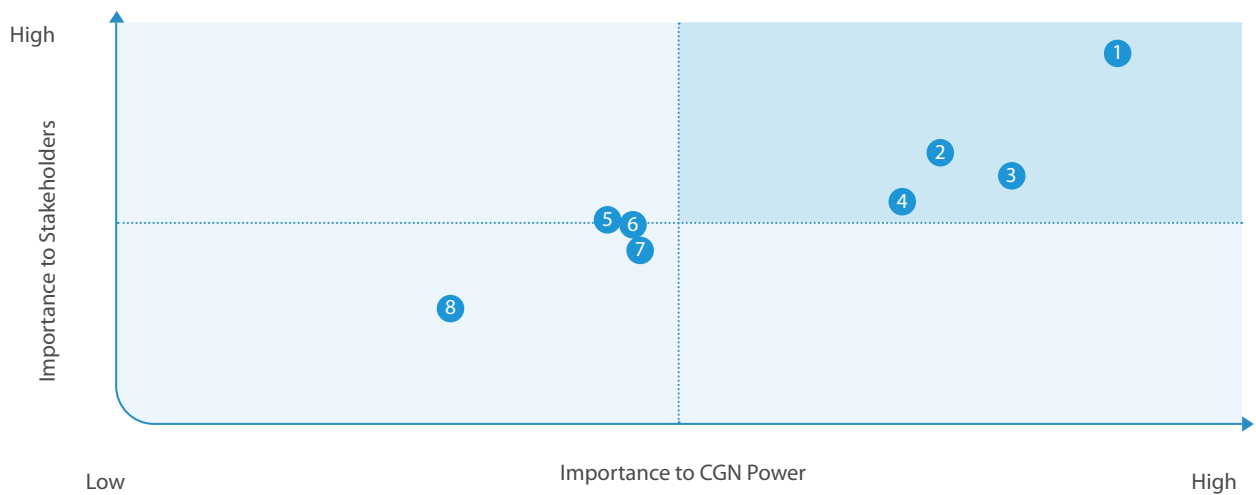
2. Promote National Nuclear Energy Policy Development

3. Risk Management of Investment Projects

4. Strengthen Research and Innovations

5. Anti-corruption

### Materiality Assessment - Employee



1. Employee Compensation and Benefits

2. Occupational Health and Safety

3. Employee Training and Development

4. Employee Incentive Mechanism

5. Employment and Labor Rights Protection

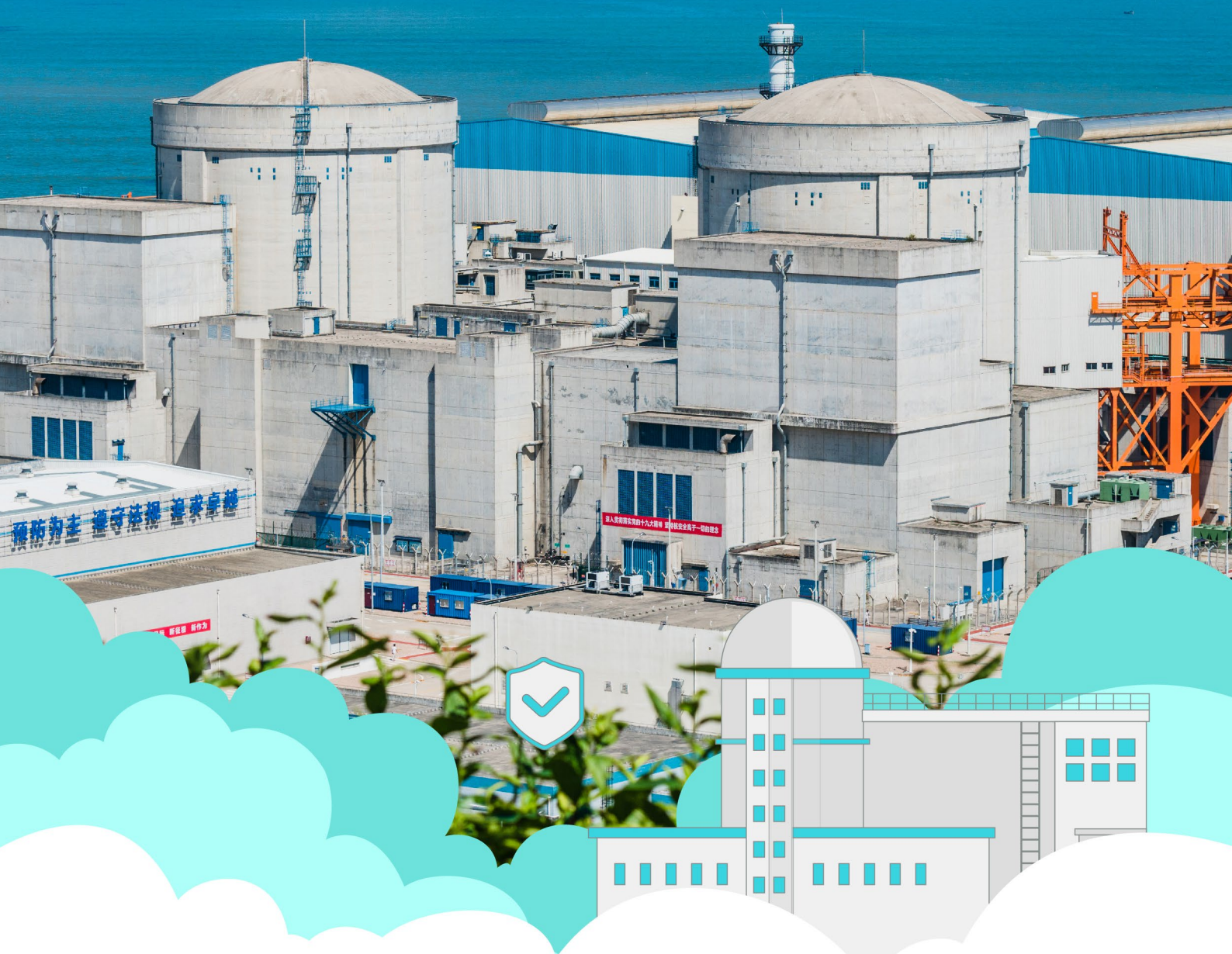
6. Employee Satisfaction

7. Diversity and Equal Opportunity

8. Labor Standards



CGN Power always considers nuclear power safety as the most important element in corporate responsibility. From the design, construction to operation phase of NPPs, we always adhere to the principles of "Nuclear Safety is Paramount" and "Safety First, Quality Foremost, Pursuit of Excellence", and the core value of "Doing Things Right in One Go", through all aspects of the design, construction and operation of the NPPs, safety protection is built from the aspects of safety system, culture, organization, system, risk, emergency response, supervision and experience feedback to form a comprehensive safety network.



**Stable Operation,  
Safety First**





### The overall goal of nuclear safety

To establish and maintain an effective defense system at nuclear power plants to protect people, society and the environment from radiological hazards.

CGN Power's commercial operation units has maintained safe and stable operation for a long time, with an average capacity factor of more than 92% for three consecutive years. In the face of the sudden outbreak of pandemic in 2020, the Group has actively responded to the impact, and implemented strict control on the epidemic prevention and control measures, strengthening the safety management of the resumption of work and production, and ensuring the safety of employees and partners, as well as safe and stable operation of the units.

Facing the complex and changeable situation domestically and internationally, the PRC is committed to managing development and safety, successfully maintaining sustainable and healthy development of economy and social stability. The development and utilization of nuclear energy is an important strategy to promote rapid economic and social development to build a beautiful China, at the same time, nuclear and radiation safety has always been developed with high quality. With the completion and operation of nuclear power projects in the PRC, and application of nuclear power has been further promoted, nuclear power generation of the PRC has maintained its growth trend. To ensure nuclear and radiation safety, China adheres to laws related to nuclear governance, and further advances the modernization of nuclear safety governance system and governance capability, placing higher requirements on nuclear power enterprises in terms of legal compliance. From the design, manufacture, construction to operation phase of NNPs, CGN Power strictly complies with national nuclear safety laws and 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 of the People's Republic of China*, the *Regulations on the Safety of Site Selection for Nuclear Power Plants*, the *Safety Requirements for Nuclear Power Station Operation*, the *Regulations on Safety of Management Systems of Nuclear Power Plants*, and the *Electric Power Law of the People's Republic of China*, etc. We have 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 Special Correction and Management of National Safety Work* and other requirements of regulatory authorities on work safety. CGN Power has actively carried out nuclear safety regulation educational activities for new administrative regulations and rules, formulated corresponding publicity and implementation work plans, and strictly implemented relevant legal requirements. For details regarding laws and regulations, please refer to the subsection headed "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.

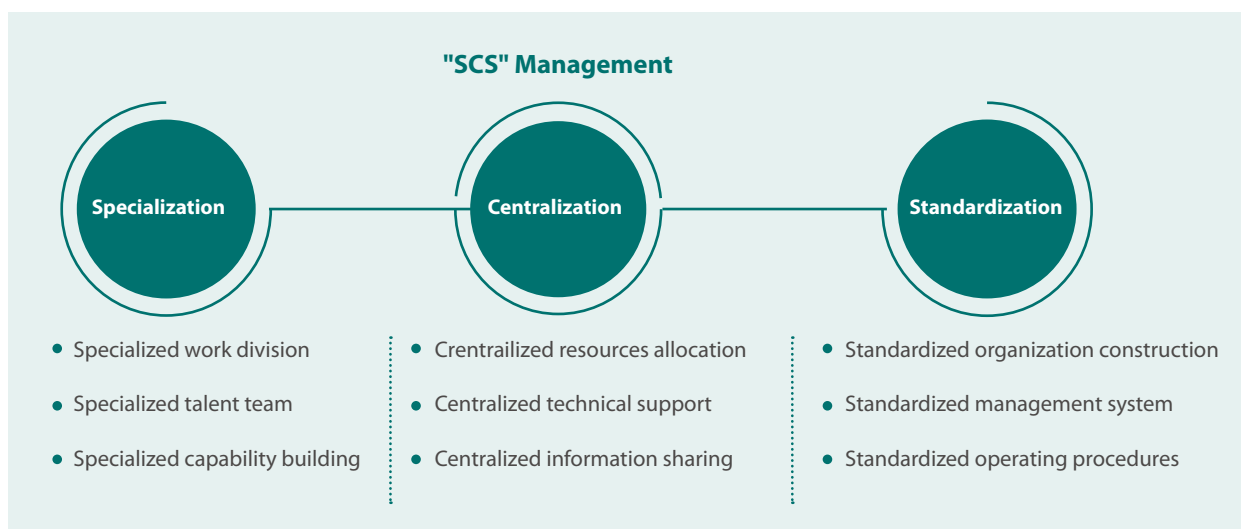


## Strengthening Safety Management



### Nuclear Power Safety System

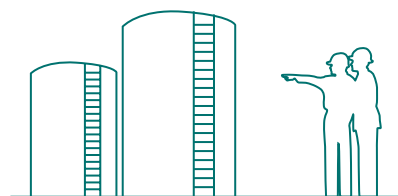
With the objective of "Zero Injury, Zero Defect, Zero Violation", CGN Power strives to construct a comprehensive management system for nuclear power safety through carrying out safety management. Based on the principle of defense-in-depth, we set up nuclear safety management system with multiple barriers of preventing, monitoring and correcting to cope with possible failures of equipment, personnel and organizational structures. All nuclear safety-related operation systems and procedures have considered the establishment of defense-in-depth barrier and its effectiveness, to achieve safe production, control and monitoring in NPPs. In order to maintain the stable operation of NPPs, CGN Power further promotes the "Specialization, Centralization, Standardization" ("SCS") Management and operates in professional, intensive and standardized mode in our NNPs.



### Cultivating Safety Culture

The cultivation of safety culture is a key factor in ensuring nuclear safety and requires the participation of all employees from the Company. We promote the principle of "Safety First, Quality Foremost and Pursuit of Excellence" by educating, cultivating and transforming people, integrating the safety culture into employees' daily work. CGN Power's Guiding Plan for Nuclear Safety Culture Cultivation stipulates the basic principles of nuclear safety culture, and fosters and practices the principles and requirements of nuclear safety culture. To advance the cultivation of nuclear safety culture in an institutionalized manner, we continuously learn successful international experiences in cultivation of nuclear safety culture, constantly promote internal good practices, and continuously improve the level of nuclear power safety.

Improving the nuclear safety awareness and capabilities of all employees is the most important part of the safety culture cultivation. Through planning and implementing various types of nuclear safety cultural activities including awareness enhancement, capacity building, culture evaluation and daily management, we continuously enhance the nuclear safety awareness and responding ability of employees, safeguarding the safety of employees.



In 2020, the number of on-site visiting by management of each subsidiary reached

# 13.94

times per person per month

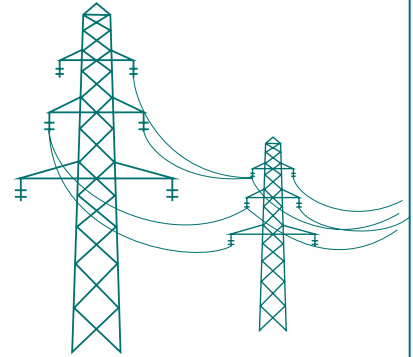




### Hongyanhe Nuclear won the Excellent Enterprise in the National "An'kang Cup" Competition

In November 2020, Hongyanhe Nuclear won the Excellent Enterprise in the 2018-2019 National "An'kang Cup" Competition. It was the recognition for enterprises from all industries with outstanding performance and achievements in safety production, team safety construction, investigation for potential hazards, employee safety and health education, and enterprise safety culture cultivation, to promote national work safety and occupational disease prevention aspects.

Hongyanhe Nuclear has integrated a series of activities into daily management and production practice to continuously enhance safety education, enhance supervision and inspection for labor protection, and enhance self-protection awareness for employees.



Adhering to the principle of leadership, the management takes the lead in demonstrating and implementing the safety management responsibilities and ensures all employees have a "sense of awe" for safety, becoming the successful practice of CGN Power's safety culture cultivation. The safety culture education is conducted by general manager and department heads of each nuclear power plant on domestic and international typical events of the industry, in the way of hosting safety and quality meetings, conducting regular site inspections and implement safety culture assessments. "Leaders On-site" is the safety culture promotion activity of CGN Power that has been held continuously for many years. The management team visits all nuclear power plants regularly to conduct on-site inspections, monitor personnel operations, and solve specific problems of the site, improving the level of safety management, and promoting safety culture practically.





## Special Inspection of "Looking Back" on Nuclear Safety Management

From July to September, 2020, the Chairman and operational management of the Company together with the team carried out a special "looking back" safety inspection in six major nuclear power bases. It was an inspection for improvement of safety management from the previous round of special inspection, and a re-inspection and re-supervision for safety production performance for all nuclear power bases. The inspection aimed to further assess the current situation of safety management of nuclear power bases, identify shortcomings and weaknesses of safety, put forward rectification requirements, and urge all nuclear power bases to comprehensively improve their safety and quality.

Yang Changli, the Chairman, carried out the "looking back" safety inspection to Hongyanhe Nuclear Base



Jiang Dajin, the Vice President, carried out the "looking back" safety inspection to Daya Bay Nuclear Base



Gao Ligang, the President, carried out the "looking back" safety inspection to Ningde Nuclear Base



Huang Xiaoheng, the Deputy Director of Safety, carried out the "looking back" safety inspection to Yangjiang Nuclear Base



Su Shengbing, the Vice President, carried out the "looking back" safety inspection to Taishan Nuclear Base



Huang Xiaoheng, the Deputy Director of Safety, carried out the "looking back" safety inspection to Fangchenggang Nuclear Base



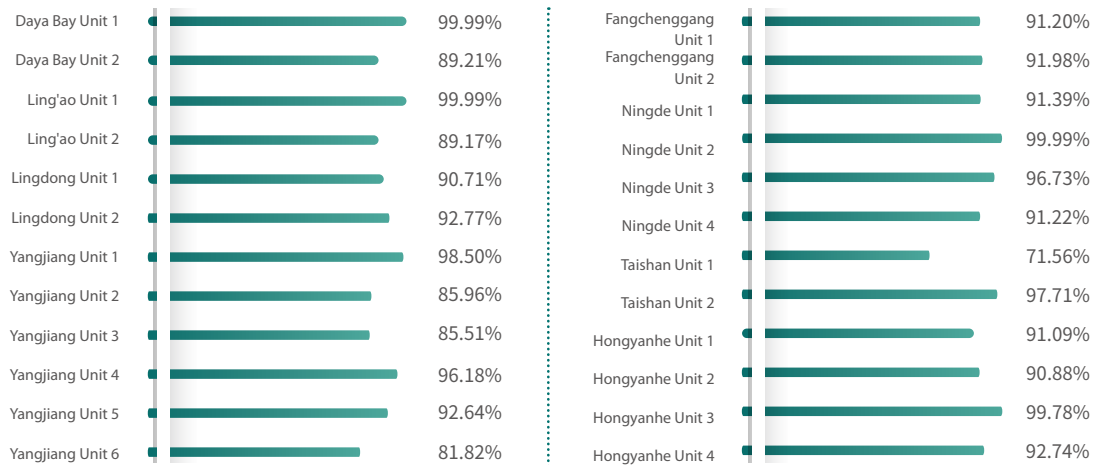




## Outstanding Safety Performance

### 2020 CGN Power Unit Capacity Factor

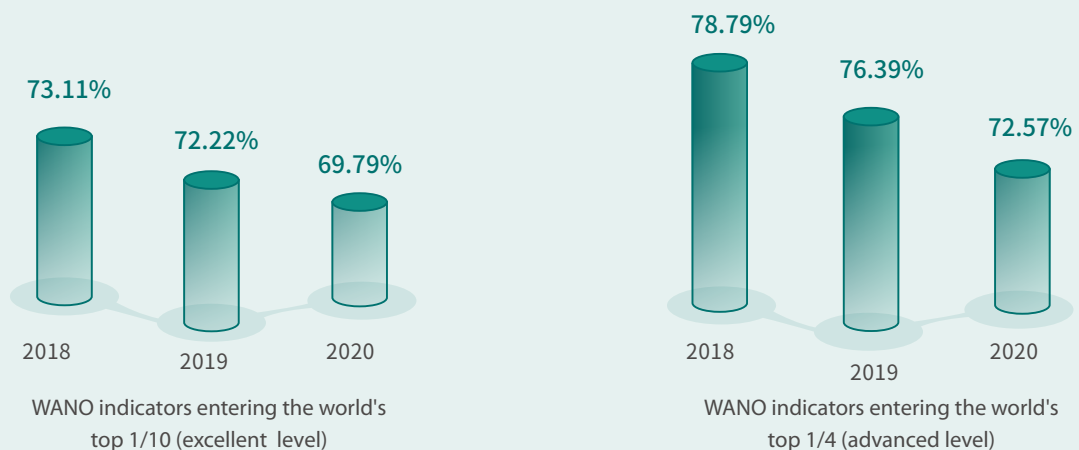
As the best indicator that is widely recognized by the international nuclear power industry for nuclear power operation performance and nuclear power safety management, "Unit Capacity Factor" is mainly used to measure the availability of nuclear power units and serves as an important indicator that reflects the electricity generation capacity of nuclear power units.



Our first nuclear power unit Daya Bay Unit 1 has been in operation for more than 26 years since its commercial operation in 1994. During the Reporting Period, the average capacity factor of 24 units in operation reached 92.03%, taking the lead in the international nuclear power industry.

During the Reporting Period, we didn't receive any customer complaints in relation to our products and services.

### CGN Power Annual Comparisons in WANO Indicators (2018-2020)



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 from WANO organization formulates internationally accepted performance indicators for unified management and coordination, which is conducive to strengthening the development of nuclear power technology, enhancing experience and accident information exchange, and continuously improving the safety and reliability of nuclear power plants worldwide.



In 2020, **4** Ningde units got full marks for their WANO indicators

With an average capacity factor of

**95%**

All the **12** WANO indicators of Ningde Unit 2 have reached the world level of excellence

As of December 31, 2020, the continuous safe operation days of Ling'ao Unit 1 has reached **5,291** days

It continued to refresh and maintained the international record for number of days of safe operation of the same type of units, nearly **15** months longer than the second-ranked unit

CGN Power is committed to maintaining an outstanding occupational health and safety performance with improved nuclear safety performance, achieving "Zero Death, Zero Serious Injury and Zero fire accident".



### DNMC Got the SHE International Benchmark 9 Certificate

Standardization of Safety, Health and Environment ("SHE") of Nuclear Operation and International Benchmarking Assessment is an evaluation system developed based on the world leading system International Safety Rating System ("ISRS"). It aims to measure and improve safety, health and environmental management of NPPs based on the best practice of international SHE management. On 19 November 2020, DNMC got the SHE International Benchmark 9 Certificate of 2020 at the 5<sup>th</sup> Det Norske Veritas ("DNVGL") International Intrinsic Safety Forum, marking its first achievement of international high standards in SHE management.





## Case

### Ningde Nuclear Got the SHE Standardization and International Benchmark 9 Certificate

In December 2020, experts from DNVGL carried out SHE standardization and international benchmarking review in Ningde Nuclear. As the result, Ningde Nuclear got the SHE Standardization and International Benchmark 9 Certificate, becoming one of the enterprises with the highest SHE rating in the world.

Ningde Nuclear has carried out standardization construction work for ten years consecutively. Getting the SHE Standardization and International Benchmark 9 Certificate is the mark for taking a lead in achieving the international first-class level in SHE management.



## Case

### Ningde Nuclear Got the Honorary Title of "National Quality Benchmark"

Ningde Nuclear won the honorary title of "National Quality Benchmark" on October 21, 2020. It was the first nuclear power enterprise in the PRC to win this honor.

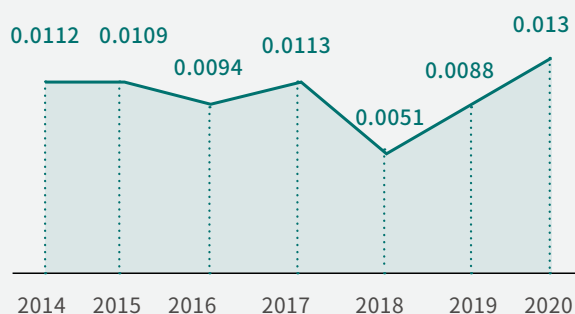
The participating project demonstrated the work experience of Ningde Nuclear in promoting construction of intelligent human-defense prevention system, building smart NPPs, and maintaining safe, stable and high-quality operations and maintenance experiences. As a result, the project passed the qualification review, report review, video response, public announcement, which was recognized by the China Association for Quality accreditation team.





## 2018-2020 Nuclear Power Operation

NPP	Industrial Safety Accident Rate of Employees per 200,000 Man Hours <sup>6</sup>			Industrial Safety Accident Rate of Contractors per 200,000 Man Hours <sup>7</sup>		
	2018	2019	2020	2018	2019	2020
Daya Bay NPP	0	0	0	0	0	0.117
Ling'ao NPP	0	0	0	0	0	0.107
Lingdong NPP	0	0	0	0	0	0
Yangjiang NPP	0	0	0	0	0	0
Fangchenggang NPP	0	0	0	0	0	0
Ningde Nuclear NPP	0	0	0	0	0.0389	0
Hongyanhe Nuclear NPP	0	0	0	0	0	0
Taishan Nuclear NPP	0	0	0	0	0	0

2014-2020 Nuclear Engineering Construction Industrial Safety Accident Rate per 200,000 Man Hours<sup>8</sup>

Nuclear Engineering Construction Industrial Safety Accident Rate per 200,000 working hours is

**0.013**

According to the *International Nuclear and Radiological Event Scale (INES)* implemented by the International Atomic Energy Agency ( "IAEA" ), as of the end of the Reporting Period, no operational events at level 2 or above have occurred at our nuclear power plants<sup>9</sup>.

<sup>6</sup> Industrial Safety Accident Rate of Employees per 200,000 Man Hours = 200,000 × (number of employees accidents per year / total man hour for employees per year). The 200,000 Man Hours is determined based on the Company's practice and actual situation.

<sup>7</sup> Industrial Safety Accident Rate of Contractors per 200,000 Man Hours = 200,000 × (number of contractors accidents per year / total man hour for contractors per year). The 200,000 Man Hours is determined based on the Company's practice and actual situation.

<sup>8</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). The 200,000 Man Hours is determined based on the Company's practice and actual situation.

<sup>9</sup> According to the INES, nuclear incidents are classified into seven levels. Level 1 or above are referred to as "incidents" or "accidents", while events without safety significance are classified as "Level 0".



## Operational Safety and Stability

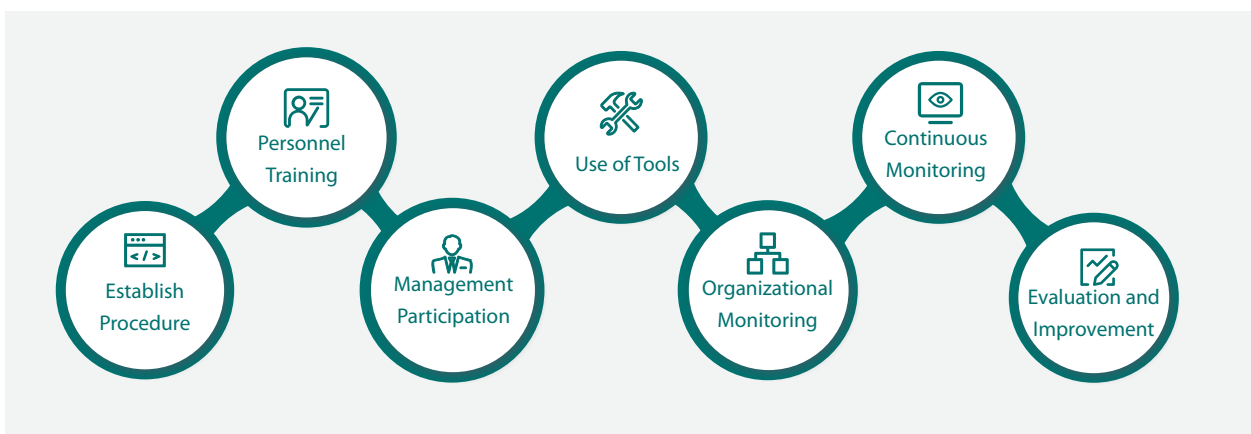
Our excellent safety performance benefits from our efficient and scientific operation management. CGN Power always puts safety first and adheres to the job requirements of "Always Act Based on Rules, Always Be Held Responsible, Always Supervise, Always Keep Documentation" and the core value of "Doing Things Right in One Go". We strictly implement operating procedures, maintain equipment in a regular and orderly manner, improve the nuclear emergency response system, and comprehensively analyze and provide incident experience feedback.

### Stringent Standardized Operation

Human error is a vital factor that results in generating units' safety issues. In order to further regulate personnel operations and consequently reduce human error, we have continuously enhanced professional skill training for employees and implemented the accountability system, thereby ensuring that each operation is conducted in accordance with procedures. We have incorporated safety and quality requirements into employee management on violations of rules and regulations, and implemented the reporting system, thereby ensuring that fraud and concealment are found in a timely manner. During the Reporting Period, due to the vigorous promotion of the monitoring system of "Abiding by Procedures and Opposing Violations of Regulations", the number of abnormal events arising from procedure problems and the number of incidents of non-compliance with procedures of the Company had a significant decreasing trend, continuously reducing human error.

In order to further improve the level of human error management, and to ensure safe operation, CGN Power has established a human error prevention management model, carried out special rectification for human error, improved the mechanism for admission, selection, training and assessment for operating personnel, organized job training for production operation personnel, and strengthened their operational skills to reduce the safety impacts caused by human error.

### Human Error Prevention Management Model



In order to further strengthen the human error management, the Company formed the Peer Group ("PG") in the field of human performance function in 2020 based on the human error management work that has been done by various power plants. We have also formed a special team for barrier construction and optimization and human error technology, integrated resources of power plants and specialized companies to improve human error performance of group plants, and to improve the human error performance by "standardization, specialization and intensification".

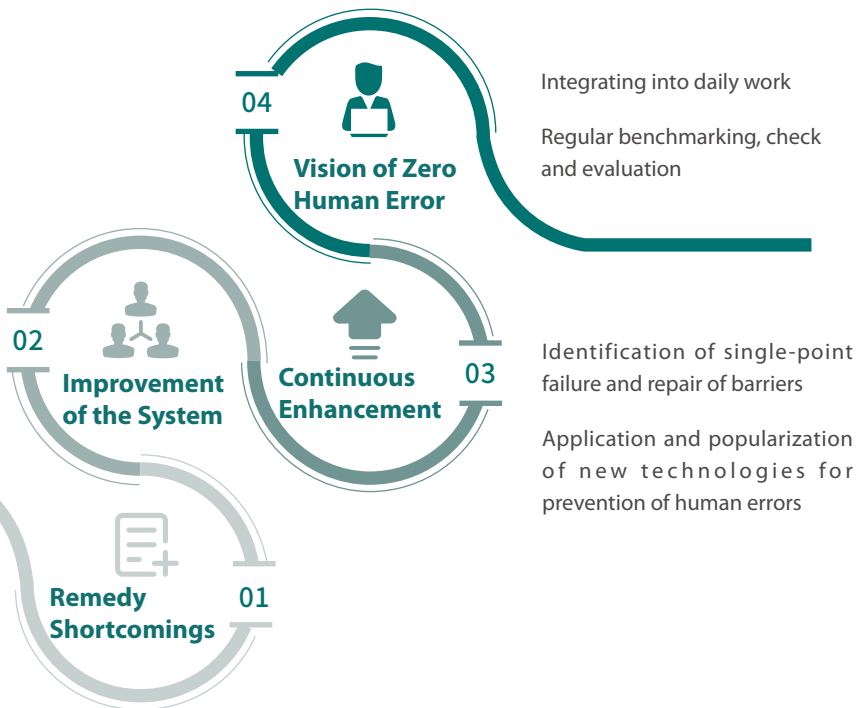


## Operation Mode

Improving management organization for human performance

Introducing new theories and technology

Reducing human error of contractors



Being driven by the vision of "Zero Human Error", improving the human error performance of multiple sites in three stages, from passive defense to proactive management

### Passive Defense

Analysis - Correction - Feedback



### Proactive Management

Management - Tracking - Prevention

## Benchmarking with excellent human error management systems to ensure safety of nuclear power units

### Improvement of the system

- Standardizing the human error management system of multiple sites based on the latest human performance model of WANO
- Holding seminars for multiple sites on human errors annually from 2018 to 2020, conducting special research on human error management issues, and developing improvement actions

### Find the Gap

- Formulating standards on maturity rating for human performance based on human performance model, for benchmarking and self-inspection of multiple sites
- Organizing special communication of platform and multiple sites with the international benchmark company about human error management

### Focusing on Implementation

- Continue to carry out "comply with procedures and against non-compliance", and introduce technical and preventive measures.

We require all online staff to carry the human error prevention cards during work to remind them of safety practices, efficiently preventing human errors. In the meantime, we have specified the training requirements of contractors on the human error prevention cards, and enhanced the application of cards by developing training courses such as *Prevention from Going to Wrong Units* and *Prevention of Mistaken Operation*, and compiling the *Management Procedures of Human Error Prevention Training for Contractors*.

### Pre-job Briefing

Pre-job briefing is a job preparation briefing to define the purpose and procedures before field operation or change of equipment status and certain other important project activities. For an operation to be completed by over two persons, the operation supervisor must hold a pre-job briefing as close as possible to the start of field operations.

中广核 CGN

#### 工前会

两人以上，改变设备或现场状态的作业，开工前作业负责人必须召开工前会。

- 第一步审视人员知识和经验
- 第二步介绍并讨论关键步骤
- 第三步识别可能出错的情形
- 第四步预想最坏情景和后果
- 第五步评估预防措施和预案

工前会应尽可能在临近现场开工时召开

中广核 CGN

#### 工前会

工前会常见失效症状：

- 作业相关人员没有到齐
- 会前未完成必要的准备
- 会议环境容易让人分心
- 缺少提问、讨论和互动
- 不讨论安全风险和措施
- 不讨论人因陷阱和措施
- 不讨论相关的经验反馈
- 讨论内容笼统而不具体
- 工前会后更换作业成员

### Use of Procedures

Use of Procedure is essential for NPPs operations. There are four steps to ensure that each work can be effectively carried out in accordance with the procedures: the first is to prepare procedures: ensure that the procedures to be executed are in line with the task; the second is to understand the procedures: ensure that the executor can fully and accurately understand the contents and requirements of the procedures; the third is to strictly implement the procedures: operate in strict accordance with the requirements and contents of the procedures; the fourth is to provide feedback on the implementation results: provide timely implementation feedback and any abnormal circumstances.

### STAR

The "STAR" is a primary human error prevention tool before the execution of major operational activities. The STAR, short for STOP, THINK, ACT and REVIEW. STOP requires to stop and focus on the job on hand. THINK about what to do, how to plan and how to cope with an accident. ACT is to complete the job as planned. REVIEW the results against our expectations. Essentially speaking, the STAR is to stop in case of uncertainties or inconsistency with expectations.

中广核 CGN

#### 明星自检 (STAR)

第一步 停 — Stop  
停下来，聚焦待执行操作  
第二步 想 — Think  
就位后，预想要领和预案  
第三步 做 — Act  
确认后，执行预想的操作  
第四步 查 — Review  
操作后，确认与预期相符  
不符合预期时，执行预案

中广核 CGN

#### 明星自检 (STAR)

常见失效症状：

- 没有停止急于操作
- 一心二用精力分散
- 没有逐字核对设备
- 没有预想操作要领
- 没有预想应急预案
- 转移视线操作设备
- 操作完成不再检查

### Supervised Operation

Operations that may result in serious consequences in case of errors must be supervised. The operator, supervisor and supervision point must be clarified first. Before the operation, the operator shall describe the operational instructions and point at the equipment. The operator shall not operate before the supervisor confirms the equipment being pointed to verify the instructions and gives consent.

中广核 CGN

#### 监护操作

确定操作者和监护者，明确监护点  
第一步  
操作者口述操作指令，指向设备  
第二步  
监护者确认所指设备，核对指令  
第三步  
操作者获得监护者同意后操作  
一旦失误会带来严重后果的操作必须监护

中广核 CGN

#### 监护操作

工前常见失效症状：

- 该监护的操作没有监护人
- 监护者不清楚监护的要点
- 操作者没有指向对应设备
- 监护者未发现或制止偏差
- 监护者未核对指向的设备
- 未经过监护者核对就操作

### Three-stage Communication

An effective communication approach implemented in the NPPs, the three-stages communication requires the deliverer to state the receiver's name clearly and accurately followed by the instructions or information to the receiver; the receiver explains and repeats the information received to the deliverer; the deliverer confirms the completeness of the repeated information and actions can be taken upon provision of the correct information. The key to three-stage communication is to clarify doubts in a timely manner.

中广核 CGN

#### 三段式沟通

完整、清晰、简要地传递信息，  
避免口头交流失误。  
第一阶段 发送  
发送人发出信息，要求复述  
第二阶段 复述  
接受人复述信息，要求确认  
第三阶段 确认  
发送人确认接受人复述正确，  
必要时提问并澄清疑点

中广核 CGN

#### 三段式沟通

至少下列情况必须使用  
三段式沟通：  
■ 下达设备操作指令  
■ 执行唱票监护操作  
■ 通报系统设备参数  
■ 接受电网调度指令  
■ 火险急救电话报警  
一次会话可多次使用三段式沟通





## Ensuring Equipment Safety

Ensuring the reliability of equipment is an important foundation for nuclear safety management. In order to ensure nuclear power equipment operates in high stability, nuclear power plants have considered equipment features and specifications at the design phase. We follow various regulatory requirements including nuclear power plants operation technical specifications, strengthen risk prevention management of major sensitive equipment, regularly monitor and maintain nuclear power plants equipment, adjust and optimize equipment reliability, achieving normalization, programmed and standardization of equipment management.

Equipment maintenance includes routine maintenance and refueling outage. Based on the NPPs' pressurized water reactor design, the nuclear reactor of each unit in operation must be shut down for refueling after a certain period of time. Taking NPPs' safety and economic factors into considerations, we have uniformly planned, organized and rationally deployed personnel to perform outage activities. Meanwhile, nuclear power plant equipment has been categorized and analyzed to continuously improve efficiency of maintenance and refueling, detect equipment abnormalities in real-time and ensure outage activities are carried out in an orderly manner.



During the Reporting Period, we successfully carried out and completed 15 refueling outages, including two initial outages, in accordance with national regulations and standards on safety and quality indicators. The overall safety and quality status remained good



During the Reporting Period, we successfully carried out and completed

**15** refueling outages



### The First Outage of Yangjiang Unit 6

On September 4, 2020, the successful interconnection of Yangjiang Unit 6 marked the end of the first outage of the unit.

As the first high-quality unit of Yangjiang Nuclear, facing various difficulties including lots of items needed to be done for its first outage, big challenges in epidemic prevention and control, prevention of high temperature, as well as heavy task for "three defenses", its safety and quality indicators still have been comprehensively improved. It created the shortest record of 49.73 days taken for the first outage for the unit of CPR1000 series in the nation. After its first outage, the unit has been running at full power with normal operating parameters and under safe and stable status.





## Effective Management for Multiple Sites

Combined with the characteristics of CGN Power's multi-technology platform and multi-nuclear power bases, we have implemented the management system with standardization, specialization and centralization for multiple sites.



### Standardization

The Operation Standard Management System ("OPST") model for core field of operation is constructed to achieve systems of unified organizational management, unified technical standard and procedure flow, and unified post qualification and authorized training, and management tools for unified operation.

Strengthening information coordination through Operation and Information Business Screening Team ("SRT"), organizing and formulating intelligent operation plans for nuclear power, and promoting the implementation of intelligent operation.



### Specialization

Determining the direction of capability development of power plants and specialized companies, continuously promoting specialized services in the fields of refueling outage, engineering renovation, equipment management, spare parts management, design and construction of nuclear power plants, etc.

For major projects, setting up technical teams with professionals to promote project implementation professionally.



### Centralization

Maximizing the overall value through continuously adopting centralization methods such as resource allocation, sharing and co-construction, and business pooling.

Carrying out centralized reporting for spare parts for cross-round outage in group plants to ensure the supply of spare parts for outage. Establishing the virtual warehouse of spare parts to optimize the inventory structure. Continuously lowering the average single heap inventory.



### Planning and Control Platform of Multiple Sites Operation Center

On December 24, 2020, the Planning and Control Platform of Multiple Sites Operation Center was officially launched, marking a new breakthrough in standardization of group plant.

To enhance the process on activity management, information communication and ability of planning and control for power plants, based on a wide range of research on needs of key users, the functions in this new multiple sites platform were enhanced and developed, including user's personalized search, information delivery to fixed groups, rolling information updates of team members for working weeks and other function, making it more practical and easier to use.

The operation of the Planning and Control Platform of Multiple Sites Operation Center further optimized the information interface for working processes, improved the control efficiency of working processes, and expanded the field of standardized management for multiple sites.



### Whole Process Visualization and Big Data System for Spare Parts of Multiple Sites

In December 2020, the Spare Parts Operation Center - Whole Process Visualization and Big Data System for Spare Parts of Multiple Sites was officially launched. The system was developed by CGN Operation in conjunction with each NPPs and the Center of Information Technology of the Company, aiming at the "Optimization of Inventory Strategy", "Spare Parts Demand Control" and other business priorities in the field of spare parts.

The system adopts ideas of digital operation, combined with big data technology, to build a whole process and closed-loop visualization system for demand planning, purchasing, receiving and delivery, payment, inventory, and acceptance. It forms a management and control system for the whole processes of spare parts with controllable macro business, visible detailed processes and traceable behavior details to monitor the whole processes and whole area of spare parts business, cooperative supervision of business, inventory and intelligent prediction of purchasing prices.

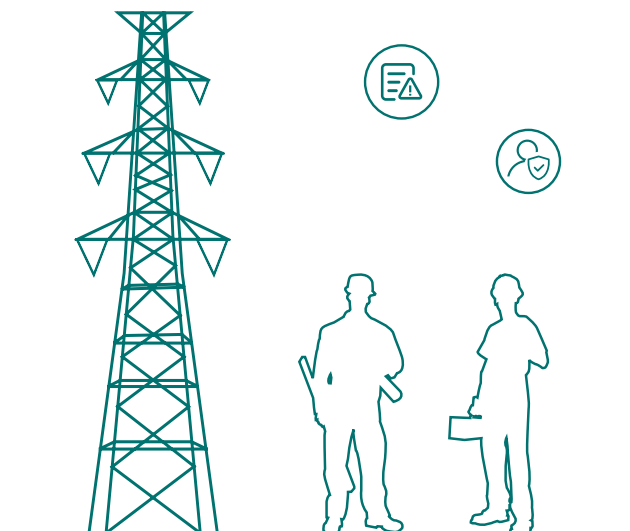
After the three-month statistical analysis for trial operation for users of each NPP, the data retrieval speed of the system has been greatly improved, saving more than 80% of data query time. At the same time, the big data analysis technology realizes functions such as protection of demand of spare parts and risk warning, effectively reducing risks on short supply, controlling inventory cost, and ensuring the high-end and stable operation of multiple sites business.



### Emergency Safety Management

CGN Power attaches great importance on prevention, control, and follow-up management of safety accidents. Continuously improving the organization system for nuclear emergency response, forming a comprehensive plan system for emergency response, a multi-level emergency defense mechanism and specialized emergency equipment and facilities, and enhancing emergency preparedness have been the focuses of our nuclear power safety work. CGN Power's nuclear emergency response system strictly complies with the *Emergency Response Law of the People's Republic of China* and the *Regulations on Nuclear Power Plant Nuclear Accident Emergency Management*, and combines the characteristics of technical support from multi-platforms and multi-bases operation to establish a comprehensive nuclear accident emergency response system. It provides material, personnel, equipment and technical support for emergency incidents, further enhancing the emergency response capabilities of nuclear power plants and minimizing the impacts of emergency accidents on the public and environment.

All of the NPPs we managed have established a comprehensive emergency preparedness system, implemented the system of 24-hour on-call duty, to ensure the emergency organization responds around the clock. During the pandemic, CGN Power built a stringent defense line for safety, and carried out emergency preparedness work in an orderly manner to ensure stable power supply. The Company has established a network platform for technical support and experience feedback and exchange for emergency response of nuclear power bases. It helps us to achieve unified reception and handling of generic technical issues, share experience and practices of emergency incidents, and timely respond to incidents, standardizing the emergency management. In order to effectively organize responses in case of emergency, we have set up an emergency command center, held regular emergency drills and conducted comprehensive drills with local authorities to improve the capabilities to respond to emergencies, ensuring the safety of people surrounding the NPPs.



## Case

**Drill for Prevention and Control on Super Typhoon in Yangjiang Nuclear Power Base**

A drill was conducted in Yangjiang Nuclear Power Base on April 27, 2020. It simulated the super typhoon "Hongxia" landing frontally in the area near Yangjiang Nuclear Power Base. A simulator was used to simulate unit control when the typhoon causes a series of accidents such as lost communications, landslides and failures of diesel generators. The purpose of the drill was to test the effectiveness and enforceability of contingency plans of the base, which was related to defense for the typhoon, and to evaluate the capability of the typhoon emergency response organization on emergency response and coordination under emergency situations.



## Case

**Integrated Emergency Drill**

The third Integrated Emergency Drill of CGN Power's emergency team was held on September 29, 2020, in CGN Power headquarter building in Shenzhen. The drill simulated the tower down of Hongwa transmission line in Hongyanhe Nuclear Power Plant caused by a super typhoon, that led the power plant to off-site emergency status. Based on the status of the power plant in the accident, the nuclear emergency command department simulated and implemented procedures for online technical support such as reactor core status diagnosis and radiation consequence assessment, emergency supplies support, technical personnel dispatch support, logistics supply and information security.

The drill effectively tested the operation of the Company's nuclear emergency response system, nuclear emergency command and coordination and emergency public opinion response, technical support and emergency resource deployment and other capabilities to improve personnel emergency response skills.







## Strengthening Safety Supervision

CGN Power makes each effort to ensure that the indicators of NPPs fulfill or exceed the national and international regulatory requirements. We actively comply with relevant national nuclear safety regulatory requirements, accept irregular inspections and supervision of NPPs by national regulatory agencies, to ensure the Company's compliance with nuclear safety regulations.

To further strengthen the safety supervision of nuclear power units, the Company has established a multi-tiered and comprehensive nuclear safety supervision system consisting of NPP safety engineers, safety authorities and the Center of Independent Supervision and Assessment for Nuclear Safety ("**Nuclear Safety Supervision Center**") to independently monitor and evaluate the safety management standards of nuclear power plants. The scope of safety supervision and evaluation covers safety culture cultivation, unit safety management and control, equipment reliability, project safety and quality control, network safety, nuclear power plant security and emergency management.

One of the important ways for us to win the battle of safety and quality is to successfully pass the evaluation and supervision of international industry organizations. CGN Power accepts independent safety assessments by international industry organizations, including IAEA and WANO. Through international peer evaluations and supervisions, we effectively learn the good safety management practices of international peers, continuously enhance internal learnings and improve the level of safety management of nuclear power.

In 2020, the Company carried out independent supervision and evaluation for DNMC, Yangjiang Nuclear, Hongyanhe Nuclear and Taishan Nuclear. The scope of the evaluation covers ten aspects such as nuclear safety, operation, maintenance, technical support, equipment reliability and experience feedback, outage and spare parts, chemical environment, industrial safety plant management and nuclear security, radiation protection, and fire protection. At the preparatory stage, the evaluation group performed the offline pre-evaluation for document procedures and records. At the period for evaluation in the plant, the evaluation group collected facts through ways such as on-site activity observation, personnel interview and document review. For weaknesses related to safety management found through on-site observation, interviews and document reviews, the power plant has developed an improvement plan to continuously improve the level of safety management.

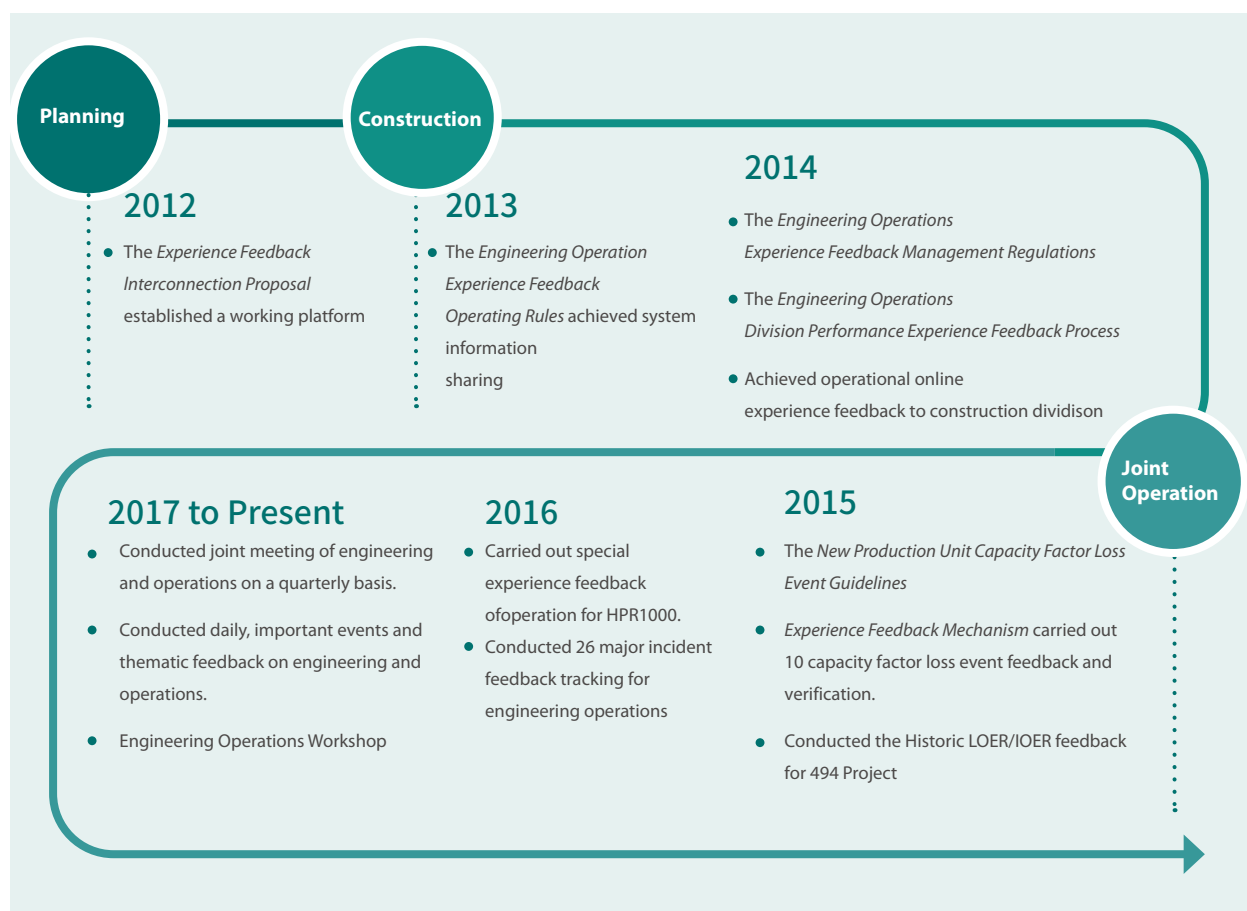


Independent Internal Safety Supervisions System	
Level	Scope of Supervision
1.On-site safety supervision team with NPP safety engineers as the core	Ensuring effectiveness of NPPs daily production activities in terms of safety
2.The safety authority with the basic functions of managing the safety quality of NPPs	Ensuring and overseeing the safety management system effectiveness at the organizational level
3.Nuclear Safety Supervision Center monitoring multiple group plants	Carrying out independent safety supervision and evaluation at each NPP
External Supervisions	
National Nuclear Safety Administration	Supervising and inspecting compliance with nuclear safety regulations
International peers' independent safety assessments (including IAEA & WANO)	Evaluating and supervising the safety operation in NPPs

## Enhancing Experience Feedback

The experience feedback system is an important mechanism for nuclear power safety management. Based on the advanced international nuclear power experience feedback system, we continuously adhere to the collection of internal and external historical experiences, and organize self-inspection and correction for safety and quality, performing root cause analysis, formulating targeted corrective actions, and continuously improving the effectiveness and operational efficiency of the experience feedback system. Based on the incident reporting and classification management system, the Company regularly summarizes and solidifies good practices, conducts regular exchanges with national and international peers, leverages external experience feedback and forms a dynamic and transparent experience feedback system to promote the improvement of safety management.

Site selection, design, construction, commissioning, operation, and management of nuclear power plants are all core elements to nuclear power plants' safety and stable operation. Through the two-way experience feedback mechanism between the engineering and operations department, both parties realized mutual sharing and use of experiences, promoting nuclear power unit improvement in areas such as design, supplier quality, equipment replacement, construction and commissioning management, operation optimization, maintenance strategy and regular safety reviews, etc.



In order to learn from our own experiences as well as other power plant operating organizations, we actively conduct experience feedback analysis among various NPPs, 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 such as the *Special Feedback on Small Lifting Operations*, the *Special Feedback on Wiring Errors*, and the *External Major Events Express*.



### Conference for Welding Technology and Experience Feedback

In July 2020, the Conference for Welding Technology and Experience Feedback for CGN Power's nuclear units that are under construction was held in Daya Bay Nuclear Power Base. In the conference, CGN Operation presented 17 important and valuable experiences of welding and nondestructive inspection in recent years. The application of welding and nondestructive technology in construction sites was introduced by each construction company.

The conference further improved the welding and nondestructive technology of each stage in construction activities of nuclear power units, and ensured the effective implementation of previous feedbacks, playing a positive role in improving the construction quality of nuclear power units.

The WANO performance analysis and the Significant Operating Experience Report ("SOER") are important ways for us to digest, absorb and practice the experience of international counterparts in nuclear power. We prioritize and timely track issues from the WANO assessment results related to nuclear safety operation, promote and optimize the improvement measures. At the same time, the Company has organized a comparative SOER analysis among multiple power plants to identify common issues and formulate improvement directions, to enhance the management's awareness of risk management and improve risk management capabilities. For example, we analyzed the shutdown of eight NPPs in South Korea due to typhoons, and implemented improvement actions at various nuclear power bases.



## Building Quality Engineering

The quality of today's projects directly affects the safety of tomorrow's nuclear operations. On the basis of conscientiously implementing relevant national laws and regulations on nuclear power construction projects, CGN Power takes the target of "Zero Behavior Violation, Zero Quality Defect", insists on building projects with the highest standards and requirements, and continuously improves nuclear power plant safety management and control in aspects such as site selection, engineering design, equipment manufacturing, construction and installation, commissioning and operation, laying a solid foundation for the safe and stable operation of nuclear power plants.

### Engineering Safety Practices

In order to comprehensively improve safety and quality of nuclear power projects, we have formulated and implemented the *Zero-Defect Scheme for Safety Quality*. Based on the international benchmark safety and quality construction and team building, we adopt three measures of "zero defect team", "elimination of quality hazards" and "behavioral improvement" and four tools of "risk analysis", "work package", "work briefing" and "human error prevention" to realize comprehensive control of quality, schedule, technology and environment, to maintain the international leading level of safety and quality performance of nuclear power projects.



#### Zero Defect Team

Establishing a zero-defect team to resolve acute problems through management, better process guidance and evaluation. The teams have been evaluated to urge the members to improve and prevent key issues at construction sites.



#### Screening of Quality Hazards

Continuous efforts have been made in potential quality hazard identification. Responsibility of each level in potential hazard identification and management regulations has been defined and implemented. Meanwhile, specific employees with defined responsibilities have been assigned to monitor the potential hazard identification system implementation, thereby improving potential hazard identification capabilities.



#### Behavioral Improvement

The "Behavioral Improvement Action" was launched and the *Implementation Guide to Quality Behavior Observation* was prepared and published to involve all employees in quality behavior observations, eliminating inadequate behaviors and ensuring engineering construction quality.



During the Reporting Period, the Company has set the goals of "Zero Behavior Violation, Zero Quality Defect" to accomplish "Cultural Leadership, Management Demonstration, Management Improvement, and Capacity improvement", focused on key quality management issues and difficulties, promoted and implemented various quality management measures of the Company in several aspects such as culture construction, fulfillment of responsibility, system and capability improvement. Key tasks include:

Promoting  
construction of  
nuclear safety  
culture

Based on experience from culture construction for nuclear safety, with reference to advanced industry practice, continuously improving system of culture construction of nuclear safety; and

Formulating and issuing the *Assessment Manual of Safety Culture for Nuclear Power Engineering (2020)*, and the *2020 Plan for Culture Construction for Nuclear Safety*. 18 actions covering mechanism improvement, leadership demonstration, responsibility implementation, behavior control, atmosphere creation, and evaluation and improvement have been formulated and implemented. Continuously holding activity for safety and quality with youth alliance of the Company, and getting remarkable effects.

Ensuring that  
responsibilities are  
fulfilled

Improving responsibility system, focusing on optimization system design of quality accountability, clarifying responsibilities of centralized management job for construction, comprehensively promoting quality evaluation system for significant progress adjustment; and

Implementing the main responsibility, establishing the list for new equipment supplier, formulating and implementing targeted helping measures based on significance of the contract; establishing the key control list for equipment with "subcontractors managed by main contractor" to promote suppliers to set up targets and management measures, and to transfer the responsibility to subcontractors; improving the standardized handling process of breach of construction contracts to reasonably and efficiently punish the breach, and to increase the accountability and efforts of incentive to the construction units.

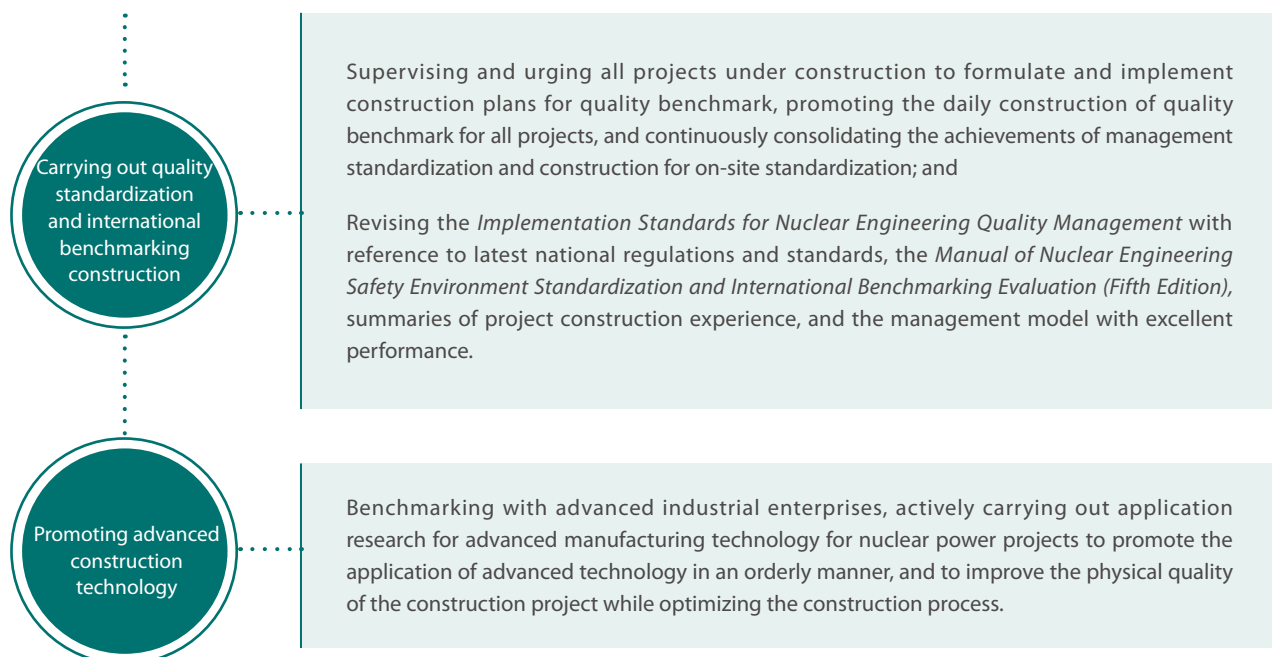
Improving the  
quality system

Improving the control mechanism for the whole process, and implementing the accountability system for program quality;

Continuously carrying out manager certification of construction industry chain, carrying out re-training, evaluation, and verification of professional skills for management personnel of construction units;

Continuously improving the qualification standard curriculum system for quality management personnel, including curriculum development and related training and evaluation; and

Organizing comprehensive investigation and analysis for problems exposed in the management of nonconformance, upgrading the management procedures of nonconformance, and optimizing aspects such as management responsibilities, business processes, terms of rewards and punishments, information platform.

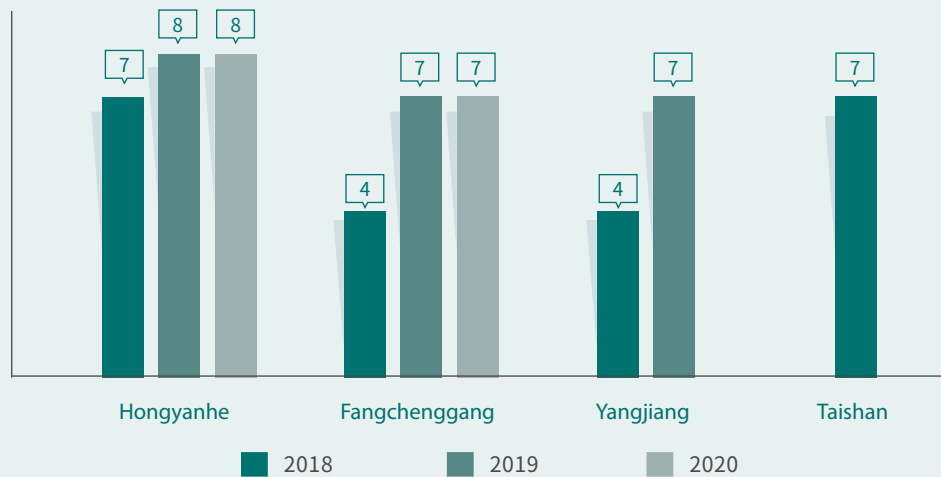


## Nuclear Engineering Rating

For nuclear power projects under construction[As of the end of 2019, Ningde, Yangjiang and Taishan nuclear power bases have started commercial operation, and therefore no overall rating evaluation will be performed.], the regulatory authority conducts a comprehensive assessment on project safety, quality, and environmental impact in terms of performance standards, site selection, and management level based on the *Manual of Safety, Quality and Environment Standardization and the International Benchmarking Evaluation of Nuclear Power Projects*. The rating system is divided into ten levels, of which level 5 and level 6 indicate good, level 7 and level 8 indicate advanced, level 9 and level 10 indicate international benchmark.

<sup>10</sup> As of the end of 2019, Ningde, Yangjiang and Taishan nuclear power bases have started commercial operation, and therefore no overall rating evaluation will be performed.

### Overall Safety, Quality and Environment Benchmarking Rating of Nuclear Power Projects Under Construction



#### Case

#### Unit 3 and Unit 4 of Yangjiang Nuclear Won Several Awards

The project of Unit 3 and Unit 4 of Yangjiang Nuclear won the "National Gold Award for Quality Excellence" on December 1, 2020, becoming the first national gold award won by the Group. On December 11, 2020, the project won the "Outstanding Project Award of the 19<sup>th</sup> National Quality Award (2020-2021)", becoming the only project to receive the award in the field of nuclear power engineering construction.

During the construction of the project, we adopted green construction plan. With quality management for the whole process, comprehensive risk management, zero defect management and other international advanced management concepts for its construction processes, it was evaluated as high quality with an excellent grade for its construction quality. The unit has won five national invention patents and 19 utility model patents.





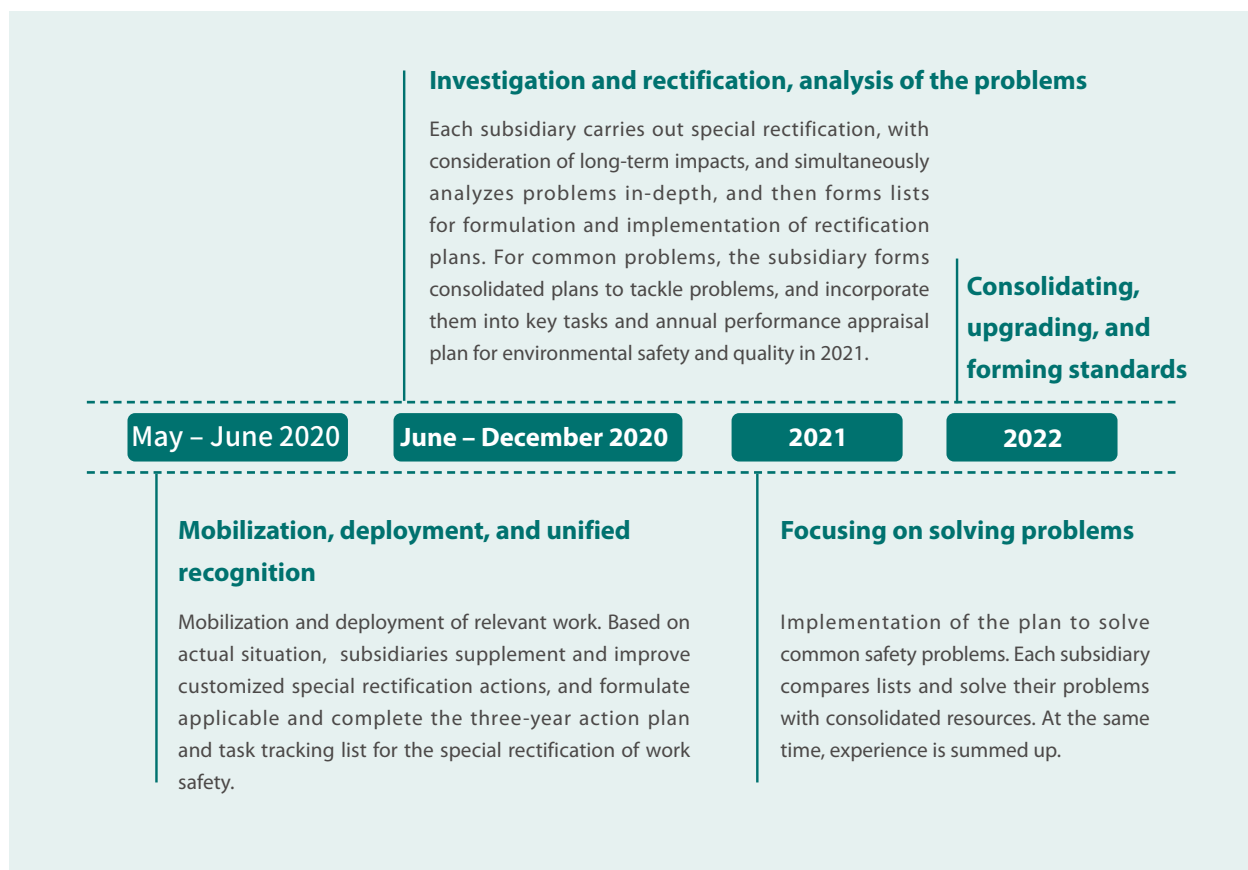
### Yangjiang Nuclear Phase I won the Nomination Award of the 6th China Industry

On December 27, 2020, Yangjiang Nuclear Phase I Project (6\*1,086 MW) won the Nomination of the 6<sup>th</sup> China Industry Award. The project has been widely recognized by judges and experts for its energy construction of "six million-kilowatt-class pressurized water reactor nuclear power units approved at one time" with a localization rate of key equipment exceeding 85% and the development of "scale, serialization and standardization" in the nuclear power industry of the PRC.

The construction of NPPs involves various professional suppliers and contractors. Close collaboration and communication play vital a role in improving engineering quality and safety level. For information on supplier management, please refer to the "Research and Development, Promoting Development" section of this Report.

## Enhancing Management of Safety, Quality and Environment

In response to the Safety Operation Committee of the State Council on the *Three-year Action Plan for National Safety Work* which was taken effect on April 4, 2020, the Company officially issued the *Three-year Plan on Safety, Quality and Environment ("SQE")* to enhance our level of management and performance on SQE in June 2020. Implementation performance will be reported to the Board and the Nuclear Safety Committee.





## 2021 Targets on SQE



## Network and Information Security

Network and information security are critical to CGN Power's operation and its nuclear power plants. We have established a corporate information security system and successfully obtained the information security system certification (GB/T22080- 2016/ISO/IEC 27001:2013) in accordance with the *Cyber Security Law of the People's Republic of China*, the *Information Security Technology — Baseline for Classified Protection of Cybersecurity*, the *Implementation Guide for Cyber Security Classified Protection of Electric Power Information System*, IAEA best practices and other safety regulations. At the same time, we have set up a safe operation and management system for computers and related equipment to enhance the confidentiality and integrity of information, ensuring information security.

To manage network security work, and to coordinate and promote information technology construction and application, the Company has formed the network security and information technology commission. It aims to protect the network security by enhancing the network security inspection, notification and early warning, and other work, and unify coordination and promotion of digital transformation to ensure the safe, stable and reliable operation of the Company's network, communication and information system, and to prevent information leakage.

During the Reporting Period, we have improved network security by strengthening network security inspection, monitoring and early warning, emergency drills, loophole rectification, science popularization training and security improvement. We have also actively participated in network security exercises, formulated improvement actions for network security, and strengthened R&D work on nuclear power information security.



Our employees are required to attend training related to network security and sign the confidentiality agreement after their induction. The Company has also carried out trainings in relation to information security for professionals and representatives from departments regularly to publicize common information security risks, and prevention and emergency disposal methods in work, and to improve the network security awareness and professional skills of employees.



### Popularization of Internet Security for Employees

The Company has carried out a centralized popularization activity in the main office areas, nuclear power bases, and non-nuclear power base area about "Network Security for People, and Protecting Network Security by People". Through placing publicity boards, posters, Yilabao, long picture recommendation on application (APP), network security knowledge and other forms, activities of National Network Security Publicity Week and the theme content of Network Security Publicity Week were carried out.



### Special Activity for Cyber Security Inspection

According to the work deployment and arrangement of the general cyber security drill command department, the Company has carried out various self-examination and self-correction work, including inspection of employees' cybersecurity behavior and habits, such as timely shutdown and inspection after work, cleaning of folder sharing authority, and screened projects that are prone to security hidden danger such as high-risk software.



### Special Area for Learning Cyber Security

The Company established the "2020 Special Area for Learning Cyber Security" on the cyber learning platform, which was opened to all employees of the Group to learn from the national and superior departments' requirements related to cybersecurity, the *Cyber Security Law of the People's Republic of China*, internal cybersecurity cases, "14 Article of Employee Cyber Security", etc.

During the Reporting Period, no major network security incidents at level III or above<sup>11</sup> occurred in the Company, and the number of large-scale computer virus infections was zero. We have effectively blocked attacks on websites and applications by domestic and foreign IP addresses, effectively ensuring the safe, stable and reliable operation of the Company's network, communication and information system, preventing information leakage, and achieving excellent satisfaction from customers for annual informatization.

Number of large-scale computer virus infections

0

<sup>11</sup> According to the National Contingency Plans for Cyber Security Incidents (CAC [2017] No.4), network security incidents of level III and above include extremely serious network security incidents (level I), serious network security incidents (level II), relatively serious network security incidents (level III).

Climate change has caused changes in frequency, intensity, scope of impacts and duration of extreme weather events, with implications for socio-economic, human health, food security and impacts to terrestrial and marine ecology. Facing the uncertainty of climate change and extreme weather, countries and companies have to carefully analyze the impacts of climate change and respond actively. CGN Power actively implements national environmental protection plan and *the Communist Party of China Central Committee's Proposals for Formulating the 14<sup>th</sup> Five-Year Plan for National Economic and Social Development and the Long-Range Objectives Through the Year 2035* ("**Fourteenth Five-Year Plan Proposals**"). We have implemented work related to ecological environment protection and new energy safety strategies of the National Work Conference of Ecological Environment Protection, and the National Energy Work Conference, considered domestic and international developing trends and national developing conditions, anchored the long-term goal of 2035, comprehensively strengthened protection of ecological environment to fight the battle of pollution prevention and control, strengthened capacity building to tackle climate change, thereby improving efficiency of clean energy use and promoting green and low-carbon development.



## Environmental Protection, Low-carbon Development





CGN Power has complied with the national requirements on ecological civilization construction and strictly abides by national and local environmental laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, the *Law on Prevention and Control of Radioactive Contamination of the People's Republic of China* ("**Law on Prevention and Control of Radioactive Contamination**"), the *Water Law of the People's Republic of China*, the *Law on Environmental Impact Assessment of the People's Republic of China*, the *Atmospheric Pollution Prevention and the Control Law of the People's Republic of China*, the *Marine Environment Protection Law of the People's Republic of China*, and the *Law on Prevention and Control of Solid Waste Pollution of the People's Republic of China*. We focus on the construction of ecological nuclear power, strengthen environmental monitoring, and improve the environmental management system.

As a leader in the nuclear power industry, CGN Power is committed to providing the society with safe, reliable, low-carbon and economic electricity to promote green and sustainable development. We actively cooperate with national environmental protection policy of "Strengthening the Overall Protection and Coordinating Management of the Ecological Environment" to promote protection of ecological environment when developing nuclear power energy. Throughout different stages of site selection, feasibility study, design, construction, operation and maintenance of NPPs, we strictly comply with relevant national environmental protection laws and regulations and related requirements. We are open to the supervision of national and local environmental protection authorities. We implement all around environmental management throughout the construction and operation of NPPs, pay close attention to the protection of the atmosphere, water quality, soil, landscape, natural habitat and biodiversity, achieving high-quality green development and being the benchmark of sustainable development in the international nuclear power industry.



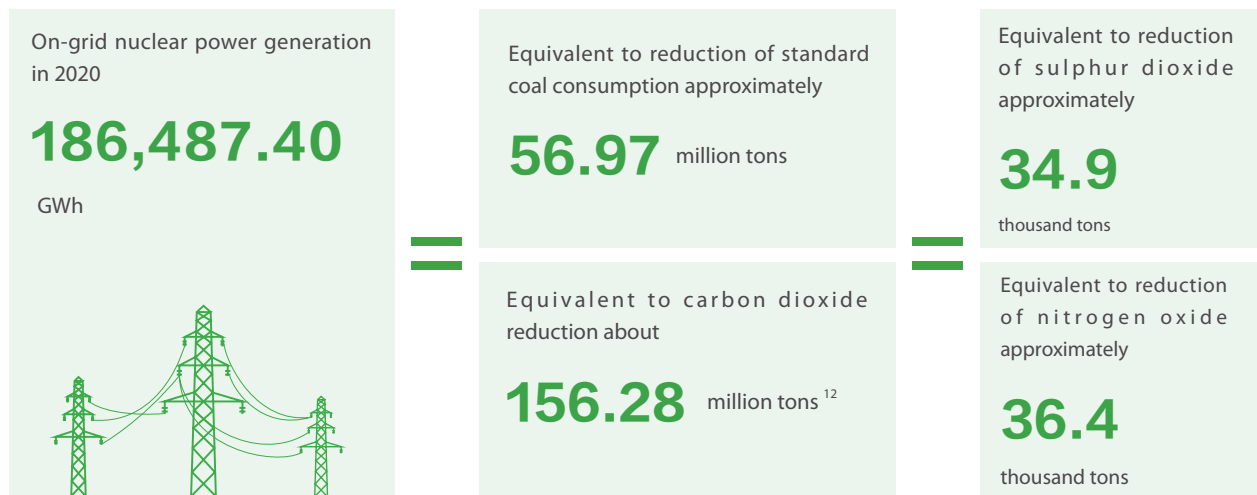
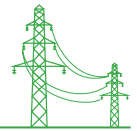


## Responding to Climate Change

The President of the PRC, Xi Jinping, delivered a speech at the 75<sup>th</sup> Session of the United Nations General Assembly on September 22, 2020 to emphasize that strong policies and measures will be adopted to strive to have CO<sub>2</sub> emissions peak before 2030 and achieve carbon neutrality before 2060. In order to achieve the target of carbon neutrality as well as the reduction of air pollutant emissions, the country will adjust the energy structure and actively develop clean energy industries such as nuclear power. Compared with traditional energy supply, nuclear power generation has the stability and economic benefits that make it the most ideal clean energy alternative to "traditional coal power". It is the key to promote the rapid decarbonization of the global power generation industry. Nuclear power can not only promote the adjustment of the energy structure in the PRC, but also make a key contribution to the growing energy demand, and at the same time help to achieve emission reduction targets in climate change.

We have included climate-related risks (such as high temperature and extreme weather) as part of operational risk assessment and management. The Audit and Risk Management Committee regularly monitors and evaluates related risks and reports to the Board of Directors. Benefited from our comprehensive preparedness and risk management system, the Company believes that climate change has no substantive impact on our current operations and financial performance. We will continue to pay close attention to the issue, tackle potential risks, and disclose relevant information in a timely manner.

In response to climate change, energy security must be maintained and the stability, continuity and sustainability of energy supply in the energy transition process must be addressed, while advocating the continuous withdrawal of fossil energy. We believe that nuclear energy may play a more important role in the future. Leveraging its strong technical reserves and operational experiences, CGN Power has continuously promoted nuclear power development, continuously increased energy conservation and emission reduction, and worked together with multiple parties to make contributions to effectively respond to global climate change. We currently operate with a nuclear power capacity of 27,142 MW and 24 sets of nuclear units in operation.



<sup>12</sup>According to the 2020 National Electric Power Industry Statistics Express Column issued in January 2021 and the Annual Development Report 2020 of China's Electric Power Industry issued in June 2020 by CEC. According to the data, the environmental protection effect of 100 million kilowatt- hours nuclear power electricity is equivalent to reducing standard coal consumption by about 30.55 thousand tons, reducing carbon dioxide emissions by 83,800 tons, reducing sulphur dioxide emissions by 18.7 tons, and reducing nitrogen oxide emissions by 19.5 tons.

## Strengthening Environmental Management

In accordance with national and local laws and regulations, and by implementing the concept of "Lucid Waters and Lush Mountains Are Invaluable Assets", CGN Power follows the environmental management policy of "Complying with Laws and Regulations, Conserving Resources, Preventing Pollution and Continuously Improving", and sets our environmental management goals to implement efficient resources utilization, efficient energy transformation, waste regeneration, and continuous radioactive waste discharge reduction. We have formulated the *Company Environmental Management System* and the *Establishing and Managing Environmental Indicators*. Adhering to the basic principle of "Prevention First and Prevention Combined", we prevent pollution from its source by integrating ecological and environmental protection into planning, construction and production, and standardized and normalized management processes for identifying and evaluating environmental impact factors, and correspondingly controlling and managing environmental impacts of operation. We strive to strengthen daily environmental management and formulate emergency response measures for environmental risks.

In order to continuously enhance the environmental management capabilities and performance, the Company continuously improves the environmental management system in accordance with the ISO 14001 standard and national laws and regulations such as the *Law on Prevention and Control of Radioactive Contamination* and the *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*. Each of our nuclear power plant has developed an environmental management manual to integrate the environmental management system with the production management system. We strive to build ecological nuclear power, and establish a pattern of symbiosis, mutual growth and regeneration with the surrounding natural and social environment. Each NPP and major subsidiaries from CGN Power has established the network of environmental management, determined environmental management departments, equipped with specific personnel to manage and improve the environmental management system, and coordinated the implementation of environmental management work among various departments. NPPs regularly organize joint meetings to report the progress of each project, perform analysis of environmental protection laws and regulations, important environmental factors and management measures, and coordinate the environmental management work of each NPP, thereby improving the level of environmental management.

During the Reporting Period, the Company continuously enhanced the environmental management system, improved the requirements of the environmental management system, and supplemented the requirements of environmental management control, evaluation, improvement and accountability.

Responding to environmental emergencies is also the focus of environmental protection work. In accordance with relevant national documents, the company has improved the preparation, review and filing of emergency plans for environmental emergencies, established a risk prevention and control system, strengthened the Company's risk prevention capabilities. We carry out drills and continue to improve the ability of relevant personnel to deal with environmental emergencies. For example, the Company has incorporated the prevention of major environmental risks such as cold sources and super typhoons into the risk management system and emergency plans, and formulated corresponding emergency response measures to ensure the safe and stable operation of nuclear power units. In addition, in accordance with the requirements of the *Company Management Policy* and *Company Environmental Management System*, the Company has established an environmental accident accountability mechanism by signing performance contracts and safety, quality and environmental responsibility letters with the management and various units to implement the main responsibility for corporate environment, clarified the accountability of environmental accidents and the punishment regulations of management cadres for violations of regulations, etc., and earnestly performed environmental protection responsibilities.



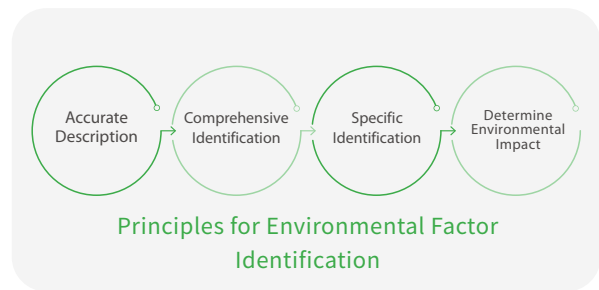
All NPPs of the Company have obtained ISO14001 environmental management system certification.



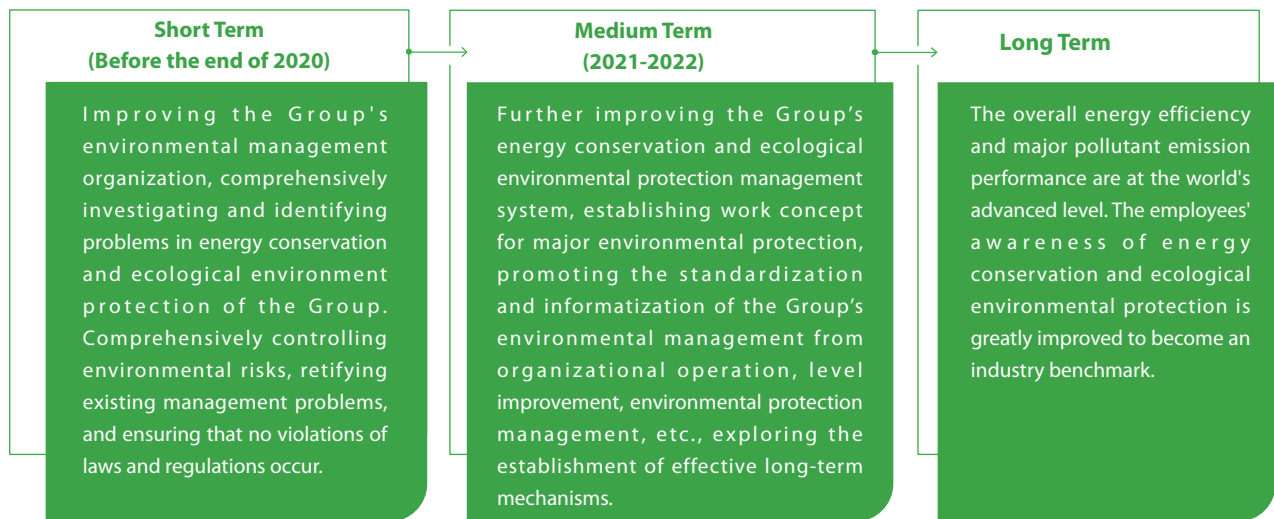
There are **0** major environmental pollution and ecological damage accident.



According to the characteristics of the nuclear power industry and the Company's environmental factor identification principles, each nuclear power company publishes environmental management objectives and indicators every year with three methods, including adopting expert assessment method, special matter assessment method and multi-factor assessment method, to fully identify environmental factors and risks and evaluate the importance. Annual updates are carried out to comprehensively investigate the ecological environment pollution and risk points which existed in the unit operation and project construction process. Corresponding control and improvement plans are also formulated.



In order to promote protection of ecological environment in a scientific and efficient manner, we have set up and maintain short, medium and long-term environmental management targets to make the work on protection of ecological environment scientific, standardized and specific.



## 2020-2022 Recent Goals and Main Work Arrangements for Environmental Management Improvement

### Reinforcing learning, raising awareness

Regularly study and implement relevant requirements of superiors; regularly organize special work meetings on environmental management regularly to learn relevant national instructions, convey the spirit of the meeting, report problems found, and deploy related work; safety committees at all levels of the group (i.e., The Safety and Quality Management Committee or the Safety, Quality and Environmental Protection Committee) shall regularly set up environmental protection related topics, strengthen the deployment of environmental protection work and promote implementation.

### Improving work organization and mechanisms

Taking the initiative to find gaps, supplementing and improving relevant systems in a timely manner, implementing the required resources and technical support guarantees; based on the characteristics of environmental risks, studying and formulating scientific and operational governance tasks and management and control measures of ecological environmental protection in terms of exhaust gas, liquid waste, solid waste, hazardous waste, etc.; clarifying short, medium and long-term governance goals; clarifying work responsibilities, strengthening environmental supervision responsibilities and resource allocation; strengthening cultivation of environmental management talents, formulating and implementing training plans for key talents on environmental management.

## Efficient Use of Resources



### Nuclear Fuel Utilization

Nuclear fuel is the main raw material for nuclear power generation. Increasing the use efficiency of nuclear fuel is the key task to improve the utilization rate of NPPs. CGN Power has continuously implemented the *Energy Conservation Law of the People's Republic of China*, gradually improved the efficiency and performance of nuclear fuel use through technological R&D and model optimization, strengthened quality control to ensure stable operation of nuclear power units. In terms of technological R&D, we have continuously developed reliable and cost-effective fuel cycle models and refueling models, cooperated with relevant agencies to conduct R&D and upgrading of nuclear fuel to increase the utilization rate of nuclear fuel. On the other hand, we have continuously optimized nuclear fuel management, carried out highly flexible fuel management research and engineering experiments, and increased the flexibility of nuclear power station cycle length. The nuclear fuel utilization rate has been increased by approximately 10%. After a series of technological development and upgrading, the current nuclear fuel cycle in the NPPs ranges from 12 to 18 months. Most of the units have been upgraded to the 18 months refueling mode. This has greatly reduced the number of refueling outages, and effectively improved the unit availability and use of nuclear fuel.



### Strengthening Water Management

Water resource is one of the key risk factors in the nuclear power industry. We attach great importance to management and utilization of water resources by applying advanced water saving technology, and strengthening maintenance of water supply system to ensure sustainability and efficiency of water supply. The water we used is sourced from municipal water supply, power plant reservoirs and sea water, with no issues in sourcing water that is fit for purpose. The reservoirs are equipped with an automatic integrated video and satellite monitoring system to track water level, dam seepage, leakage pressure, rainfall, ensuring stable operation of the reservoirs. In order to strictly manage reservoir water, the power plant reservoir has been managed in accordance with the *Base Water Saving Management Regulations* and as the first-level water source protection area. We have implemented a water extraction permit system, implemented water use plans, water use declaration, and water use tracking system with statistics. All bases have formulated water-saving management requirements, advocated water conservation and reasonable water use, and promptly intervene and urgently repair for abnormal water use and burst pipes to avoid wasting of the water.

For seawater utilization, we have continuously promoted seawater desalination technology, and established a seawater desalination system based on actual conditions of different nuclear power bases, thereby reducing the consumption of fresh water from land by NPPs, and improving efficiency of water resource utilization.





## case

**Hongyanhe Nuclear Seawater Desalination System**

The seawater desalination system of Hongyanhe Nuclear is the first seawater desalination system of a nuclear power plant in the PRC. The seawater desalination team of Hongyanhe Nuclear has strengthened its capacity building, focused on improving the health of plants and equipment, and adopted a series of measures to promote the overall operational stability and efficiency of seawater desalination.

Hongyanhe Nuclear's ultrafiltration and reverse osmosis seawater desalination system is divided into first and second levels. The concentrated water treated via the second level of reverse osmosis is recycled to the ultrafiltration production water tank through the system pipeline to save the amount of seawater intake. In 2020, the amount of recycled water exceeded 200,000 tons. In order to ensure the major needs, the Company has established a hierarchical management of water users, dividing the living water into three levels. When water supply is in short supply, the trend of water supply and water production data are evaluated every day. Users are separated according to the degree of importance to further ensure the water safety of major important systems, regions, and jobs.



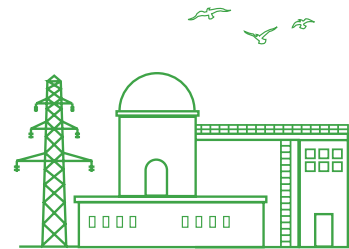
## case

**Yangjiang Nuclear Water Saving Management**

By establishing water-saving organizations, management systems and water-saving indicators, strengthening equipment maintenance, optimizing operation methods, reusing industrial water, and carrying out water balance tests, Yangjiang Nuclear has effectively promoted the construction of a water-saving enterprise and rationally used water resources to achieve sustainable use of water resources.

By summarized testing results, the water plant of Yangjiang Nuclear has optimized the backwash time and flow rate of the multi-media filter, optimized the backwash time of the V-type filter, adjusted the water production dosage to improve quality of effluent water and equipment reliability. The rate of self-used water has reached 5% ~10%, which is a good standard for self-used water small water plants among the industry, saving 320,000 cubic meters of water annually.

The wastewater from Yangjiang Nuclear will firstly be reused after sewage treatment. According to the analysis of the water extraction process, measurement and deployment during the test period, the amount of reclaimed water of the sewage treatment station in the main plant is 181.1 cubic meters per day with the displacement volume of 241.1 cubic meters per day, and the wastewater reuse rate in the main plant area is 42.9%.





### "River Chief System" River Protection

DNMC has strictly implemented relevant national requirements for the "River Chief System" and carried out related work in accordance with the "River Chief System" for the four rivers in Daya Bay Nuclear Power Base. The base has set up a "Public Sign for River Chief" in a prominent position to indicate responsibilities of the river chief, river profile, management and protection goals, and supervision telephone numbers for accepting social supervision at all times. At the same time, the Company has conducted regular inspections and monitoring of river water area on four rivers to ensure that the rivers will not be polluted, and the shorelines will not be illegally used.

The protection of the four rivers in the base is currently in good condition. No pollution from industrial and mining enterprises, urban life, livestock, aquaculture, agricultural, poultry breeding, and ships and ports has been found.

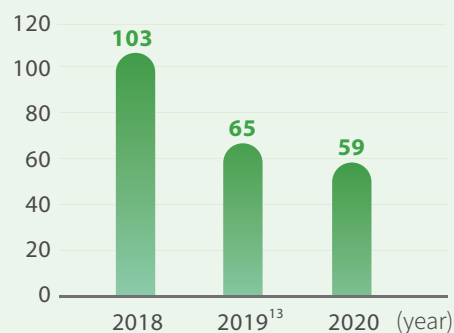
To further improve the sustainability of water supply, we have regularly assessed the safety and stability of water supply and formulated water-related management regulations and emergency plans, including the *Emergency Plan for Water Supply Shutdown in Water Supply Pipeline* and the *Emergency Plan for Reservoir Collapse* to ensure timely and effective handling of water source anomalies with standardized measures. We have rationally allocated water resources and implemented comprehensive environmental protection measures in special freshwater reservoirs of NPPs and adjacent water areas' ecological environment, and further improve the stability and sustainability of water supply.

Our water consumption is mainly used for construction, production, office operation and daily life in the NPPs. We continuously monitor our total water consumption and sewage discharge and rate of water reuse. During the operation and construction, we encourage water resources recycling and efficient water resources management. For example, we use treated reclaimed water for landscape irrigation and road cleaning through a water recycling system. During site construction of engineering construction projects, we inspect the location of pipelines in advance to avoid pipeline rupture caused by accidents during excavation. During the Reporting Period, water consumption per unit of on-grid power generation decreased by 9.23% compared to last year.

**Freshwater Consumption (ten thousand tons)**



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



<sup>13</sup>The Company has updated the data for 2019 to ensure meaningful comparison. The relevant data for 2019 shall be subject to this Report.

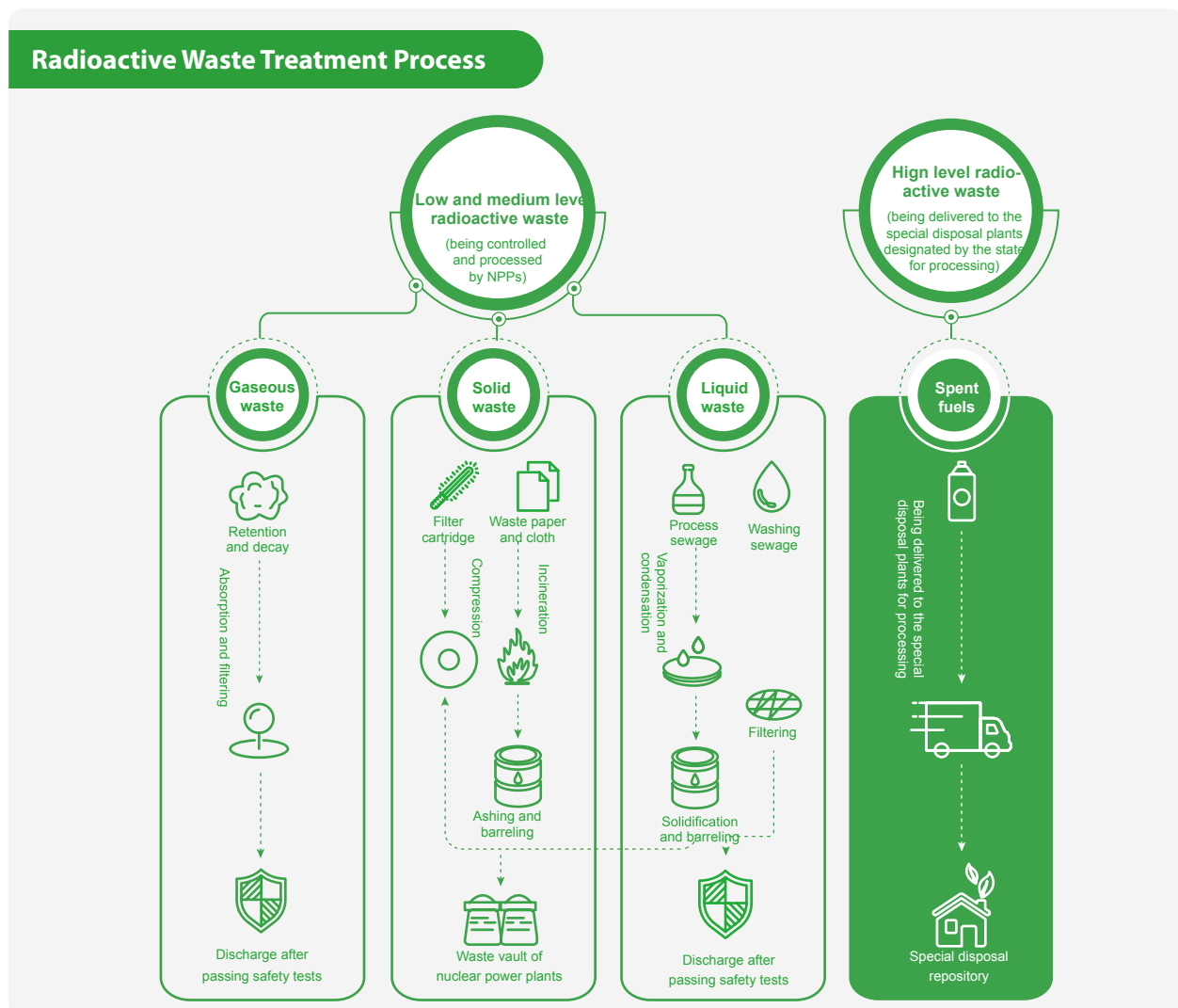
## Reducing Pollutant Emissions

### Radioactive Waste

In terms of radioactive waste management, CGN Power has operated in strict accordance with legal requirements and industrial standards such as the *Law on Prevention and Control of Radioactive Pollution*, the *Regulations for Environmental Radiation Protection of Nuclear Power Plant* (GB6249-2011) and the *Technical Requirements for Discharge of Radioactive Liquid Effluents from Nuclear Power Plant* (GB14587-2011), and strictly controlled discharge and treatment of radioactive waste.

The operation and production activities of NPPs 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, formed a complete set of radioactive waste treatment mechanisms, adopted international advanced technologies and standards to control and process radioactive waste, actively carried out waste minimization, and effectively controlled and minimized the generation of radioactive waste. In terms of emission standards, we require ourselves with the most stringent standards. The discharge of radioactive waste is far below the emission standards allowed by the PRC.

The Three-wastes management systems of each nuclear power plant have been designed, constructed and operated at the same time as the corresponding main project. During the Reporting Period, all subsystems are operating in a desirable condition.





According to relevant national regulations, spent fuel (that is, used fuel assembly taken from reactors) is a high-level radioactive waste, which cannot be disposed of by the nuclear power plant itself, but must be sent to a designated special disposal plant for further treatment. After treatment, 97% of the spent fuel can be reused. For low- and medium-level radioactive waste, each power station is equipped with advanced facilities for treatment. The chart on the previous page outlines the classification and treatment of each radioactive waste.

To continuously reduce radioactive solid wastes, CGN Power has complied with domestic regulatory requirements and benchmarked with annual radioactive solid waste generation of major nuclear power countries internationally to set our long-term waste reduction targets. We have also formulated management strategies for plant's radioactive waste as a whole and proceeded with the radioactive waste reduction work from two aspects, namely source control and capacity reduction technology application.



#### **Successful Application of Mobile Production Line of Reusable Nuclear-grade Air Filter**

The reusable nuclear-grade air filter series products and the in-plant reusable mobile production line jointly developed by the DNMC and manufacturers have been officially put into industrial application after eight years. The application of the technology can promote the realization of the goal of low amount of solid waste and high circulation of NPPs. Taking the six units of the Daya Bay Nuclear Power Base as an example, it can reduce the amount of low- and medium-level radioactive incompressible metal waste by more than 13 tons per year, and the amount of low-level radioactive waste is reduced by more than 80 cubic meters.



CGN Power is in strict accordance with requirements of the *National Radiation Environment Monitoring Plan* and the *Technical Criteria for Radiation Environment Monitoring* issued by the national Ministry of Ecology and Environment, to establish strict environmental monitoring systems and environmental supervisions and record systems for nuclear power bases in operation of Daya Bay, Yangjiang, Ningde, Hongyanhe, Fangchenggang and Taishan. The systems focus on monitoring and analysis of air quality, terrestrial creatures and marine creatures within 10 kilometers of the nuclear power plant to assess environmental conditions in and around the plants.

During the Reporting Period, the management of radioactive waste for the 24 units in operation under our management strictly complied with relevant national laws and regulations and met the standards of relevant technical specifications. The amount of radioactive waste discharged from NPPs has been at a level far below the applicable national limits. It also exceeded the annual management target set by the Company.

	Year	Discharged Liquid Radioactive Waste (Radionuclides Other Than Tritium) to the National Annual Limit	Discharged Gaseous Radioactive Waste (Inert gases) to the National Annual Limit	Solid Radioactive Wastes (m <sup>3</sup> )	Results of Environmental Monitoring
Daya Bay Nuclear Power Base (including Daya Bay NPP, Ling'ao NPP and Lingdong NPP)	2018	0.35%	0.56%	248.6	Normal
	2019	0.27%	0.43%	244.8	Normal
	2020	0.24%	0.42%	230.3	Normal
Yangjiang NPP	2018	0.29%	0.24%	44.8	Normal
	2019	0.55%	0.30%	60.8	Normal
	2020	0.41%	0.21%	102.4	Normal
Fangchenggang NPP	2018	0.43%	0.35%	64.6	Normal
	2019	0.29%	0.29%	67.6	Normal
	2020	0.30%	0.30%	74.0	Normal
Ningde NPP	2018	0.30%	0.30%	136.8	Normal
	2019	0.24%	0.28%	124.8	Normal
	2020	0.37%	0.30%	110.4	Normal
Hongyanhe NPP	2018	0.21%	0.21%	159.6	Normal
	2019	0.19%	0.20%	118.4	Normal
	2020	0.15%	0.14%	120.0	Normal
Taishan NPP <sup>14</sup>	2018	0.54%	0.71%	0	Normal
	2019	3.02%	1.59%	0	Normal
	2020	4.85%	2.19%	0	Normal

<sup>14</sup> The annual emission limit of Taishan Nuclear Power Station is different from other power stations, and there is no comparability among power stations.

## Non-radioactive Waste

The non-radioactive solid wastes of CGN Power are primarily generated from construction and daily production, including construction waste, wastepaper, domestic waste and waste generated from green decoration of buildings. Relevant data have not been collected due to the low impact of the total amount on the business operation of the Company. For disposal of non-radioactive wastes, we strictly comply with the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*. Each nuclear power plant has formulated the *Industrial Solid Waste Management*. Starting from reducing waste generation from the source, we have supervised and managed the entire process of classification, collection, storage, handling, transportation, utilization, and disposal. Wastes are sent to agencies for waste disposal with qualified professional after sorting and recycling to ensure proper treatment for each waste.

As for the disposal of non-radioactive hazardous chemical waste, we have formulated the *Disposal Procedure of Hazardous Chemical Waste* based on the national *Regulations on the Safety Administration of Dangerous Chemicals*. We have implemented comprehensive and standardized management of waste disposal to prevent various risks in the disposal of hazardous chemical waste.

During the Reporting Period, various green office initiatives have been implemented in office areas. For example, a concise garbage classification guideline has been formulated to specify the garbage classification and placement location in the office environment, facilitating the effective implementation of the measure.

## Non-radioactive Sewage Discharge

CGN Power strict complies with the *Environmental Protection Law of the People's Republic of China*, the *Marine Environmental Protection Law of the People's Republic of China* and other relevant national laws and regulations and local standards. We have strictly controlled the treatment and discharge of wastewater. All of our NPPs have developed non-radioactive sewage management procedures to provide detailed requirements for sewage collection, construction, operation, maintenance management, water quality analysis and testing. In each NPP, sewage treatment facilities have been set up to treat radioactive wastewater and non-radioactive wastewater separately through independent systems, and conduct online real-time monitoring. At the same time, we have entrusted professional organizations to test the quality of discharged water to ensure that discharges have meet the relevant standards. For the processing of radioactive liquid, please refer to the "Radioactive Waste" section of this Report.

According to the different requirements of the region or province where the NPP is located, our NPP has adopted different control measures for non-drained sewage discharge:

Some NPPs are equipped with sewage outlets. Online monitoring equipment and flow meters are installed at the sewage outlets to monitor relevant data of the discharged water in real time, and measure the discharge flow of wastewater to ensure that the water quality meets the requirements of discharge standards



Some NPPs upgrade the sewage treatment facilities in the plant. Part of the treated water is used for plant greening, dust prevention spray treatment, etc., for recycling of water resources



Each nuclear power plant regularly monitors the sewage treatment station in the plant area and establishes monitoring files to ensure effective sewage treatment



## Greenhouse Gas Emissions and Electricity Management

As a source of clean energy, nuclear power does not generate greenhouse gas emissions in the process of power generation. The main sources of greenhouse gases are generated from electricity purchased for construction, refueling outages and activities in office and living areas. Nevertheless, CGN Power still has strengthened carbon emission management, deeply integrated environmental protection concepts into the whole process of project construction and operation to reduce greenhouse gas emissions through technical means and management measures.

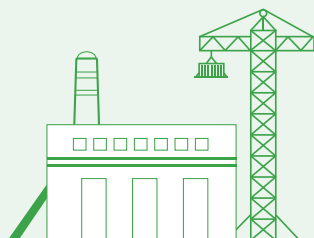
In order to further improve the management level of the energy management system, the five nuclear power bases of Daya Bay, Yangjiang, Taishan, Fangchenggang, and Hongyanhe have carried out certification for usage and management of energy input, storage, conversion, distribution, use, and recycling processes involved in production activities with the energy management system. After sorting out the status quo of energy management and carrying out power quality testing, each nuclear power base has established a system in accordance with the ISO50001:2018 version of the energy management system standard. We have also formulated relevant documents and records for energy policies and goals, organized training and publicity, and formed energy management manuals, procedure documents, energy review reports, compliance evaluation report, internal audit report, and management review report. Five nuclear power bases have successively passed the certification audit to obtain the certification during the Reporting Period, becoming the first batch of domestic nuclear power companies to establish and pass the energy management system certification.

Each NPP has set up an energy-saving management team responsible for coordinating energy-saving related work of various departments, continuously optimized the operation mode, shuts down unnecessary equipment, and eliminated high-energy-consuming equipment. Through technological transformation, we have optimized equipment energy efficiency to strengthen energy saving and carbon reduction, posted labels for air conditioners and electric lights to strengthen power management in office space, spread the concept of energy saving to advocate low-carbon travel for employees.



### Electricity Consumption Management in NPP Operation and Engineering Construction

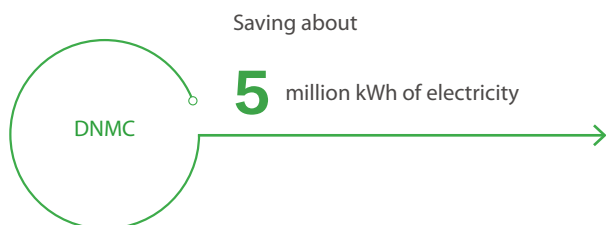
- Optimizing operation mode and energy efficiency for safety and environmental concerns. Improving or replacing high energy-consumption equipment when feasible.
- Closely tracking units' output changes, timely tracking system anomalies and carrying out analysis and evaluation
- Optimizing operation mode of production equipment to reduce power consumption scientifically and reasonably
- Carrying out energy-saving renovation of production equipment



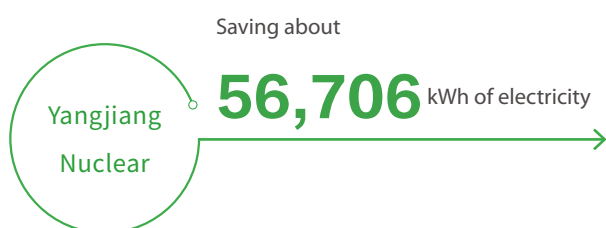
### Electricity Consumption Management in Office and Living Areas

- Regulating the power consumption of employees in office and living areas and promoting the concept of energy saving
- Carrying out energy-saving publicity to strengthening employees' awareness of energy saving, conserving electricity, and maintaining good living and office habits
- Setting electricity consumption quota and recording electricity consumption
- Managing daily energy saving and controlling the use of air conditioners and water heaters
- Adjusting elevator operating schedule
- Switching to energy-efficient air conditioners and LED lights
- Implementing lighting and power shutdown management. Turning office equipment such as computers, printers, etc. into sleep mode when unused
- Advocating holding of video conferences
- Promoting the use of electric vehicles as shuttle buses for employees

## Outstanding Power-saving Measures



On the basis of ensuring the safe and stable operation of units, implementing relevant measures to reduce power consumption of the plant, and adopting a number of innovative measures on operation optimization of major power-consuming equipment during refueling outages and thermal shutdown, operation optimization of ventilation fan in turbine hall, regular test and optimization, replacement of high energy-consuming equipment, and operation time control of air conditioning and lighting.

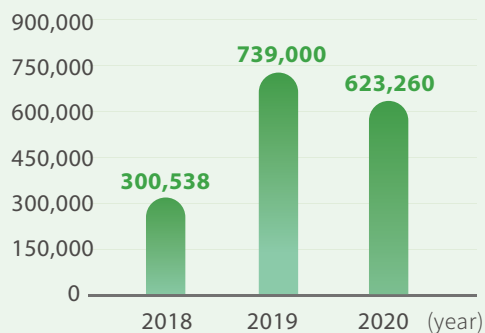


Implementing the overall energy-saving renovation of the lighting fixtures in the office buildings of the power plant. At present, 1,079 old-fashioned fluorescent lamp panels have been renovated, which is expected to save 56,706 kWh of electricity annually.

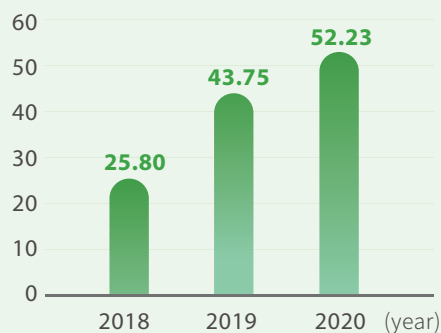


Heat supply is provided by nuclear steam heat exchange, saving about 20,000 tons of standard coal and reducing carbon dioxide emissions by about 73,300 tons per year approximately.

Purchased Electricity (MWh)<sup>15</sup>



Purchased Electricity Equivalent to Carbon Dioxide Emissions (ten thousand tons)<sup>16</sup>



<sup>15</sup> The purchased power is mainly used for engineering construction, refueling outage, and activities in office and living areas at the NPPs of CGN Power. The Company has updated the data for 2019 to ensure meaningful comparison. The relevant data for 2019 is subject to this Report.

<sup>16</sup> Refer to the *China Electricity Industry Annual Development Report 2020* issued by CEC on June 12, 2020, in which the carbon dioxide emission per unit of electricity generation by thermal power plants is about 838 g/kWh. The 2019 data has been calculated and updated based on the updated purchased power and the conversion formula disclosed in the 2019 ESG report.

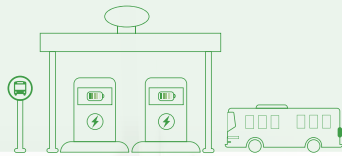




## Electric Shuttle Bus for Employees

### ► Daya Bay Nuclear Power Base

On September 27, 2020, the first batch of pure electric shuttle buses for the Daya Bay Nuclear Power Base were officially put into use. At the same time, 20 supporting fast charging piles dedicated to buses were completed and put into use. The gradual realization of the electrification of the transportation shuttle bus is an important measure for the Daya Bay Nuclear Power Base to build a demonstration park that integrates industry and nature. By the end of 2020, 30% of the shuttle bus for employees in the Daya Bay Nuclear Power Base was electric. In the next three years, all shuttle buses for employees will be electric.



### ► Yangjiang Nuclear

In order to effectively promote the reduction of greenhouse gas emissions, Yangjiang Nuclear Power has adopted a series of measures to promote the use of electric vehicles:

- Introducing two electric buses for transportation of employees in the base to get to and off work. The electric buses drove approximately 100,000 kilometers during the Reporting Period, which was equivalent to reduction of fuel consumption by 30,000 liters
- The four patrol shuttle buses in the protection zone of units in operation used electric vehicles and drove about 78,000 kilometers during the Reporting Period, which was equivalent to reduction of fuel consumption by 23,400 liters
- Encouraging contractors to replace employee shuttles with electric vehicles



## Green Nuclear Power Ecology

### Monitoring Environmental Impact

The planning, design, construction, operation and maintenance of NPPs have taken fully consideration of the impact on the surrounding environment. According to the laws, regulations and normative documents such as the *Regulations for Environmental Radiation Protection of Nuclear Power Plant* and the *Nuclear Power Plant Environmental Radiation Monitoring Regulations*, we have effectively monitored the surrounding environment of operating NPPs, tracked environmental impacts and taken actions. We have regularly submitted environmental monitoring monthly reports and environmental monitoring annual reports, disclosed monitoring data in a timely manner, and accepted supervision by regulatory agencies at all levels and the public.

### Internal Monitoring

Each nuclear power base of CGN Power have established stringent environmental monitoring systems and environmental survey recording systems according to the requirements of regulatory authorities and the *Environmental Supervision and Monitoring Outline*. We have set up a full set of environmental monitoring facilities such as thermoluminescence measurement room, gamma spectrometer measurement room, general discharge measurement room, liquid flash measurement room, sample preparation room, carbonization room, water evaporation room, releasing chemical analysis room, balance room, plant environmental radiation, meteorological monitoring system central station, etc. Targeting surrounding noise, dust, soil erosion, domestic sewage and production sewage and other environmental factors, we have regularly conducted monitoring and analysis for air, water quality, terrestrial biological and marine biological environment in the vicinity of the nuclear power based. In the meantime, we have focused on monitoring level of environmental radioactivity in and around the NPPs to assess impacts on the surrounding environment, and timely released relevant information to the public for supervision.

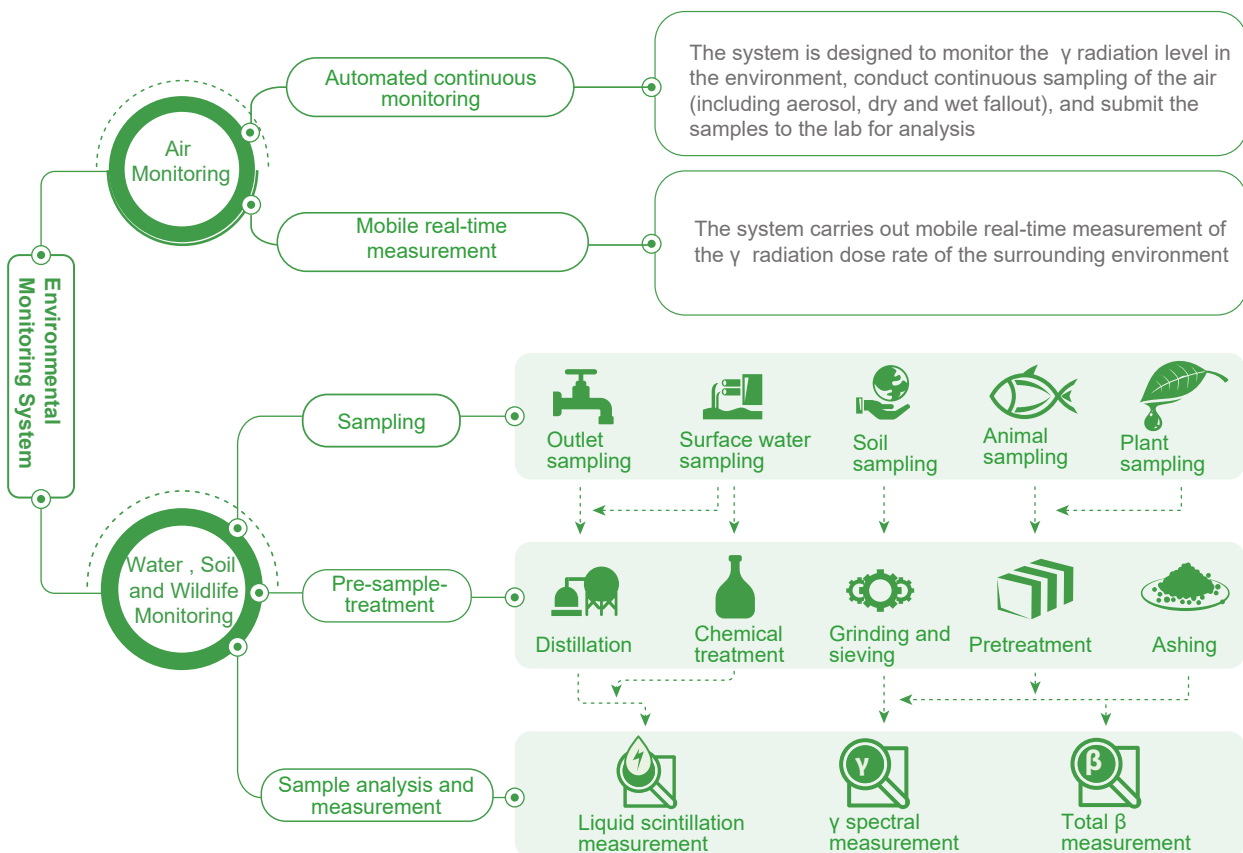
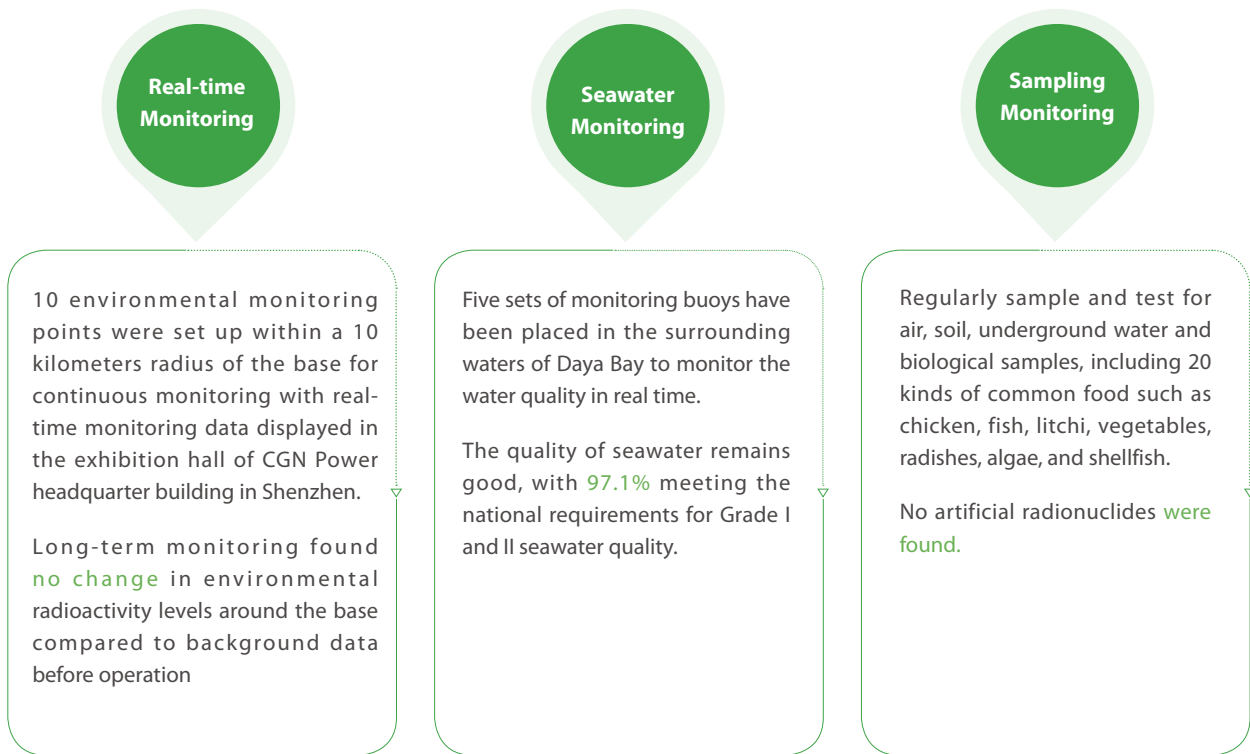
The Daya Bay Nuclear Power Base is the longest operating nuclear power base of CGN Power, and its relevant data is extremely representative. According to the long-term tracking and monitoring data of 10 monitoring sites within a 10-km radius of the base, since the operation, the environmental radioactivity level in the surrounding area has not changed from the background data before the operation of the nuclear power plant.



#### Online Monitoring Platform for Marine Environment Surrounding NPPs

The online monitoring platform for marine environment surrounding NPPs was independently developed by SNPI. It has been successfully applied to the marine environmental monitoring of Ningde Nuclear, Yangjiang Nuclear, and Guangxi Zhuang Autonomous Region Environmental Supervision and Management Station. The technical results have reached the domestically leading level and has been appraised by the Shanghai Nuclear Society.

The platform takes the online monitoring function of seawater water body radiation as the core, and conducts online monitoring of seawater radionuclide concentration, sea air radiation dose rate, conventional water quality and hydrometeorology. It can monitor and warn marine environmental radiation under abnormal conditions of NPPs, and conduct environmental supervision during the discharge period. This platform takes the lead in realizing the engineering application of NaI spectrometer in marine environmental radiation monitoring in China, providing new technical means for marine environmental protection of NPPs, and filling the domestic gap in online marine environmental radiation monitoring of NPPs.



## External Supervision

CGN Power actively cooperates with external supervisory bodies to monitor and release external monitoring data to the public in an open and transparent manner. According to requirements of the *National Radiation Environment Monitoring Plan* and the *Technical Criteria for Radiation Environment Monitoring* (HJ/T 61-2001), and requirements from Ministry of Ecology and Environment of People's Republic of China (National Nuclear Safety Administration), we have strictly regulated radioactive substances of NPPs and conducted "Dual-track" monitoring of gaseous, liquid effluents and the peripheral environment specifically to ensure that the ranges of radioactivity data meet the standards. The monitoring results in 2020 indicate that the absorbed dose rate in air measured in the surrounding areas of NPPs in operation was within the local natural background fluctuation range. The activity and concentration of radionuclides in environmental media such as water, soil and organisms around the NPPs remained the same as previous years, and no negative impact was found on the environment and public health.

Given Daya Bay NPP's close proximity to Hong Kong, the Hong Kong Observatory and other monitoring departments have set up environmental radiation monitoring since the operation of Daya Bay NPP. A total of 12 radiation monitoring stations have been set up in Hong Kong to continuously monitor environmental gamma radiation dose rates for 24 hours every day. Annual reports have been issued to inform the public of the status of environmental radiation levels in Hong Kong. Years of monitoring results have indicated that there has been no increase of artificial radionuclides since the operation of Daya Bay NPP.



## Promoting Ecological Nuclear Power

Adhering to the concept of harmonious coexistence between nuclear power operation and ecological environment, CGN Power has incorporated biodiversity protection into its corporate development strategies, and strive to reduce the impacts on biodiversity at different stages of NPP site selection, design, construction and operation, and has taken various effective measures to protect ecological resources and the surrounding natural ecosystem, so as to accomplish "Symbiosis, Mutual Generation and Regeneration".

### Symbiosis

As a "friend", nuclear power achieves the symbiotic integration with the original ecology on the basis of maintaining the balance of the original ecology

### Mutual Generation

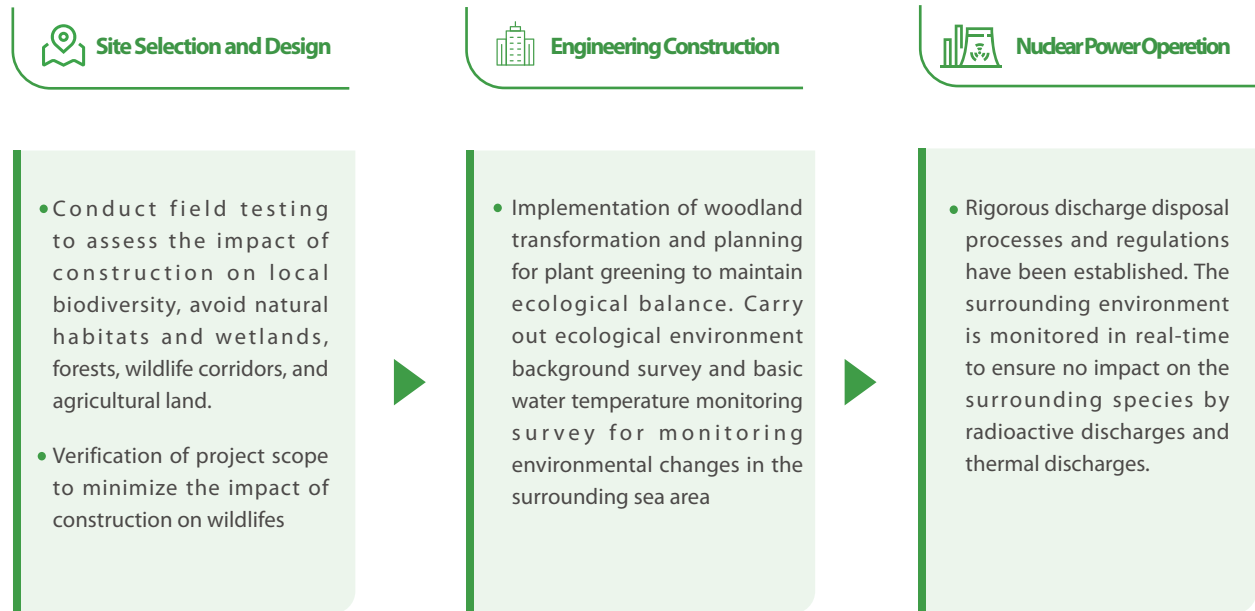
Nuclear power, as a "participant", interacts with the environment by promoting the development of surrounding villages and towns through project construction, achieving mutual sharing with the environment and new and better ecological balance

### Regeneration

Nuclear power as a "contributor" builds a green, harmonious and prosperous nuclear power industry chain ecosystem by providing high-quality ecological products such as clean electricity



Out of the importance of biodiversity protection, since the beginning of site selection, planning, and design of NPPs, we have excluded high-value biodiversity areas; we have formulated corresponding protection measures from various aspects such as design and construction plan to reduce the ecological environmental impact; in the operation process, the project operation management is combined with the protection of natural resources. The hidden dangers of the ecological environment are investigated, and the biological diversity is protected through ecological restoration, habitat investigation and research, and formulation of animal and plant protection measures.



In addition, adhering to the basic principle of "Technology First, Efficient Development", we strive to improve the research and application capabilities of ecological environmental protection technology. We have also incorporated the concepts of "Resource Saving" and "Environmentally Friendly" in all stages of project construction, actively promoted new processes, new technologies, and new equipment in the field of environmental protection, and made full use of advanced technologies and management methods to promote the standardization and informatization of ecological environmental protection management.

### **case** Coral Conservation Area of Day Bay Nuclear Base

The eighth "August 7 Public Open Day" was held at Daya Bay Nuclear Power Plant on August 7, 2020. In addition, the "Daya Bay Nuclear Power Base Coral Conservation Area" was officially inaugurated on the same day, becoming the country's first coral conservation area established in the waters of the nuclear power base. Prior to this event, CGN Power had publicly convened 40 coral conservation officers in the public through WeChat, Weibo, Tik Tok and other platforms, and demonstrated the whole process of coral fragment restoration to the public in a live webcast.

Daya Bay Nuclear Power Base, as an outstanding representative of CGN Power's nuclear power plant, has been carrying out terrestrial biological protection, marine biological protection and habitat protection for a long time. While injecting a steady stream of green power into the economic and social development of the region, it has also achieved symbiotic integration with the original ecology.

## case

**Ecological Greening of Yangjiang Nuclear Power Plant**

Pingdi Reservoir is located on the Xiangshui River at the junction of Yangjiang and Taishan. It has a storage capacity of 25.74 million cubic meters and a water area of 1.02 million square meters. There are three small islands in the center of the reservoir with a total area of about 16,000 square meters. Affected by geological conditions, the island in the lake has serious soil erosion and is exposed to a large area. In order to thoroughly implement the development concept of "Lucid Waters and Lush Mountains are Invaluable Assets" and ensure the natural ecological balance of the reservoir, Yangjiang Nuclear Power has carried out soil and water conservation and greening on the island of the lake.



## case

**Hongyanhe Nuclear Power was awarded "Advanced Group of Ecological Environment Publicity and Education in Dalian"**

Hongyanhe Nuclear Power has focused on improving the public's environmental awareness and the level of science popularization of nuclear power. It has carried out a series of environmental science popularization and education work via nuclear power science lessons and public open days. In the 2019-2020 List of Dalian's Advanced Ecological Environment Publicity and Education Work announced by the Dalian Municipal Ecological Environment Bureau, Hongyanhe Nuclear Power was awarded the title of "Advanced Group of Ecological Environment Publicity and Education in Dalian".

Hongyanhe Nuclear Power actively explores the way of online science popularization, and is the first company to launch "Popularizing Science Online" in China's nuclear power industry. It holds the June 5 World Environment Day, August 7 Public Open Day and other webcasts, so as to promote public awareness, consolidate neighboring relations, and enrich the ecology, contributing to environmental promotion.

## case

**Ningde Nuclear Power was awarded the National Soil and Water Conservation and Ecological Civilization Project**

In March 2020, Ningde Nuclear Power was awarded with the National Soil and Water Conservation and Ecological Civilization Project. Nine projects nationwide in total have been awarded this honor. Ningde Nuclear Power Plant Phase I (4\*1,089 MW) have become the Company's first nuclear power base to win this honor.

During water and soil conservation, Ningde NPP Phase I adheres to the advanced concept of green nuclear power, continues to promote the healthy development of the nuclear power industry, and strictly implements the "Three Simultaneous" policy of soil and water conservation. Ningde Nuclear Power will continue to do a good job in the ecological environment protection within and around the plant area, and strives to improve the living environment of the surrounding people to the greatest extent through the advancement of the project; continues to increase the publicity of environmental protection and soil and water conservation, and takes the lead in the industry effect.



## case

**Volunteer service for garbage sorting**

On August 28, 2020, the Equipment R&D Center of CNPRI and the volunteer team jointly organized a waste sorting volunteer service activity. Various methods were adopted in the event such as exhibition boards, fun contests, and charity donations to popularize waste sorting knowledge and create a good atmosphere of low-carbon environment.

This waste classification publicity activity enhanced community residents' understanding of waste classification knowledge, raised residents' awareness of consciously caring for the environment, and promoted the concept of "Green, Low-carbon, and Environmental Protection". At the same time, the volunteers will further enhance their environmental awareness and work together to build a "Beautiful Shenzhen".



## Cultivating Environmental Awareness

Cultivating employees' awareness of environmental protection is crucial for promoting environmental protection performance. We have been carrying out action plans of environmental education for all employees. Using Arbor Day, World Environment Day and other opportunities, we organize various environmental protection activities. The Company encourages employees to start with minor things in work and life, and things nearby to contribute and create a green, low-carbon work and life atmosphere by saving one kilowatt-hour of electricity, one drop of water, and one piece of paper, participating in a video conference, reducing one trip, and planting a tree.

### case

#### "Beautiful Taishan, Harmonious Development" Environmental Protection Activity

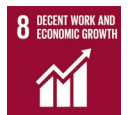
On June 4, 2020, Taishan Nuclear and the Chixi Town Government jointly organized an environmental protection activity with the theme of "Beautiful Taishan, 'Nuclear' Harmonious Development", with more than 150 public participants. The area is one of the environmental monitoring points of Taishan Nuclear Power. After the operation of Taishan Nuclear, the soil, atmosphere, water, and organisms here have been monitored for radiation throughout the year. The results showed that the radiation level had no difference from the level before its operation. The environmental protection activity enhanced the awareness of community residents on environmental protection, strengthened the communication between NPPs and community residents, contributing to a beautiful Taishan.





Talents are the most treasurable wealth of CGN Power. Our sustainable development greatly relies on our talented employees. The Company adheres to the concept of "Talent-lead Corporate Development", insists to create a work development platform with fairness and impartiality, and provides scientific development path and training to develop together with employees.

## Caring for Employees, Cherishing Talents



The Company strictly complies with relevant laws and regulations such as the *Company Law of the People's Republic of China*, the *Labor Law of the People's Republic of China*, and the *Labor Contract Law of the People's Republic of China*. Based on its own circumstances, the Company has formulated the *Labor Management System*, the *Recruitment and Employment Staffing Management System*, the *Professional and Technical Staff Recruitment Management System*, the *Management Staff Selection and Appointment Management System*, the *Salary Management System*, the *Employee Performance Management System* and other employee management systems, and adheres to the principle of fairness, impartiality and openness to regulate compensation, recruitment, dismissal, promotion, working hours, leave, benefits, code of conduct, professional ethics and other systems related to human resource management.

## Caring for Employees

### Recruiting Outstanding Talents

According to the national energy development plan, and combined with business development and market condition, CGN Power gradually strengthens the planning and construction of high-level talents to continuously attract outstanding talents. The Company has prepared the *Human Resources Plan* to recruit talents through combinations of campus recruitment and social recruitment. With the principles of openness, fairness and impartiality, the Company screens and reviews on resumes, arranges phone interviews, written tests and background checks to candidates, and only the candidates who successfully pass the assessments will be hired.

### Protecting Employee Human Rights

In accordance with internationally recognized human rights norms, CGN Power adopts fair and diversified employment policy to continuously promote fairness and inclusiveness in the workplace. During the recruitment process, the Company strictly examines the applicant's identity information to prevent candidates under the age of 16 from participating in, eliminating child labor and all forms of forced labor. We oppose any discrimination because of gender, ethnicity, religion or any other factors, ensure the diversity and reasonable structure of talent team, fully protect the human rights of employees, and provide an equal and excellent platform for each employee to fully achieve their individual value.

During the Reporting Period, we strictly complied with relevant laws and regulations and the Company's employment system, and there are no violations of human rights, child labor or forced labor. As of the end of the Reporting Period, the total number of employees (excluding affiliated companies) of CGN Power amounts to 18,264, which could meet the staff requirement of tens of nuclear power units operating at the same time.

Employee social security  
coverage rate:

**100%**



Female employees' paid maternity leave:

**statutory leave**



Male employees' paid  
paternity leave:

**15** business days

Employee average  
annual leave:

**12** business days



Employee social insurance covers:

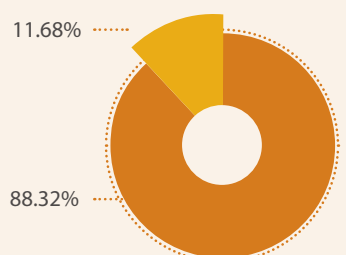
**medical, pension, unemployment,  
work injury and paternity  
insurance**

During the Reporting Period, CGN Power's Total Number of Employees (not including affiliated companies):

# 18,264

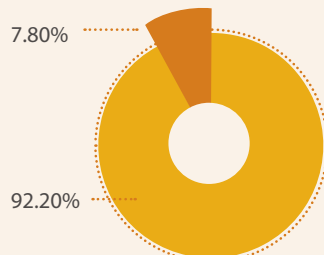
## Proportions of Different Types of Employees

**By Genders**



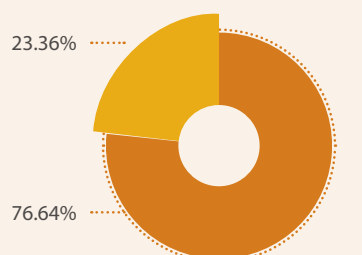
Male Female

**By Employee Categories**



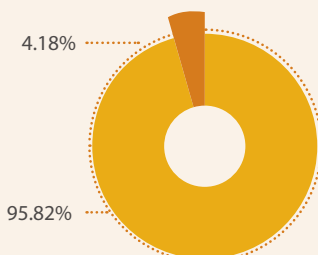
Technical personnel Administrative personnel

**By Regions**



Outside Shenzhen Shenzhen

**Proportions of Ethnic Minority**



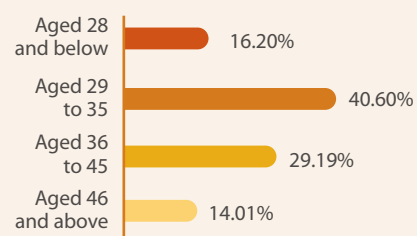
Ethnic Minority

**By Employee Categories**

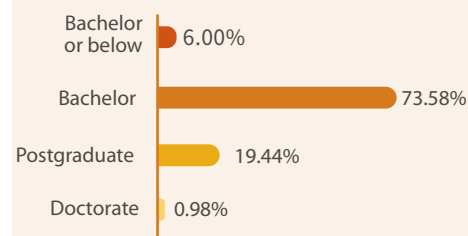
Full-time 100%  
Part-time 0%

# 100%

**By Age Groups**



**By Academic Background Categories**



## Employee Turnover

Employee Turnover Rate: **1.68%**

**By Genders**



Male



Female

**By Regions**

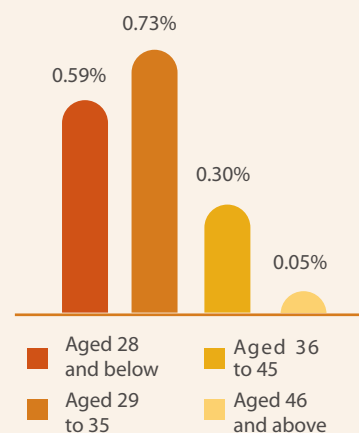


Shenzhen



Outside Shenzhen

**By Age Groups**



## H-Shares Appreciation Rights Scheme

In order to provide incentives to key talents and to create more value for our shareholders, the H-Shares Appreciation Rights ("SAR") Scheme ("Scheme") was approved at the 2014 annual general meeting of the Company. The Scheme is expected to be conducted in three grants with each grant taking effect in three tranches. As of the end of the Reporting Period, the three tranches of SAR for the first grant have all taken effect, and no exercises have occurred because the exercise price has not been reached. Two tranches of SAR for the second grant have taken effect, where the first tranche of SAR was exercised, and the second tranche of SAR was not exercised as the exercise price has not been reached. For retired or redesigned Board of Directors and senior management, specific arrangements for the exercise shall be implemented in accordance with the SAR Agreement. For more details, please refer to the 2020 Annual Report of the Company.

## Democratic Employee Management

In order to keep broadening the channels of democratic management, improving the democratic management system, and implementing the system of worker's director and supervisor, the Company strictly complies with the *Regulations on Democratic Management of Enterprises* (ACFTU [2012] No. 12), the *Regulations on Workers' Congress of Industrial Enterprises under the Ownership of the People*, the *All-China Federation of Trade Unions on Strengthening the Democratic Management of Corporate Enterprises Opinions* (ACFTU [2012] No. 78), the *Guiding Opinions of the State-owned Assets Supervision and Administration Commission Party Committee and the State-owned Assets Supervision and Administration Commission on Establishing and Improving the Staff and Workers Congress System of Central Enterprises* (SASAC Party Committee [2007] No. 120), the *Notice on Regulations of the Grassroots Trade Union Member Conference issued by the All-China Federation of Trade Unions* (ACFTU [2019] No. 6) and other rules and regulations to establish a "Workers Congress". It aims to encourage employees to make suggestions, participate in business decision-making, management, supervision of management team and exercise of democratic rights, to fully guarantee employees' rights of learning the truth, participation, expression and supervision.

### case Lufeng Nuclear the Second 4<sup>th</sup> Staffs and Workers Congress

In the afternoon of June 4, 2020, Lufeng Nuclear held the Second 4<sup>th</sup> Staffs and Workers Congress. The Workers Congress firstly completed the set agenda of the preliminary meeting. Then the official meeting of the Second 4<sup>th</sup> Staffs Congress has reviewed and passed 2019 *Annual Report on the Work of Trade Unions* and other three reports. Meanwhile, the by-election of the second trade union committee members was completed. The official meeting of the Second 4<sup>th</sup> Workers Congress has also reviewed and passed six reports, including the 2019 *Report on the Work and Integrity of the Leading Groups*.





## Strengthening Employee Communication

CGN Power encourages open communication. A multi-channel communication mechanism has been established between the management team and the employees. The management team regularly visits various projects to understand employees' needs, and to improve the workplace environment based on the suggestions. At the same time, employees can further provide their opinions or suggestions to their superiors through channels such as forum, mailbox from leaders, the Party branch, labor union, and League branch.

The Company regularly holds organisational meetings, democratic meetings for management team and etc., to seek employees' opinions and suggestions regarding company strategy, operation management, reform and personal development, salary, welfare and other aspects.

In addition, when employees formulate and implement their individual performance plans, and also conduct year-end performance appraisal, management team of the Company is arranged to have interviews with employees, which not only promotes the consistency of employee performance and company performance, but also promotes mutual understanding of problems and requirements in work, so as to achieve common development of employees and the Company.



## Maintaining Work-life Balance

Adhering to the concept of "People-orientated", CGN Power actively maintains work-life balance for employees. With diversified cultural and sports activities, festival celebrations, family activities and etc., CGN Power enriches the life of employees, alleviates work pressure of employees, enhances employee connections, creates sustainable working environment with employees together. It also provides more opportunities for employees to develop their interests and to release themselves physically and mentally.



## case

**"Love· Meet" Youth Friendship Activity**

On December 2, 2020, Fangchenggang Nuclear, Fangchenggang Branch of China Post Group Co., Ltd and other units jointly held a youth friendship activity with the theme of "Love· Meet". About 100 single youth from Fangchenggang Nuclear and other enterprises attended this activity.

The activity provided a smooth, healthy and warm communication platform for youth of the Company to communicate with other units, and created a united, harmonious and positive atmosphere, which further enriched the cultural life of single youth.



## case

**Daya Bay "Health with Me" Campaign**

DNMC has carried out "Health with Me" campaign for more than 10 consecutive years to encourage employees do sports and exercises, which integrates sports into life and cultivates their habits.

In 2020 Daya Bay "Health with Me" campaign, DNMC successively launched sports events, including tennis, football, basketball, table tennis and etc. The "Health with Me" campaign offered competition events with full coverage, it played a positive role to enrich part-time life, to keep fitness of employees and to build harmonious teams for employees.





## Focusing on Humanistic Care

The Company respects and cares every employee, positively provides assistance to employees in difficulties, and effectively solves their problems. During the Reporting Period, we tried our best to deal with accommodation issues for employees, relieved their living and housing pressures to generate a better sense of belonging for employees in the big family of CGN Power.



CNPRI deals with accommodation issues for employees, helps employees to apply for public rental housing to relieve their living and housing pressures.

With considerations on the rents for housing and income issues, the president of the Trade Union and Worker Representative Congress have passed the *Graduates Rental Housing Subsidy Programme* to allow graduates to reimburse their rental expense in a fixed rate within 12 months after induction.

CNPRI follows relevant favorable government policies on housing supply and support, and talent introduction in a timely manner to facilitate employees to apply for public renting housing for newly introduced talents and relevant subsidy of renting and housing for talents in key industries. With fully utilization of enterprise benefiting policies provided by government to relieve living and housing pressures for employees, CNPRI enables employees to live in peace and enjoy their work, and attracts more outstanding talents to work in CNPRI.

## Caring for Employees' Health

Health and safety of employees are the cornerstones of the Company's development and employees' happiness. The Company strictly complies with relevant laws and regulations such as the *Safe Production Law of the People's Republic of China*, the *Fire Control Law of the People's Republic of China*, the *Law on Prevention and Control of Occupational Diseases of the People's Republic of China* and the *Interim Provisions on the Supervision and Management of Work Safety at Central Enterprises* to implement the management policy of "Safety First, Prevention-oriented and Comprehensive Governance". Adhering to the principle of "Safety Management Must Be Included in the Production Management", the Company actively adopts measures to ensure employees' health and safety, and pays close attention to the health of employees to create a healthy working environment.

During the Reporting Period, we achieved desirable results in occupational health and safety management. The specific management measures and data related to safety are detailed in the section "Stable Operation, Safety First" of this Report.





## Improving Management Systems

A complete occupational safety management system is crucial to guarantee the occupational health of employees. The occupational health and safety management system includes identification and management of occupational hazard, full staff participation and prevention, third party inspections and safety warning, promotion, training and warning. We have extensively benchmarked with domestic and foreign peers, actively established and promoted safety operation standardization, and continuously improved the occupational health and safety management system.

In order to promote the culture of occupational health in all aspects of production and operation, we are committed to improving the health protection ability of our employees and encouraging relevant communications about health and safety. We continue to enhance selfchecking and occupational health evaluation to continuously identify and evaluate occupational hazards in each work process, and manage identified hazards according to their risk levels. To reduce and control occupational health and safety risks according to the onsite work time limit required by the occupational hazards evaluation, a series of measures such as technology, management and personal protection have been adopted to ensure the health and safety of employees.

In order to further improve the occupational safety management system, all NPPs of the Company have established a dedicated department to manage occupational health and safety, and have all obtained the OHSAS 18000 occupational safety management system certification. All NPPs have gradually passed the ISO 45001 Occupational Safety Management System Standard that is newly issued by the International Standardization Organization.

All NPPs have involved contractors' participation in construction, operation of power generation, equipment maintenance and other activities. The occupational health and safety management system is therefore also applicable to contractor personnel and whoever carries out work at the operating sites apart from employees of the Company.







## Protecting Employee Safety

To protect employees' safety with a robust occupational safety and health protection system, the Company has formulated various control measures such as the *Occupational Safety Management System* to standardize safety operations, ensuring health and safety in daily work. Annual routine health check-ups have been arranged and personal health files have been established for all employees. The Company has engaged with third-party professional organizations to conduct additional occupational health inspections (including audiometry, electric pure tone listening, lung function, visual, long bone X-rays, etc.) for some front-line employees (including employees whose work involves radioactivity, noise, high temperature, chemicals, electricians, operations at height, etc.).

For retired employees, we also provide comprehensive health check, management and tracking services to protect their physical condition after their retirement. During the Reporting Period, the Company provided 374 person times of medical examinations and tracking services to retired employees.

The values of Maximum Individual Radiation Dose by person<sup>17</sup> for those (including employees, contractors and others) entering the control area of the nuclear power plants are specified by the national and international standards. During the Reporting Period, the Company maintained good performance on occupational safety and health with the average value of Maximum Individual Radiation Dose by person much lower than the standards specified.



During the Reporting Period, the Company provided

**374** person times

of medical examinations and tracking services to retired employees.

### Maximum Radiation Dose Received by Personnel in NPPs (in millisieverts)

NPP/ Unit	2018	2019	2020
Daya Bay NPP	5.11	9.14	5.02
Ling'ao NPP	10.32	6.94	6.77
Lingdong NPP	5.25	5.81	4.70
Yangjiang NPP	8.11	11.82	12.05
Units 1, 2, 3 & 4 of Hongyanhe NPP	7.60	8.79	6.43
Ningde NPP	8.00	8.72	11.22
Unit 1 & Unit 2 of Fangchenggang NPP	3.59	4.10	6.36
Taishan NPP	0.29	1.01	7.10

<sup>17</sup>The annual refueling outage is the key factor affecting the individual radiation exposure of all NPPs.

Facing the "Fight Against Pandemic", it is particularly important for enterprises to ensure adequate health protection for employees. Adhering to the principle of "Full Coverage, Hierarchical Management, Full Intervention, Moving Forward", the Company has established a complete health service system with service available for all employees, and paid attention to the health of employees to constantly improve their sense of happiness, belonging and identification.

During the Reporting Period, to further optimize the health management system, strengthen the professional health management services and promote the culture of health management, each subsidiary established the *Procedure for Employee Health Management*, set up the "Health Management Committee" and the parttime "Health Management Coordinator Team" to generate a management mechanism of planning, classification management and assignment.

In order to constantly improve the health condition for employees, the Company undertakes a series of targeted, systematic and effective measures for health and cares, including medical examinations to check health conditions for employees regularly, relevant activities with publications to improve the self-management of health. In terms of the pandemic prevention and control, the Company sets up 7x24 hour health hotline for oversea employees, provides on-site nucleic acid tests and medicines with professional medical institutes, and formulates health guideline with professional, scientific and effective medical treatment for employees to safeguard the health and safety of employees.



## Caring for Mental Health

Maintaining mental health for employees is also important in occupational safety and health. Adhering to the principle of "Physical and Mental Health both Matters", we have continuously held the "Employee Assistance Program" to provide employees with 7x24 hours counselling services. It helps to understand the physical and mental conditions of employees, relieve their pressure of life and work, and therefore advocate a positive and healthy lifestyle.



## case

## The Third Employee Assistance Program ("EAP") Mental Care Festival

The Company organized the third EAP Mental Care Festival in May 2020. Psychology lecturers analysed the mental challenges faced by employees, guided employees how to accommodate negative emotions, to actively focus on individual outstanding points, and to maintain a positive attitude of life. The event not only enabled employees to feel the humanistic cares of the Company, but also provided employees with a platform to relieve pressure and undertake scientific measures to relieve negative emotions and adjust the mental condition and enhance their well-being.

During the Reporting Period, we provided counselling services for those in need. Accumulatively, more than 1,328 person times have been supported.



## case

## Employee Medical Treatment Event Organized by DNMC

On June 23, 2020, the employee medical treatment event was held in the cultural center of Daya Bay Nuclear Power Base, allowing employees to meet famous doctors face to face without going out. The event met different needs of the employees. The doctors carefully examined and answered questions for employees, especially for the common problems of workers in the office, and provided targeted health care or treatment countermeasures.



## Fostering Employee Development

Constantly promoting employee development is an essential factor for the Company to maintain sustainable development. CGN Power adheres to the concepts of "Talent-lead Corporate Development" and commits to building a comprehensive talent training platform, provides employees with a high-quality environment to develop and grow, building a high-quality nuclear power talent team.

### Enhancing Training Systems

The Company constantly promotes standardized training and sets up a scientific and diversified training system for new employees, professional staff, middle-level and senior-level management members, which covers leadership training, engineering training, operation training, etc., to provide employees with multi-channel, multi-form, and multi-level professional skill training.

### Professional Training KPIs

CGN Power has always been providing employees with training to improve work efficiency and to enhance professional skills, so as to comprehensively improve the talent team's career qualifications and professional skills.

In 2020, the Company continued to improve the training system, enhanced training ability and strengthened training quality. During the pandemic, participating in online training and test became an important way for employees to learn and train. The duration of employees who attended online training increased by 7% than last year, while the number of online tests taken and attended increased by 1.6 times and 5.4 times respectively.

The Company strictly complies with the *Nuclear Safety Law* to stipulate that nuclear power plant operation must be performed by licensed personnel, and actively carries out relevant training for nuclear power licensed personnel. During the Reporting Period, the Company had 94 operators and 109 senior operators passed the assessment.



During the Reporting Period,  
the Company had

**94** operators

and **109**

senior operators passed the  
assessment



The average training time per  
employee

**93** hours



The training rate of senior-level  
management member

**100%**



The training rates of male  
and female employees both

**100%**

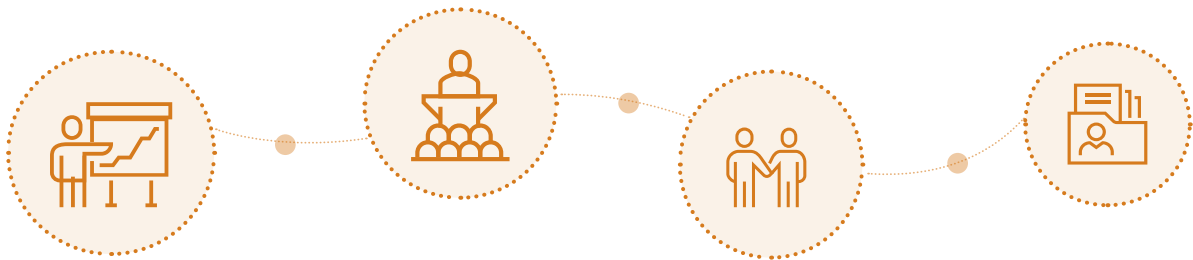


The training rate of middle-level  
management member

**100%**



The Company continues to improve the training management system, designs training programs to fits specific jobs for all levels of staff. We have set up a leadership training system for senior management based on business needs and characteristics of management structure, which aims to improve the management ability for senior management. Meanwhile, the Company has designed a management position transformation program – Egret Program for each management level. The program is designed based on aspects of role change, managerial skills, organizational knowledge and skills to ensure smooth transition for managers at all levels during the transition period, to provide all-round, multi-level and targeted training for new employees and management members at all levels. In addition, we have also established standardized engineering and operation-related training to continuously enhance employees' professional skills.



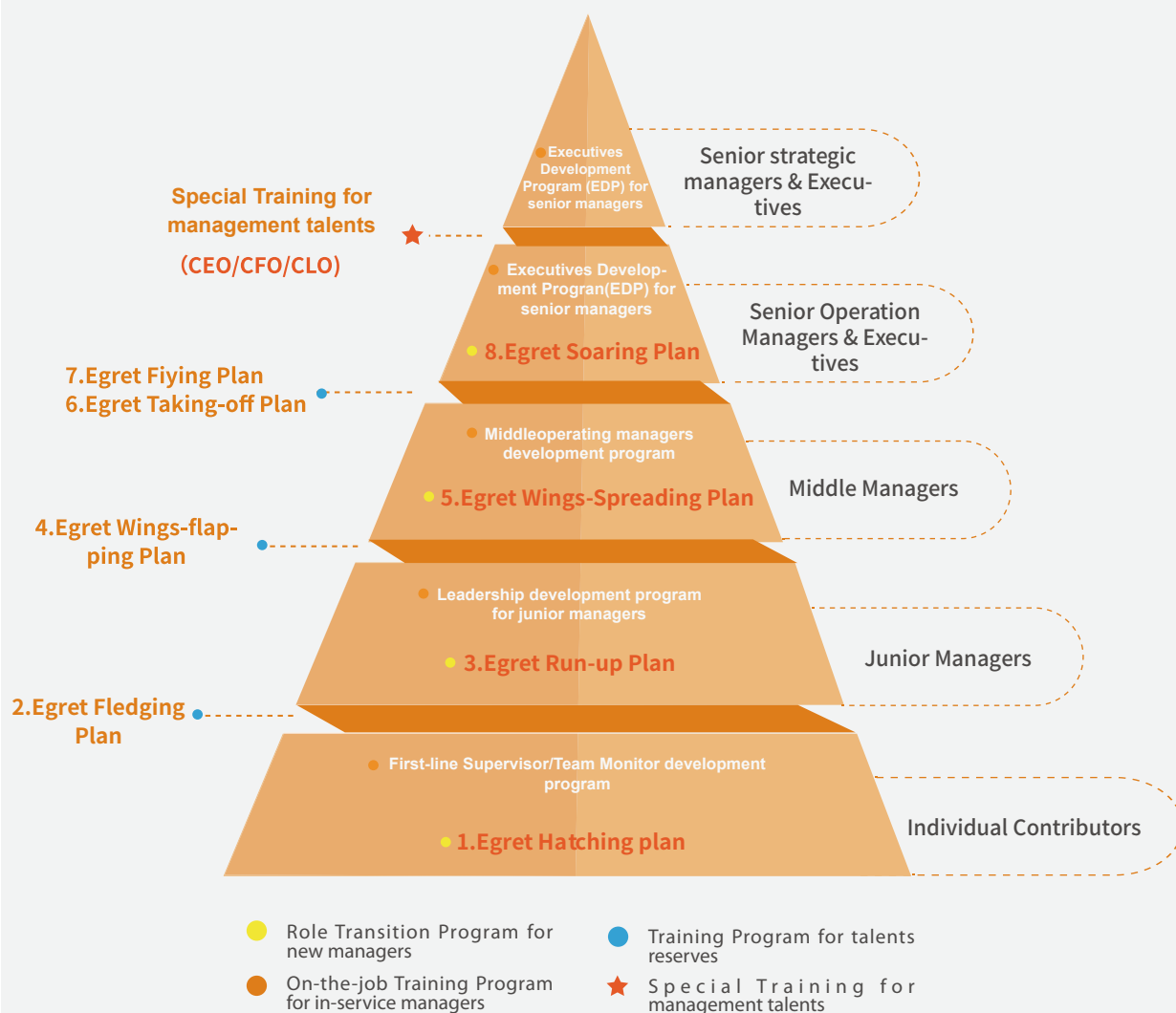
#### case

#### Leadership Training System- Executives Development Program ("EDP")

EDP is a training program designed to meet the needs of senior managers for knowledge renewal and lifelong learning. The program aims to empower leaders in the "14<sup>th</sup> Five-Year Plan", which combines online and offline programs. The first phase of the training program was launched on August 31, 2020. The training fits the Group's "14<sup>th</sup> Five-Year Plan" strategy development, focusing on the key responsibilities, core business and state-owned enterprises reformation, to strengthen senior managements' awareness of governing enterprises according to law and compliance. It further stimulates organizational vitality, and continuously improves the management level and leadership of senior-level management members.



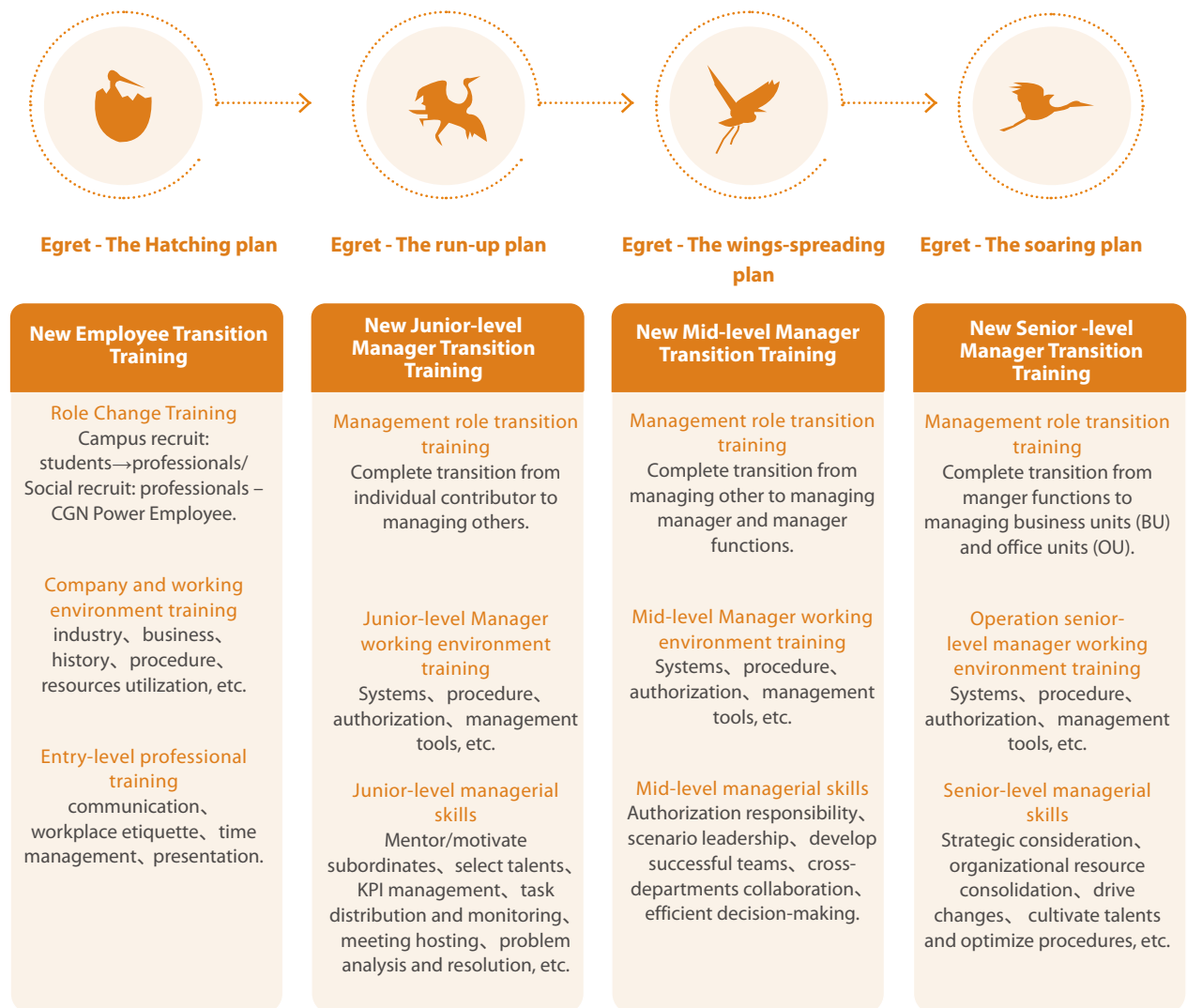
## Leadership Training - Egret Program



## CGN Power Leadership Training - Egret Program

No.	Plan	Targeted Trainee
1	Egret Hatching Plan	New Employee (Campus Recruitment/social Recruitment)
2	Egret Fledging Plan	Reserved talents for Junior management positions
3	Egret Run-up Plan	New Junior managers
4	Egret Wings-flapping Plan	Reserved talents for middle management positions
5	Egret Wings-Spreading Plan	New middle managers
6	Egret Taking-off Plan	Reserved talents for medium and long-term projects
7	Egret Flying Plan	Reserved talents for senior management positions
8	Egret Soaring Plan	New senior managers & Executives

## Employee-Seniors Manager Transition Training Program



## 2020 Egret Program Achievement

	Target	Progress
Egrets – The Hatching plan	Accelerating role change for new employees	Ongoing
Egrets – The run-up plan	Enhancing junior-level managers' managerial skills	10 sessions
Egrets – The wings-spreading plan	Enhancing mid-level managers' human resources managerial skills	5 sessions
Egret - The soaring plan	Broadening horizon, enhancing managerial skills for future senior managers	1 session



### Engineering Training—Project Manager Qualification System

CGN Engineering thoroughly summarizes the project construction experience and constructs the project manager training and certification system -- the project manager qualification system based on the core role of the project construction and different positions and responsibilities of project managers at all levels, with four dimensions of K (knowledge), S (skills), A (attitude) and E (experience). In 2020, the system mainly carried out qualification training for senior project managers/ project managers, with 142 senior project managers or project managers trained through face-to-face training, communication with executive, examination and assessment, on-the-job practice and other sections.



### Engineering Training-- "AE Training Alliance" Industry Chain Training Ability Construction

In order to improve personnel skills of nuclear power construction, ensure nuclear construction safety and quality, CGN Engineering initiated and united with more than 40 units to establish the "AE Training Alliance". The training courses have effectively ensured the steady growth of nuclear power performance of the Company.

In 2020, "AE Training Alliance" played an important role and carried out nine public lectures on safety and quality, culture of nuclear safety and training technique. It trained and certified 188 safety and quality managers and trainers for "AE Training Alliance" units, and helped the continuous improvement of the safety and quality management level of the industry chain.

In addition, "AE Training Alliance" has released and conducted trial tests of the first tool for evaluating the effectiveness of training in the nuclear power industry-- the *Guidelines for Effectiveness Evaluation of Safety and Quality Training in the Nuclear Power Engineering Industry Chain* for the industry chain. In 2020, "AE Training Alliance" carried out entrance safety training for personnel of construction units. The number of annual training and assessment was 45,606 person-times, which effectively ensures the construction safety of nuclear power projects.



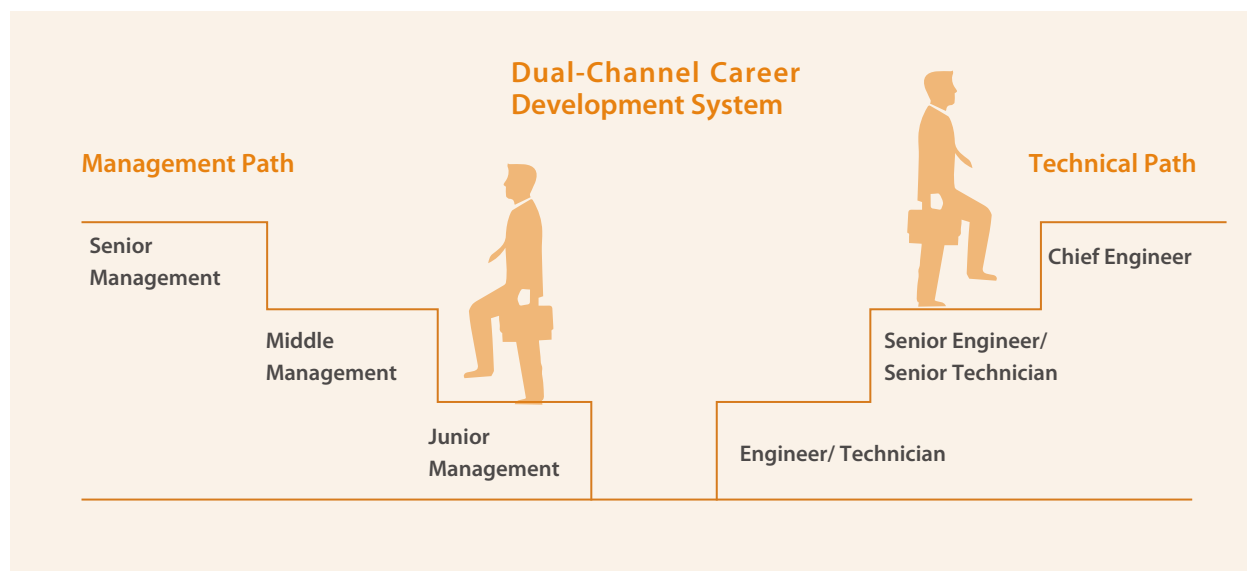
### Operation Training--Middle and Junior Managers Development Program ("MDP") Training

In 2020, DNMC carried out a MDP training course with the topic of "Reform and Innovation for High-quality Development", and invited the general manager of the Company and domestic well-known experts to give lessons. It enabled more core staff to have a chance to communicate with top management and accurately understand the Company's strategic direction and the changes of external environment. It facilitates middle and junior managers to upgrade their thoughts through deep thinking, and broaden their horizons in communication and sharing.



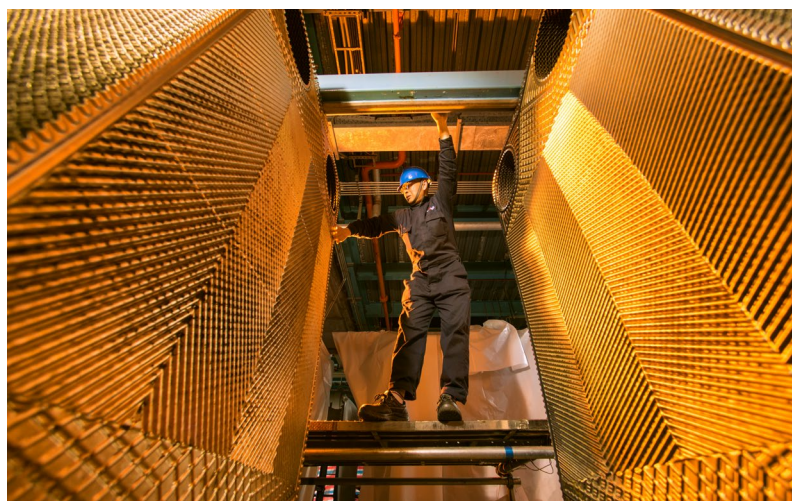
## Employee Career Development System

CGN Power cares about the career development of every employee, develops personal career development plans together with employees, sets up smooth career development systems for employees, and helps employees to achieve individual value. In order to meet the development needs of different employees, so that each employee can achieve career development based on their personal ability and career planning, the Company has established the dual-track career development system in both "management" and "technical paths", set up a conversion mechanism between two paths. The switchover mechanism forms a link of "Position Categories — Development Path — Employee Aspiration — Employee Flow".



## Advocating the Craftsman's Spirit

The new craftsman's spirit is a concept of meticulous care, excellence, and continuous innovation. The Company adheres to the core value of "Doing Things Right in One Go" and advocates employees to treat every task with a meticulous, dedicated and focused work attitude like craftsmen, and therefore to constantly create new ideas for nuclear power projects. Over the years, the Company has been committed to establishing a platform and environment for craftsmen to grow their talents, nurturing a number of outstanding teams with exceptional talents.



## case

## CGN Power Craftsmen

National Model Worker is the highest national honor awarded to laborers by the Central Committee of the Communist Party of China and the State Council. On November 24, 2020, the National Model Worker and Advanced Worker Commendation Conference was held at the Great Hall of the People in Beijing. Engineer Zhou Chuangbin, the first winner of the China Skills Award in Shenzhen, became one of the 82 national model workers in Guangdong province to be honored.

Zhou Chuangbin is the deputy chief engineer of the commissioning center of CGN Engineering and a researcher-level senior engineer. With the development of China's nuclear power industry, Zhou Chuangbin works hard on his position and has many papers that have been honored and patented. He is a recipient of many awards, including Guangdong Provincial Model Worker, National May Day Labor Medal, National Technical Expert, Excellent Expert of Pengcheng in Dapeng New District, Pengcheng Craftsmen, etc. He has 18 invention patents and enjoys the special allowance of the State Council.

With the National Model Worker award, Zhou Chuangbin believes that this is the approval of the country and society to labor spirit and craftsman spirit. In the past 30 years, he has devoted himself to nuclear power construction and innovation, he overcame technical difficulties one after another and achieved several new breakthroughs in the industry.



## case

## 20 employees awarded as "Guangdong Technical Expert"

On October 20, 2020, 20 employees from CGN Power were awarded as "Guangdong Technical Expert" in the first occupational skills competition of Guangdong Province. 55 industrial and enterprise occupational skills competition projects were set up in the occupational skills competition, while 4 projects were undertaken by CGN Power. The competition provides a platform for youth to communicate, improve and show their skills, and urges young people to strive for excellence to serve the enterprise through technology and actively participate in the high-quality development of nuclear energy.

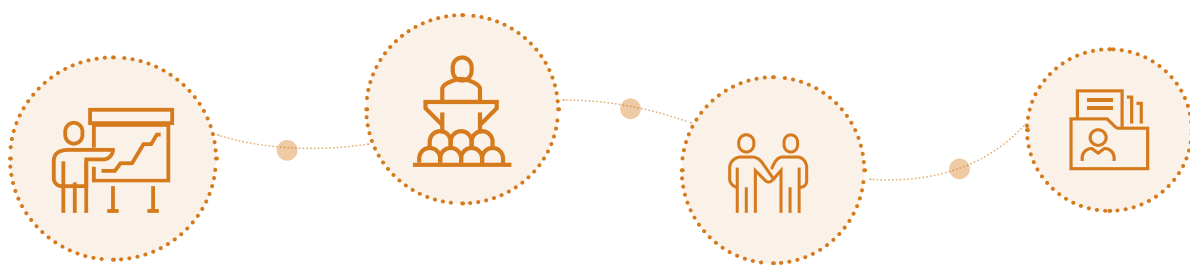


## case

**Two Employees from Hongyanhe Nuclear Were Selected As "Million Talents Project" of Liaoning Province**

Yang Wei and Wang Jiaqian from the chemical and environmental protection department of Hongyanhe Nuclear Power were selected as ten-thousand-level candidates in the 13<sup>th</sup> batch of "Million Talents Project" of Liaoning Province.

The "Million Talents Project" of Liaoning Province focuses on the selection and training of professional talents for strategic emerging industries, high-tech industries, manufacturing industries that are regionally competitive and characteristic industries, which leads and supports the development of the local economy and society. It helps to form a scientific talent team, and provides solid talent support for the overall revitalization of Liaoning Province.



## case

**Yang Hongbo Was Awarded "Outstanding Pandemic Prevention Volunteer Service Model" in Guangdong Province**

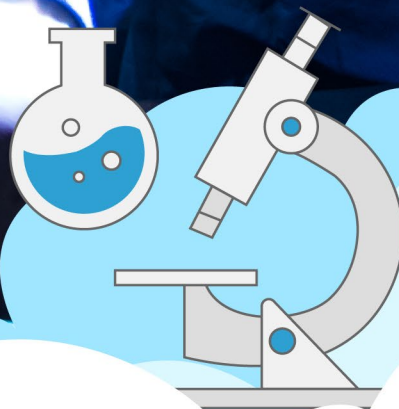
In December 2020, Yang Hongbo, an employee of CGN Engineering, was selected into the individual list of "Outstanding Pandemic Prevention Volunteer Service Model" in Guangdong Province. In the early stage of pandemic prevention and control, Yang Hongbo actively responded to the call of the Youth League Committee of the Company and took the initiative to participate in the "Volunteer Service Cares Action" for pandemic prevention and control in Wuhan. He organized a volunteer team of 45 people to assist the community in purchasing and delivering all kinds of groceries to meet the daily needs of the community residents.

Yang Hongbo adopts the volunteer spirit of dedication, friendship, mutual assistance and progress with practical actions, and demonstrated the outstanding image of CGN Power personnel.





CGN Power continuously promotes the development of nuclear power technology, actively cooperates closely with governments, enterprises, professional institutions, and suppliers. We utilize existing advantages and technologies to promote sharing and exchanges, continue to promote scientific research and innovation, deepen cooperation and industrial coordination, and promote nuclear power development.



## Research and Development, Promoting Development





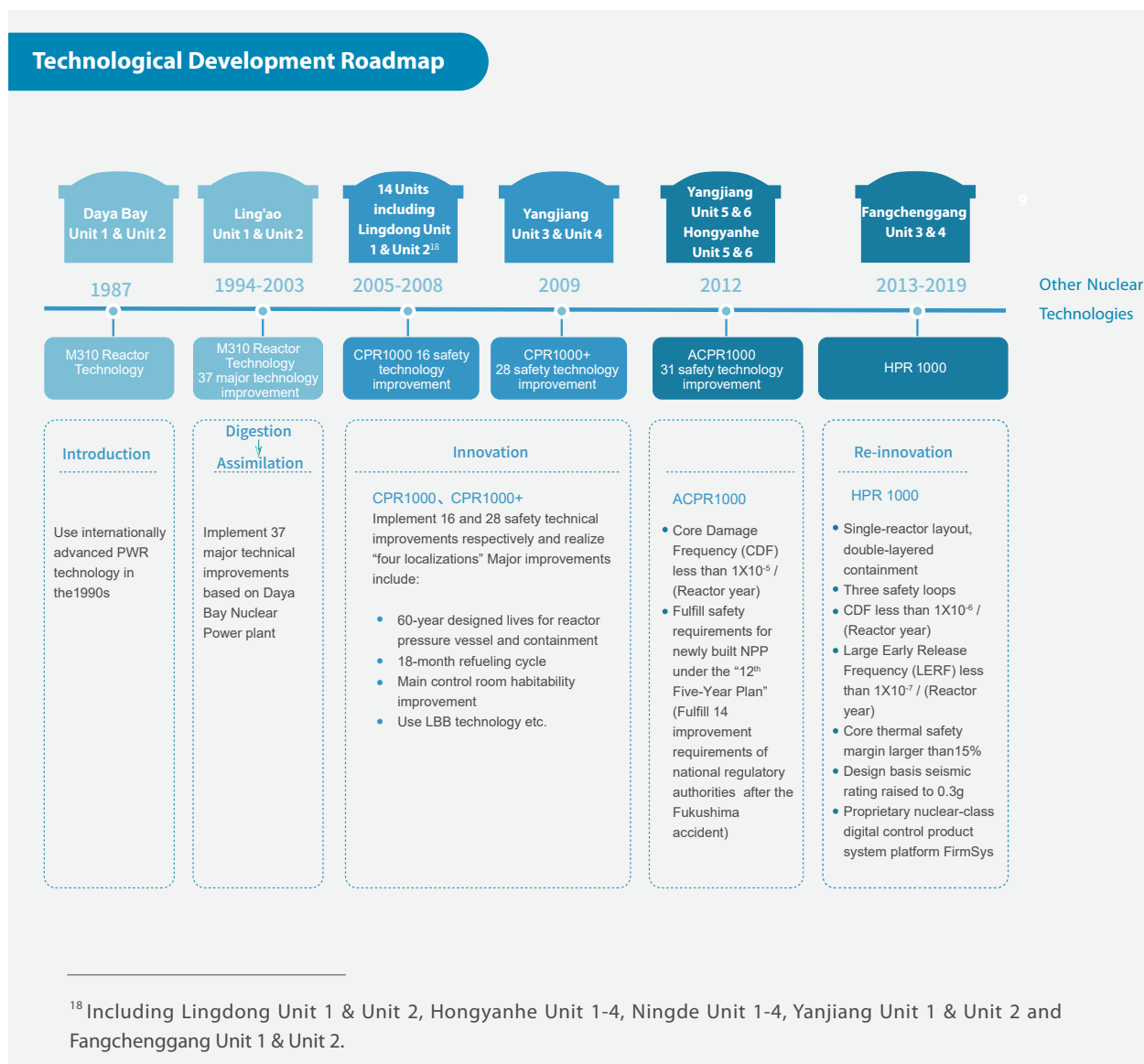
## Leading Nuclear Power Innovation

As the leader in China's nuclear technology innovation, CGN Power firmly implements the strategy of "Development Based on Innovation", continuously increases input and resource support for innovation technology, builds platforms for technological innovation, stimulates vitality of innovation management, and cultivates teams with innovative talents to develop safe, clean and smart nuclear power.



### Research and Development of Nuclear Power Technology

Strong technical foundation and R&D capability is one of the core competitiveness of CGN Power. Since the adoption of M310 reactor technology at Daya Bay NPP in the 1980s, CGN Power has followed the technical guidelines of "Introduction, Digestion, Assimilation and Innovation", and promoted the development of nuclear power with technological innovation. In addition, we continue to promote research in other nuclear power technologies in accordance with the technological development roadmap "Leading Plan". We are committed to developing technological capabilities for the Company's future development and contributing to nuclear power safety.





## Case HPR 1000

Based on the rich experience, technology and talent accumulated in design, construction, operation and R&D of nuclear power plants for decades, combined with the latest domestic and foreign safety requirements, CGN Power has developed the HPR 1000, the Generation-III nuclear power technology with proprietary intellectual property. It has Generation-III of Gigawatt-level nuclear power technology, laying a foundation for further proprietary innovation of nuclear power in the future.

HPR 1000 is equipped with three series of physical isolation and adopts safety systems combining active and passive features to greatly improve its ability to cope with internal and external disasters. The main technical indicators meet or exceed the latest international safety standard. The proprietary innovation lays a technical foundation for the development of the Company's subsequent nuclear power technology.



## Case FirmSys

"FirmSys" is China's first nuclear-grade digital instrumentation and control system ("**nuclear-grade DCS**") with completely independent intellectual property rights. During the development process, we had developed the first national nuclear-grade DCS product with the reliability, availability, maintainability, and nuclear safety (RAMS) technological system. We had developed the first national real-time operating system for nuclear-grade, and mastered several core technologies for nuclear-grade DCS. "FirmSys" has been applied to nine nuclear power units that are under construction in China. It marks that China's independent nuclear-grade DCS has officially entered the engineering application stage of Gigawatt-level pressurized water reactor nuclear power plants, realizing the localized production of core components for NPPs.

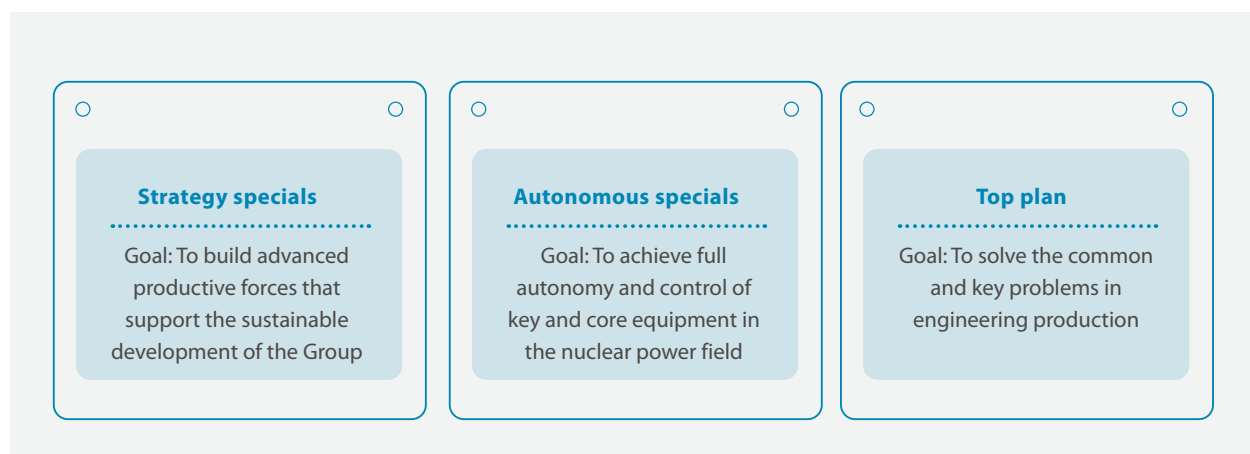




## Technological Innovation in Nuclear Power

### Research and Development Overall Layout

CGN Power takes scientific and technological innovation as an important driving force to lead the high-quality development of the Company. We have deployed three key tasks, namely strategy specials, autonomous specials, and top plan.



### Research and Development Platform

In order to further promote independent innovation, we have established R&D platforms at the national, group and company-level, including the National Energy Nuclear Power Plant-level Equipment R&D Center, the National Energy Marine Nuclear Power Platform Technology R&D Center, the National Energy Advanced Nuclear Fuel R&D (Experiment) Center, the National Energy Nuclear Power Operation and Life-cycle Management Technology R&D Center, the National Nuclear Power Plant Safety and Reliability Engineering Technology Research Center, the National Energy Nuclear Power Engineering Construction Technology R&D (Experiment) Center and the National Key Laboratory of Nuclear Power Safety Monitoring Technology and Equipment. There are seven national-level R&D centers and key laboratories, and multiple large-scale advanced laboratories in the industry, including thermal-hydraulic and safety research laboratories, material performance analysis laboratories, and inaccessible equipment laboratories.



The establishment of independent R&D platforms introduces, digests and absorbs international advanced technologies to provide technical support for the Company. It is expected to shorten the technological achievement transformation cycle, improve the maturity, matching and engineering level of existing technologies, accelerate the transformation of production technology, and promote technological upgrading. During the Reporting Period, our R&D investment was approximately RMB 24.73 hundred million, and R&D staff exceeded 4,800 persons.



During the Reporting Period, our R&D investment was approximately RMB

**24.73** hundred million

### Case

#### Thermal-hydraulic laboratory

The thermal-hydraulic laboratory of the National Key Laboratory of Nuclear Power Safety Monitoring Technology and Equipment ("**Laboratory**") was officially established in the Reactor Engineering Experimental Research Center of CNPRI on April 20, 2020. Being currently the only national key laboratory approved by the Ministry of Science and Technology in the field of nuclear power, the Laboratory is expected to meet the demand on future development of the society and nuclear power industry with development of innovation system for nuclear power safety technology. Focusing on the goal of "Improving the Safety of National Nuclear Power Plants in Design, Operation and Equipment R&D", the Laboratory is committed to further improving the safety of nuclear power plants throughout their lifecycle.



### Case

#### Joint Research Center for Marine Ecology of Coastal Power Plants

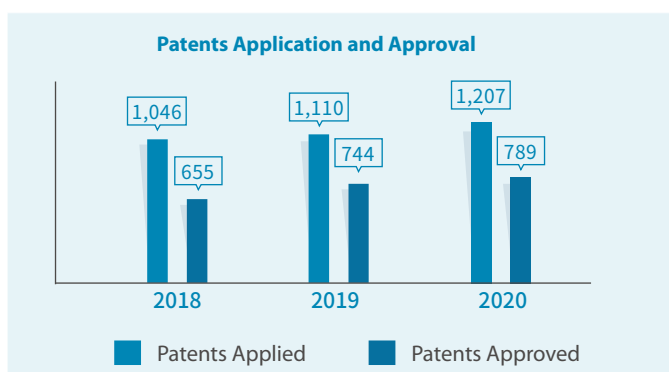
On September 28, 2020, the Key Laboratory for Marine Ecology Monitoring and Remediation Technology of the Ministry of Natural Resources, Ningde Marine Environment Monitoring Center Station of National Oceanic Administration and Ningde Nuclear signed the framework agreement for construction of China's first "Joint Research Center for Marine Ecology of Coastal Power Plant". The content of the agreement is to ensure the safety of cold source of Ningde Nuclear, and take advantages of technologies and talents from East China Sea Bureau of the Ministry of Natural Resources, achieving capacity construction, resource sharing and joint management. The agreement is expected to form the technical synergy in business areas such as cold source safety for coastal power plants, marine ecology protection, and marine disaster monitoring and early warning, jointly studying, solving, and responding to real and potential problems of marine ecology related to coastal power plants.





## Research and Development Achievements

CGN Power attaches great importance to the protection and management of intellectual property rights and incorporates intellectual property protection into all aspects of project approval, execution, interim inspection and final acceptance inspection, to fully protect intellectual property rights. We continuously improve the construction of intellectual property management organization and procedures and regularly update the intellectual property management system, effectively promoting the development of intellectual property management and laying a foundation for more R&D achievements.



Leveraging our independent R&D platforms, during the Reporting Period, the Company

filed

of which

**114** independent R&D projects

**1,207** patent applications

**789** have been approved



Case

### Visualized cleaning robot ("ROSIL")

Led by DNMC, developed and implemented by SNPI, the generator stator ROSIL project won the first prize of the National Power Industry Equipment Management Innovation Technology.

ROSIL robot is developed by water cooling generator structure of Daya Bay/Lingao Nuclear Power Plant, aiming at the abnormal temperature rise caused by blocking of cooling water channel at the end of the stator rod. With a number of independent core technologies, it has a wide application prospect in the field of state monitoring, foreign material capture, video inspection and cleaning in inaccessible areas of generator's cooling water system.



Case

### Differential pressure transmitter leakage maintenance technology and equipment

From October 29 to 30, 2020, at the 2020 China Innovation Methods Competition, the scientific and technological innovation from Fangchenggang Nuclear – the "Differential Pressure Transmitter Leakage Maintenance Technology and Equipment" won the first prize.

The differential pressure transmitter leakage maintenance technology and equipment is designed mainly for problems such as media leakage, joint abrasion, and increased maintenance wastes of the original differential pressure transmitter in the maintenance process. It can quickly complete the maintenance work of the instrument when there is no leakage of the medium, which completely avoids the disassembly of the instrument pipeline joint, and eliminates the risk of joint wear and loose. It greatly reduces the risk of work, improves maintenance efficiency, and enhances the safety and stability performance of the instrument and system.

## Case

## Smart construction site

On July 15, 2020, the platform of the smart construction site from CGN Engineering was fully applied in the nuclear power project in Huizhou. The platform focuses on "Collaborative Innovation, Lean Management, Quality and Efficiency Improvement" of the construction site, and the requirements on "Visible, Manageable and Controllable" management on project construction. It carries out effective management of personnel, equipment and operations in nuclear power projects by taking regional grid management as the core and using new technologies such as big data and artificial intelligence.



Since the launch of the smart construction site of the nuclear power project in Huizhou, the intelligence level of potential risk detection for safety and quality has been significantly increased, effectively reducing the safety and quality risk on the site, reducing the cost and increasing the efficiency. Combined with the grid platform, it uses control methods such as AI monitoring, face recognition and intelligent inspection of equipment with real-time control of the field status. Subsequently, the smart construction site will be extended to all new nuclear power projects to comprehensively improve the intelligent management level of the project site.

## Case

## 2020 China Specialized Robot Civil Innovation Award from CNPRI

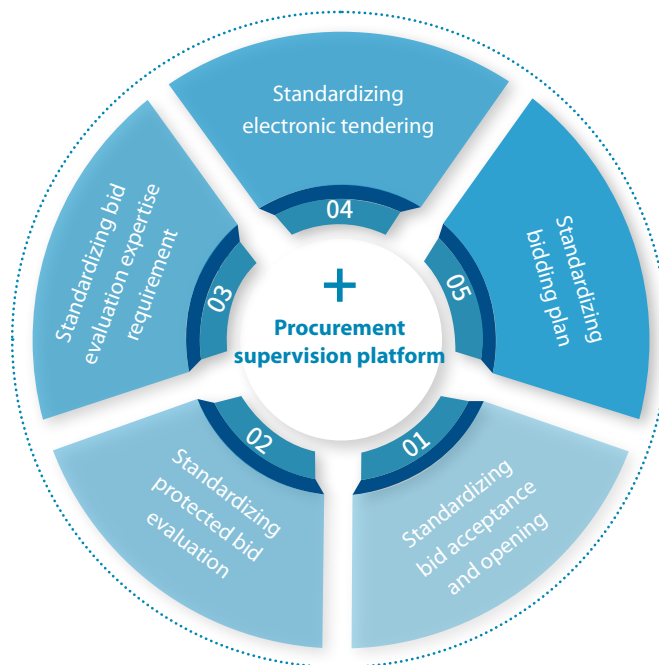
On December 12 to 13, 2020, at the 2020 China Robot Industry Annual Conference, CNPRI was awarded the "2020 China Specialized Robot Civil Innovation Award", rewarding the changes and improvements in smart nuclear power brought by CNPRI in its innovations in specialized robot for nuclear power.

Centering on inspection and repairing of main equipment and fuel assembly, and operation in specialized environment, CNPRI has developed several numbers of robot products to solve problems of intelligent operation in some areas with medium and high radiation and high risks in nuclear power plants. It sets up an industry benchmark in the field of specialized robots for nuclear power. CNPRI will continuously maintain its leading advantage in the field of nuclear power robots, continuously promote the application of robots in the field of nuclear power and the sustainable development of the specialized robot industry by actively exploring the non-nuclear market.

## Enhancing Supply Chain Management

We have always maintained close cooperation with suppliers to promote prosperity development for the nuclear power industry. CGN Power strictly complies with relevant laws and regulations such as the *Law on Tenders and Bids of the People's Republic of China* and has formulated policies such as the *Supplier Management Measures* and the *Supplier Misconduct Management Process*. Based on the principles of fairness, openness and justice, starting from the common interests of the Company and its business partners, we have created a new and win-win situation.

During the Reporting Period, CGN Power introduced 1,238 new suppliers, increasing the total number of qualified suppliers to 6,574. Among them, 6,178 are domestic suppliers, covering multiple provinces and municipalities. To standardize supplier management more effectively, we have developed the E-commerce Platform ("ECP"), which unifies the acceptance and opening of bids through the electronic platform and conducts completely closed bid evaluation to continuously improve standardization and transparency of the bidding work. The platform operates in accordance with the "Five Standardizations and One Supervision", in which the expert pool is composed of more than 5,100 experts from 121 specialties who are responsible for supervising the bid evaluation process to ensure fairness and justice.



### Supplier Classification

Suppliers provide different types of services, goods and engineering services, which play an important role to ensure CGN Power's stable operation. To ensure the efficiency of supplier management, the Company has divided our suppliers into "Potential Suppliers", "Qualified Suppliers" and "Blacklisted Suppliers".



#### Potential Suppliers

Suppliers that have not been accredited or whose accreditation has expired



#### Qualified Suppliers

Suppliers that have passed the qualification review/re-assessment

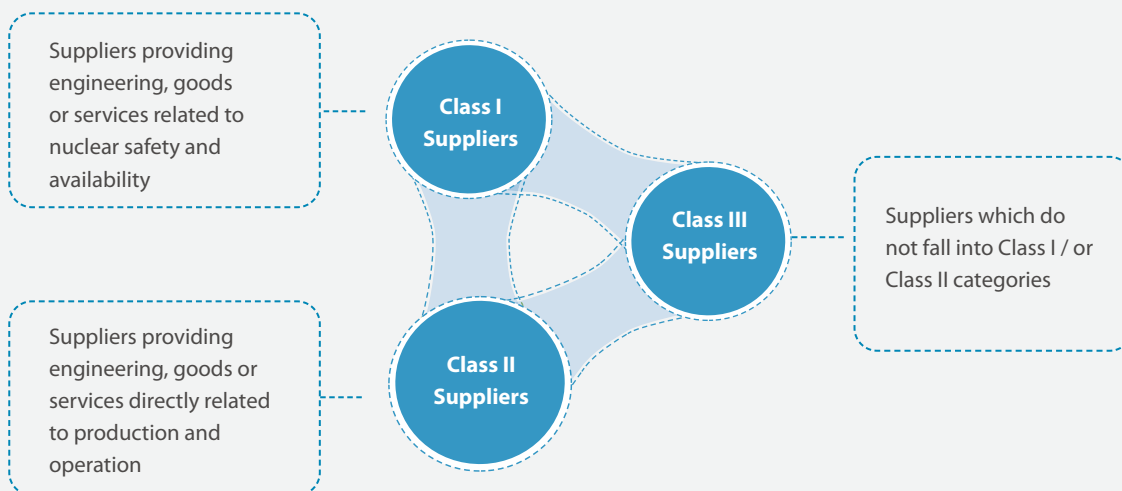


#### Blacklisted Suppliers

Suppliers that have seriously violated the relevant laws, regulations or management requirements in procurement activities

For Qualified Suppliers and Blacklisted Suppliers, the *Supplier Management Measures* and the *Supplier Misconduct Management Process* further clarify the subdivision control measures to ensure efficient management of the supply chain.

### Qualified Suppliers



### Blacklisted Suppliers

- 01 If the Blacklisted Supplier's misconduct does not materially hinder the execution of the existing contract, it shall ensure the normal performance of the contract; At the time it is blacklisted, suppliers that are in the course of bidding or submission of offers will be disqualified. Blacklisted Suppliers are banned from procurement activities for three years.
- 02 When a Blacklisted Supplier turns into a Potential Supplier after the ban, our subsidiaries and affiliated companies should use this supplier with due care.
- 03 During the period when the Blacklisted Supplier is banned, if our subsidiaries and affiliated companies have to use the supplier due to special needs, they shall evaluate the risks and clarify the countermeasures, obtain the approval of the Company's management and report to the CGN Bidding Center. The application for signing a one-time cooperation plan can be submitted after re-passing the qualification review.

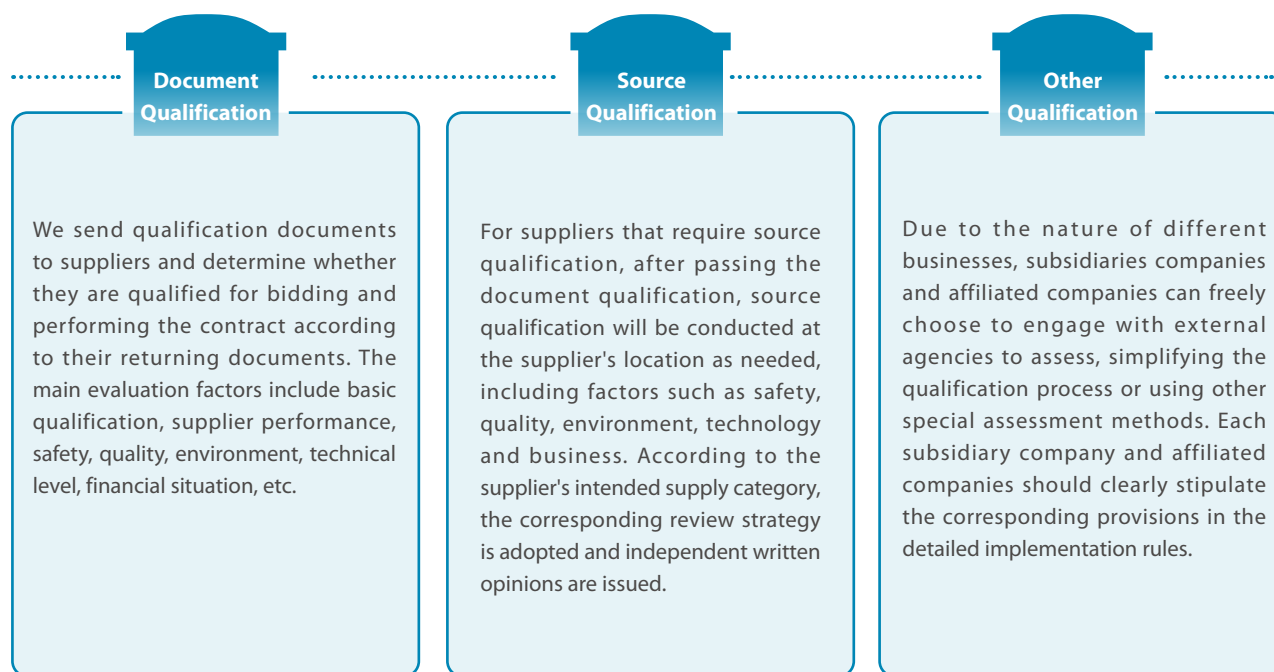
During the Reporting Period, the Company continuously optimized the management process for supplier's misconduct by adding management of lists of restricted suppliers, cancellation and unfreezing functions for Blacklist Suppliers. A total of 68 suppliers were blacklisted due to violations of supplier management measures.





## Supplier Review

The suppliers must pass a series of strict qualification evaluations before cooperating with the Company. In the supplier management system, suppliers will be qualified and assessed by technical, safety and quality assurance, and business-related personnel based on different types. The methods of qualification assessment include document qualification, source qualification and other qualifications.



To ensure partners' compliance with laws and requirements in the supply chain, after strict qualification assessment, performance evaluations are conducted by the Company for all suppliers at least once a year, covering seven dimensions: technology, quality, cost, delivery, service, environmental protection and social responsibility. All evaluation results are recorded and archived on ECP to ensure suppliers' basic rights with fairness and justice. All subsidiaries and affiliates 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 will be established based on business characteristics, which is consistent with the company's procurement strategy.





## Supplier Training

To further enhance suppliers' understanding of CGN Power's requirement and culture, we have established mechanisms for long-term and effective cooperation and two-way communication with suppliers to continuously improve the level of service quality, actively promote the exchange of experience and resource sharing, and work together to promote the sustainable development of the supply chain. We regularly provide training for suppliers, including corporate culture, supplier management, ECP implementation, CA application, procurement and bidding management, etc., thereby helping suppliers improve their quality, enhance culture recognition and cooperation efficiency.



## Promoting Green Supply Chain

To fully implement the concept of green operation, the Company has signed contracts with suppliers that require them to comply with relevant laws and regulations during green operation. Suppliers shall strive in accordance with relevant standards and requirements of ISO 14001 on aspects such as control materials, resources consumption, wastes generation, environmentally friendly processes adoption, recycling and utilization efficiency leverage, reducing the impacts of operation on the environment to protect the ecology at all aspects.

To implement the green industrial management relating to engineering operation, CGN Engineering has strictly followed the principle of green construction and has established and implemented the *CGN Engineering Green Industrial Chain Management Rules*. It requires each business center and project implementation unit to designate responsibility for departments in 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 to achieve standardized and procedural green industry chain management. CGN Engineering focuses on the management of green industry chain through supplier management and adopts effective measures in the aspects of qualification review, bid evaluation, contract execution, supplier evaluation, spare parts management, etc., promoting the co-development of the green supply chain.

To further improve the environmental performance of suppliers, the Company has incorporated environmental factors in the qualification reviews for suppliers with 100% coverage. In the tender document, we require bidders to include green nuclear power elements in the submitted technical proposals, and incorporate green elements of design proposals, raw material selection, subcontractor selection, manufacturing processes, packaging, recycling and other aspects into the scoring criteria, achieving development in green supply chain.



The Company has incorporated environmental factors in the qualification reviews for suppliers

with **100%** coverage

## Fostering Industry Development

As a leader in the nuclear industry chain, CGN Power is an important member of multiple industry organizations. Through various forms of consortium, we actively explore opportunities for external cooperation and establish close cooperation with governments, enterprises and professional institutions to fully leverage our advantages in the upstream and downstream of the nuclear power industry, deepen construction of collaborative mechanism and platforms for quality management of the industrial chain, and achieve mutual complementarity and mutual benefit, leading the development of the nuclear power industry.

For enhancing the quality management of the nuclear equipment industrial chain, we have jointly established the "Major Equipment Quality Risk Prevention Group" with suppliers in the nuclear equipment industrial chain and has established the *International Benchmarking Evaluation Standard for Quality Management of Equipment Industrial Chain* to improve the level of quality management for nuclear power equipment industrial chain. To facilitate the interactive exchange and common progress of the nuclear power industrial chain, the Company has also established the platform for experience exchange and sharing among suppliers to improve the feedback mechanism for nuclear power equipment industrial chain.



### CGN Conference for Quality Integrity of Equipment Industrial Chain

On July 28, 2020, the CGN Conference for Quality Integrity of Equipment Industrial Chain was held by CGN Engineering in Shanghai. The conference aimed to further promote a transparent culture of quality integrity and continuously improve awareness and ability to prevent fraud in the industrial chain. Representatives from participated companies from online and offline carried out discussions on the construction quality integrity. By exchanging and sharing ideas and practices of preventing fraud, consensus on the urgency and importance of anti-fraud works was reached. During the conference, representatives of all parties signed a joint statement on quality integrity of CGN equipment industrial chain online and committed to strictly complying with and promoting guidelines on quality integrity.



### Communication for Supplier Management

On November 18, 2020, DNMC invited a well-known foreign supplier to visit Daya Bay Nuclear Base and communicate with the Company on supplier sourcing, maintenance, performance evaluation and quality management.

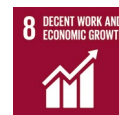
At the communication meeting, the visitor shared experience on topics related to introduction of new suppliers, maintenance of existing suppliers, evaluation method on suppliers' performance, and quality management for suppliers respectively. Through the communication, the Company continuously improved its management of suppliers and enhanced the relationship with strategic suppliers.



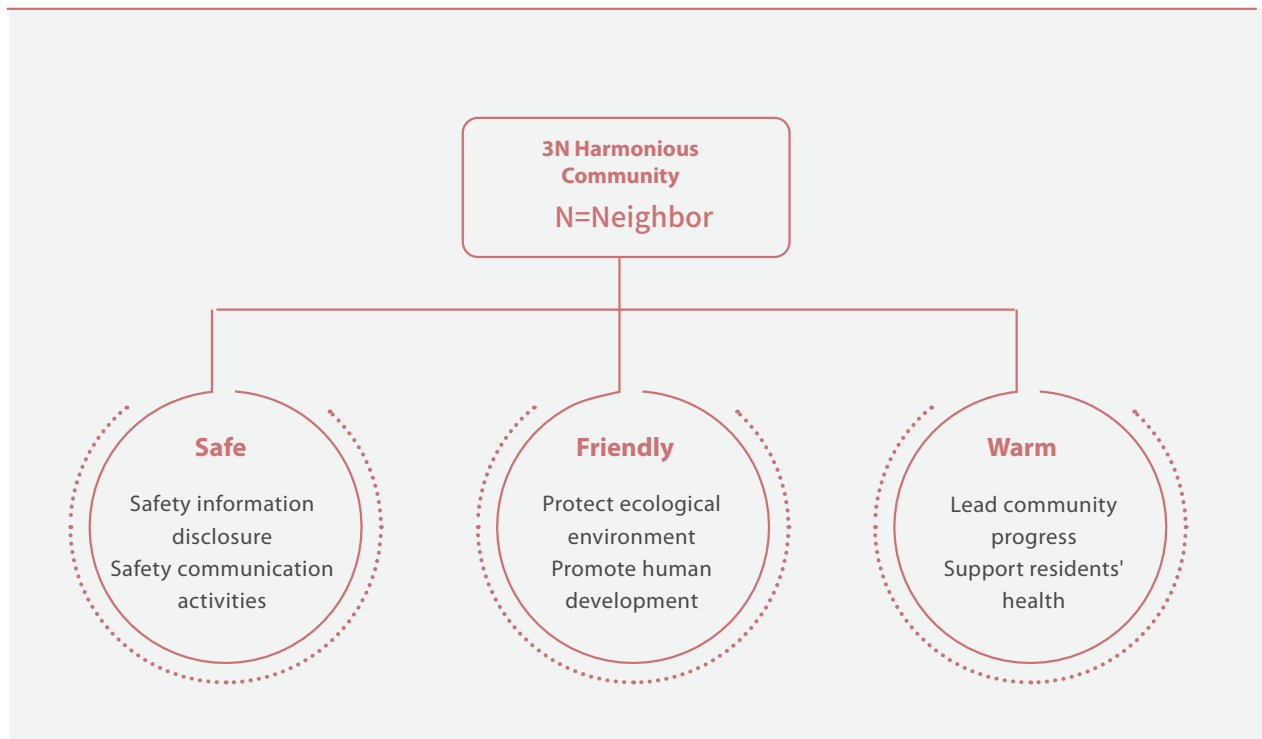


Pursuing the "3N" community development concept of "Safe Neighbor", "Friendly Neighbor", and "Warm Neighbor", CGN Power is committed to ensuring the safe and stable operation of nuclear power, creating corporate value while enhancing poverty alleviation, fostering community development, promoting balanced growth between population and regional development, and fulfilling its corporate social responsibility. We actively participate in community affairs, maintain regular communication with public, and serve and give back to the community, to build a harmonious relationship with the community. At the same time, by contributing our corporate resources, we actively cooperate with the national poverty alleviation policy, collaborate with stakeholders, and provide our support to socially disadvantaged groups.

## Harmonious Community, Public Welfare







## Strengthening Community Communication

To promote transparent operation of the Company and enhance the communication with stakeholders, we constantly innovate communication methods with stakeholders to build trust with public through multiple communication channels and strengthen their understanding of nuclear power.

### Multiple Communication Channels

To promote the openness and transparency of information disclosure and enhance public understanding and trust in the operation of nuclear power, the Company has established communication platforms with stakeholders according to characteristics of each stakeholder. Each nuclear power base has also established a nuclear power safety reporting and disclosure system to further enhance communication effectiveness.

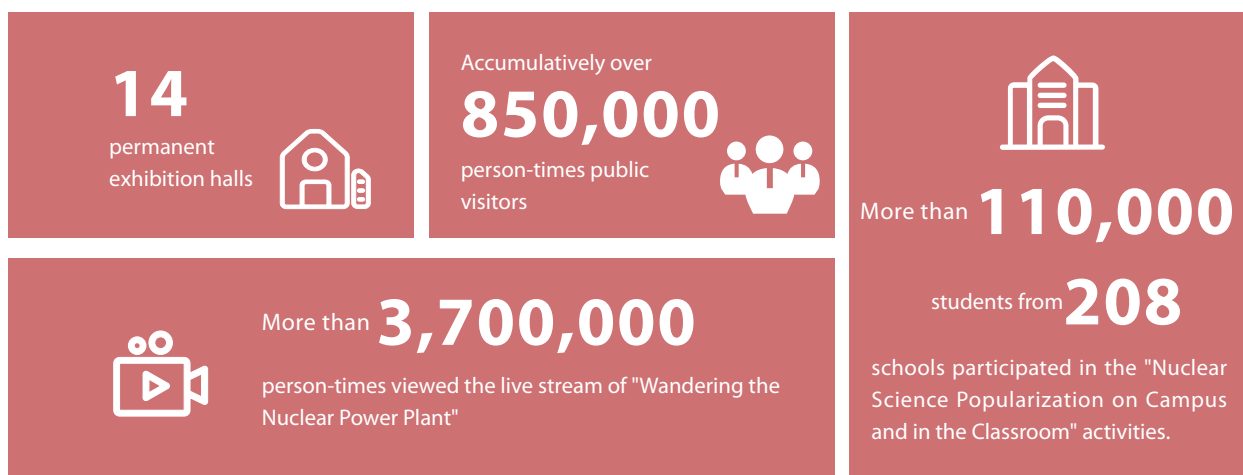
Press conferences, Weibo, WeChat, open days are platforms that we use to communicate with and receive feedback from the community with regards to major concerns about nuclear power development, ensuring the public's right to know the safe operation of nuclear power and enabling public supervision on our operation. The operating data and nuclear safety information of NPPs managed by the Company will be published online every month. Any event occurring after fuelling of a nuclear power unit must be published within two natural days (excluding the day occurring the defined event) from the date on which such event is defined.



## Popularizing Nuclear Power Science

Popularizing the public's understanding of nuclear power is beneficial to promoting the long-term development of nuclear industry. Each nuclear power base has set up its exhibition hall for nuclear power science popularization. Various activities such as nuclear power experience day and summer camps are held on a regular basis to continuously increase public's knowledge on nuclear power. The exhibition halls enable the public to understand the development history of nuclear power in a variety of interesting forms, and enhance their awareness of nuclear power safety and low-carbon environmental protection.

During the Reporting Period, we continuously promoted the event of "Nuclear Power Science Popularization on Campus and in Classrooms" for primary and secondary school students to train qualified personnels in nuclear technology for the country. This campus program has been promoted in schools nearby the nuclear power plants, including Guangdong Province, Liaoning Province, Fujian Province and Guangxi Zhuang Autonomous Region with continuous expansion. As of December 31, 2020, more than 110,000 students from 208 school participated in the program.



### Case DNMN was Awarded the "Excellent Energy Educational Base"

On November 10, 2020, DNMN was awarded the honorary title of "Excellent Energy Educational Base" in the 2020 China Energy Research Society Annual Conference. DNMN has always taken nuclear knowledge popularization as an important social responsibility, and constantly explored innovative events in various forms to popularize knowledge of nuclear power. Through a series of interactive experience activities such as "August 7 Public Open Day", "NPP Tour by National People's Congress Deputies" and "Nuclear Science Popularization on Campus", mechanisms for regular communication with the public have been established. Meanwhile, DNMN has developed various products to popularize nuclear science include a series of "Wan Wan" animation products, topics related to nuclear power by Tencent video "Theory of Relativity in Science", "News and Science: Revealing the Secrets of Nuclear Power Plant" by Hunan Satellite TV, to popularize nuclear power in a popular and interesting way.



## Case

**"Online Visit in the Nuclear Power Plant"**

Due to the pandemic, we used various platforms such as Tik Tok, Weibo, WeChat, online video platform, Yangshipin, CCTV News and Sina to do the live-stream of the "Wander the Nuclear Power Plant" to popularize nuclear science in an innovative way. More than 500,000 people gained in-depth experience of the coral conservation and operation of the nuclear plant.

In the live stream, audience visited the only 1:1 refueling tank in China, the main control room in Daya Bay Nuclear Power Base, production area in Ling'ao Nuclear Power Plant, and watched the real-time working conditions of nuclear engineers. Through drone and underwater filming robot, the audience appreciated the charms of natural landscape in "the most beautiful power plant".



## Case

**"Online Popularization" in Hongyanhe Nuclear**

During the period of the pandemic, Hongyanhe Nuclear organized the "Online Popularization" in an innovative way. The initial phase of the "Online Popularization" focused on exploring the main control room in the nuclear plant. Students from 31 secondary schools in Wafangdian City watched the short video through official social media of Hongyanhe Nuclear upon its launch.

Through lively and interesting language style, Hongyanhe Nuclear's "Online Popularization" unveiled the secrets of the nuclear power plant via short videos that are intouchable to the public. It enriched the contents and methods of popularization dissemination.



## Fighting for Poverty Alleviation

CGN Power continuously explores public welfare methods that are in line with the historical background and social development, and takes advantages of different aspects such as capital, technology, talents and management, to build a harmonious and warm society and promote sustainable development in local areas. The Company followed documents such as the *Decision of the Communist Party of China Central Committee and the State Council on Winning the Battle against Poverty* and the *Guiding Opinion of the General Office of the Communist Party of China Central Committee and the General Office of the State Council on Further Strengthening the Poverty Alleviation Work of Central Enterprises*, fully implemented the important spirit of poverty alleviation made by general secretary Xi Jinping, and followed the requirement of "Leaving No One Behind in Poverty Alleviation". We mobilize internal and external efforts to tackle poverty alleviation, deeply understand the needs of underdeveloped areas, develop poverty alleviation projects with distinctive features with respect to local conditions, donate funds and goods, participate in infrastructure development and poverty alleviation through education, organize multiple special recruitments and volunteering events at the nuclear power plants, and support residents to solve problems of employment and living, making unremitting efforts for the solid advancement and sustainable development of targeted poverty alleviation.

During the Reporting Period, the Company fully supported and implemented poverty alleviation in the designated sites by the central, namely Lingyun County and Leye County of Baise City in Guangxi Zhuang Autonomous Province, Kongtong Village of Yangjiang City in Guangdong Province and Liaocuo Village and Ming Yang Village of Gutian County in Fujian Province. As of the end of the Reporting Period, the Company had 12 poverty alleviation cadres working at the designated sites.

### 2020 Major Work and Performance in Poverty Alleviation

Overall capital investment RMB **40.37** million



Industrial poverty alleviation project investment RMB

**30.7** million



Input for medical and health resources for undeveloped areas RMB

**15** thousand



Funding for disadvantaged students RMB

**5.55** million



Amount invested in designated poverty alleviation work RMB

**41.73** million

### Awards



Fangchenggang Nuclear was awarded the recognition of National Advanced Collective for Poverty Alleviation



Yangjiang Nuclear was awarded the Gold Cup of "Hongmian Cup Poverty Alleviation in Guangdong Province" by the Leader Group of Poverty Alleviation and Development of Guangdong Province



## 2020 Major Work in Poverty Alleviation

### Lingyun and Leye County, Baise City, Guangxi Zhuang Autonomous Province

Chen Yang has been selected to serve on the Lingyun County Standing Committee and as Deputy County Executive. Zhang Wei has been selected to serve as the First Secretary of Longhuai Village, Jiayou Town, Lingyun County

Adhering to the concept of combining "Mindset, Wisdom and Skill Support" to further invest the "Egret Class" program and "Rainbow Project". Partners were introduced to build the "Rainbow School" together to improve the working, studying and living conditions of teachers and students. Continuously providing industrial supports to the silkworm breeding project in Lingyun County and the kiwi fruit project in Leye County. The project of preservation treatment by electron beam irradiation in Baise City has already come into operation that created more jobs for the whole industry

Lingyun and Leye County have lifted out of poverty officially in 2020. The poverty rates in Lingyun and Leye County have dropped to zero

### Kongtong Village, Yangjiang City, Guangdong Province

Combined with many years of experience of poverty alleviation, forming the special working group to develop the first village-level models asset management measures of poverty alleviation in Guangdong Province

Investing RMB 3.35 million to provide comprehensive support in various aspects including education, production development, infrastructure and livelihood. Enhancing medical insurance for disadvantaged households, and promoting the implementation of five characteristic industries

After comprehensive support, the local per capita disposable income of disadvantaged households has been doubled, substantially increasing the village collective economic income

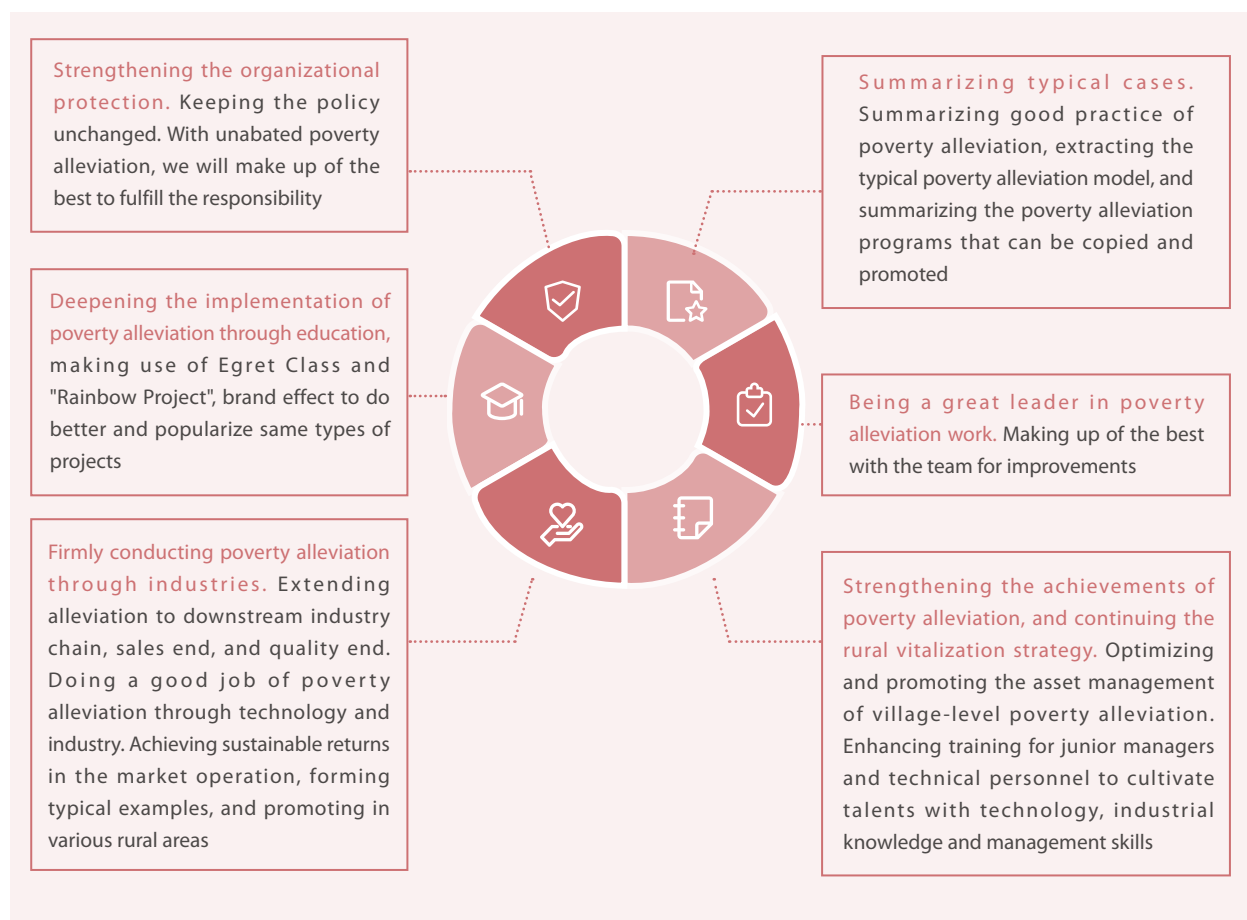
### Gutian County, Xiapu County, Fuding City, Fujian Province

Two cadres have been designated to station in the village as poverty alleviation officers. Investment of RMB 300 thousand has been made for Liaocuo Village and Mingyang Village in the project of renovating roads and "Living in An Environmental Friendly Place".

Assisting 7 disadvantaged households in Nantang Village, Yantian Town, Xiapu County, and visited designated disadvantaged households to know their needs during the pandemic; helping one disadvantaged household to sell 2,162 kilograms of watermelon.

Investment of RMB 300 thousand has been made for Xishan Village, Songyang Village and Paitou Village, Guanlin Town, Fuding City in economy and tourism development.

2021 is first year when poverty alleviation and rural vitalization are effectively linked, and the start of "14th Five-Year Plan". Following the work requirements of "Continuity of Four Aspects after Removing from the Poverty List", the Company continuously enhances poverty alleviation, continuously promotes, consolidates and expands the achievements and effectively connects them with rural vitalization, and implements various tasks in the following areas:



### Case

#### Live Stream for Poverty Alleviation Selling Activity by Taishan Nuclear

On May 20, 2020, Taishan Nuclear held the live stream for poverty alleviation selling activity to sell products such as dried mango, dried sweet potato and dried passion fruit from Lingyun County, Baise City, Guangxi Zhuang Autonomous Province. Employees and their families from Taishan Nuclear Power Base bought 910 poverty alleviation products, with total amount of RMB 17,903.6. Taishan Nuclear Power has reduced the impact of the pandemic through innovative channels such as live stream, effectively driving the online sales of agricultural products.





### Case Targetted Recruitment for Poverty Alleviation Held in Kongtong Village, Yangjiang City

Actively responding to the call for rural revitalization in Guangdong Province, Yangjiang Nuclear held a job fair in Kongtong Village in December 2020 to recruit local villagers to work at Yangjiang Nuclear Power Base to strengthen the achievements of poverty alleviation by real actions. In the job fair, the staff introduced the job situation and salary for applicants in detail. In addition, different services including free employment consultation, job registration, job recommendation and policy promotion were provided. According the situation in Kongtong Village, the staff carried out door-to-door visits to provide villagers with "One-to-one" employment assistance.

Yangjiang Nuclear will continue to carry out activities to consolidate the results of poverty alleviation, timely grasp the employment status and employment needs of the villagers with information system of poverty alleviation, and carry out precise employment assistance to allow more villagers to find suitable jobs, and to increase the income level of the villagers for a better life.



### Case Fangchenggang Nuclear Held Charity Activities to Provide Medical Service in the Village

To help the elderly in the village to have a healthy winter time and to have a happy Chinese New Year, Fangchenggang Nuclear organized volunteers to go to Longhuai Village, Lingyun County, Baise City in December 2020 to carry out the "Targetted Assistance" Party Day activity. Health check and consultation was conducted for old party members and the elderly in the village.

In order to cover the elderly from the whole village to participate in the free clinic activity, doctors brought medical equipment and medicines to carry out health check for the elderly with limited mobility at their home. The elderly truly appreciated the thoughtfulness and convenience of the free clinic and felt the care from their hearts. The free clinic also introduced the knowledge of disease prevention and keeping good health to the elderly by issuing health promotion brochures and providing health consultations. The free clinic not only sent health care to the elderly, but also sent care to the doorstep and warmth to the heart with a better and healthier life.





### A Series of Poverty Alleviation Activities of "Decisively Fight against Poverty, Create A Better Life" by Ningde Nuclear

On the occasion of the 7th Poverty Alleviation Day in China, Ningde Nuclear held a series of poverty alleviation activities in various forms, such as poverty alleviation meals and agricultural product sales.

The canteens of Ningde Nuclear Power Base used 15 kinds of agricultural and animal husbandry products purchased from designated poverty alleviation areas to cook three meals of the day for everyone. Employees not only enjoyed the delicious food, but also supported the poverty alleviation work with actions, bringing love to the poverty alleviation areas.

In October 2020, Ningde Nuclear held an agricultural product exhibition to increase income of farmers. The agricultural products on display included 19 products such as ecological rice and dried mango from Lingyun and Leye Country, Guangxi Zhuang Autonomous Province. The exhibition allowed employees, family members, and partners of the base to access to agricultural resources in impoverished areas with zero-distance, opening up a wider market for agricultural products in disadvantaged areas, and also inspiring everyone's awareness of poverty to help with the poverty alleviation.

## Caring for the Community

CGN Power has always been adhering to the spirit of "Dedication, Love, Mutual Assistance, Progress", and actively engaged in volunteering services and public welfare activities such as provision of poverty-stricken household assistance, student aid, science popularization, and undertaking tree planting to provide warmth to those in need. We launched a total of 43,413 hours of volunteering and social welfare activities, and our employees participated in 28,942 volunteering activities throughout the year.



We launched a total of

# 43,413

hours of volunteering and social welfare activities



Our employees participated in

# 28,942

volunteering activities throughout the year





## Case

**Fangchenggang Nuclear Held Charity Activities for Disadvantaged Students**

In May 2020, Fangchenggang Nuclear organized the charity activity "Donate a Piece of Wastepaper, Give a Love". A total of more than 4,000 kilograms of wastepaper was collected within one week with the support from various departments. After the sale of the wastepaper, Fangchenggang Nuclear purchased more than 200 sets of books for poor primary school. Starting with small things, Fangchenggang Nuclear gives love with actions, showing the warmth from the world.



## Case

**Ningde Nuclear Blood Donation Activity**

Blood donation is a type of social responsibility. It shows the traditional Chinese virtue of philanthropy and dedication. On October 29, 2020, with support from Ningde Blood Donation Centre, the party working group of the safety protection department of Ningde Nuclear cooperated with CGN Operations jointly undertook the "Blood Contribution, Donating Together" blood donation activities. In Ningde Nuclear base, hundreds of participants joined the event, with the total blood donation amounted to 38,900 ml, breaking the record of 32,000 ml in last year.



# Safeguarding Nuclear Power, Looking Forward





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## China General Nuclear Power Co., Ltd. 2020 Environmental, Social and Governance Report Independent Assurance Report

安永华明(2021)专字第 60806422\_A01 号

To the Board of China General Nuclear Power Corporation:

### I. Scope of Our Engagement

The 2020 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 27 Environmental, Social and Governance Reporting Guide of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and Guidelines for the Standardized Operation of Listed Companies on Shenzhen Stock Exchange, 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 the year ended 31 December 2020 in accordance with the Management's instructions and the terms of the Engagement Letter signed in December 2020.

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 to 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 Managements instructions, we performed limited assurance procedures in:

- China General Nuclear Power Co., Ltd. Headquarters
- Ling'ao Nuclear Power Co., Ltd.
- Lingdong Nuclear Power Co., Ltd.
- Guangdong Nuclear Power Joint Venture Co., Ltd.

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 2020:

- Level 2 or above nuclear events
- 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)
- The installed capacity of nuclear power in operation
- On-grid nuclear power generation
- On-grid nuclear power generation equivalent to reduction of standard coal consumption
- On-grid nuclear power generation equivalent to carbon dioxide reduction
- Purchased electricity
- Purchased electricity equivalent to carbon dioxide emissions
- Fresh water consumption



安永华明(2021)专字第 60806422\_A01 号

- Water consumption per unit of on-grid power generation
- Number of Employees

In response to the above key performance indicators, the company has applied the Environmental, Social and Governance reporting guidelines in the Appendix 27 Environmental, Social and Governance Reporting Guide of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and Guidelines for the Standardized Operation of Listed Companies on Shenzhen Stock Exchange to prepare.

The limited assurance work includes interviews with persons in charge of selected key performance indicators, execution of analytical procedures and other limited assurance procedures, etc.

The limited assurance procedures we carried out are following:

- Interviewing the company's Management and staffs responsible for the selected key performance information;
- 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.

### 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 (as set out in ISAE 3000) 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 2020 ESG Report are unfairly expressed in any material respect according to the criteria defined 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.





# Appendix

## Analysis of United Nations' Sustainable Development Goals ("UN SDGs")

SDGs	UN SDGs	CGN Power Actions	Chapter
	End poverty in all its forms everywhere	Actively pay attention to the socially disadvantaged groups to eliminate poverty, and creating a harmonious and warm society	Harmonious community, Public Welfare
	Ensure healthy lives and promote well-being for all at all ages	Adhere to the management policy of "Safety First, Prevention-oriented, Comprehensive Governance", and actively adopt measures to ensure employees' health and safety	Caring for Employees, Cherishing Talents
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Implement education alleviation to improve education resources and quality in underdeveloped areas	Harmonious community, Public Welfare
	Achieve gender equality and empower all women and girls	Adhere to the principle of open, fair and equal competition, and implement gender equality	Caring for Employees, Cherishing Talents
	Ensure access to affordable, reliable, sustainable and modern energy for all	Promote nuclear power development and clean energy popularity. Ensure the safety operation of nuclear power	Stable Operation, Safety First
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Respect and protect employees' rights and interests. Build a diversified workforce with adequate development support	Caring for Employees, Cherishing Talents Research and Development, Promoting Development Harmonious community, Public Welfare
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Construct power infrastructure, enhance innovation capabilities and optimize energy development technologies	Stable Operation, Safety First Research and Development, Promoting Development
	Ensure sustainable consumption and production patterns	Improve overall nuclear power efficiency, reduce resources consumption and waste disposal. Ensure radioactive waste emissions meet national standards	Stable Operation, Safety First
	Take urgent actions to combat climate change and its impacts	Adhere to nuclear power development. Promote low carbon energy structure, and reduce carbon emissions	Environmental Protection, Low-carbon Development
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Attach importance to the impacts of power plant construction and operation on surrounding underwater life, and adopt measures to protect the underwater life around the community	Environmental Protection, Low-carbon Development
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Attach importance to the impacts of power plant construction and operation on surrounding terrestrial flora and fauna, and adopt measures to protect the terrestrial life around the community	Environmental Protection, Low-carbon Development
	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	Enhance competitiveness and synergy in the nuclear power industry chain. Establish a mutually beneficial strategic partnership with upstream and downstream companies	Research and Development, Promoting Development

## Key Performance Indicators

### Safety

Item	Indicator	Performance Comparison		
		2018	2019	2020
Nuclear Safety	Nuclear power generating units in operation (units)	22	24	24
	Percentage of advanced value achieved for WANO indicators of units (top1/4)	78.79%	76.39%	72.57%
	Unplanned automatic scram (times)	2	3	5
	Level 2 or above nuclear event <sup>19</sup>	0	0	0
Personal Safety (including employees and contractors)	Death (persons)	0	0	0
	Death rate per 100,000 persons in engineering construction	0	0	0
	Serious injury (cases)	0	1	0
Fire Safety	Fire hazards (cases)	0	0	0
Radiation Protection	Accidental overexposure (cases)	0	0	0
	Loss of radiation sources (cases)	0	0	0
	Internal contamination accident (cases)	0	0	0

### Environmental

Year	2018	2019	2020
Clean energy equivalent to carbon dioxide emission (10,000 ton)	13,254.56	15,051.35	15,627.64
Clean energy equivalent to sulfur dioxide emissions (10,000 ton)	-	-	3.49
Clean energy equivalent to nitrogen oxides emissions (10,000 ton)	-	-	3.64

### Water Resources Management

Item	2018	2019	2020
Fresh water consumption (10,000 tons)	1,620	1,156	1,100

<sup>19</sup>Nuclear incidents are classified into seven levels in the INES. Event of levels 1 to 3 are terms as "incidents" while levels 4 to 7 are classified as "accidents". Events without safety significance are classified as "below scale/ Level 0".

## Social

Year		2018	2019	2020
Number of Employees <sup>20</sup>		18,663	18,383	18,264
Number of ethnic minority employees		781	783	763
Proportion of employees				
Gender	Female	11.60%	11.58%	11.68%
	Male	88.40%	88.42%	88.32%
Employee Category	Administration	7.29%	7.69%	7.80%
	Technical	92.71%	92.31%	92.20%
Employee Category	Full-time	100%	100%	100%
	Part-time	0%	0%	0%
Age	Aged 28 and below	24.46%	19.66%	16.20%
	Aged 29 to 35	42.78%	42.13%	40.60%
	Aged 36 to 45	21.73%	25.48%	29.19%
	Aged 46 and above	11.03%	12.73%	14.01%
Academic Background	Undergraduate or below	7.59%	6.28%	6.00%
	Undergraduate	72.91%	73.74%	73.58%
	Postgraduate	18.57%	19.00%	19.44%
	Doctorate	0.93%	0.98%	0.98%
Region	Within Shenzhen	23.90%	23.22%	23.36%
	Outside Shenzhen	76.10%	76.78%	76.64%
Turnover rate				
Gender	Female	0.30%	0.28%	0.16%
	Male	2.75%	1.96%	1.52%
Region	Within Shenzhen	0.43%	0.38%	0.44%
	Outside Shenzhen	2.62%	1.86%	1.24%
Age	Aged 28 and below	1.14%	0.97%	0.59%
	Aged 29 to 35	1.42%	0.89%	0.73%
	Aged 36 to 45	0.41%	0.32%	0.30%
	Aged 46 and above	0.08%	0.06%	0.05%

Employee Training			
	2018	2019	2020
Average training hours per employee (rounded up, hour)	179	146	93
Senior managers training rate	100%	100%	100%
Middle managers training rate	100%	100%	100%
Training rate for male	100%	100%	100%
Training rate for female	100%	100%	100%

<sup>20</sup>Not including affiliated companies.

Public Welfare and Communication			
Category	2018	2019	2020
Total donation (RMB 10,000 )	1,790.15	1,949.07	7,091.58
Volunteering hours	35,000	28,131	43,413
Press conference	15	10	4

Poverty Alleviation Achievements			
Indicator	Unit	2019 Quantity/ Development	2020 Quantity/ Development
Overall			
Funds	RMB 10,000	1,853.59	4,037
Goods donations	RMB 10,000	35.34	136
Number of disadvantaged individuals supported	Person	3,050	2,308
Breakdown			
Industrial alleviation			
Type of industrial alleviation project		Agriculture and forestry poverty alleviation	Agriculture and forestry poverty alleviation
Number of industrial alleviation project	Unit	2	4
Amount invested in industrial alleviation	RMB 10,000	740	3,070
Number of disadvantaged individuals assisted	Person	3,050	2,308
Employment alleviation			
Employment alleviation	RMB 10,000	0	0
Number of vocational skills trainees	Person- time	828	0
Number of employments achieved for disadvantaged individuals	Person	51	0
Education alleviation			
Amount invested for disadvantaged students	RMB 10,000	371.76	555
Number of disadvantaged students supported	Person	740	1,452
Amount invested for improving education resources in underdeveloped areas	RMB 10,000	9.1	18.7
Health alleviation			
Amount invested in medical and health funds in underdeveloped areas	RMB 10,000	0	1.5
Social alleviation			
Amount invested in Eastern and Western poverty alleviation	RMB 10,000	150	0
Amount invested in designated poverty alleviation	RMB 10,000	648.59	4,173
Amount invested in poverty alleviation charitable fund	RMB 10,000	1,205	0





## ESG Index

The Company has complied with the "Comply or Explain" provisions set out in Appendix 27 *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	Disclosure	Chapters/ Remarks
Environmental				
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	●	Reducing Pollutant Emissions
	A1.1	The types of emissions and respective emissions data	●	Reducing Pollutant Emissions
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	●	Reducing Pollutant Emissions
	A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	●	Reducing Pollutant Emissions
	A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	●	Reducing Pollutant Emissions
	A1.5	Description of measures to mitigate emissions and results achieved	●	Reducing Pollutant Emissions
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	●	Reducing Pollutant Emissions
A2: Use of Resources	General Disclosure	Policies on the efficient use of resources including energy, water and other raw materials	●	Efficient Use of Resources
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total and intensity (e.g. per unit of production volume, per facility)	●	Reducing Pollutant Emissions
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	●	Strengthening Water Management
	A2.3	Description of energy use efficiency initiatives and results achieved	●	Efficient Use of Resources
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	●	Strengthening Water Management
	A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced	●	Not applicable for electricity product

A3: Environmental and Natural Resources	General disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	●	Environmental Protection, Low-carbon Development
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	●	Environmental Protection, Low-carbon Development
A4: Climate Change	General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer	●	Responding to Climate Change
	KPI 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	●	Responding to Climate Change
Social				
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, anti-discrimination, and other benefits and welfare	●	Caring for Employees, Cherishing Talents
	B1.1	Total workforce by gender, employment type (for example, full-or part-time), age group and geographical region	●	Caring for Employees Key Performance Indicators
	B1.2	Employee turnover rate by gender, age group and geographical region	●	Caring for Employees Key Performance Indicators
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	●	Caring for Employees' Health
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	●	Key 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	●	Caring for Employees' Health
B3: Development and Training	General disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	●	Fostering Employee Development
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	●	Enhancing Training Systems Key Performance Indicators
	B3.2	The average training hours completed per employee by gender and employee category	●	Enhancing Training Systems Key Performance Indicators
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	●	Employee Caring for Better Performance
	B4.1	Description of measures to review employment practices to avoid child and forced labor	●	Protecting Employee Human Rights
	B4.2	Description of steps taken to eliminate such practices when discovered	●	Protecting Employee Human Rights

B5: Supply Chain Management	General disclosure	Policies on managing environmental and social risks of the supply chain	●	Enhancing Supply Chain Management Promoting Green Supply Chain
	B5.1	Number of suppliers by geographical region	●	Enhancing Supply Chain Management
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	●	Enhancing Supply Chain Management
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored	●	Enhancing Supply Chain Management
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	●	Enhancing Supply Chain Management
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.	●	Healthy and Safety: Caring for Employees' Health Privacy: Network and Information Security Advertising and labelling are not applicable for electricity product
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	●	Not applicable for electricity product
	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 in Nuclear Power
	B6.4	Description of quality assurance process and recall procedures	●	Product recall is not applicable for electricity product
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	●	Network and 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	●	Anti-corruption
	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	●	Anti-corruption
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	●	Anti-corruption
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	●	Harmonious Community, Public Welfare
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	●	Fighting for Poverty Alleviation Caring for the Community
	B8.2	Resources contributed (e.g. money or time) to the focus area	●	Key Performance Indicators

## Feedback Form

Dear readers,

Thank you for reading the *2020 Environmental, Social and Governance Report* published by CGN Power. In order to provide you with more valuable information, and for our continuous improvement in performance of ESG/social responsibility, capacity and level of fulfilment of corporate social responsibility, you are invited to complete the survey below via email, fax or mail and provide us with feedbacks. We eagerly look forward to your precious opinions.

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Your opinions on this Report: (please tick "√" where appropriate)

**01** Our efforts and influence in economic, environmental and social aspects highlighted in this Report

☐ Very good ☐ Good ☐ Acceptable ☐ Bad ☐ Very bad

**02** Clarity, accuracy and completeness of information and indicators disclosed in this Report

☐ Very good ☐ Good ☐ Acceptable ☐ Bad ☐ Very bad

**03** Readability from the perspective of content layout and design of this Report

☐ Very good ☐ Good ☐ Acceptable ☐ Bad ☐ Very bad

Which part(s) of this Report are you most interested in?

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