中广核 CGN

中國廣核電力股份有限公司

CGN Power Co., Ltd.*

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

Stock Code:1816

2018

Environmental, Social and Governance Report

*For identification purpose only

About This Report

CGN Power Co., Ltd. has been publishing annual environmental, social and governance reports since 2015. This report is the fourth Environmental, Social and Governance report released by CGN Power Co., Ltd. and sets out our environmental, social and governance performance in 2018. This year, we invited different stakeholders to conduct a materiality assessment to understand the importance they attach to the Company's sustainability issues and to help us develop and refine our policies on sustainable development.

Reporting Period

This report covers data and information of CGN Power Co., Ltd., and its subsidiaries and major affiliated companies from January 1, 2018 to December 31, 2018 (the "**Reporting Period**") . If past data are applicable, they will also be displayed for comparison.

Reporting Standards

The report is prepared in accordance with the *Guidelines for Environmental, Social and Governance Reporting* in Appendix 27 of the *Main Board Listing Rules (the "**Listing Rules**")* published by the Stock Exchange of Hong Kong Limited ("**SEHK**"), taking into account the *GRI Standards* issued by Global Reporting Initialtive (GRI), *the Ten Principles* of 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 (SASAC), the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises of* Chinese Academy of Social Sciences *and* the *Guidelines on Social Responsibility for Listed Companies* of Shenzhen Stock Exchange.

Name Description

For convenience, "CGN Power Co., Ltd." in this report is also expressed as "CGN Power", "our Company", "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 *2018 Annual Report* published by the Company on April 8, 2019.

Reliability Assurance

The contents of this report are compiled from internal documents, statistical reports and publicly available materials. 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 statements, misleading representations or material omissions

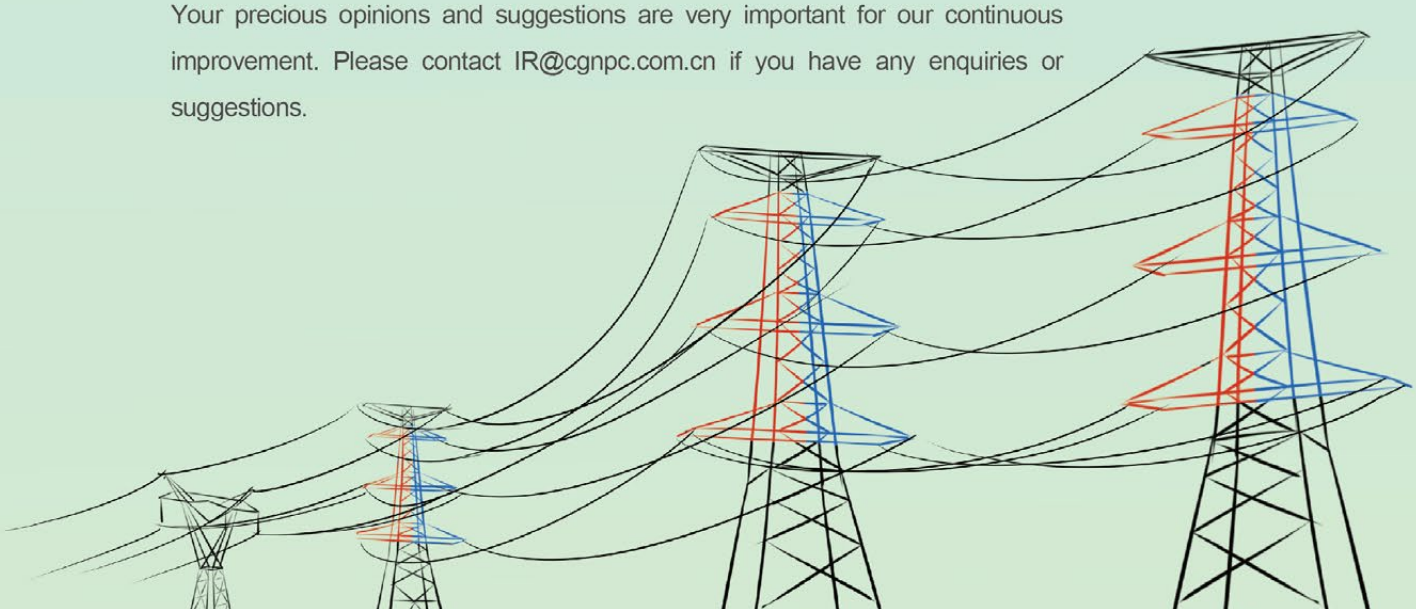
Access to This Report

This report is written in both Chinese and English, and in case of discrepancy between the two versions, the Chinese version shall prevail.

The electronic copy of this report is available for download at CGN Power’s website (www.cgnp.com.cn).

Feedback

Your precious opinions and suggestions are very important for our continuous improvement. Please contact IR@cgnpc.com.cn if you have any enquiries or suggestions.



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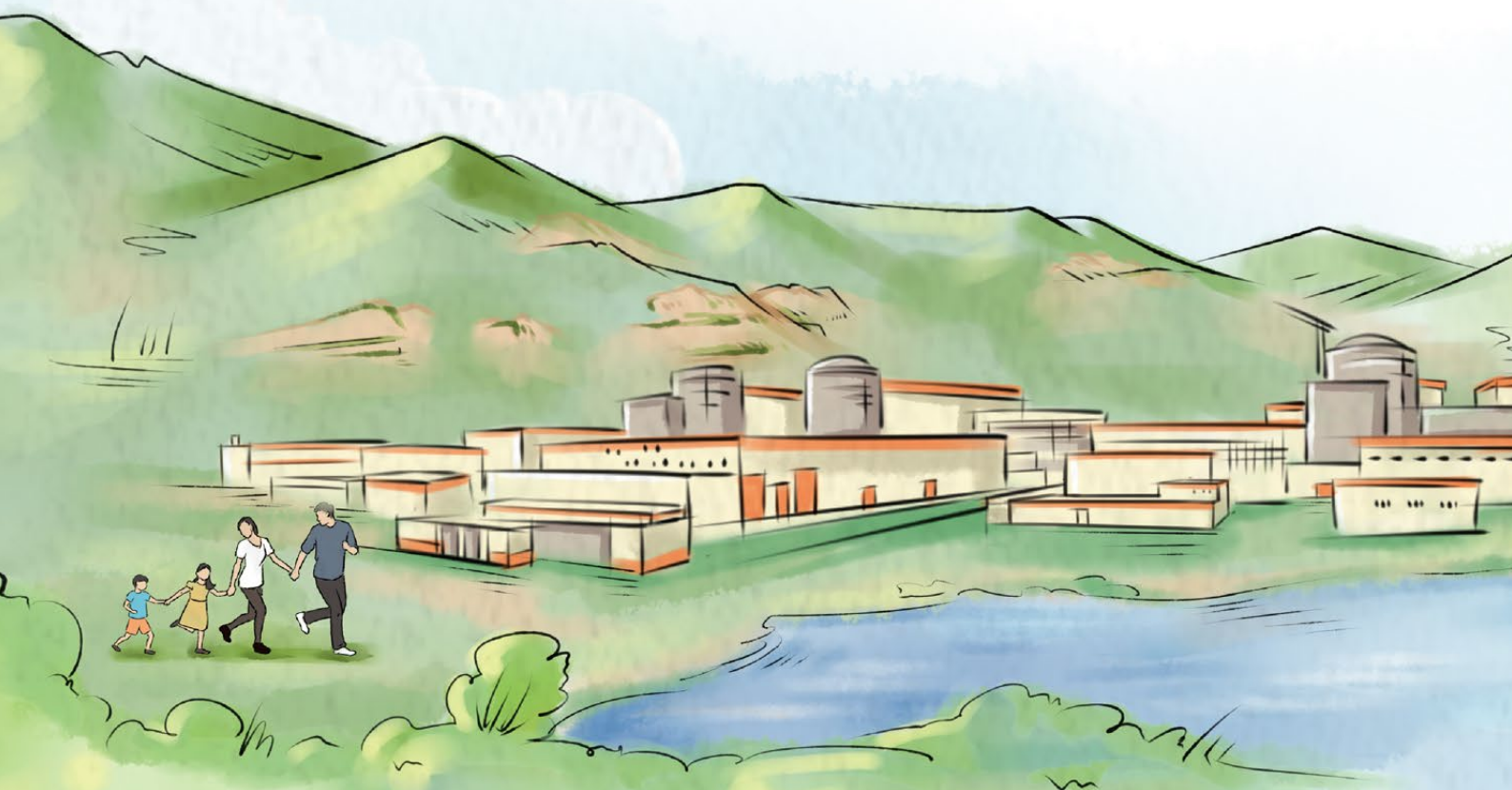

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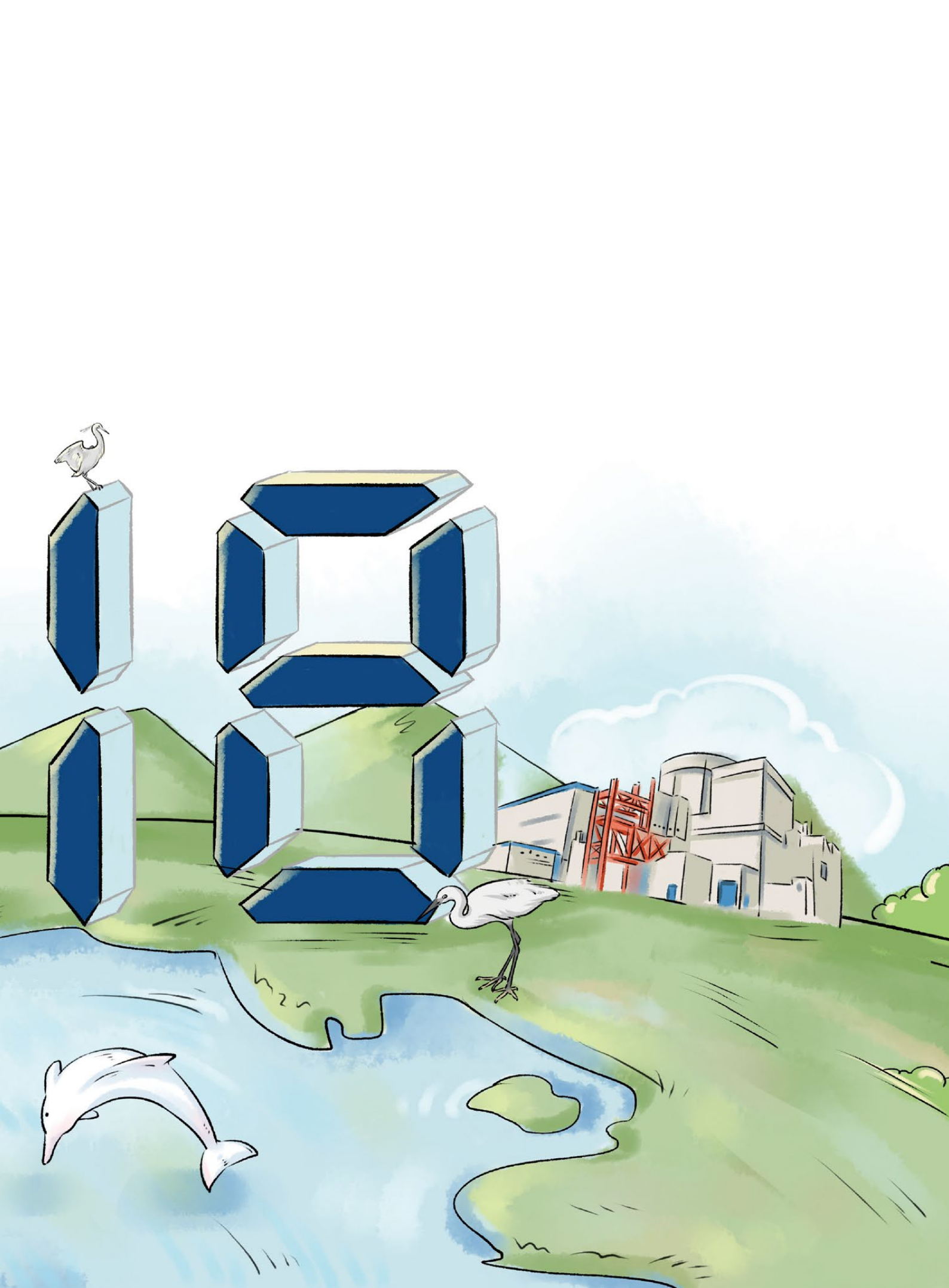
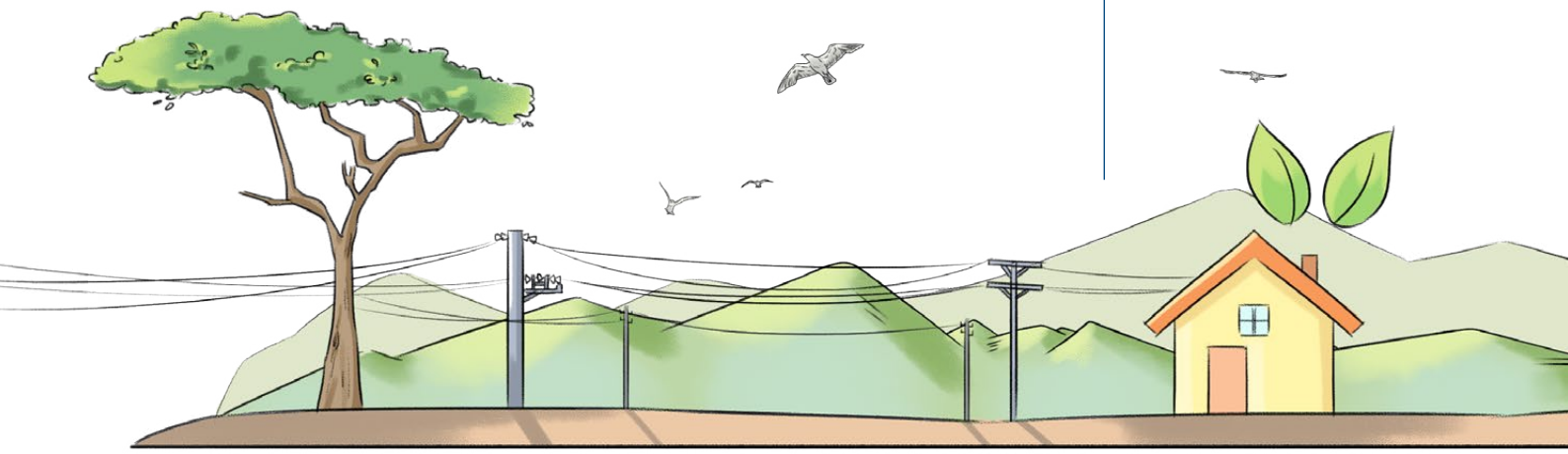
About Us



Overview of Key Data in 2018

On-grid Power Generation

157,044.58 GWh



Guarding Nuclear Safety

WANO Indicators

78.79% entering top 1/4 of the world

73.11% entering top 1/10 of the world

Nuclear incident of level 1 or above 0

Nuclear power safety accident rate 0.51%[1]

"Greening" the World

On-grid power production equivalent to standard coal consumption reduction

48.37 million tons

Equivalent to carbon dioxide emission reduction

132,55 million tons

Equivalent to forest area

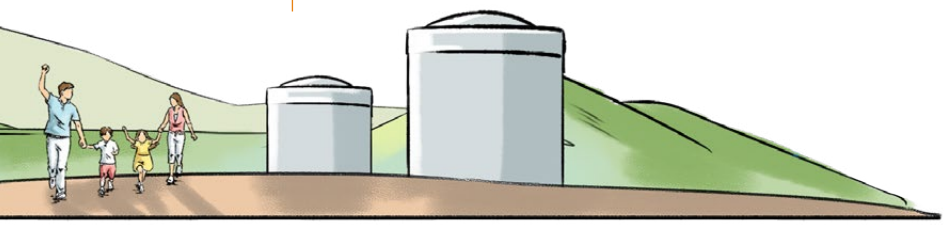
353,400 hectares

1. Only one minor injury in 2018.

Unite the Talents

Total number of employees
18,663[2]

Average training hours per employee
179 hours



Cooperate to Develop

504 New suppliers introduced in 2018

Total number of suppliers 7,014

Cherish the Neighborhood

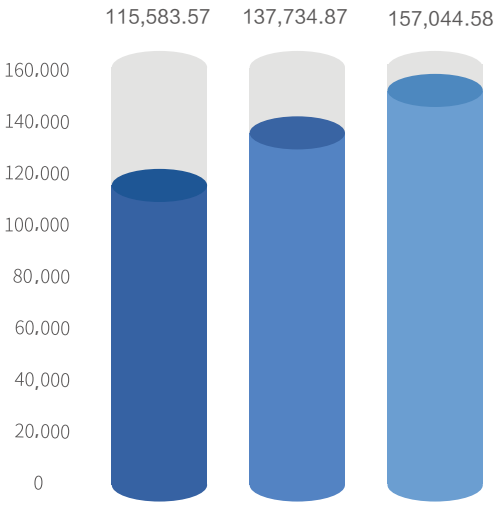
Visitors of nuclear power bases over
700,000
times

Total number of our employee volunteers over
10,000

Employee participation in public welfare activities
Over 27,000 times
Over 35,000 hours

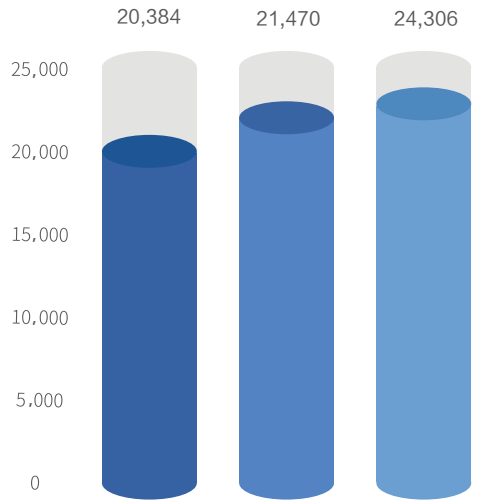
2. Not including affiliated companies.

CGN Power's Operational, Environmental and Safety Performance during 2016 – 2018



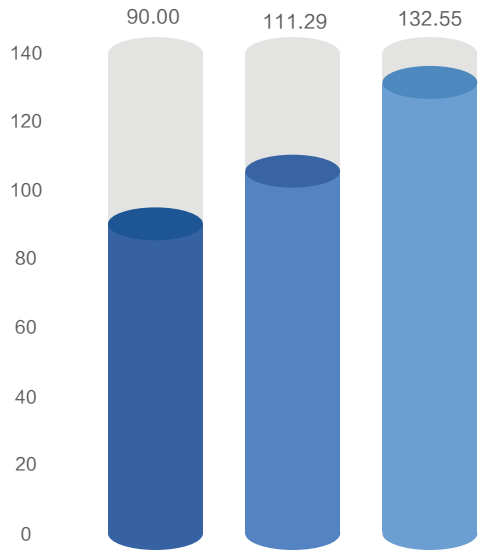
On-grid power genertion (GWh)[3]

2016 2017 2018



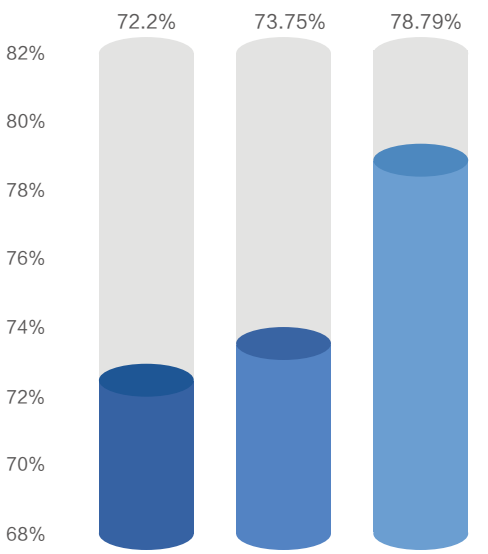
Installed capacity in operation (MW)[4]

2016 2017 2018



Power generation equivalent to reduction of CO_2 (million tons)

2016 2017 2018



WANO Indicators (top 1/4 level of the world)

2016 2017 2018

3. Statistics showing the on-grid power generation of NPPs (including Daya Bay Nuclear Power Station, Ling'ao Nuclear Power Station, Lingdong Nuclear Power Station, Ningde Nuclear Power Station, Yangjiang Nuclear Power Station, Fangchenggang Nuclear Power Station, Hongyanhe Nuclear Power Station and Lufeng Nuclear Power Station) operated and managed by the Company from January 1, 2018.

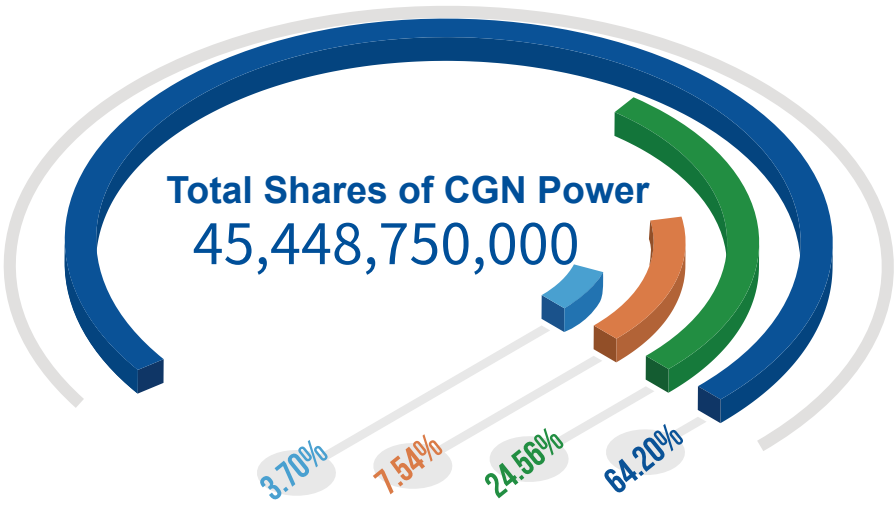
4. Taishan Nuclear Power Station has entered commercial operation after completing commissioning work since December 13, 2018.

Company Overview

CGN Power (stock code: 1816) was established on March 25, 2014 by its controlling shareholder China General Nuclear Power Corporation ("**CGNPC**"). It has been listed on the Main Board of the SEHK since December 10,2014 and was the only listed company in the world that solely operated nuclear power generation at that time.

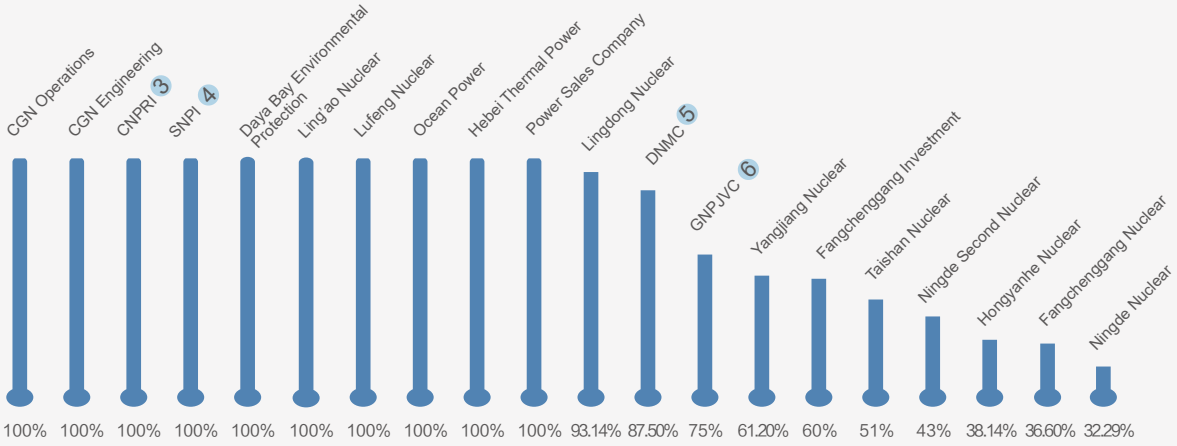
Always upholding the basic principles of "Safety First, Quality Foremost, Pursuit of Excellence", CGN Power has been practicing its core value – "Doing Things Right in One Go." Upon the completion of the Daya Bay Nuclear Power Station, the Company has accumulated rich experience in nuclear power construction and operation, and established nuclear power design, construction and operation and maintenance, scientific research and development (R&D), , and personnel training systems in line with international and professional practices, and gained the ability to simultaneously and safely construct, operate and manage multiple nuclear power projects in different regions and bases across China.

Equity Structure and Major Subsidiaries and Affiliated Companies



1 "Hengjian Investment" refers to Guangdong Hengjian Investment Holdings Co.,Ltd.

2 "CNNC" refers to China National Nuclear Corporation Co.,Ltd.

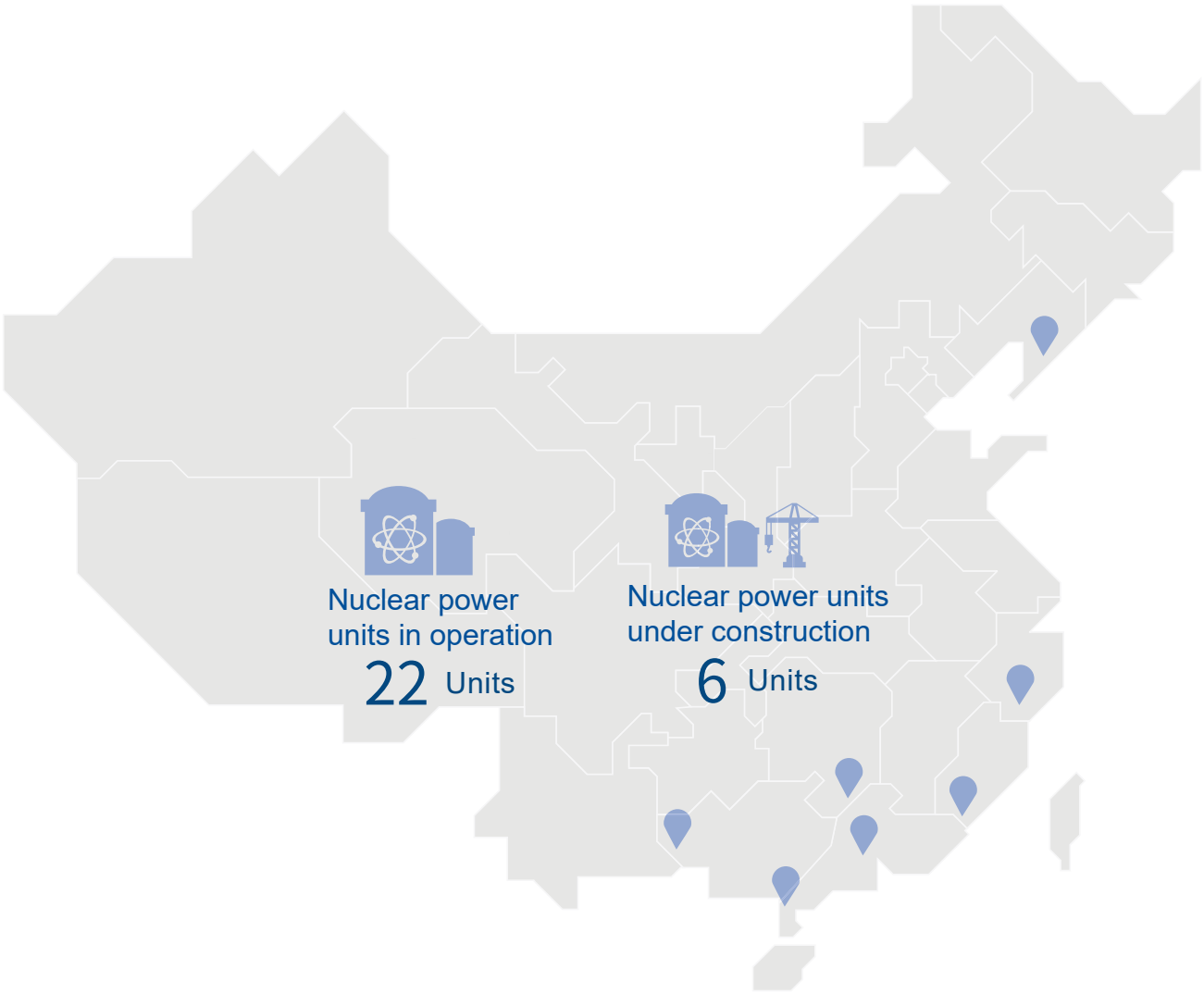


CGN Power's Proportions of Shares in Subsidiaries and Affiliated Companies

3 China Nuclear Power Technology Research Institute
4 Suzhou Nuclear Power Research Institute
5 Daya Bay Nuclear Power Operations and Management Co., Ltd.
6 Guangdong Nuclear Power Joint Venture Co., Ltd

Business Distribution

CGN Power is continuously investing in the construction of nuclear power units, contributing to the development of clean nuclear power energy. As of the end of 2018, CGN Power owned:



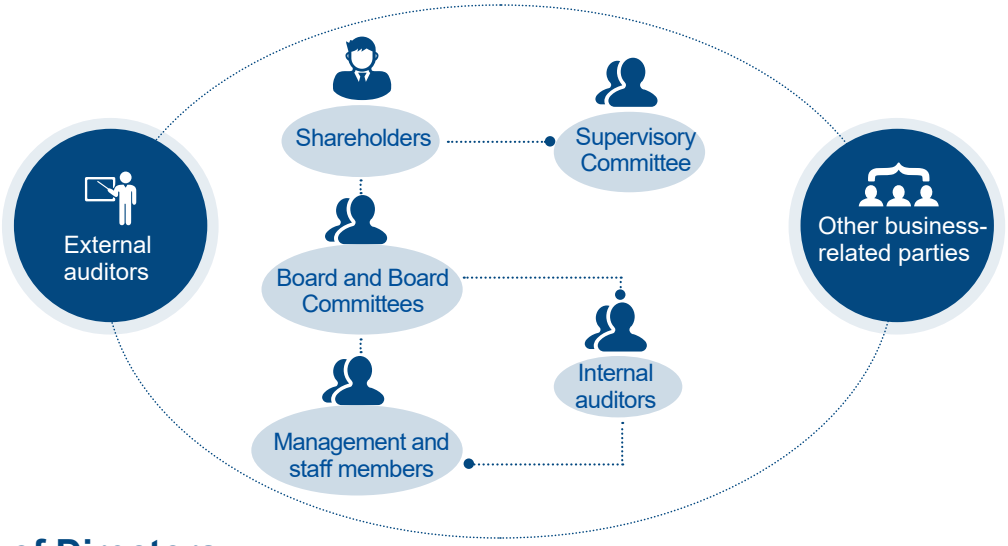
For more details on business distribution, please refer to the section titled “Production Capital” of the 2018 Annual Report.

Corporate Governance

Governance Framework

CGN Power strictly observes the Company Law of the People's Republic of China, Securities Law of the People's Republic of China, and the Code on Corporate Governance Practices issued by the SEHK. We continue to maintain a high level of corporate governance management, as well as transparency and effectiveness in our operations, to safeguard the rights and interests of shareholders and other stakeholders.

The framework of our internal governance mainly consists of shareholders, 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 governance; meanwhile, the relationship between the Company and its stakeholders (including customers, partners, social environment, regulatory bodies, etc.) also reflect our effectiveness in terms of corporate governance.



Board of Directors

Pursuant to the *Articles of Association*, the Board of Directors of the Company consists of 9 members. Besides Gao Ligang who concurrently serves an executive Director and the president, all other directors are non-executive directors (including 3 independent non-executive Directors) independent from the management. Directors shall be elected at the general meeting and each serves a 3-year-term. Upon expiration of the term, the term is renewable upon re-election. Candidates for directors other than the independent non-executive director 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 shares, and be elected at the general meeting.

Compliant with the *Code of Corporate Governance* set out in Appendix 14 of the Listing Rules of the SEHK, the Company has established the Audit and Risk Management Committee, the Remuneration Committee and the Nomination Committee under the Board of Directors. According to industry characteristics, we have added the Nuclear Safety Committee. The Board Committees conduct studies and provide advice and recommendations on professional matters for the reference of the Board of Directors in decision-making.

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, which embodies the Company's efforts in promoting diversity in many aspects. The current board members have backgrounds in nuclear power, law, accounting and finance with over 20 years of experience in their respective industries. We also have one female director.

During the reporting period, the Board of Directors held 10 meetings, deliberated 78 resolutions and reviewed 23 resolutions. The Special Committee held 15 meetings and deliberated 42 resolutions. For more details on corporate governance, please refer to the section titled “Corporate Governance” of the 2018 Annual Report.

Board Members

Name	Position
Zhang Shanming	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
Tan Jiansheng	Non-executive director
Shi Bing	Non-executive director
Zhong Huiling	Non-executive director, member of the Remuneration Committee and member of the Nuclear Safety Committee
Zhang Yong	Non-executive director, member of Audit and Risk Management Committee and member of Nuclear Safety Committee
Na Xizhi	Independent non-executive director, Chairman of the Nomination committee, member of the Audit and Risk Management Committee, and member of the Nuclear Safety Committee
Hu Yiguang	Independent non-executive director, Chairman of the Remuneration Committee, member of the Nomination Committee
Francis Siu Wai Keung	Independent non-executive director, Chairman of Audit and Risk Management Committee, member of Remuneration Committee

Communication with Shareholders

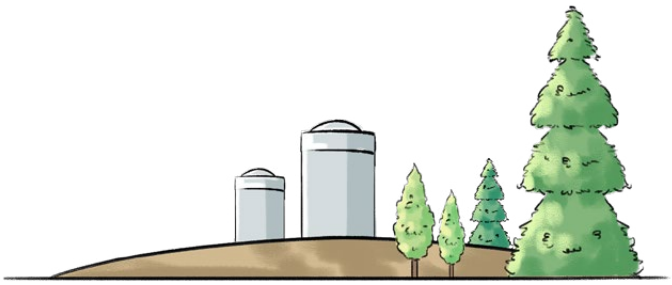
In accordance with the *Hong Kong Stock Exchange Code* and the *Listing Rules*, the Board has formulated the *Corporate Governance Code* of CGN Power (the "**Code**") that articulates how we ensure that the level of governance of the Company meets the expectations of shareholders and other business stakeholders through a series of systems, procedures and measures.

The general meeting holds the rights of decision-making prescribed by the laws and regulations and the *Articles of Association* of the Company and is entitled to legally exercise its voting rights on major matters such as operation policies and profit distribution of the Company. In 2018, we successively held the first extraordinary general meeting of 2018, the first H-Share class meeting of 2018, the first domestic share class meeting of 2018, the annual general meeting of 2017 and the second extraordinary general meeting of 2018 in Hong Kong, three meetings in total. The two extraordinary general meetings examined and approved the resolutions including the A-Share issuance and listing plan based on the Company's proposal of A-Share issuance and the *Articles of Association*.

Placing continuous emphasis on the opinions and feedback of shareholders and investors, we maintain ongoing communication with shareholders and investors mainly through roadshows, reverse roadshows, teleconferences, results announcement conference, 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, special reports and other methods, so as to promote the unity of the Company's development and shareholder value.

During the reporting period, the Company held the 2017 annual results announcement conference, the 2017 annual results roadshow, the 2018 interim results roadshow, 5 teleconferences with 430 participants and other activities. In 2018, we received about 80 visitors of 36 groups of investors and organized two reverse roadshows inviting 119 investors and analysts to field visits in Shanghai, Shenzhen, Daya Bay Base and other locations.

Operational Compliance



We have continuously improved our overall risk management system, enhanced our risk management ability and developed a robust risk management culture. We have also been executing risk management throughout all steps of business processes, thereby creating a safe and efficient working environment for our employees and contractors, ensuring the safety and health of the public and minimizing our impact on the environment.

We have established an efficient internal audit system and authorized the internal audit department in accordance with the basic standard and evaluation guidelines, to regularly conduct internal audits on functional departments, business centers, subsidiaries and major affiliated companies in respect of financial, business, engineering, production, information systems and economic responsibility, to review and evaluate the effectiveness of the design and operation of the internal control. In 2018, the internal audit department has carried out special audits on key management areas such as internal control, production management, business management, nuclear power supplier management, network security management and financial management, and reviewed the management's concerns. The audit results are reported to senior management, and the Annual Internal Control Evaluation Report was submitted to the Board of Directors for approval after being reviewed by the Audit and Risk Management Committee.

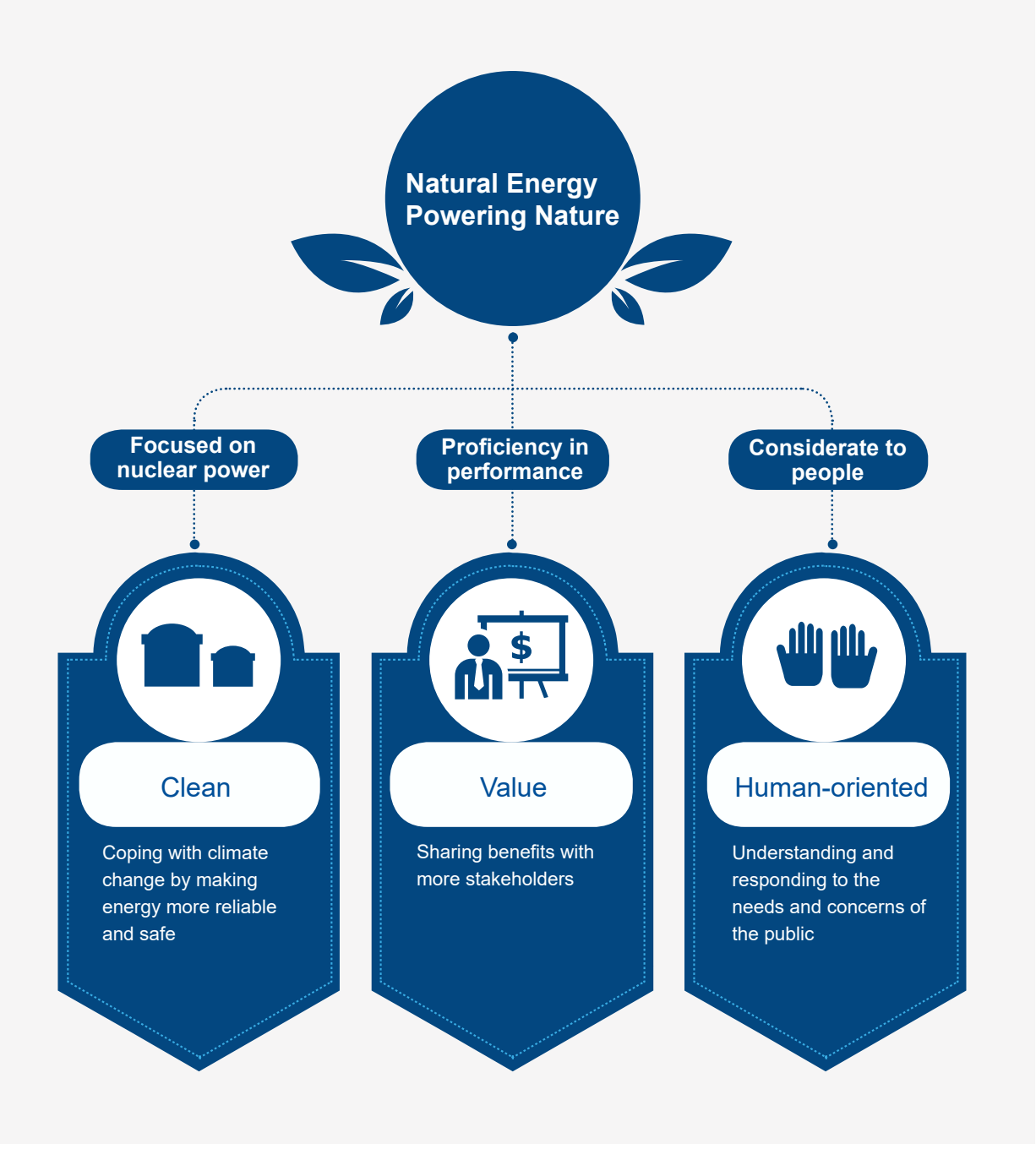
Relying on institutional improvement and cultural development, we proactively promoted anticorruption work. The Company strictly observes laws including the *Criminal Law of the People's Republic of China*, the *Law for Countering Unfair Competition of the People's Republic of China*, the *Interim Provisions on Banning Commercial Bribery* issued by State Administration for Industry and Commerce, *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 *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 *Employee Disciplinary and Regulatory Violation Management Rules*, the *Discipline Handbook of Listed Companies* and the *Implementation Rules on the Implementation of Eight-point Rules on Austerity* have been formulated applicable to all employees and the management to deal with disciplinary and regulatory violations.

In order to practicably and effectively implement relevant regulations, the Company further optimized the investigation and handling procedures for disciplinary and regulatory violations, and adopted various measures to strengthen the integrated supervision and administration. Meanwhile, we enhanced the practice of integrity education for our employees and gained full recognition from them. We further set up proper whistle-blowing channels such as telephone hotlines and e-mail, to encourage employees and third parties related to the Company (for example, suppliers) to report malpractices and violations regarding the Company's business. During reporting period, there was no corruption lawsuit filed against the Group or our employees.

Responsibility Management

The Concept of Responsibility

Guided by the idea of “Natural Energy Powering Nature” and on the basis of safe and steady operation, the Company incorporates sustainable development in the decision-making process and daily operations, actively learns and responds to various stakeholders’ expectations and requirements for the Company, and proceeds with its social responsibilities systematically under the social responsibility management mode with brand characteristics.



Responsibility Reporting

Since 2015, we have published the Environmental, Social and Governance Report every year in accordance with the *Environmental, Social, and Governance Reporting Guide* issued by the SEHK. We have actively participated in the reporting process, consolidated the social responsibility management system comprising joint actions of three levels, promoted a deep involvement at the management level, a horizontal coordination between various business departments at the organization level and the implementation of actions by subordinate units at the execution level, and comprehensively carried out the implementation and improvement of social responsibility. We also invite experts to our Company to provide training on the trends of sustainable development of domestic and foreign enterprises, and take targeted measures to incorporate and improve environmental, social and governance indicators in daily operation and management according to characteristics of each department.

Three-Level Management System

1 Management Level	2 Organization Level	3 Execution Level
Major matters are reviewed and decided on by the Board of the Company. Senior management are responsible to put the decisions into practice.	The Company sets up several professional teams based on business and position functions. These teams coordinate the implementation of work in the Company and other major subsidiaries and affiliated companies.	Major subsidiaries and affiliated companies set up specialized working groups comprising full-time members to carry out the work based on its own business features.

Responsibility Communication

In order to improve the public's understanding and gain trust for nuclear power generation, CGN Power has started to communicate with the public from early stage. We have established a stakeholder communication mechanism to address the expectations and concerns of stakeholders and strived to establish a friendly relationship of mutual trust with stakeholders to promote the healthy development of the Company. In addition to daily communication, we also invited stakeholders to participate in a survey during the reporting period to better understand their expectations of our Company and effectively integrated them into daily operations and reports.

Stakeholder	Expectations and Concerns	Method of Communication and Response
Government	• Assurance of nuclear safety • Optimization of energy mix • Observance of law and discipline and payment of tax according to law	• Execution of national energy policies • Improvement in corporate governance • Supervision review • Regular reporting of work
Shareholder	• Constant and steady return • Transparent disclosure of information • Protection of shareholder's rights • Enhancement of communication	• Timely disclosure of information • Regular reporting of operating information • Improvement in daily management • Various communicating activities from time to time
Customer	• Stable supply of clean and economical electricity	• Keeping in close contact • Active cooperation for power grid dispatching
Suppliers and Partners	• Performance of undertaking • Openness, fairness and impartiality in procurement • Experience sharing	• Strategic cooperation • Disclosure of procurement information • Regular communication activities
Employee	• Competitive remuneration package • Employee health and safety • Fair promotion and development • Care for employees	• Building healthy working conditions • Establishing fair promotion channels • Strengthening training for employees • Care for distressed employees
Media	• Transparent disclosure of information • Enhancement of communication	• Regular press conferences • Interview arrangements • Timely disclosure of public information
Environment	• Energy conservation and emission reduction • Ecological protection	• Development of clean energy • Enhancement of environmental monitoring and protection
Community and the General Public	• Service of community construction and development • Assurance of safe operation	• Participation in community construction • Disclosure of nuclear and radiation information • Education and promotion of nuclear power

Materiality Assessment

Materiality issues are those that reflect the significant economic, environmental and social impacts resulted from the Company's business operations and have a material impact on the assessment and decisions of stakeholders. Through the materiality survey, we identified and assessed material issues to ensure that the content of the report meet the expectations of stakeholders. Based on the results of the stakeholder survey, the Company identified the following 18 important issues.

Guarding Nuclear Safety*

"Green" the World

Pollutant Emission Management
Use of Resources
Promoting Low-carbon Lifestyle
Formulation and Implementation of Environmental Policies
Proper Disposal of Construction Waste
Environmental Impact Monitoring
Adaptation to Extreme Climates
Protection of Biodiversity and Natural Habitat

Unite the Talents

Staff Management
Occupational Health and Safety
Employee Training and Development

Cooperate to Develop

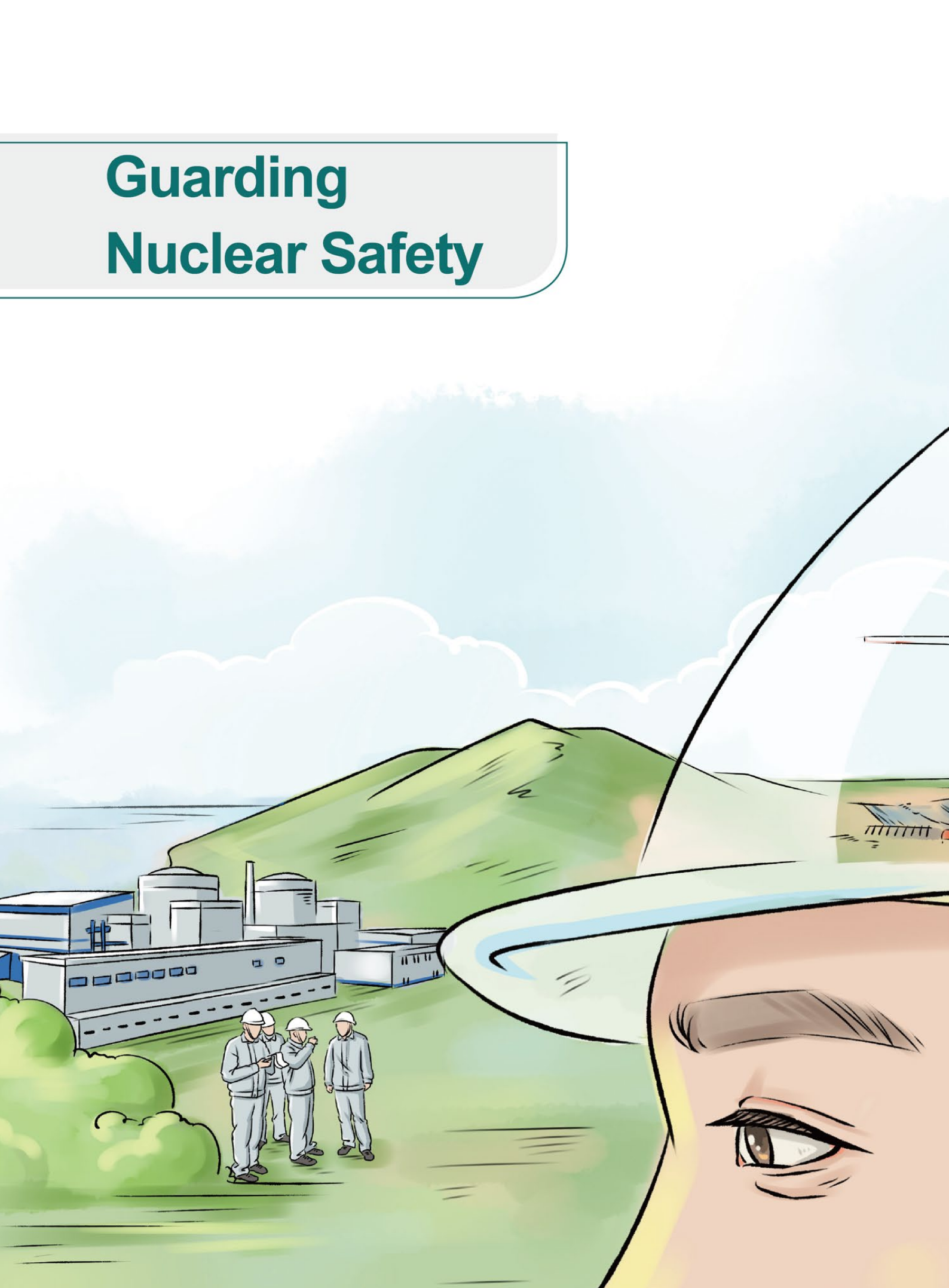
Supplier Management
International Cooperation
Industrial Leadership
Construction Quality

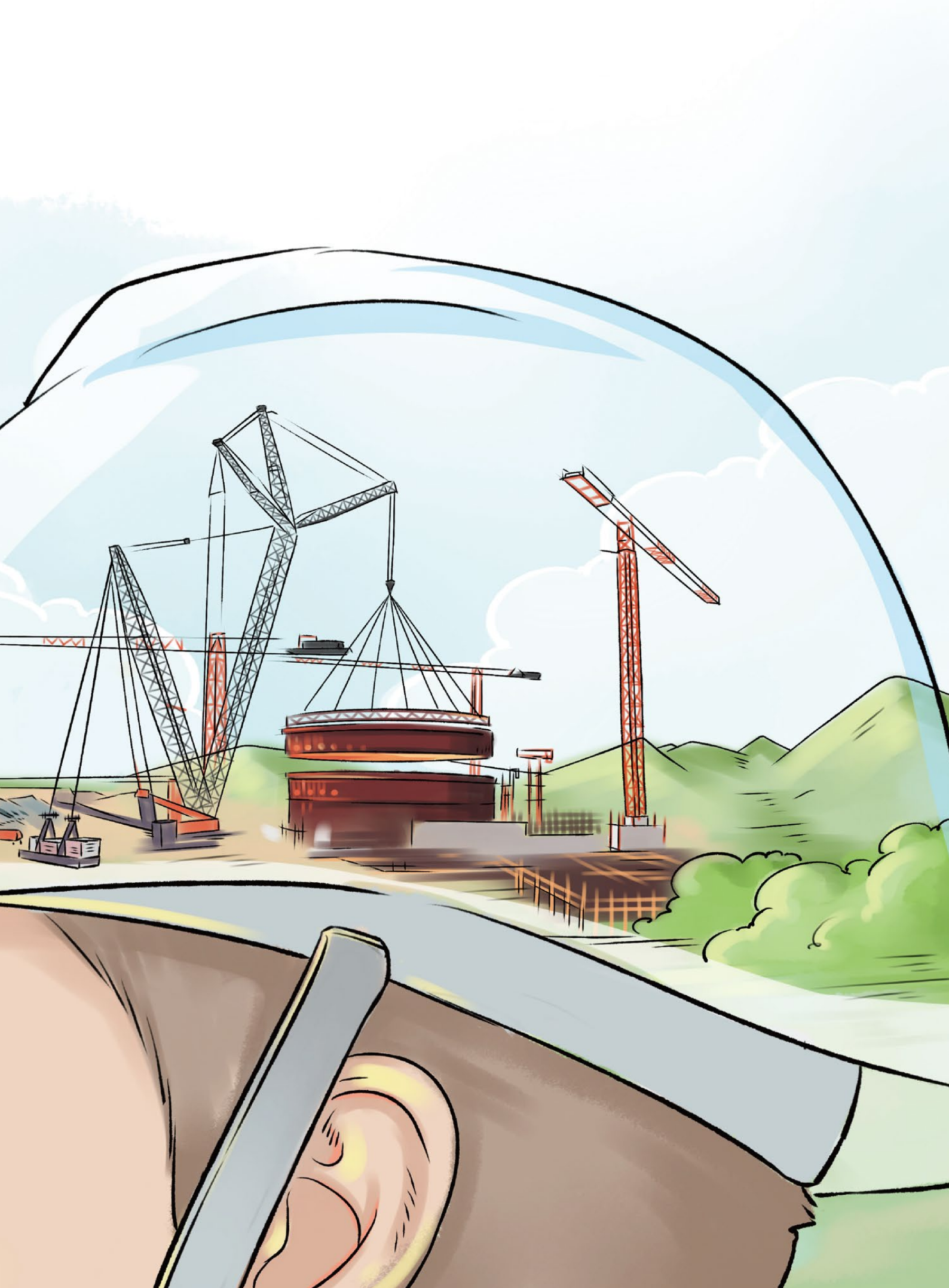
Cherish the Neighborhood

Community Investment (e.g. targeted poverty alleviation, promoting the science popularization of energy)
Community Communication
Attention to Community and Media Opinion

*As safety issues are critical to our Company, they were not included in the scope of the stakeholder survey.

Guarding Nuclear Safety





Safeguarding nuclear safety has always been CGN Power's primary responsibility. From design, construction to operation of nuclear power plants (NPPs), we have always adhered to the principles of "Nuclear Safety is Paramount" and "Safety First, Quality Foremost and Pursuit of Excellence". Through advanced technology and scientific management, we have maintained the safe and stable operation of NPPs to protect the safety of personnel, society and the environment.

With all of its NPPs located in China, CGN Power strictly complies with the national nuclear safety regulations, such as the *Nuclear Safety Law of the People's Republic of China* (the "**Nuclear Safety Law**"), the *Regulations on Civil Nuclear Facility Safety Supervision and Administration of the People's Republic of China*, the *Regulations of Site Selection for Nuclear Power Plants, the Safety Requirements for Nuclear Power Station Operation and the Electric Power Law of the People's Republic of China,* etc. For details regarding laws and regulations, please refer to the section titled "Laws and Regulations for the Nuclear Power Industry" of the (draft) A-share Prospectus issued by the Company on June 22, 2018.

The *Nuclear Safety Law of the People's Republic of China* came into effect on January 1, 2018. In 2018, China also issued the *Guidance on Energy Development of 2018*, the *Guiding Opinions on Further Strengthening the Administration of the Operating Security of Nuclear Power* and the *13th Five-year Plan for Nuclear Safety and* the *Prevention and Control of Radioactive Pollution and its Long-Term Goals for 2025*, putting forward higher requirements for the safe and efficient development of nuclear power generation. We actively participated in the preparation of the downstream rules and regulations of *the Nuclear Safety Law*, formulated plans to promote the *Nuclear Safety Law* from the Company to NPPs and specialized subsidiaries, actively carried out learning activities on nuclear safety laws and regulations, and conscientiously implemented the relevant legal requirements.

Following the idea of "continuously enhancing nuclear safety and embarking on a new journey of development", we comprehensively reviewed and improved our nuclear safety management system, made continuous progress in nuclear safety technology and capacity, advancing nuclear safety management to a higher level.

Strengthening Safety Management

In accordance with the principles of defense-in-depth, we set up multiple barriers for prevention, monitoring and corrective actions to cope with possible failures of equipment, personnel and organizations. The designs and improvements of all nuclear safety related activities management systems and procedures must take into consideration the establishment of a defense-in-depth barrier and its effectiveness. With the objective of "zero injury, zero defect, zero violation", we strive to achieve effective control for the safe production of NPPs.

In order to maintain the stable operation of existing units and ensure the safe and stable production of new units, we continue to further promote the "Specialization, Centralization, Standardization" (the "**SCS**") Management in different NPPs in 2018, pursuing large-scale development of nuclear power and excellence in safety management.

Specialization

- Specialized work division
- Specialized talent team
- Specialized capability building

Centralization

- Centralized resources allocation
- Centralized technical support
- Centralized information sharing

Standardization

- Standardized organization construction
- Standardized management system
- Standardized operating procedures

Building Safety Culture

We believe that safety culture is a key factor in ensuring nuclear safety and a systematic work involving collective participation. Therefore, we have been promoting and practicing the top-down nuclear safety culture by fulfilling safety management responsibility through the management demonstration, consolidating safety barriers and implementing procedural requirements through penetration of core members and participation of all employees, and regulating personal safety behaviors through the respect of nuclear safety. We continued to drive forward our special action plan of "abide by the procedures, preventing violation of rules" based on promoting the working habit of "would not" violate the rules, creating the work environment that makes employees "can not" breach the rules, and the overall atmosphere where employees "dare not" violate procedures, promoting the “safety is must” proactiveness of our employees, and hence incorporating the principle of "Safety First, Quality Foremost" into their daily working habits.

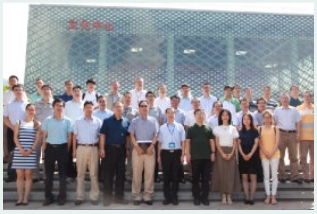
Promoting Safety Culture among All Employees

Management Demonstration

- Promote safety culture and host safety and quality meetings
- "Leaders On-site" management inspections
- Support and strengthen the conservative decision making and promote "Safety First"

Penetration of Core Members

- Set up safety culture promotion groups
- Build core team of expert supervising safety and quality
- Establish and implement safety culture assessment system



Full Participation of Grass-root Teams

- Build up safety and quality grassroots team for benchmarking
- Implementation of STAR self-examination
- Carry out "precautionary education" to stress on safety

In 2018, we continued promoting "Leaders On-site" activities in CGN Operations, CGN Engineering, DNMC, Yangjiang Nuclear, Ningde Nuclear, Hongyanhe Nuclear, Fangchenggang Nuclear and Taishan Nuclear. The management promoted safety culture through site inspection and supervision on workers’ operations, taking the lead to promote safety culture.

In 2018, the number of management of major subsidiaries and affiliated companies working on-site reached

14.4 times

per person per month

Practice Safety Diligently

We adhere to "always practice based on rules, always have someone responsible, always have someone to supervise, always keep it documented" as the basic job requirements, stressing the idea of “guarding against risks according to procedures”. We strictly follow operation procedures, regularly conduct equipment maintenance, and establish and perfect the nuclear emergency response system. We continuously and transparently analyze events and provide experience feedback to ensure the safe and stable operation of NPPs and the safety of the public.

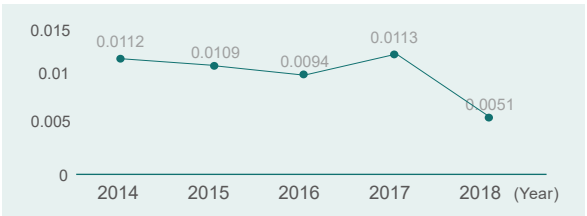
According to the International Nuclear and Radiological Event Scale ("**INES**") of the International Atomic Energy Agency ("**IAEA**"), as of December 31, 2018, no operation events at level 1 or above occurred in the NPPs we managed, and 5 deviations without safety significance (below INES/Level 0)[5] occurred. For more details on the operation events, please refer to the section titled “Business Performance and Outlook” of the *2018 Annual Report*.

In 2018, our nuclear safety performance continued to improve. The Company maintained a good occupational safety and health performance, achieving "zero deaths, zero severe injuries and zero fire accidents". During the reporting period, the lost working day of employees in CGN Power and the NPPs under its management due to work injury was zero.

0 Operation events of level 1 and above in 2018

Industrial Safety Accident Rate per 200,000 working hours is only **0.0051**

Industrial Safety Accident Rate per 200,000 Working Hours in 2014-2018[6]



Nuclear Power Station	Industrial Safety Accident Rate of Employees per 200,000 Man Hours[7]		Industrial Safety Accident Rate of Contractors per 200,000 Man Hours[8]	
	2017	2018	2017	2018
Daya Bay Nuclear Power Station	0	0	0	0
Ling’ao Nuclear Power Station	0	0	0	0
Lingdong Nuclear Power Station	0	0	0	0
Yangjiang Nuclear Power Station	0	0	0	0
Fangchenggang Nuclear Power Station	0	0	0	0
Ningde Nuclear Power Station	0	0	0	0
Hongyanhe Nuclear Power Station	0	0	0	0
Taishan Nuclear Power Station	-	0	-	0

5. Nuclear incidents are classified into seven levels in the INES according to their impact on (i) people and the environment, (ii) radiological barriers and control, and (iii) defense-in-depth. Level 1 to Level 3 are referred to termed as "incident," while Level 4 to Level 7 are termed as "accidents." Events without safety significance are classified as "below scale/ Level 0".

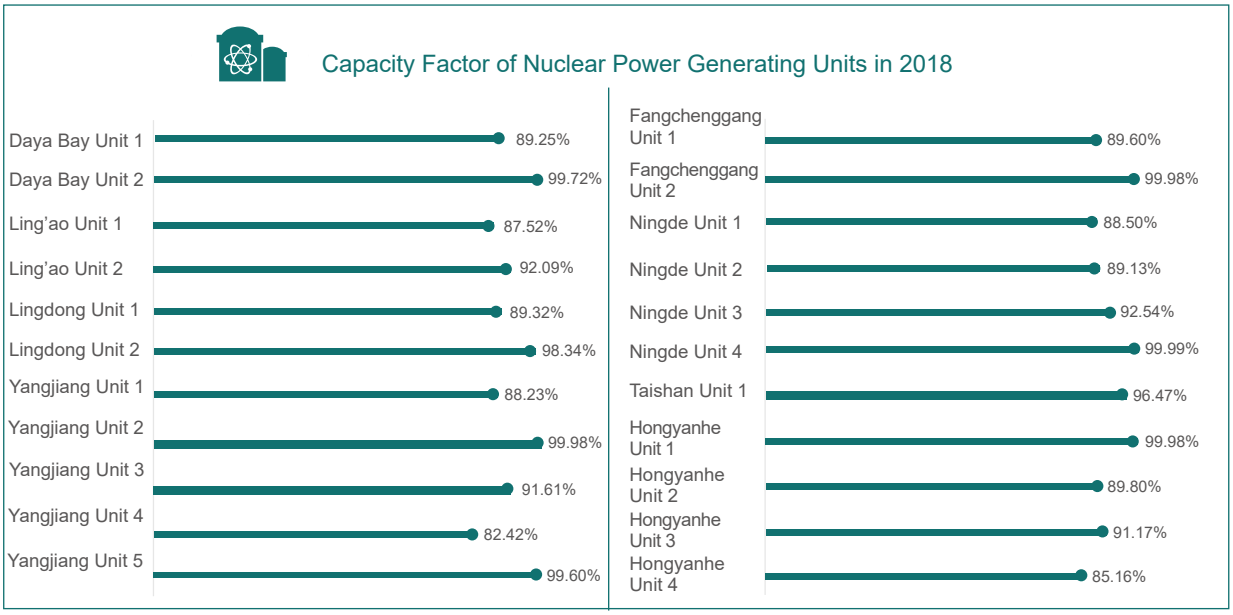
6. Industrial Safety Accident Rate per 200,000 Man Hours= 200,000× (number of accidents for both employees’ and contractors’ a year / total man hour of both employees and contractors a year)

7. Industrial Safety Accident Rate of Employees per 200,000 Man Hours = 200,000× (number of employees’ accidents a year / total man hour for employees a year)

8. Industrial Safety Accident Rate of Contractors per 200,000 Man Hours = 200,000 × (number of contractors’ accidents a year / total man hour for contractors a year)

Safe and Stable Nuclear Power Generation

In 2018, two new units commenced commercial operation, and the average capacity factor of 22 units in operation reached 92.75%.



Case **Daya Bay Base Seized 2 EDF Challenge Award Again**

On March 28, 2018, on the 2017 Electricite de France (**EDF**) International Safety Performance Challenge Competition among Reactors of the Same Type Award Presentation Ceremony held in Paris, Daya Bay Nuclear Power Base won the two first prizes of "Nuclear Safety/Automatic Scrams" and "Capacity Factor". Till this point, Daya Bay Nuclear Power Base has won 38 first prizes in this competition.

Daya Bay Unit 1

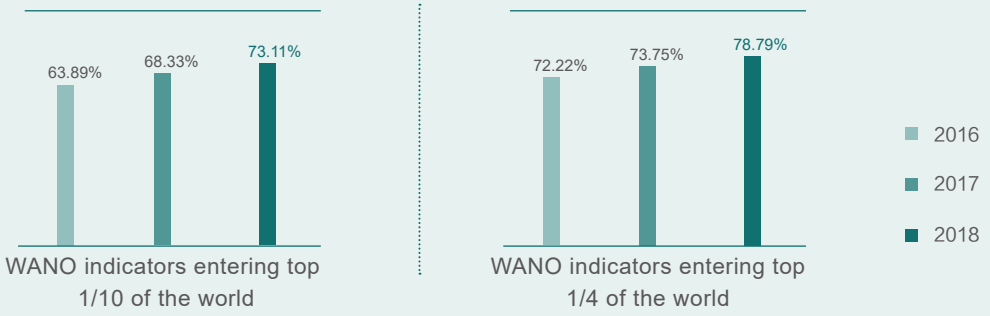
Has been operating safely for nearly **25** years since February 1994

Ling'ao Unit 1

By the end of December 2018, it has been operating safely for more than **4,600** days, ranking first among 64 units of the same type in the world

"Unit Capacity Factor" and "Nuclear Safety/Automatic Scrams" are recognized by the international nuclear power industry as the best indicators showing the nuclear power operation performance and nuclear power safety management level. The "Unit Capacity Factor" is mainly used to measure the availability of nuclear power units and is an important indicator reflecting units' capacity in safe power generation. In EDF's Annual International Safety Performance Challenge Competition among Reactors of the Same Type, the Daya Bay Nuclear Power Base has won the award on "Unit Capacity Factor" for the 10th consecutive year. The "Nuclear Safety / Automatic Scrams" is an important indicator reflecting units' safety level, which ranks the participating NPPs based on the number of automatic scrams in the past three years. As of December 31, 2018, the Ling'ao Unit 1 in Daya Bay Nuclear Power Base has achieved safe operation for over 4,600 days (not including the days for refueling outages), ranking No. 1 world-wide among reactors of the same type.

Annual Comparisons of WANO Indicators (2016-2018)



The World Association of Nuclear Operators ("**WANO**") index is an important international parameter of nuclear power operation performance. The 12 indicators of WANO index are an important reference for evaluating the operation safety and reliability of NPPs. In May 2018, all 12 WANO indicators of Fangchenggang Unit 1 entered the world advanced level (or top 1/4), becoming the first nuclear power unit under CGN Power with 100% WANO indicators entering the world leading level.

Strict Implementation of Codes of Conduct

Human error is an important factor that results in safety issues. In order to regulate the operations of personnel, we have continuously enhanced the professional skill training for employees and implemented the accountability system, thereby ensuring that each operation is conducted in accordance with procedures.

In order to raise awareness of front-line staff to reduce human error, we require all front-line staff to carry the Human Error Prevention Cards during their work to make full use of the cards as a reminder and regulation. In the meantime, we also compiled and published the *Management Procedures of Human Error Prevention Training for Contractors*, in which the training requirements of contractors on the Human Error Prevention Cards are specified. We continuously enhance the application of the cards by developing training courses such as “Prevention of Going to Wrong Units” and “Prevention of Mistaken Operation”.

Pre-job briefing	A pre-job briefing is a job preparation briefing to define the purpose and procedures of operation before a field operation or a 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.
Use of procedures	Use of procedures are essential for NPPs operations. We have four steps to ensure that every work can be effectively carried out in accordance with the procedures: one 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; Third, ensuring strict implementation of procedures: operate in strict accordance with the requirements and contents of the procedures; Fourth, feedback of implementation results: provide timely feedback on the result of implementation 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, requires us to stop to focus on the job on hand; think about what to do, how to plan and how to cope with an accident; complete the job as planned; and review the results against our expectations. Essentially speaking, the STAR is to stop in case of uncertainties or inconsistency with expectations.

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 to the equipment. The operator shall not operate before the supervisor confirms the equipment being pointed to verify the instructions and give consent.

Three-stage communication

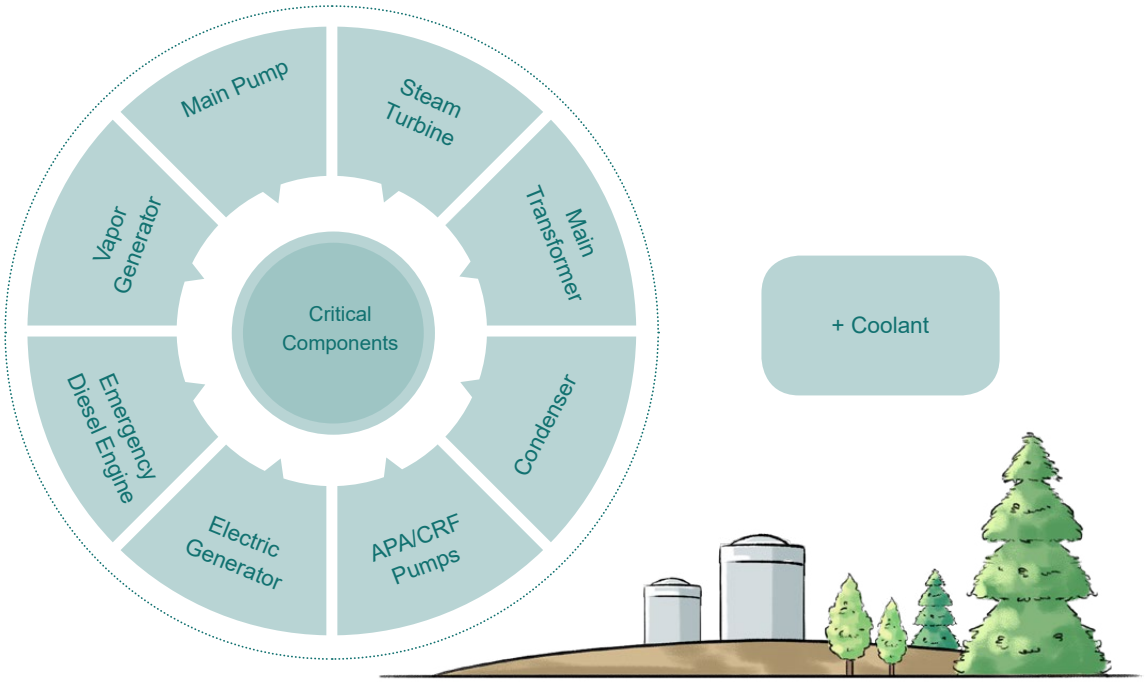
An effective communication approach implemented by NPPs, the three-stage communication requires the deliverer to state the receiver's name and clearly and accurately deliver the instructions or information to the receiver; the receiver explains and repeats the information received to the deliverer; the 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.

Regular and Orderly Equipment Maintenance

We have made improving equipment management a top priority in nuclear safety management. In order to maintain high level of stable operation of plant equipment, we continue to strengthen the risk prevention and management of critical components, and regularly monitor and maintain plant equipment in compliance with operating technical specifications and other regulatory requirements applicable to NPPs.

In accordance with the Company's *Improvement Scheme on Nuclear Power Safety Management and* the *Special Plan for Improving Nuclear Power Equipment*, we focused on lean management and full life-cycle equipment management. We have optimized our equipment management system, specified equipment quality control responsibilities at all levels and strengthened the overall management of equipment at all stages. We also published the daily equipment tracking management measures and the management improvement measures for "8+1" critical components. At the same time, we set up an operation management center to realize the comprehensive monitoring and management of the on-site operation activities in NPPs.

"8 + 1" Critical Components



Equipment maintenance includes daily maintenance and refueling outage. Based on the design of pressurized water reactor NPPs, the nuclear reactor of each unit in operation must be shut down and refueled after a certain period of time. Taking the safety and economic considerations for NPPs into account, nuclear power operators often make use of the refueling period to intensively conduct preventive and corrective maintenance projects as well as various modification projects, and this is usually referred to as a refueling outage by NPPs. We have uniformly planned, and rationally deployed outage personnel to outage activities. Meanwhile, the equipment of NPPs has been sorted through and analyzed, and equipment abnormalities tracked to ensure an orderly-arranged outage activity.

In 2018, we successfully carried out 14 refueling outages and completed 13 refueling outages, including 2 initial outages and 1 cross-year outage.

In 2018, the reliability of key equipment in our NPPs gradually increased, and the forced loss index[9] of equipment decreased from 0.75% to 0.11%, **down by 85%** year on year, and the number of equipment quality incidents **decreased by 32.6%** year on year

Vigilant Nuclear Emergency Response and Disposal System

We have ensured the effective operation of the emergency response system through a comprehensive emergency response plan system, a multi-level emergency defense mechanism, professionally managed emergency equipment and facilities, and adequate and qualified emergency workers. To ensure rapid response in any emergency, all NPPs under our management have established sound emergency preparedness system and regularly organized emergency exercises of different sizes.

In order to effectively direct emergency work in case of emergency, we have set up an emergency command center, held regular emergency exercises, and conducted comprehensive exercises with local authorities to improve the ability to respond to emergencies and ensure the safety of the people around the NPPs.

In 2018, we incorporated *the National Priorities of Nuclear Emergency Preparedness for 2018* in our operations, continued to optimize the organization of nuclear emergency preparation, and made remarkable achievements in refining our nuclear emergency preparedness system, capacity building, construction of emergency support base, R&D in emergency technology, and international and domestic exchanges on emergency preparedness.

Case **IAEA Level 2 Convention Exercise (ConvEx-2) of 2018 Held Smoothly**

On December 4, 2018, China and IAEA jointly held the ConvEx-2 Exercise. The exercise is under full command of the National Nuclear Emergency Coordination Committee and guided by the National Nuclear Emergency Response Technical Support Centers. During the exercise, Yangjiang Nuclear Power Station and domestic and foreign participating units successfully completed this exercise according to the real-time accident information and on-site meteorological conditions of Yangjiang Nuclear Power Station, as well as the prediction and evaluation of the accident consequences.

9. i.e. The forced shutdown coefficient. Forced shutdown coefficient = hours of forced shutdown / total hours x 100%

Case Comprehensive Nuclear Emergency Exercise at Daya Bay Nuclear Power Base: Proving System Effectiveness through Real Scenario Exercise

The comprehensive on-site emergency exercise of the Daya Bay Nuclear Power Base in 2018 was held on December 4, 2018. For the first time, extreme external event scenarios such as wild fire and loss of power to the external power grid were simultaneously introduced into the exercise. Drones and robots were also used to conduct patrol and survey, and helicopters were used to carry out actual combat exercises of emergency response such as rapid transport of injured people.

Case Taishan, Daya Bay, Yangjiang and Fangchenggang Nuclear Power Stations Held Strong Against Super Typhoon "Mangkhut"

On September 16, 2018, super typhoon "Mangkhut" landed in Hayan town of Taishan. The center of typhoon is only about 20km away from the Taishan Nuclear Power Station, with a maximum wind speed of 58.27m/s (level 17 typhoon) recorded. Four major nuclear power bases had issued typhoon warnings before the typhoon, and actively prepared for the typhoon in accordance with the emergency plan. "Mangkhut" has not affected the safety of nuclear power units. The NPPs have achieved a complete success defending typhoon.

Response measures of NPPs during typhoon included:

- Connected with the National Nuclear Emergency Response Office (NNERO) and other departments by video calls to report the latest situation of typhoon prevention and the real-time situation on site.
- Emergency headquarters organized and held a special meeting on typhoon prevention and resistance to provide meteorological information and overall operational arrangements for typhoon prevention and resistance.
- Members of the emergency headquarters conducted overall command, called emergency personnel on duty and evacuated non-emergency personnel to designated safe spots.
- Discussed and deployed in advance the inspection for typhoon preparedness, communication support, logistic support and preventive transfer of personnel in NPPs.
- Carried out recovery and inspection after the typhoon warning was lifted.

On September 16, 2018, National Nuclear Safety Administration (NNSA) supervisors inspected the Taishan Nuclear Power Station

On September 16, 2018, shift personnel of Daya Bay Nuclear Power Station checked the penetration assemblies of the plant

Completely Independent Safety Supervision and Evaluation

We have established a three-tiered nuclear safety supervision system consisting of plant safety engineers, safety authorities and the Independent Nuclear Safety Supervision and Evaluation Center ("**Nuclear Safety Supervision Center**"), which independently monitors and evaluates the safety management standards of NPPs. In accordance with the national nuclear safety regulatory requirements, we also receive irregular and targeted inspections from national regulatory authority in NPPs under our management to monitor and inspect the nuclear safety regulations compliance.

In addition, we regularly organize and invite international peers to conduct safety assessments on our NPPs. These independent international safety assessments include IAEA and WANO peer reviews and safety assessments conducted by international peer experts. Through international peer evaluation and supervision, we are able to effectively share the good practices of international peers in safety management and continuously improve the level of safety management.

Internal Safety Supervisions	
Level	Scope of Supervision
On-site safety supervision team with NPP safety engineers	Ensure the effectiveness of daily production activities of NPPs in terms of safety
The safety authority with the basic functions of managing the safety quality of NPPs	Ensure and oversee the effectiveness of the safety management system at the organizational level
Nuclear Safety Supervision Center monitoring multiple plants	Carry out independent safety supervision and evaluation on the effectiveness of the safety management of NPPs
External Supervisions	
National regulatory authority	Supervise and inspect compliance with nuclear safety regulations
Independent safety assessments by international peers (including IAEA & WANO)	Evaluate and supervise the safety operation of NPPs

Transparent and Effective Experience Feedback System

The NPP experience feedback system is an integral part in the safety management of NPPs. We have established an event reporting system for root cause analysis, devising corrective actions targeting at fundamental reasons, and formed a dynamic and transparent experience feedback system to prevent reoccurrence of incidents. While focusing on feedback of events occurred during the operation and management of NPP, we also regularly conclude and solidify our good practices, and learn from external experience feedback through continuous exchanges with peers to facilitate enhancement of our safety management.

Safe and Reliable Construction Quality

Good quality today means safety tomorrow. We strictly follow the national laws and regulations on nuclear power project construction. Adhering to high standards and rigorous requirements, we strive to achieve compliance with quality requirements, meticulously organize project constructions, and continue to improve the level of safety control in engineering, equipment manufacturing, construction, start-up, etc., ensuring the quality of construction projects and laying a foundation for the safe and stable operation of NPPs.

In order to improve the safety level of nuclear power projects, we formulated and implemented the *Zero-Defect Scheme for Safety Management* in recent years. Based on construction of international benchmarking on safety and team building, we realized and maintained a continuous improvement with four tools (risk analysis, work package, work briefing and human error prevention) through three ways (zero defect team, potential hazard identification and behavioral improvement) on safety performance of nuclear power projects internationally and domestically.

Zero Defect Team

Efforts have been made to build the Zero-Defect Team to resolve acute problems by team management, better process guidance and evaluation. The teams have been evaluated to urge the members to improve and prevent key issues at construction sites.

Potential Hazard Identification

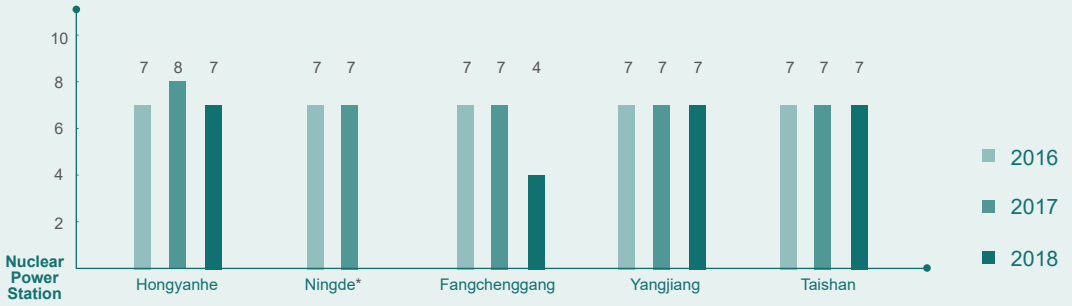
Continuous efforts have been made in potential quality hazard identification, and potential hazard identification and management regulations at all levels have been defined for the implementation of responsibility system. Meanwhile, employees have been specially assigned to monitor the implementation of potential hazard identification system in real time and improve potential hazard identification ability.

Behavioral Improvement

The Behavioral Improvement Action was launched and the *Implementation Guide to Quality Behavior Observation* was prepared and issued to involve all employees in quality behavior observations, eliminating non-standard behaviors and guaranteeing engineering construction quality.

While developing internal tools and methods to guarantee construction quality, we also cooperate with industrial partners to jointly ensure and improve construction quality and safety. For information on supplier management, please refer to the section titled "Cooperate to Develop".

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



*Ningde nuclear power has commenced operation and has not participated in this rating in 2018.

The Overall Safety, Quality and Environment Benchmarking Rating is an evaluation based on the *Manual of Safety, Quality and Environment Standardization and the International Benchmarking Evaluation of Nuclear Power Projects.* The integrated evaluation is conducted from performance standardization, site standardization, and management standardization. The rating system is divided into ten levels, of which level 5 and level 6 indicate good, level 7 and level 8 advanced, level 9 and level 10 international benchmark.

Customer Service and Information Security

Since the establishment of the Company, we have adhered to the basic values of “responsibility undertaking, rigorous and pragmatic, innovative and progressive, customer-oriented and value creation”. We communicate with our customers on a regular basis and are open to feedback, striving to become a world-class nuclear power supplier and service provider with international competitiveness. During the reporting period, we received 0 customer complaints in relation to our products and services.

Considering that information security is one of the important issues raised by our customers, CGN Power has established a corporate information security assurance system in accordance with the *Law of the People's Republic of China on Cyber Security* and other safety regulations relating to classified protection and power monitoring in China, the *Information Technology – Security Techniques Information Management Systems Requirement (ISO/IEC 27001:2013)* and IAEA best practices. A Network Security and Informatization Committee has been set up to lead and coordinate network security operations, and advance informatization and application. In 2018, we intensified the network safety check and warning notification. As a result, no incident of level 3 and above[10] regarding information security occurred and the Company’s network, communication and information system ran in a safe, stable and reliable way, effectively preventing information leakage.

Case **The First Meeting of CGN Nuclear Information Security Research Center Technical Committee**

On January 30, 2018, CGN Nuclear Power Information Security R&D Center technical committee held its first meeting. More than 30 experts and scholars from related units such as the Chinese Academy of Engineering, the National Energy Administration, the National Electric Power Dispatching Control Center, the National Research Center for Information Technology Security were invited to attend the meeting.

The R&D Center will establish a mode of joint R&D upon win-win cooperation, and strive to become a leading professional organization in the R&D of key technologies and standards of network and information security in nuclear power industry.

10. According to the Circular of the Office of the Central Leading Group for Cyberspace Affairs on Issuing the National Contingency Plans for Cyber Security Incidents (Zhong Wang Ban Fa Wen [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).

Leading Innovation and Development

We firmly follow the strategy of "development based on innovation", continuously improve our scientific and technological innovation system and promote independent innovation to lay a foundation for the development of safer, smarter and cleaner nuclear power.

Concentrating on Technology Development

Since the construction of the Daya Bay Nuclear Power Station in the 1980s, we have always been adhering to “Introduction, Digestion, Assimilation and Innovation” to carry out technological improvements perpetually. Based on the M310 reactor technology adopted at the Daya Bay Nuclear Power Station jointly founded by CGNPC and our Company, we have implemented a series of major technical improvements (including 16 safety technology improvement items) and developed the second-generation improved CPR1000 series nuclear power technology with our own brand. In addition, we have 31 safety technology improvement items based on the CPR1000 technology, and have developed the ACPR1000 technology with the third-generation of nuclear power technical characteristics referring to the latest international safety standards and experience feedback.

We have developed HPR1000, the third-generation of nuclear power technology with proprietary intellectual property rights. HPR1000 is a gigawatt-level third-generation nuclear power technology with proprietary intellectual property rights developed on the basis of experience, technologies and talents accumulated during the NPP design, construction, operation and R&D within China in the past three decades.

The independent R&D of HPR1000 technology has laid a foundation for the subsequent nuclear power development of the Company. Fangchenggang Units 3 and 4 are demonstration projects of HPR1000. Fangchenggang Units 3 and 4 started construction on December 24, 2015 and December 23, 2016 respectively.

Case **“Digital Hualong” on Show at Hi-tech Fair**

The 20th China international Hi-tech Fair opened in Shenzhen on November 14, 2018. CGN Power participated in the fair with its "Digital Hualong" and other major scientific achievements. “Digital Hualong” helps to deliver a digital power station during NPP construction. Through the deepening application of cloud platform, Internet of Things, mobile platform, big data, artificial intelligence, information security, API Enablement Platform and other technologies, "Digital Hualong" improves the standardization and streamlining of the management and production, and finally realizes the intellectualization, making the operation and management more efficient.

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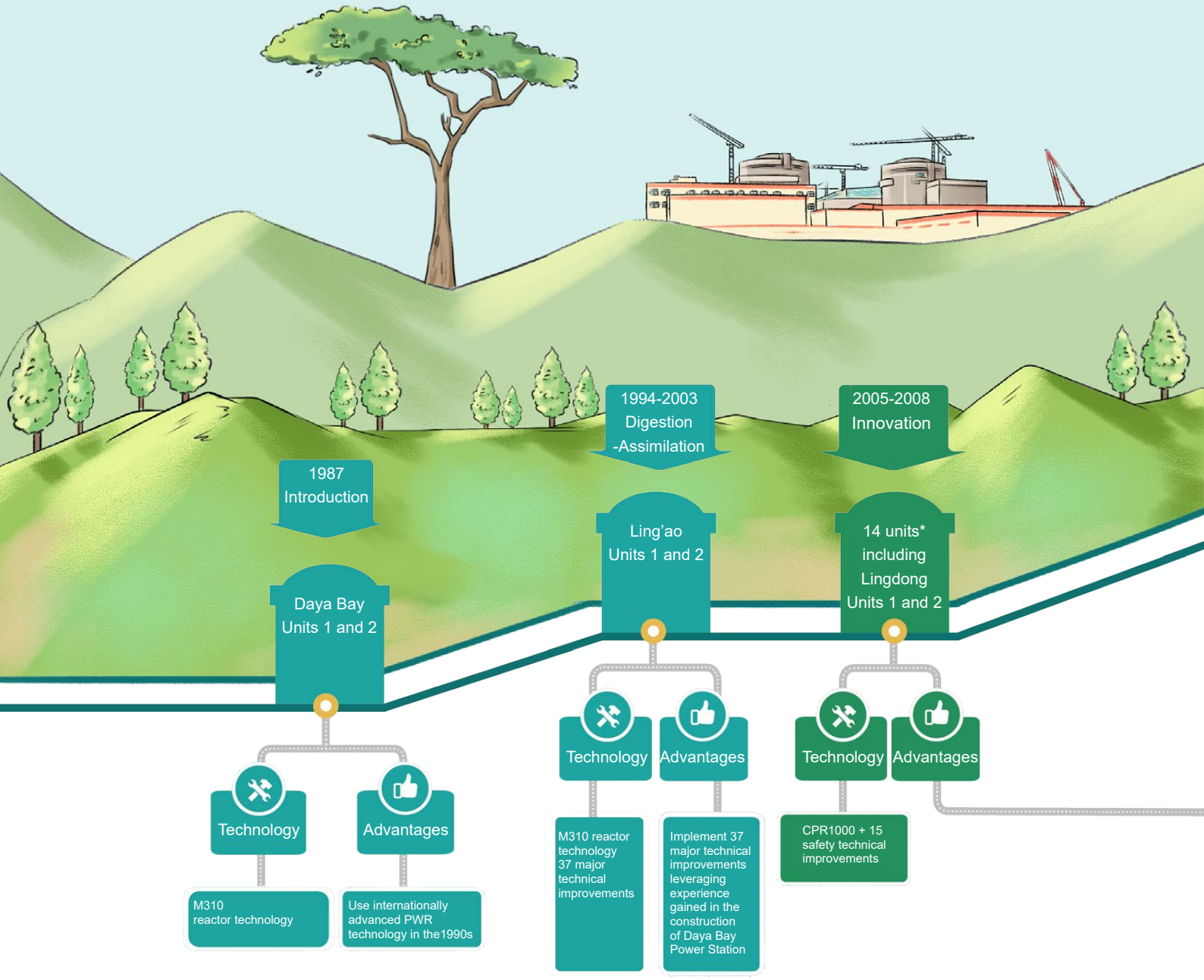
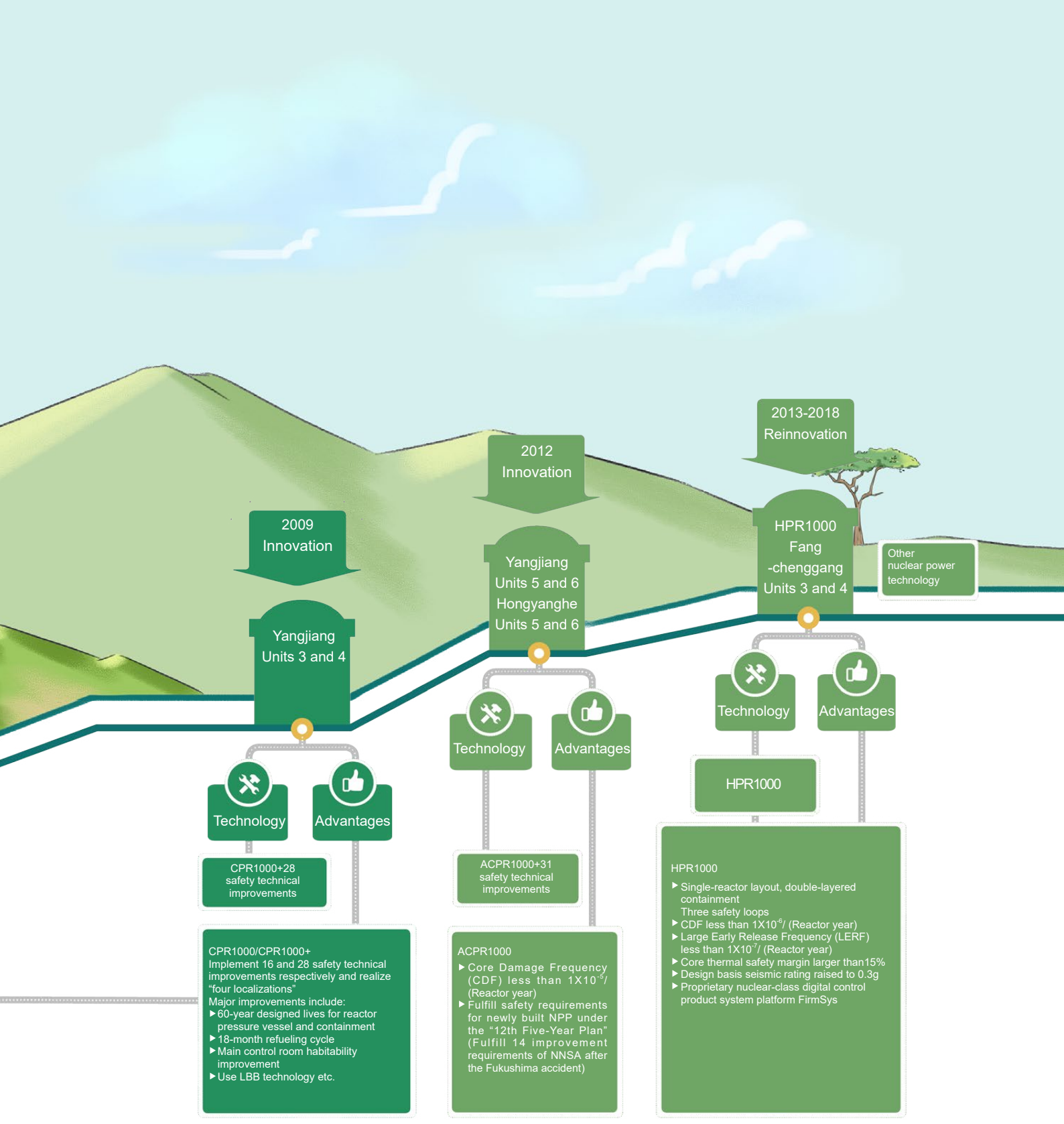


*Including: Lingdong Units 1 and 2, Hongyanhe Units 1 - 4, Ningde Units 1 - 4, Yangjiang Units 1 and 2, Fangchenggang Units 1 and 2



In order to continuously advance the development of the Company, in accordance with the "Leading Plan" development plan we continue to promote the research in other nuclear power technologies based on a majority of the world's third generation nuclear power technology. We are committed to accumulating technical ability for the Company's future development and to contributing to the nuclear power industry development.

Excellent Research and Innovation Capability

Scientific Research Platform

We have developed our R&D platform of our Company with seven national R&D centers and laboratories, namely the National Energy NPP Nuclear Equipment R&D Center, the National Energy Advanced Nuclear Fuel R&D (Experiment) Center, the National Energy NPP Operation and Life Management R&D Center, the National NPP Safety and Reliability Engineering Technology R&D Center, the National Energy Nuclear Power Engineering Construction Technology R&D (Experimental) Center, the State Key Laboratory of Nuclear Safety Monitoring Technology and Equipment and the National Energy Marine NPP Technology R&D Center. We have also established several large laboratories of advanced level within the industry including the Thermal Hydraulics and Safety Research Laboratory, the Material Performance Analysis Laboratory and the Inaccessible Equipment Laboratory. As of the end of 2018, we had more than 5,500 staff specialized in R&D.

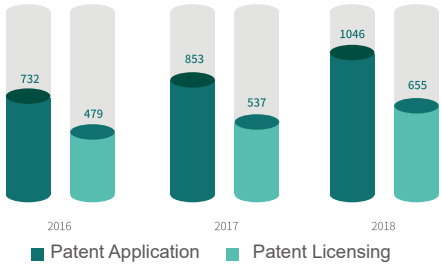
In 2018 we applied for **1,046** patents, **655** of which were approved.

Scientific and Research Achievements

Attaching great importance to the protection and management of intellectual property, we have incorporated intellectual property management into project approval, execution, interim inspection and final acceptance inspection to fully protect intellectual property rights. Meanwhile, we continuously improve organization building and procedural systems for the management of intellectual property, which is effective to carry forward the intellectual property management work.

In 2018, we filed 1,046 patent applications, 655 of which were approved. The patent filed by the CGN Engineering "Passive Reactor Cavity Flooding System and Method for Nuclear Power Plant" was awarded the 20th China Patent Silver Award by the State Intellectual Property Office, and the patent of "Integral Stud Tensioner Machine for Nuclear Reactor Pressure Vessel and Its Operation Process" of the CNPRI and Ling'ao Nuclear was awarded the excellence award of the 20th China Patent Award. The first prize of the first China Innovation Methods Competition was awarded to the "Application of Innovative Methods of Marine Creature Cleaning Robots in Tunnels" by the CNPRI team. Suzhou Nuclear Power Research Institute, together with Southeast University, Wuhan University and Guangdong Electric Power Research Institute, won the second prize of the National Science and Technology Advancement Award for the achievement in scientific and technological innovation "The Key Technology of Industrial Intelligent Ultrasonic Testing Theory".

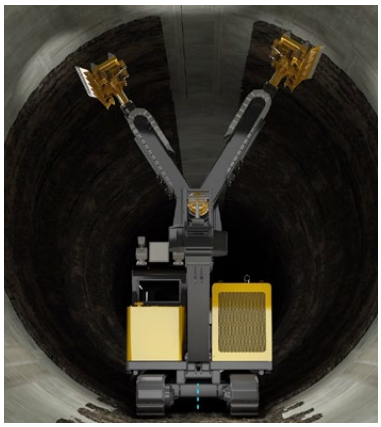
Patent Applications and Licensing during 2016-2018



Case **The Project "Marine Creature Cleaning Robots in Tunnels" Won the First Prize in the First China Innovation Methods Competition**

On November 23, 2018, the project of CNPRI team "Application of Innovative Methods of Marine Creature Cleaning Robots in Tunnels" was entitled the first prize in the national finals of the first China Innovation Methods Competition jointly sponsored by the China Association of Science and Technology and the Ministry of Science and Technology of the People's Republic of China.

Traditional artificial cleaning cannot clear out marine organisms in water intake tunnels. Under the circumstance of no mature equipment reference both at home and abroad, the team successfully developed the marine organisms cleaning robot, and achieved safe, efficient and complete cleaning. A total of 21 patents stemmed from this project, including five domestic inventions, 1 international patent application of PCT (Patent Cooperation Treaty), and part of the patent is in the course of application.



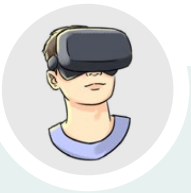
Case **CGN Intelligent Safety Execution Information System AN (AN-SIMs) Makes China Hi-tech Fair Debut**

AN-SIMs, an intelligent security implementation information system developed by the CGN Engineering, made its debut at the 19th China International Hi-tech Fair.

This system is the first integrated digital safety management tool in China. It integrates new information technologies such as "Internet +", mobile applications, Internet of Things and big data to make safety management of nuclear power projects more intelligent and efficient.

Case Detection Robot Helps to Ensure Safety in NPPs

Reactor pressure vessel is a key part of NPPs, and the design of its inspection equipment has been a major challenge in the industry. To this end, CGN Inspection Technology has developed a variety of detection robots, which can reach reach any place where unreachable by staff, complete several nuclear island inspections and conduct "physical examination" for nuclear power equipment.



Virtual Reality Technology Facilitates Nuclear Power Development

Virtual reality ("**VR**") is a new means of human-computer interaction created by computer and sensor technology. VR technology enables users to interact with the virtual environment, creating a truly immersive experience for users. Since many years ago, we have carried out research on the application of VR technology in safety training and science popularization of nuclear power to promote the development of nuclear power technology. At the same time, through novel technology and realistic experience, we have enabled employees and the public to gain a deeper understanding of nuclear power safety.

October 18, 2016

Since the establishment of the "Laboratory of the Application of VR Engineering" of CGN Design in Shenzhen, the industry-leading VR technology has been formally introduced into the design process, marking an important step in the innovation of design tools.

Case 3D Printing Technology Came into Use in Daya Bay Nuclear Power Station

Since 2016, CGN Operations has led the research on the application of 3D printing technology in the field of nuclear power. Since February 11, 2018, the refrigerator cover on compressed air production system, developed and manufactured by metal 3D printing technology has been used in Daya Bay Nuclear Power Station, marking a breakthrough in the manufacturing and maintenance of spare parts and components of NPPs, and achieving a significant leap from theoretical research to engineering application.

3D printing technology can not only optimize product design and spare parts inventory, reduce the cost of spare parts procurement, effectively solve the problem of emergency spare parts supply on site, but also solve the problem of supply due to equipment modifications.

First half of 2017

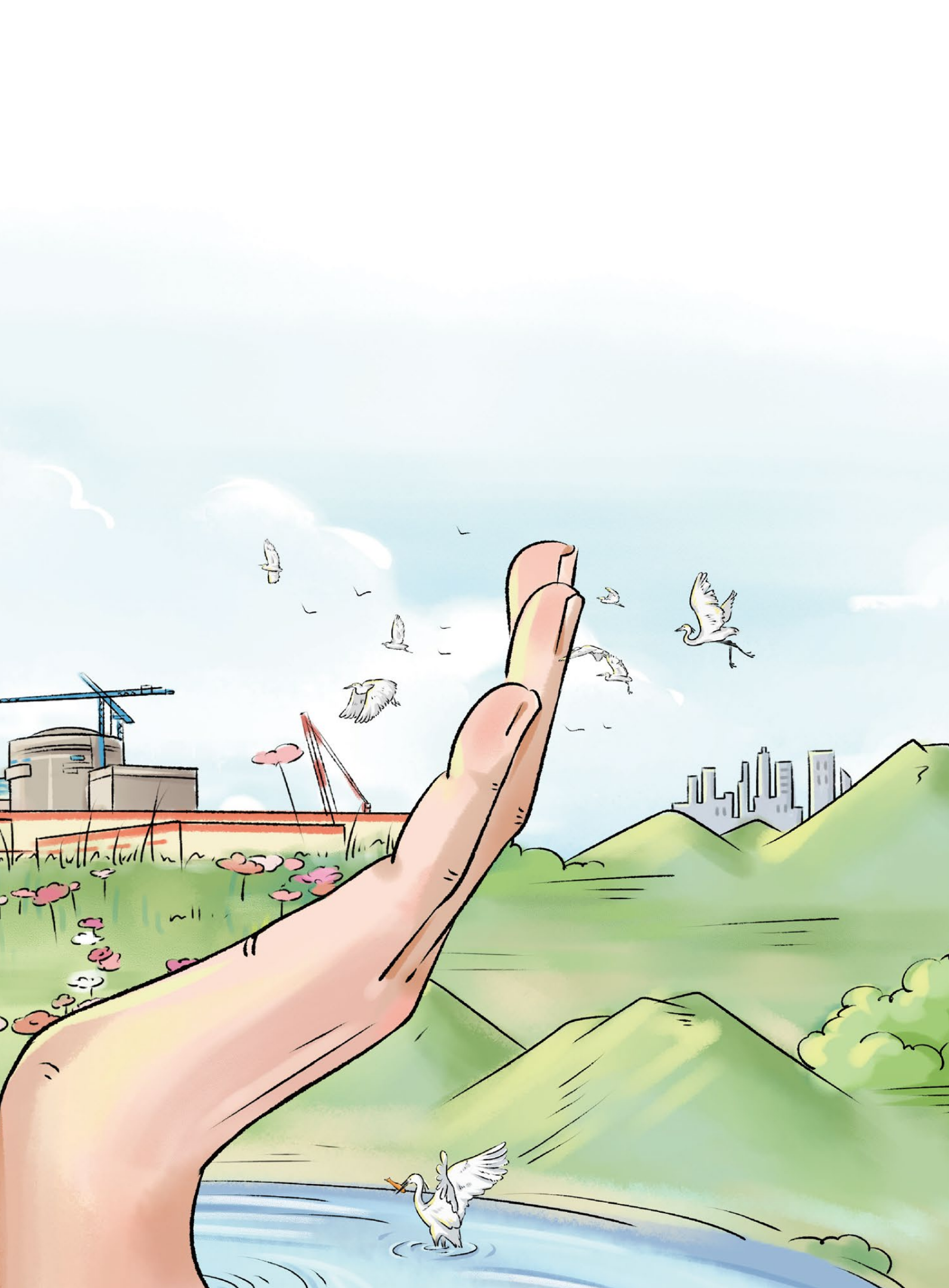
After months of filming, modeling, platform building and debugging, a VR safety experience center integrating "VR Scene Experience and Industrial Safety Visual Instruction Training" has been established and put into use by Hongyanhe Nuclear, to realize the first application of VR technology in the field of nuclear power safety.

Employees and contractors can choose different scenes of operations, wear VR glasses and hold operating levers to experience not only realistic visual effects but also simulated falling, electric shock, gas leakage and other scenarios, which ultimately improve the effectiveness of safety training.

May 10, 2018

The Daya Bay Safety Education Experience Center, which applies VR, augmented reality ("**AR**"), holography and other cutting-edge technologies, was officially opened. Among them, VR scenes cover all risk operations such as operation high above the ground, and adds scenes such as instrument alarm response in nuclear power control area. AR is a new human-computer interaction technology, through which users can roam in the real scene of Daya Bay buildings and learn about safety risks and corresponding protection measures in a relaxed and pleasant atmosphere. Holographic technology can realize online training of working skills and specifications, virtual disassembly and assembly of equipment, and 360-degree three-dimensional rotation to view the internal structure of parts and components. It can be subsequently expanded and applied in maintenance technology, which is of great significance for equipment failure analysis and personnel skill training.

“Green” the World



Providing safe, reliable, low-carbon and economical power supply to society while making the sky bluer and water cleaner is our commitment to the environment and society and the cornerstone of our sustainable development. In the course of developing nuclear power, we actively cohere with the national environmental policy “Comprehensively Tightening Ecological and Environmental Protection and Lawfully Promoting Triumph in the Uphill Battle for Prevention and Control of Pollution”[11], follow the basic principle of “prevention first, combining prevention and mitigation”, carry out specific measures to conserve energy and reduce emissions, prevent environmental pollution from the source, improve the efficiency of resource utilization, and promote greener development.

CGN Power strictly implements the national and local environmental laws and regulations, including the *Environmental Protection Law of the People’s Republic of China*, the *Water Law of the People’s Republic of China*, the *Law of the People’s Republic of China on Environmental Impact Assessment*, 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 so on.

We implement comprehensive environmental management in our NPPs. With the focus on protecting local atmosphere, water quality, soil and landform to conserve natural biological habitats and biodiversity. Throughout different stages of site selection, feasibility study, construction and operation of NPPs, we strictly comply with relevant national environmental protection laws and regulations and related requirements. We submit the environmental impact reports in accordance with laws and are open to the supervision of national and local environmental protection authorities. All the NPPs under our operation and management have obtained ISO14001 environmental management system certification. In accordance with relevant national laws and regulations, we have formulated the environmental management system applicable to the Company and determined the environmental policy of "Abide by Laws and Regulations, Conserve Resources, Prevent Pollution and Continuously Improve". In each NPP, we have set up a special environmental protection management department with professional environmental protection personnel. We strive to contribute to energy conservation and emission reduction while meeting the needs of electricity for regional economic development. We strive to contribute to energy conservation and emission reduction while meeting the needs of electricity for regional economic development. Each year, we publicize our environmental management targets and performance, identify and analyze environmental aspects, and provide control and improvement plan.

Actively Respond to Climate Change

Global climate change is no longer out of reach. Effective response to climate change has become a common aspiration at home and abroad. The *Paris Agreement*, under the impetus of the United Nations, has been effective since 2016. China has pledged to reach a peak in carbon dioxide emission reduction by around 2030. It also targeted that the non-fossil energy ratio will reach 20% in the same year. At the 19th National Congress of the Communist Party of China, China has proposed the goal of "Speeding up Reform of the System for Developing an Ecological Civilization, and Building a Beautiful China” and made the commitment of "Actively Participating in Global Environmental Management and Implementing Emission Reduction ".

Compared with traditional energy sources, nuclear power has the advantage of being cleaner and more environmentally friendly. On June 27, 2018, the State Council released the *Three-Year Action Plan for Winning the Battle for a Blue Sky*, emphasizing the adjustment of energy structure and the development of clean energy industries such as nuclear power, in order to significantly reduce the total amount of atmospheric pollutants and greenhouse gas emissions in a coordinated manner. In October 2018, the United Nation's Intergovernmental Panel on Climate Change (IPCC) report points out that to limit global warming to 1.5 °C, carbon emissions due to human activities need to decrease by about 40%[12] by 2030 and reach zero net emissions by 2050. Nuclear power technology is the key to promote the fast decarbonizing global power industry. It can make a key contribution to the growing energy demand while helping to meet carbon reduction targets to combat climate change. CGN Power has actively promoted the development of nuclear power, a clean energy, and makes a due contribution to the bluer sky, clearer water, greener land and fresher air.

11. Opinions on Comprehensively Tightening Ecological and Environmental Protection and Lawfully Promoting Triumph in the Uphill Battle for Prevention and Control of Pollution published by the State Council in June 2018.

12. Based on 2010 level.

On-grid nuclear power generation in 2018	Equivalent reduction of standard coal consumption about	Equivalent reduction of carbon dioxide about
157,044.58 GWh	48.37 million tons[13]	132.55 million tons

Improving Environmental Management

In accordance with national and regional laws and regulations, we follow the environmental management policy of " Abide by Laws and Regulations, Conserve Resources, Prevent Pollution and Continuously Improve", and take as our environmental management objectives by implementing efficient utilization of resources, efficient transformation of energy, regeneration of wastes, and continuous reduction of radioactive waste discharge in a reasonable and feasible way. We have established the *Company Environmental Management System* and *Establishing and Managing Environmental Indicators*, carried out identification of various environmental impact factors and take controlling measures on environmental impact caused by our operations.

We have set up a network of environmental management organizations in each NPP to define the environmental management departments, and have been equipped with full-time personnel to manage and improve the environmental management system, and coordinate with all departments to implement environmental management. Our NPPs held joint meetings regularly to report the work progress of each project, analyze environmental laws and regulations and important environmental factors and coordinate the environmental management .

In order to promote ecological and environmental protection in a scientific and efficient way, we have set up short, medium and long-term environmental management targets in 2018 to implement and manage the work on ecological and environmental protection.

Short Term (within 2018)	Fully identify and control ecological and environmental protection risks and ensure all environmental issues are rectified in place.
Mid Term (2019-2020)	To further improve the environmental management system, consolidate risk prevention mechanism, and facilitate the advancement of green industrial chain.
Long Term	In the field of nuclear power operation, overall energy efficiency and emission performance of major pollutants are at the world's advanced level, leading ecological pollution prevention and control technologies at home and abroad are developed, and employees' awareness of environmental protection is significantly enhanced.

13. Notes: According to the 2018 National Power Production Stats released by the National Energy Administration of the People's Republic of China in January 2019, the Annual Development Report of China's Power Industry 2018 published by China Electricity Council in June 2018, and the afforestation related data from the Development Research Center of the State Council show that the environmental protection effect of 100 million kWh nuclear power is equivalent to reducing the consumption of standard coal by 30,800 tons and the emission of 84,400 tons of carbon dioxide, and generating 225 hectares of afforestation.

Reducing Greenhouse Gas Emissions

CGN Power is committed to reducing greenhouse gas emissions from its operations. Most of our greenhouse gases emissions are from the electricity purchased for production, operation and construction. Each NPP has its own energy conservation management team that is responsible for coordinating the work related to energy conservation between various departments.

NPP Operation and Engineering Construction

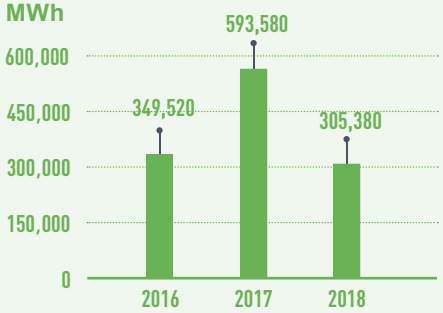
Shut down unnecessary equipment for safety and environmental concerns. Optimize the operation and improve or replace high energy-consumption equipment when feasible.

Power Consumption in Office and Daily Life

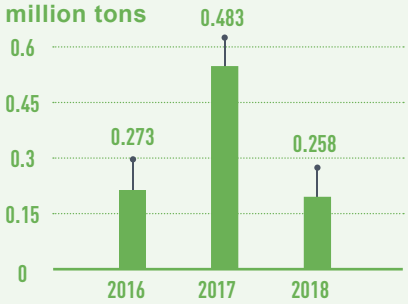
Regulate the power consumption of employees in office and daily life, promote the concept of energy saving.

- set electricity consumption quota and record electricity consumption.
- manage daily energy saving and limit the use of air conditioners and water heaters.
- switch to energy-efficient air conditioners and LED lights

Purchased Electricity of CGN Power (MWh)[14]



Purchased Electricity Equivalent to Carbon Dioxide Emission (million tons)[15]



In addition, our Company's vehicles are managed by third-party professional vehicle management companies. Some of the vehicles are new energy vehicles and use low-energy-consumption systems to minimize fuel consumption and exhaust emissions.

Efficient and Rational Use of Resources

Improving Nuclear Fuels Utilization

Nuclear fuel is the main raw material for nuclear power generation. The thermal energy generated by nuclear reaction is used to drive the generators to generate electricity. The current nuclear fuel cycle in the NPPs is 12 to 18 months. Most units have been upgraded to 18 months refueling mode. We continue to research and develop fuel cycle models and refueling models with reliable technologies to enhance economic benefits. We also cooperate with relevant agencies in the R&D and upgrading of nuclear fuel, and gradually improve the efficiency and effectiveness of nuclear fuel. In addition, reducing unplanned load reduction and temporary shutdown of nuclear power units also helps to improve the efficiency of nuclear fuel utilization and reduce the generation of radioactive wastes.

14. The purchased electricity of CGN Power is mainly used for production and construction of the power stations.

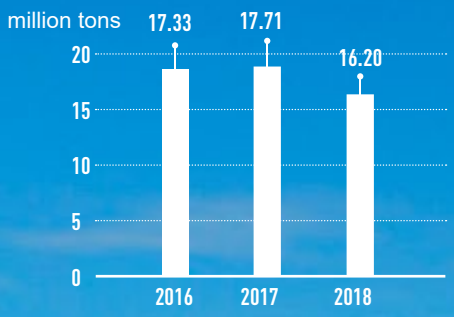
15. For the conversion formula, please refer to the China Clean Coal-Fired Power Development Report released by the China Electricity Council in September 2017, for the coal consumption for thermal power supply, please refer to the 2018 National Power Production Stats released by the National Energy Administration of the People's Republic of China in January 2019.

Reducing Water Consumption

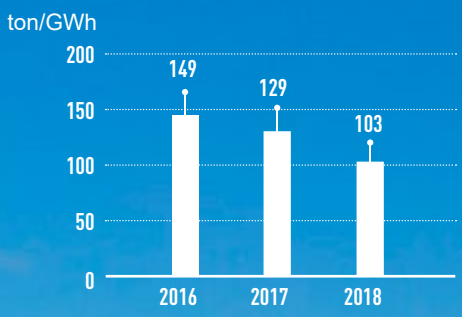
We source water from municipal water supply, power plant reservoirs and sea water, and we do not have any difficulty in sourcing water. Our water consumption is mainly used for production, office operation and daily life in the NPPs. In order to make good use of every drop of precious water, we continuously monitor our total water consumption and sewage discharge, and reuse water. For instance, water recycling system is used wisely for watering plants and cleaning roads to reduce sewage discharge and save water. In 2018, water consumption on-grid power generation decreased by 20.2% compared to last year.

We have set up sewage treatment facilities in all NPPs. Radioactive and non-radioactive waste water are treated through separate systems. We treat non-radioactive waste water strictly in accordance 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 national laws, regulations and relevant local standards and conduct online monitoring. Meanwhile, we engage qualified units to conduct water quality tests to ensure that wastewater discharge meets emission standards. For the treatment of radioactive effluent, please refer to the section titled "Commitment to Reducing Pollution Emissions" in this report.

Water Consumption (million tons)



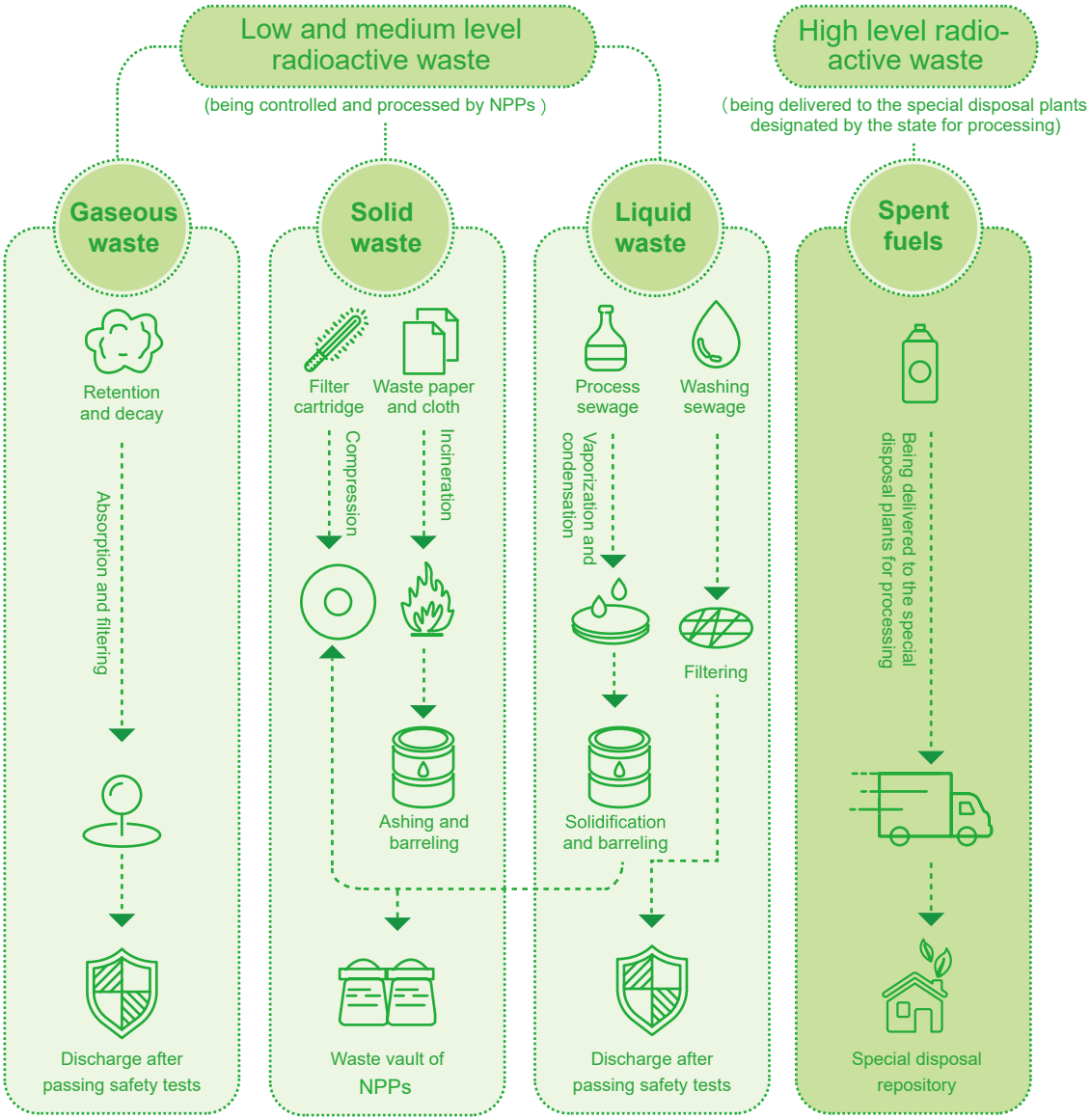
Water Consumption Per Unit of On-grid Power Generation (ton/GWh)



Commitment to Reducing Pollution Emissions

According to the characteristics of the nuclear power industry, the operation and production activities of NPPs produce radioactive and non-radioactive wastes, in which radioactive wastes are in solid, liquid and gaseous states, and are referred to as "three wastes". We operate in strict accordance with national and industrial standards such as 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 follow the basic principles of radioactive substances management - ALARA (As Low As Reasonably Achievable), continue to improve radioactive material management system, and carry out proper management and safe disposal of radioactive waste.

We have set up waste management organizations in all NPPs and formulated technical regulations for the treatment of the three wastes to strictly control radioactive wastes in power plants, minimize the generation and discharge of wastes and ensure environmental and public safety. The following chart summarizes the classification and treatment of radioactive waste.



We continue to optimize and improve the working process, and strive to reduce the production of radioactive waste, constantly improve radioactive waste management, optimize effluent discharge process and strictly implement emission control standards. In 2018, the radioactive waste management of the 22 units under our management strictly comply with relevant national laws and regulations, and meet the standards of relevant technical specifications. The amount of radioactive waste discharged from NPPs is **far below** the applicable national limits and **beyond** the management target set by the Company at the beginning of this year. We are also experimenting with a new technology of solid waste reduction, which is being rolled out at different NPPs to reduce radioactive solid waste.

	Year	Discharged Liquid Radioactive Waste (Radionuclides Other Than Tritium) to the State's Annual Limit	Discharged Gaseous Radioactive Waste (Inertgases) to the State's Annual Limit	Solid Radioactive Waste (m^3)	Results of Environmental Monitoring
Daya Bay Nuclear Power Base	2016	0.17%	0.14%	180.4	Normal
	2017	0.47%	0.44%	276.4	Normal
	2018	0.35%	0.56%	248.6	Normal
Yangjiang Nuclear Power Station	2016	0.49%	0.35%	21.2	Normal
	2017	0.38%	0.30%	42.8	Normal
	2018	0.29%	0.24%	44.8	Normal
Fangchenggang Nuclear Power Station	2016	0.09%	0.26%	12.9	Normal
	2017	0.78%	0.39%	101.3	Normal
	2018	0.43%	0.35%	64.6	Normal
Ningde Nuclear Power Station	2016	0.32%	0.58%	183.6	Normal
	2017	0.38%	0.51%	129.6	Normal
	2018	0.30%	0.30%	136.8	Normal
Hongyanhe Nuclear Power Station	2016	0.23%	0.18%	114.4	Normal
	2017	0.22%	0.15%	196.8	Normal
	2018	0.21%	0.21%	159.6	Normal
Taishan Nuclear Power Station	2016	under construction	under construction	under construction	Normal
	2017	under construction	under construction	under construction	Normal
	2018	0.54%	0.71%	0	Normal

Moreover, the non-radioactive solid wastes of CGN Power are primarily generated from construction and day-to-day office operation, mainly including construction waste, waste paper, domestic waste and waste generated from green decorations of buildings. These wastes[16] were disposed of by qualified third-party treatment institutions. Recycling and emission reduction have been adopted to fully utilize resources and minimize environmental impact as much as possible.

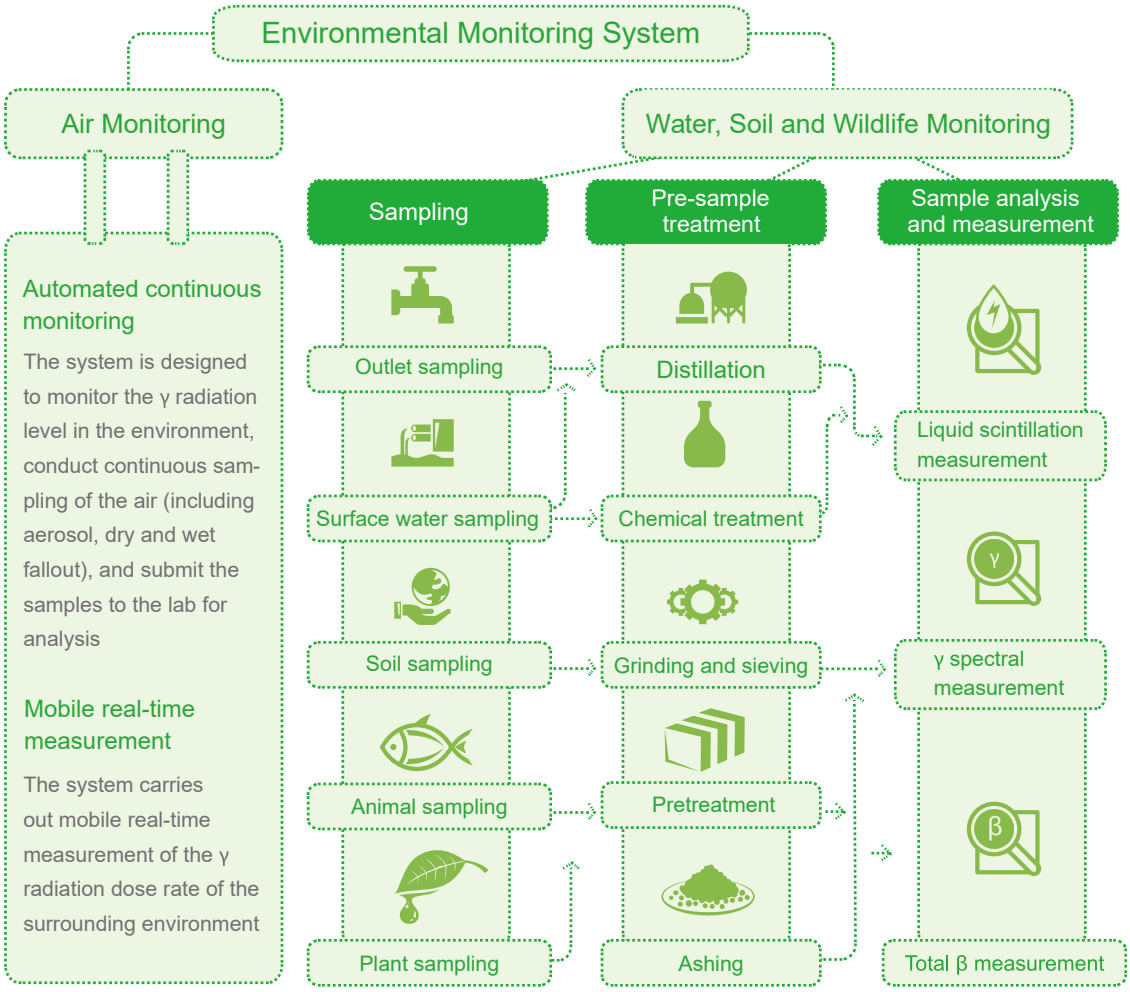
16. Since such wastes account for a small proportion and are handled by specialized companies, their environmental impact is limited, therefore no relevant data has been collected.

Timely Tracking of Environmental Impacts

From planning, construction to operations of NPPs, we take into full account our impact on the surrounding environment. We have developed well-established environmental monitoring systems to promptly track environmental impact and take actions to avoid environmental impact. Meanwhile, the Company has been working with external regulators to keep environmental impact under control.

Internal Monitoring

In every NPP we manage, we have established the environmental monitoring systems and environmental surveying record systems according to the requirements of national regulatory authority. The monitoring system regularly records and track the impacts on air, water, terrestrial and marine biological environment within a radius of 10 km around our NPPs, and the level of radioactivity in and around NPPs, to assess the impact on the surrounding environment. We timely publicize monitoring data of each NPP and accept supervision from the public.



External Supervision

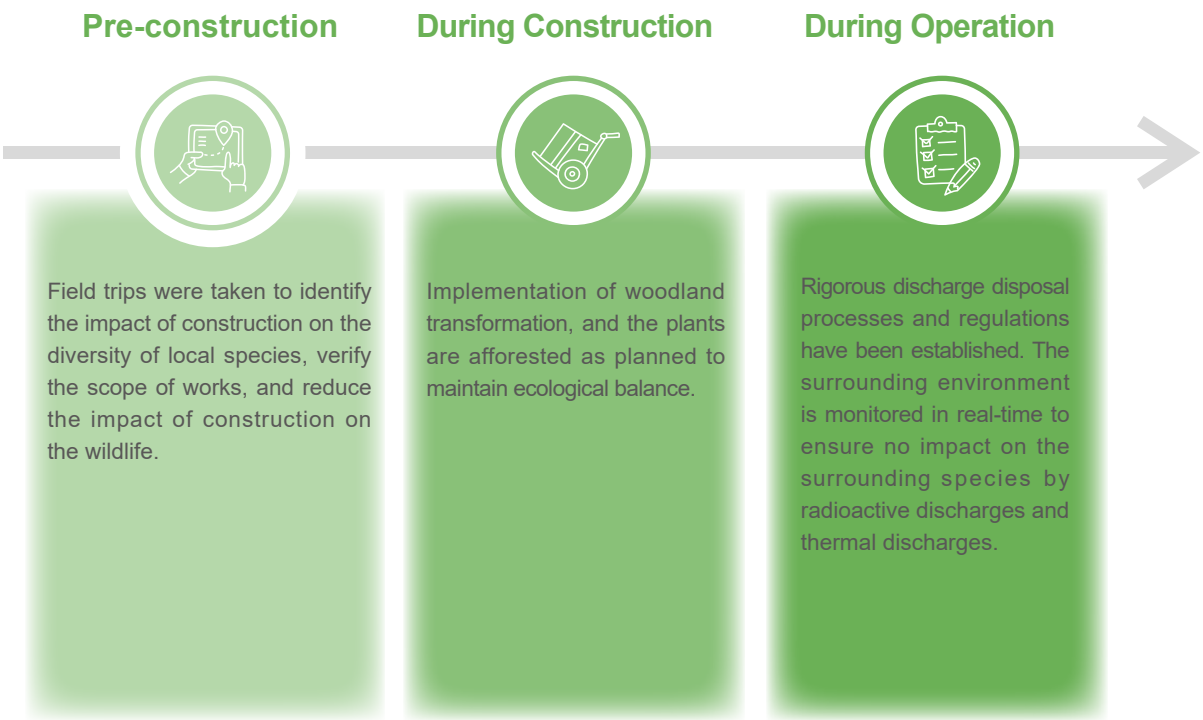
In addition to our own monitoring at the NPPs, we actively cooperate with external bodies to monitor and make external monitoring data available to the public.

As required by the *National Monitoring Plan of Radioactive Environment,* and the *Radiation Environmental Monitoring Technical Specifications* (HJ/T 61-2001), the surrounding radioactive environment of NPPs has been monitored by national regulatory authority. The operator of the NPP and the provincial radiation environment monitoring agency of environmental protection authorities are responsible for the "dual-track" monitoring of gaseous, liquid effluents and the peripheral environment to ensure that the range of radioactivity data meets the standards. The monitoring results in 2018 indicated that the absorbed dose rate in air measured in the surrounding areas of NPPs in operation in China were within the local natural background fluctuation range. The activity and concentration of radionuclides in such environmental media as water, soil and organisms around the NPPs remained the same as previous years, and no impact was found on the environment and public health.

The Hong Kong observatory has set up environmental radiation monitoring programs since the commissioning of the Daya Bay Nuclear Power Station. A total of 12 radiation monitoring stations have been set up in Hong Kong to continuously monitor environmental gamma radiation levels 24 hours a day. Annual reports have been issued annually to inform the public of the status of environmental radiation levels in Hong Kong. Years of monitoring results indicated that there has been no increase of artificial radionuclides within Hong Kong since the operation of Daya Bay Nuclear Power Station.

Persistent Protection of Ecosystem

We are committed to reducing impacts on biodiversity and protecting ecological resources. From initial site selection, planning and design of NPPs, we excluded areas with high biodiversity. During the construction and operation, we have conducted measures such as ecological restoration, investigation and research of habitats and formulated measures for the protection of animals and plants, thereby protecting biodiversity.



Case Daya Bay Nuclear Power Base Sea Area and Coastal Environment Ecological Patrol Project

In addition to the monitoring of environmental radioactivity, we have established the quarterly ecological touring project in Daya Bay Nuclear Power Station, mainly through visual observation and sampling approach, focusing on scope of about 10 km area around the NPP. The monitoring covers the destruction of vegetation due to construction, as well as illegal sewage, red tides and gathering of marine organisms, etc., to timely evaluate and control the marine ecological environmental impact from NPP operations.

Since the operation, the environmental radioactivity level in the surrounding area has not been different from the data before and after NPP operation, and the number of terrestrial and marine biological populations in the area has not changed significantly.

Case Chinese White Dolphins Visited Yangjiang Nuclear Power Station Twice in 2018

On both March 30, 2018 and October 10, 2018, Yangjiang Nuclear Power Station staff spotted Chinese white dolphins playing in areas close to the heavy cargo wharf of Yangjiang Nuclear Power Station. The Chinese white dolphin, nicknamed the "giant panda in the sea", is listed as an endangered wild animal under first-class state protection. They have high habitat requirements and are called the indicator of marine ecological environment. In recent years, employees at the Yangjiang Nuclear Power Station have observed Chinese white dolphins in nearby waters several times.

Strengthening Research on Environmental Technologies

In accordance with the principle of "Prioritize Technology, Develop Efficiently", we are committed to improving the research and application of ecological environmental protection technology, focusing on pollution prevention, energy conservation and consumption reduction in the field of nuclear power operation. During the construction of NPPs, we have incorporated "resource conservation" and "environmental friendliness" into the decision-making process at the planning stage and are committed to building and operating green projects through technological development.

Upgrading of Domestic Sewage Station in Fangchenggang Nuclear Power Station

There are three domestic sewage treatment stations in Fangchenggang Nuclear Power Station, including temporary domestic sewage treatment station to be used during construction period, on-site domestic sewage treatment station (ED1) and off-site domestic sewage treatment station (ED2). To tighten the control of sewage and further reduce pollutant emissions, Fangchenggang Nuclear Power Station has finished the upgrade of three sewage treatment stations. After treatment at these stations, the discharged effluent has met the Level 1A of the *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002), an improvement from previous Level 1B.

Ningde Nuclear Power Station Condensate Water Pump Energy-saving Renovation

Ningde Nuclear Power Station has three condensate water extraction pumps with a single motor power of 1.8MW. Through innovative technology and the application of frequency conversion scheme and change of the speed of the condensate pump to control the level of the deaerator, Ningde Nuclear Power Station was able to achieve a reduction of more than 40% of the motor power usage, and an estimated reduction of total power consumption by 1,500 kWh.

Promoting Staff Awareness of Environmental Protection

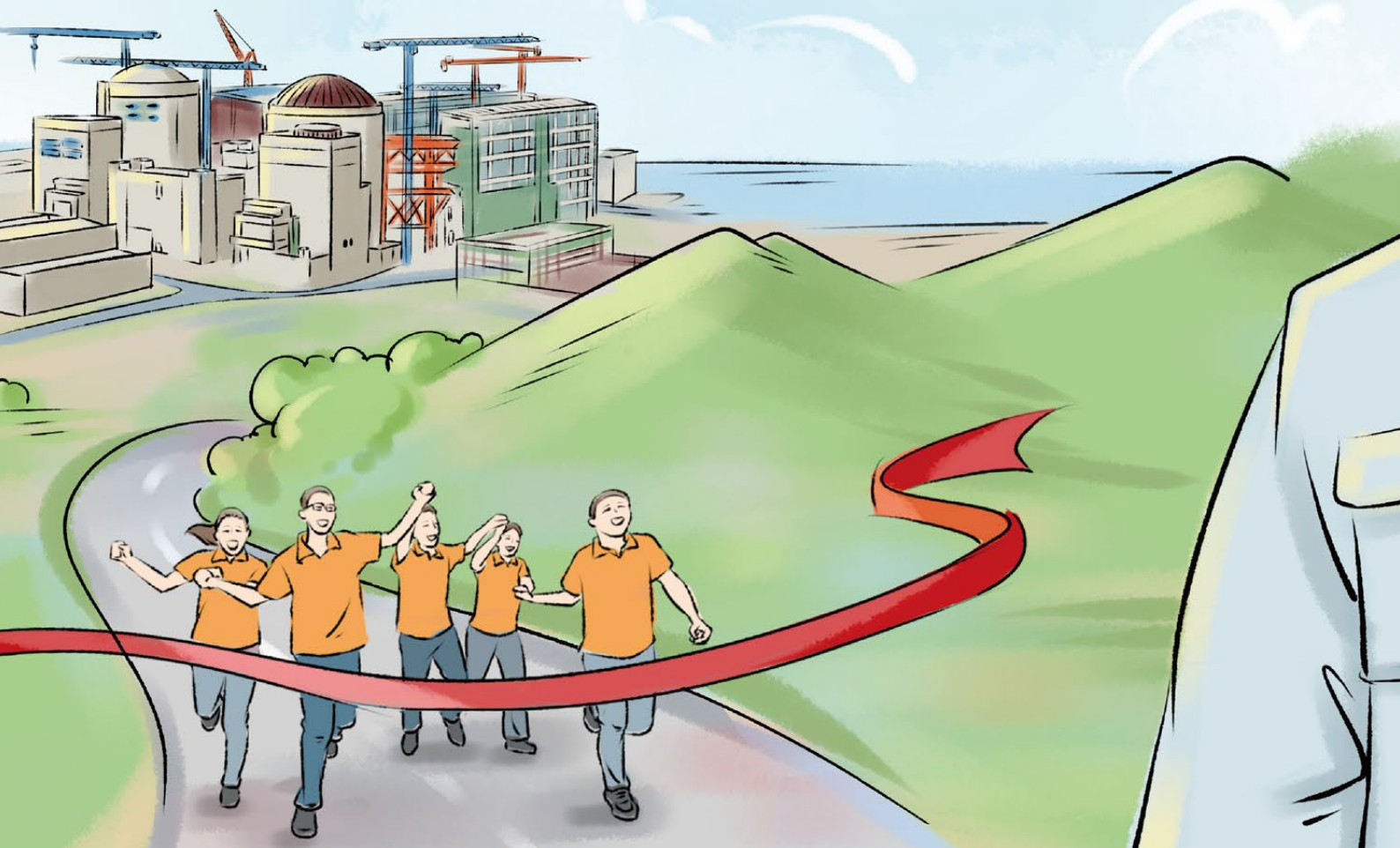
In order to enhance employees' awareness of environmental protection, we have been carrying out the action plan of environmental education for all employees, encouraging all employees to participate in environmental protection, promote green activities, and advocate environmentally friendly travelling, energy saving and consumption reduction.

Case **Fangchenggang Nuclear Power Station Set up Egret Protection Volunteer Team**

In 2018, volunteers of Fangchenggang Nuclear Power Station have visited several villages to examine the conditions of egrets habitats. The first encounter with egrets was on the evening of January 5. Many egrets were busy nesting in the bamboo habitat. The Fangchenggang Nuclear Power Station can be clearly seen from the bamboo forest.

The egret protection program consists of two stages. The first stage was to improve the environment of the Hong Sha Fishing and Egret Park, renovate facilities in the park, and set up a workstation for the CGN Egret Protection Volunteer Team. In the second stage, Fangchenggang Nuclear Power Station established egret protection volunteer team to provide more timely and professional protection for egrets in the park and promote egret protection among the public.

Unite the Talents



We believe employees are the most important assets for the Company, and they are also the core driving force for sustainable development. We adhere to the concept of “Talent-lead Corporate Development“, continuously improve our employment and salary systems, focus on physical and mental well-being of our employees, and provide them with comprehensive protection of their rights and interests. At the same time, we also provide them with professional learning opportunities and development platforms, so that each of them will be able to realize their full potential.

Caring for Employees and Promoting Harmony

Protecting Employees’ Rights

To protect the legitimate rights and interests of employees, the Company strictly abide by the *Company Law of the People’s Republic of China*, the *Labor Law of the People’s Republic of China* and the *Contract Law of the People’s Republic of China*; and other relevant laws and regulations. The company also formulated the employee’s management systems such as the *Labor and Employment Management System* and the *Recruitment and Deployment Management System* based on the above laws and regulations as well as the characteristics of the Company. These policies outline details in working hours, compensation, recruitment, dismissal, promotion, holiday, benefits, code of conduct and professional ethics, to ensure that each employee receive fair treatment without discrimination based on race, color, gender, age or other factors.

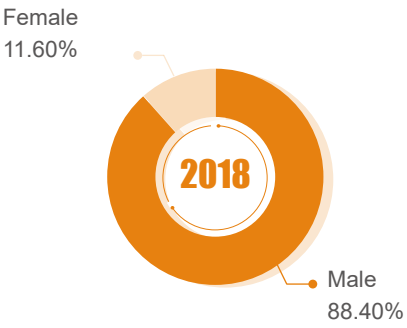
In order to protect the interests of employees, the Company has signed individual contracts with all employees and collective contracts with trade unions. The contracts specify working hours, rest and holidays, insurance and other related matters to ensure that employees have a clear understanding of the relevant rights and interests. The collective contract is concluded by the trade union of the Company on behalf of the employee and the employer through fair negotiation, so as to balance between workers and the Company and ensure the fair and reasonable content of labor contract negotiation. As operational personnel in NPP work in shifts, in order to ensure that employees have enough rest, the collective contract stipulates that employees in shift work who participate in 21 days of work and no less than 5 days of training and meetings in a 6-week period is granted the rest of the time off. The collective contract also ensures that employees can take public holidays as stipulated by the state and standardizes the application process for paid holidays. The employee salary management system is detailed in the section "Human Capital" of the 2018 Annual Report.

In its recruitment and staff management policies, CGN Power explicitly prohibits illegal labor practices such as child labor and forced labor. In order to avoid people under the age of 16 participating in the recruitment interview, the applicant's ID card, education background and other information would be strictly verified before the interview. The use of child labor or forced labor in any manner is strictly prohibited in all business operations of the Company, including the employment of the providers of goods and services. During the reporting period, we strictly complied with relevant laws and regulations and the Company's employment system. No occurrence of child labor or forced labor was reported.

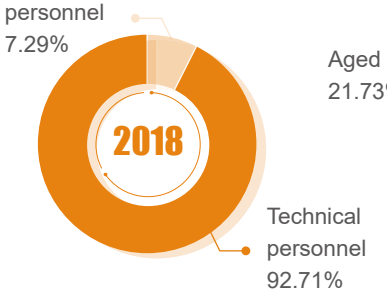
CGN Power's Total Number of Employees in 2018: 18,663

Proportions of Different Types of Employees[17]

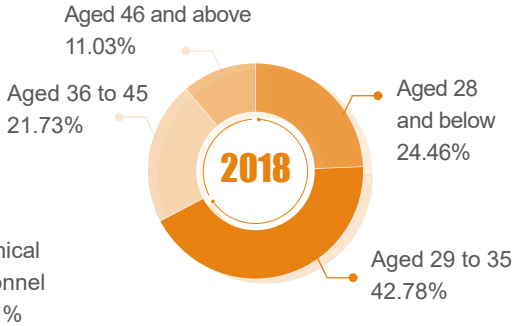
By Genders



By Types of Work



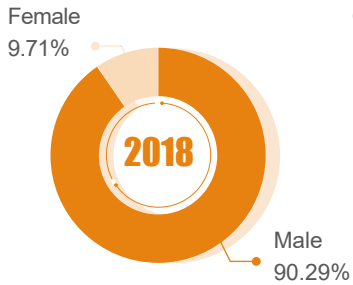
By Ages



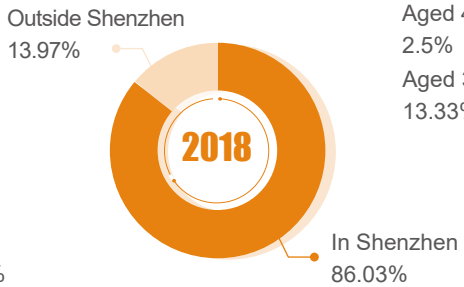
Employee Turnover

Employee Turnover Rate 3.05%

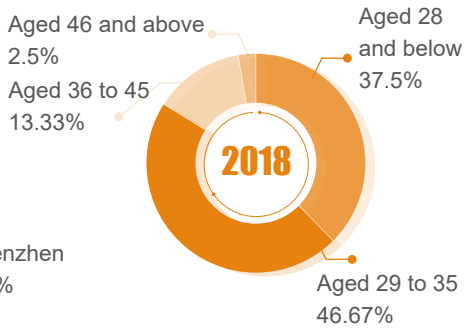
By Genders



By Types of Work



By Ages



Employees' social security coverage 100%

Number of average paid holidays per employee 12 days

17. As our main business is in mainland China, all our staff work in mainland China.

Valuing the Health of Employees

CGN Power highly values employees' health and safety. We strictly comply with the 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 of the People's Republic of China on the Prevention and Control of Occupational Diseases* and the *Interim Provisions on the Supervision and Management of Work Safety at Central Enterprises*. In addition to compliance with laws and regulations, we have formulated our occupational safety management system to implement the management policy of "Safety First, Prevention-oriented and Comprehensive Governance", standardized and normalized the occupational health code and cultivated the health and safety culture from top to bottom among all employees based on occupational health and safety management system at home and abroad. We require that all production and business activities to be implemented only if safety and health is ensured, so as the results of implementation must also be safe and healthy.

CGN Power and its NPPs all have dedicated departments to manage occupational health and safety, and all organizations have been certified by OHSAS18000 on occupational health and safety management system. We have conducted benchmarking against domestic and foreign peers, actively promoted safety standardization and continuously improved our occupational health and safety management system. We effectively controlled and reduced occupational health and safety risks and protected the health and safety of employees by identifying and evaluating occupational hazards in various types of work, conducting hierarchical management, controlling occupational health risks and adopting a series of measures such as technology, management and personal protection.

Since the construction, production and equipment maintenance activities of each NPP involve the participation of contractors, other than the Company's employees. Our occupational health and safety management system is also applicable to contractor personnel and any other person who normally enter the Company's operation site to carry out work.

In daily work, we take various control measures to protect the health and safety of employees. Every year, the Company engages external professional organizations to conduct occupational health examination for employees in certain positions (including radioactive, noise, high temperature, chemical poison, high pressure, etc.), set up personal health records, and analyze employees' health status and evaluate their adaptability to work. In addition to the physical health of employees, the Company also pays attention to their mental health, and has introduced the "Employee Assistance Program" to provide employees with 7*24 hours of psychological counseling services.

In 2018, we continue to achieve good results in occupational health and safety management. Detailed management measures and data related to safety are set out in the section "Guarding Nuclear Safety" of this report.

Maximum Individual Radiation Dose[18] by person (including employees, contractors and other people) entering the Control Area of the NPPs Operated and Managed by the Company are all lower than the national and international standards:

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

NPP/Unit	2016	2017	2018
Daya Bay Nuclear Power Station	8.277	6.756	5.114
Ling'ao Nuclear Power Station	6.071	6.610	10.323
Lingdong Nuclear Power Station	6.834	7.668	5.247
Unit 1, 2, 3, 4 & 5 of Yangjiang Nuclear Power Station	13.078	7.889	8.112
Unit 1, 2, 3 & 4 of Hongyanhe Nuclear Power Station	5.404	7.803	7.601
Ningde Nuclear Power Station	7.537	8.624	7.998
Unit 1 & 2 of Fangchenggang Nuclear Power Station	0.432	8.034	3.588
Taishan Nuclear Power Station[19]	–	–	0.288

18. The annual outage is the key factor affecting the individual radiation exposure of all NPPs.
19. Taishan Nuclear Power Station commenced operation in 2018.

Caring for Employees' Life

We have actively launched various forms of recreational and sports activities, and strive to help employees to solve worries at home, relieve work pressure, enrich leisure time, stimulate their vitality, help to achieve work-life balance, and enhance happiness and the sense of belonging .

In response to employees' needs and to keep a spirit of mutual assistance and mutual love, we continuously launch special support programs for the employees facing difficulties.

In 2018, the Company reached out to 1,076 employees in difficulty and arranged 210 visits to family members of employees who take business trips frequently.

Case DNMC Organized Lectures on Chinese Tea Culture and Art

Chinese tea ceremony culture has a long history. In order to enrich the life of employees and improve personal tastes, DNMC specially invited national tea artists to teach employees tea appreciation techniques and artistic appreciation, etc., and enriched their leisure life.

Case Parents Spending Fun Time with Cute Babies - Taishan Nuclear Held the Fifth Happy Parent-child Event

On the evening of August 21, 2018, the Annual Happy Parent-child Event was held in Taishan Nuclear Power Station. More than 100 babies of NPP employees took part in the activity. Activities such as skateboarding, fishing, folding paper airplanes, painting and other parent-child activities were arranged, bringing happiness from such parenting activities to their family.

Case Lufeng Nuclear Power Station Held "Health with Me" Opening Ceremony and Fun Sport Events

"Health with Me" is a large-scale mass sports activity organized by the trade union of Lufeng Nuclear Power Station, which further promoted the pursuit of fitness and among employees, established a civilized and healthy lifestyle, improved physical and mental quality and health level of employees, and cultivated team spirit through joyful activities.

Training Staff to Promote Development

Employees equipped with sufficient skills and experiences are the Company's most valuable assets, and we support the development strategy of "Strong Talent, Strong Enterprise". We provide employees with clear career development pathways and targeted training programs to assist in their development; and to allow them to better contribute in parallel with the Company's growth.

Flexible Development Channels

We attend to the career development of employees, and encourage them to develop individual career development plans under the guidance and assistance of the Company. The Company has offered two career development paths for management-level and technical professionals, and established mechanisms for switchover between the two paths, forming a link of "Position Categories — Development Path — Employee Aspiration — Employee Flow". Employees can achieve their own career development through the two paths according to their competence, potential and characters.

Training Systems

Continuous improvement of employees' abilities and skills is the foundation of CGN Power's talent strategy for sustainable development. Upholding the basic requirement of “Full-staff Training, Authorized Employment and Lifelong Learning”. With the future business development in mind, we have absorbed internationally advanced experience, combined with our business characteristics, established the independent talent training system, and standardized and efficient on-job training management system. As a core complence, we are fully able to conduct professional, large-scale and practical training for high caliber nuclear power talents. In accordance with the requirements of nuclear safety regulations on the allocation of licensed NPP operating personnel, as of December 31, 2018, the Group (including affiliated companies) has 612 licensed operators and 734 senior operators, which are able to meet the operational needs of dozens of nuclear power units at the same time.

For more details on training courses for our employees, please refer to the section titled "Human Capital" of the 2018 Annual Report.

- Average training hours per employee 179 hours
- The training rate of senior management member 100%
- The training rate of male and female employees are both 100%
- The training rate of middle management member 100%

Case **Trainer at NPPs Awarded The "China Gold Medal Lecturer" on the China Talent Development Elite Award**

On April 20, 2018, Chinese Enterprise Training and Development Annual Meeting and China Talent Development Awards Ceremony were held in Tianjin. Lv Kefa, the gold instructor of the CGN Engineering, and Wang Junyi from Daya Bay Operation Company were both awarded the honorary title of "China Gold Instructor".

This award focuses on corporate training and talent development, and is the most influential corporate talent development award in China. It recognizes organizations, teams and individuals who have contributed to innovation and talent development.

Carrying Forward the Craftsman’s Spirit

"Craftsman’s Spirit" is a spirit of striving for perfection. We have been adhering to the core values of "Doing Things Right in One Go", advocating the spirit of dedication, craftsmanship and achieving excellence in ordinary things, and constantly reaching new heights of nuclear power business. Over the years, we have worked hard to create the platform and environment for the development of nuclear power "craftsmen", fostering a great number of outstanding talents and assisting employees in achieving a remarkable career.

In the context of the country's efforts to promote and advocate the "Craftsman's Spirit", we have successively found a number of outstanding nuclear power engineers who have the "Craftsman's Spirit".

Case The First-line "Craftsman" Awarded the Honor of National "China Skills Awards"

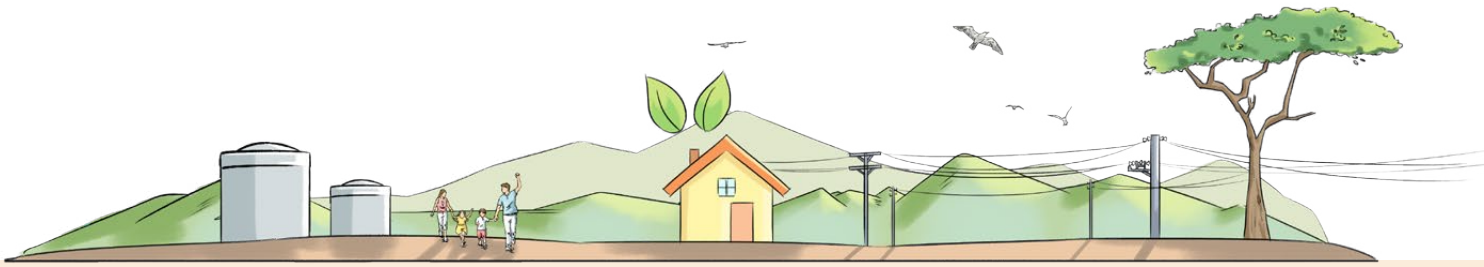
In November 2018, Zhou Chuangbin from the CGN Engineering won the honor of "China Skills Awards", the highest national award for skilled people. The "China Skills Awards" are the highest awards given by the Chinese government to the skilled workers in terms of their skills.

Zhou Chuangbin has joined the commissioning and operation of Daya Bay Nuclear Power Station since 1991. He has obtained numerous honors and patents, and the projects he participated in the R&D have won the 16th China Patent Gold Awards. In 2007, he became the first employee in the group to receive the "National May First Labor Medal".

Case Nuclear Engineers Won Good Places in the "Stars of Craftsmen" Competition in Shenzhen

On November 27, 2018, the "Stars of Craftsmen" vocational skills competition of the advanced maintenance of safety valve of industrial system, the 2018 Shenzhen skills competition organized by Shenzhen Human Resources and Social Security Department, concluded at Daya Bay Nuclear Power Base.

Craftsmen from various nuclear power companies competed in nuclear power technology. Through the strict examination and selection in the first round, a total of 51 top talents stood out and entered the final round. The competition comprehensively and deeply examined the contestants' knowledge, skills and experience. After a fierce final competition, Fu Bing, Hu Zhenhe and Yan Jichao from CGN Operations, as well as Dong Guangyu from Hongyanhe Nuclear Power Station, won the top four.



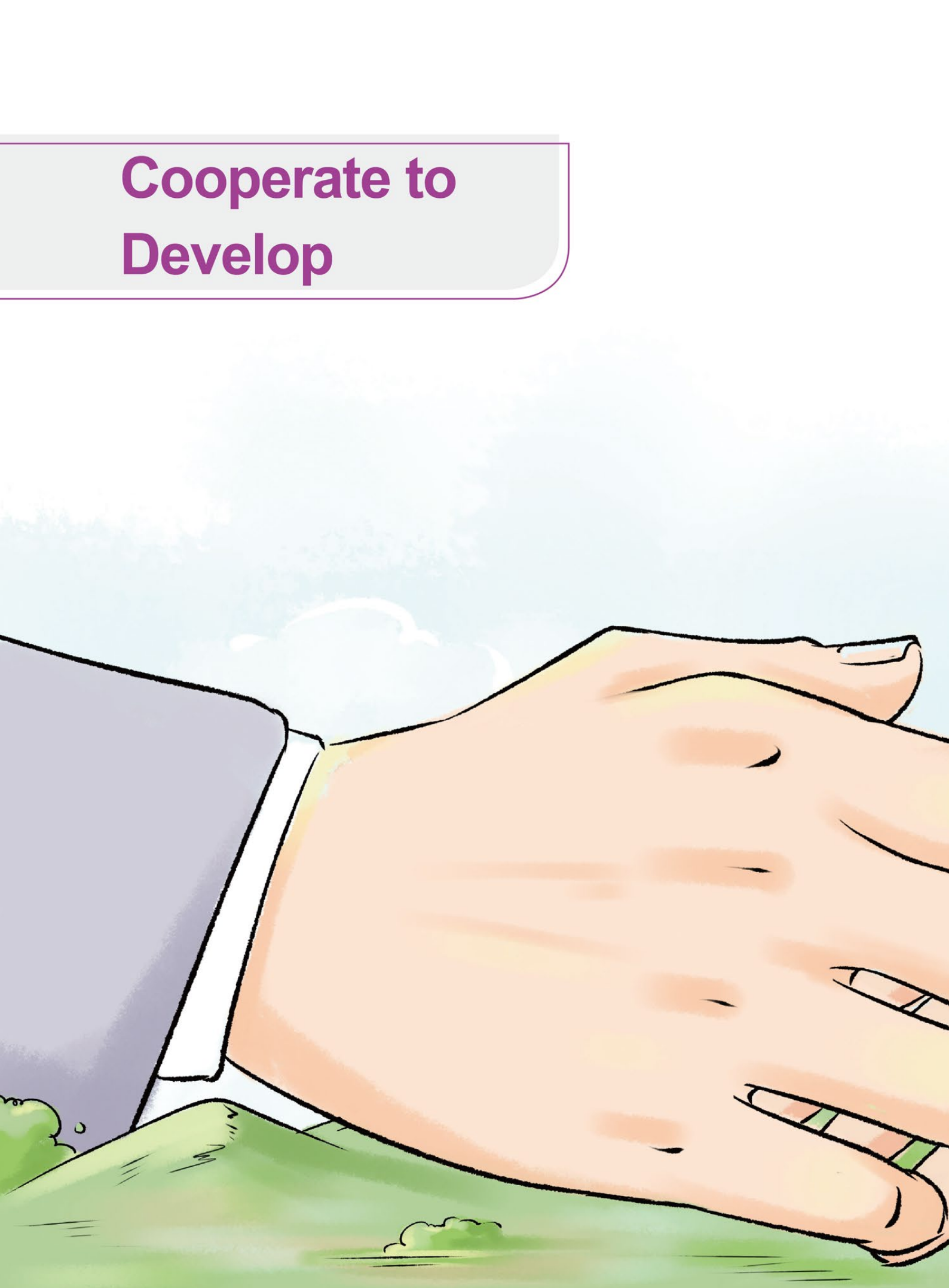
Case Young Nuclear Power Craftsman Realizes Dreams with Action

On January 6, 2019, Jia Zhengjun from DNMC was awarded the highest honor "Guangdong May First Labor Medal" by Guangdong Federation of Trade Unions, which aims to recognize his outstanding contributions to Guangdong's economy and society.

Jia Zhengjun entered Daya Bay Operation company in 2011. In the past eight years, he has grown to be a professional and rigorous operation craftsman with his assiduous study, craftsmanship, and perseverance to be a good "goalkeeper" safeguarding nuclear power units. It was his tireless work and research that made him stand out among many young operation talents, and he won the first place in the 2017 Guangdong Professional Worker Skill Competition - Competition of NPP Control Room Operators.

Jia Zhengjun has won many honorary titles such as "Technical Expert of Central Enterprise" and "Young Expert of Central Enterprise" and is an outstanding young talent in our nuclear power craftsman team.

Cooperate to Develop

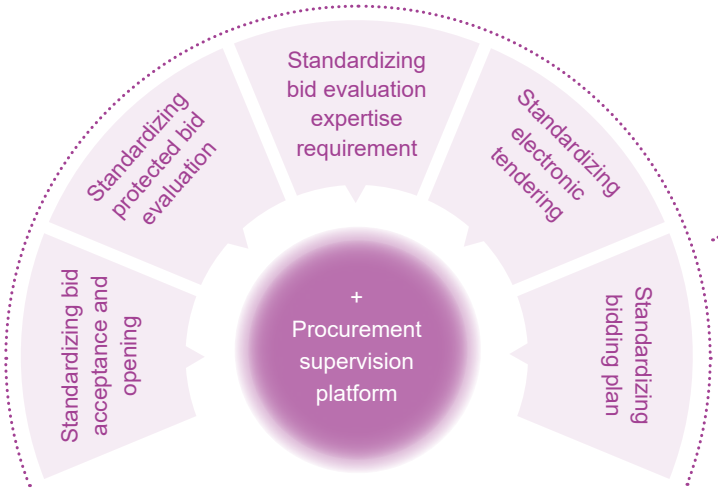


We work together to uphold the concept of mutually beneficial cooperation, and promote the development of domestic and international nuclear power industry. Embracing the call of our nation government on “Internet+”, we strive to build an efficient and transparent bidding platform, strengthen our supply chain management, and construct broad partnership with many enterprises and scientific institutions, which would increase communication and deepen cooperation, and work together to tackle challenges and foster the development of nuclear power industry.

Efficient and Transparent Bidding Platform

We strictly obey the laws and regulations such as the *Law of the People's Republic of China on Tenders and Bids*. We follow the rules of openness, fairness, justice and standard, advocate transparent sourcing and endeavor to continuously improve our tendering system and form a liability system in the overall procurement process.

We actively responded to the national *"Internet +" Bidding and Procurement Scheme*, built up and maintained the CGN E-commerce Platform (ECP), greatly improved the efficiency and transparency through the whole-process incorporation of electronic bidding and evaluation. Through the "Five Standardizations and One Supervision", we are able to uniformly accept bids and conduct fully protected bid evaluation. We have realized the transformation from "artificial control" to "artificial + computer control", enabling us to regulate bid evaluation and supplier management more effectively.



Five Standardizations and One Supervision

We have established an expert database consisting of more than 5,100 bid evaluation experts from 121 specialties. We supervise and prompt our experts to evaluate bids fairly and impartially through the bid evaluation restriction and incentive mechanisms.

Case **The Company Was Invited to The Second China "Internet +" Bidding Procurement Development Forum**

In order to facilitate the implementation of the national big data development strategy, we coordinate and promote the "Internet +" bidding and procurement activities and data sharing, promoting fair trading and sharing economy. Owning to our outstanding performance in the whole-process electronic bidding and online real-time supervision, we were invited to attend and share our experience in the name of "Integration, Interconnection, and Intelligence”, during which we introduced the construction process of informationized procurement system, five measures of “lean bidding”, our significant achievements, and we proposed our suggestions based on our practical experiences.

Supplier Management

We adhere to the concept of "Faithful and Trustworthy Service, Tolerant Entry and Strict Supervision, Mutual Evaluation and Recognition, and Win-Win Cooperation", and always attach importance to supply chain management and daily supervision.

In 2018, the Company introduced 504 new suppliers. By the end of 2018, we had a total of 7,014 qualified suppliers, including 6,318 in China, covering 31 provinces, autonomous regions and municipalities.

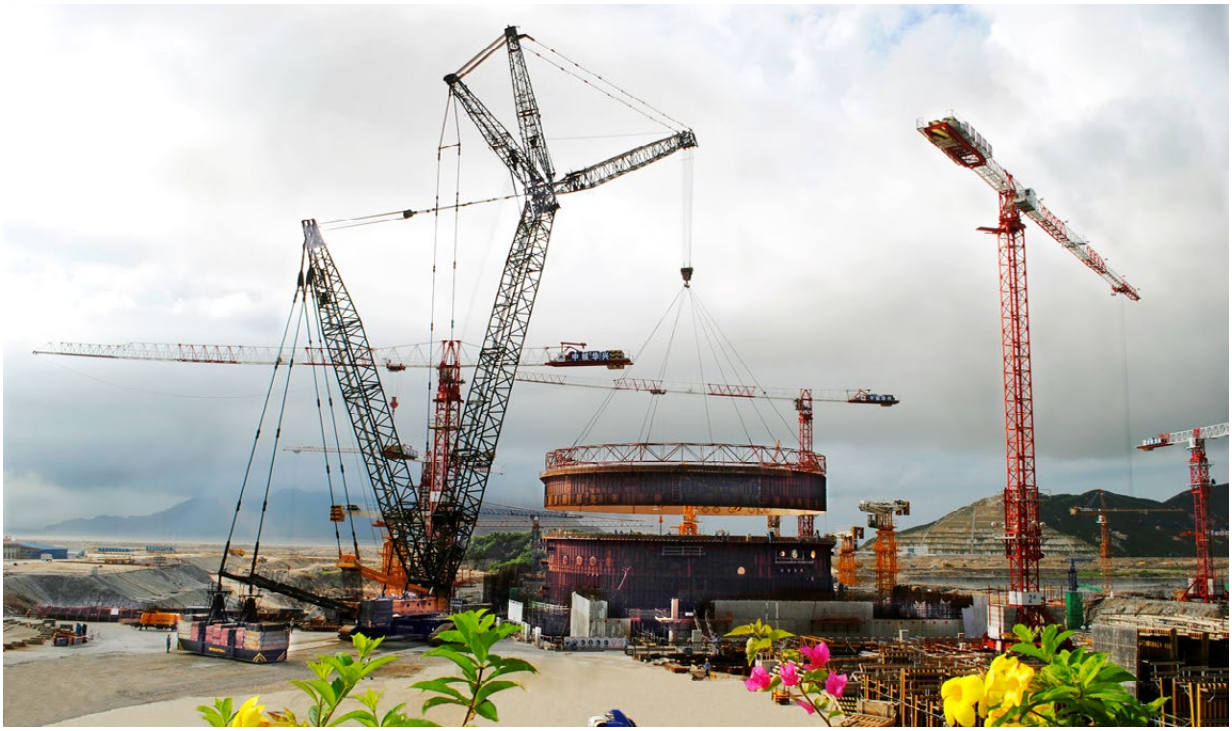
In 2018, the Company introduced

504 new suppliers.

Evaluation Standards

In accordance with relevant national nuclear safety laws and regulations, we have formulated strict supplier performance evaluation management methods, requiring that the comprehensive performance evaluation of suppliers should cover at least seven dimensions, including technology, quality, cost, delivery, service response, environmental protection and social responsibility, and such evaluation should be carried out regularly. Among them, the major subsidiaries and affiliates shall organize at least one performance evaluation annually for the suppliers whose contracts are being executed. The evaluation results will be used as the basis for supplier qualification and subsequent purchase evaluation.

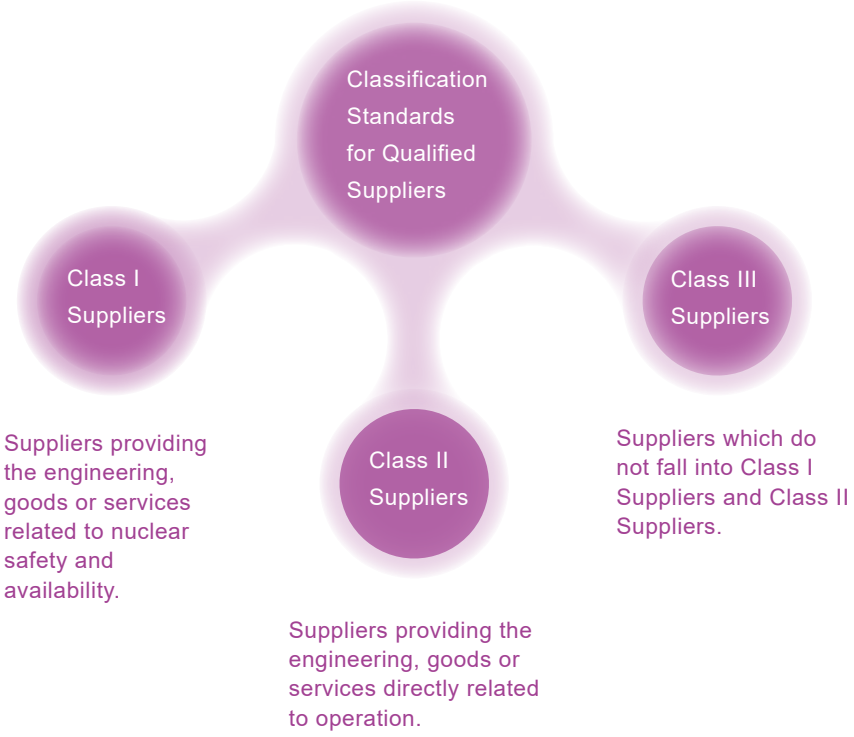
In order to further improve the environmental and social responsibility performance of the upstream and downstream parties of our supply chain, we pay increasingly more attention to the integration of environmental and social responsibility into supply chain management in the process of selecting suppliers. In accordance with the *Guidelines for the Management of the Green Industrial Chain of Nuclear Power Plants*, the Company promotes green procurement, requires suppliers to comply with the national environmental protection laws and regulations and strives to carry out production operations in accordance with the relevant standards and requirements of the ISO14001 environmental management system. The Company attaches great importance to environmental protection, promotes the use of environmentally-friendly materials, adopts environmental-friendly processes, increases recycling and utilization and protects the natural ecology. By comprehensively applying various environmental management systems and measures, the Company aims to reduce waste generation and its impact on the environment at the source.



Classifications in Evaluations

Suppliers are divided into three types - "Potential Suppliers", "Qualified Suppliers" and "Blacklisted Suppliers" respectively in the supplier management system. "Potential Suppliers" refers to suppliers out of qualification review or expired members on the Electronic Commerce Platform ("**ECP**"). "Qualified Suppliers" refers to suppliers that have met the requirements in the corresponding product qualification evaluation. "Blacklisted Suppliers" refers to suppliers with a record of improper bidding, bribery, material breach of contracts, or those who were responsible for major accidents or received serious negative evaluations. If a supplier is blacklisted, we will prohibit or restrict any business activities between the subsidiaries / affiliated companies and the supplier.

In accordance with the above principles, we would mark the "qualification review status" of suppliers in the ECP system and stipulate that suppliers who have signed contracts or orders with the Company must be Qualified Suppliers who have passed the qualification review. For Qualified Suppliers, we will also classify them into three categories. The procurement of engineering, goods or services are limited to the level of qualification and supply categories.



In 2018, the Company blacklisted five suppliers with serious misconducts.

Control Measures on Blacklisted Suppliers

(1) 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 was 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.

(2) When a Blacklisted Supplier turns into Potential Supplier after the ban, our subsidiaries and affiliated companies should use the supplier with due care.

(3) 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.

Evaluation Methodology

Qualified Suppliers each have their own implementation personnel and audit methods in the process of qualification assessment or review. For Class I and Class II Suppliers, the process of qualification assessment or review is carried out by relevant personnel in technology, safety quality assurance and business. For Class III Suppliers, this process is carried out by commercial personnel while technical personnel are also engaged in some circumstances. Regarding the source review, we require Class I suppliers and domestic suppliers introduced for the first time to undergo a source review; whilst for Class II and Class III domestic suppliers, we would adopt other approaches of qualification assessments or reviews according to the project budget.

Methods of Qualification for Suppliers in CGN Power

Document Qualification

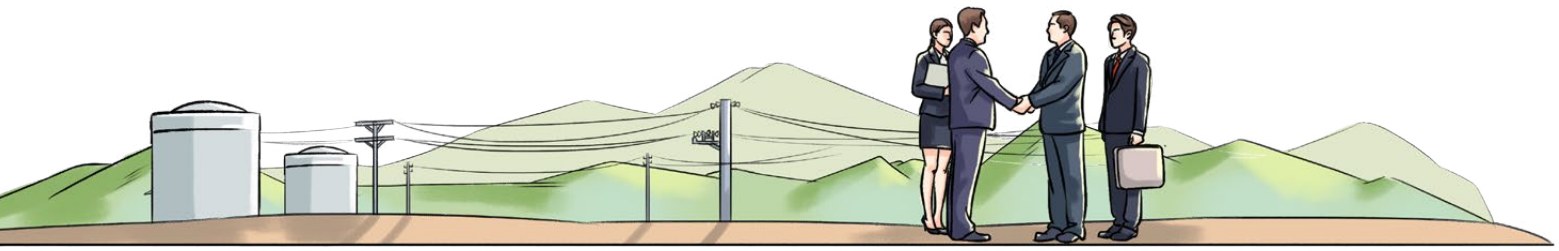
We send qualification documents to suppliers and judge whether they are qualified for bidding and performing the contract according to their return documents. The main evaluation factors include basic qualification, supplier performance, safety condition situation, quality, environment, technical level, financial situation, etc.

Source Qualification

For suppliers that require source qualification, it is necessary to visit sites where suppliers are based after they have passed document qualification; and to assess the parts of safety, quality, environment, technology and business where required. In accordance with the type of planned supplies, we adopt a corresponding strategy of assessment and draw up independent written comments.

Other Qualification

Due to the nature of different businesses, subsidiary companies and affiliates can freely choose to entrust external agencies to assess, simplify the course of qualification or use other special assessment methods in accordance with their implementation rules.



Deepening Relationship with Suppliers

We continue to carry out supplier training, and advocate that our partners seize new opportunities together with the Company, jointly face new challenges, continuously improve nuclear safety, actively foster the sharing of experience and resources, and collectively promote the sustainable development of the nuclear power supply chain.

Case The Second Supplier Conference of the Company Held in Shenzhen

On April 2, 2018, the second supplier conference with the theme of "New Journey, New Value" was held in Shenzhen, aiming to deliver new development concepts to suppliers in the new era. Focusing on the "Belt and Road" new economy, we strive to continuously improve the industry quality and safety management ability, and holistically integrate the industrial chain with suppliers to achieve win-win cooperation. The conference reviewed the history of joint growth of the Company and its partners, shared a series of measures taken by CGN Bidding Center since its establishment to start a new journey and realize new values, introduced supplier management and quality control policies and looked forward to the grand vision of building a green ecosphere and "going global" together.

Case Safety Director of CGN Engineering Visits Equipment Supplier to Conduct Assessment and Training

From July 18 to July 20, 2018, Safety Director of the CGN Engineering visited key equipment suppliers for inspections and assessments, conducted in-depth inspection on production lines, communicated with manufacturing personnel about the production quality, organized training on nuclear safety regulations and quality assurance system and promoted the improvement of equipment quality management of suppliers.

Multi-party Cooperation

We are actively pursuing cooperative opportunities with the government, enterprises, professional institutions and research institutes. Through the collaboration with associated agencies and other organizations, the Company makes full use of its advantages in the nuclear power industry and deepens its cooperation both inside and outside of the industry while learning best practices and experiences from domestic and foreign peers. We continue to improve and strengthen the peer review with international organizations such as IAEA and WANO, set up the direction of improvement from an external perspective, so as to achieve mutual benefits and co-development.

Case **CNPRI signed a strategic framework cooperation agreement with the National Center for Nuclear and Radiation Safety**

In February 2018, representatives from CNPRI met with the Nuclear and Radiation Safety Center of the Ministry of Ecology and Environment of the People's Republic of China to exchange views on strengthening cooperation between the two sides. Both parties reviewed the previous cooperation between, exchanged ideas on the subsequent cooperation in the R&D of small modular reactors, nuclear fuel, reactor engineering software, R&D and validation of domestic equipment, plasma capacity reduction, radiation protection and other aspects, and reached consensus on the idea of jointly building a joint R&D center. After the meeting, both parties signed a strategic cooperation agreement.

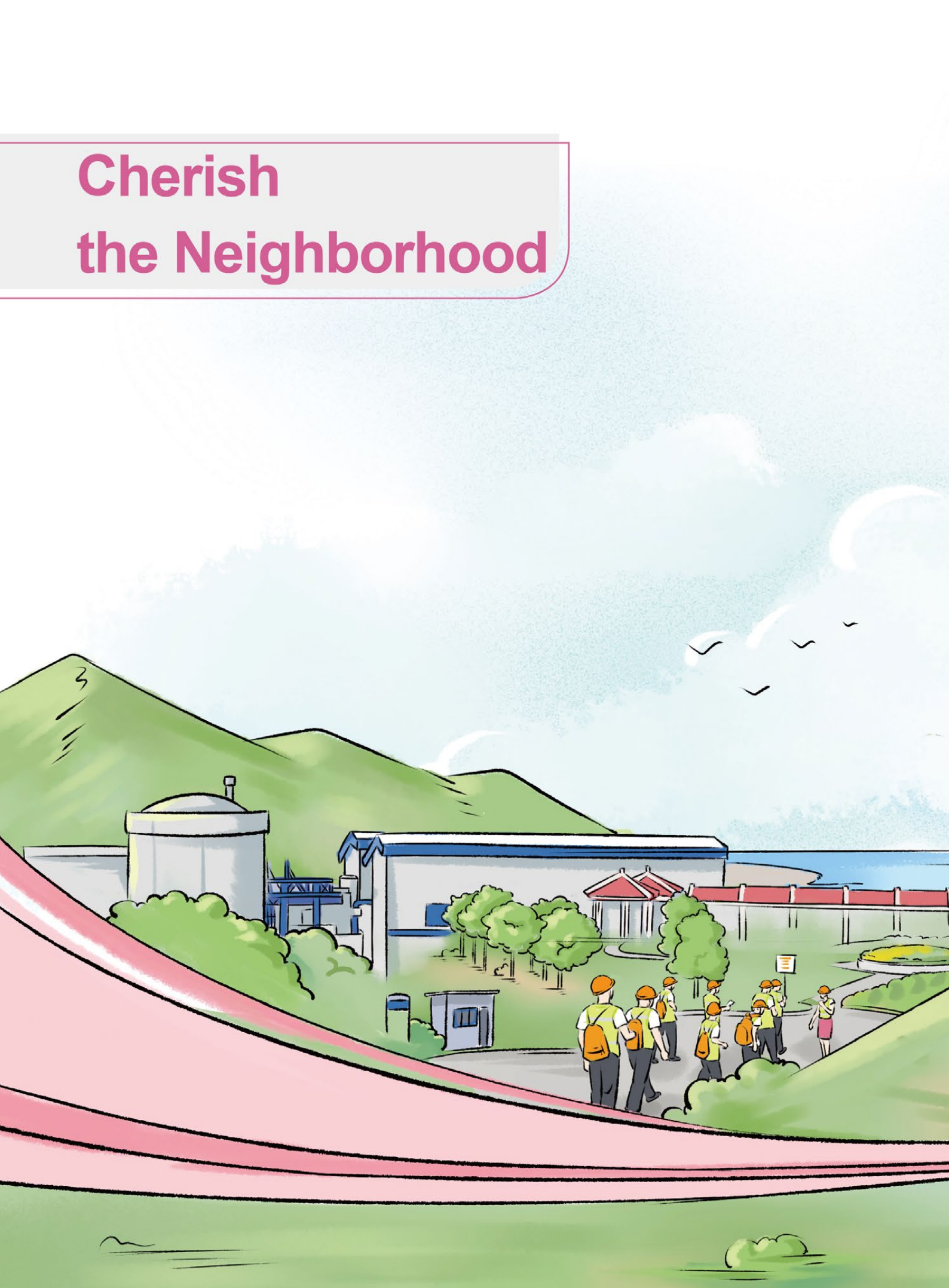
Case DNMC Held High-level Meeting with Key Partners

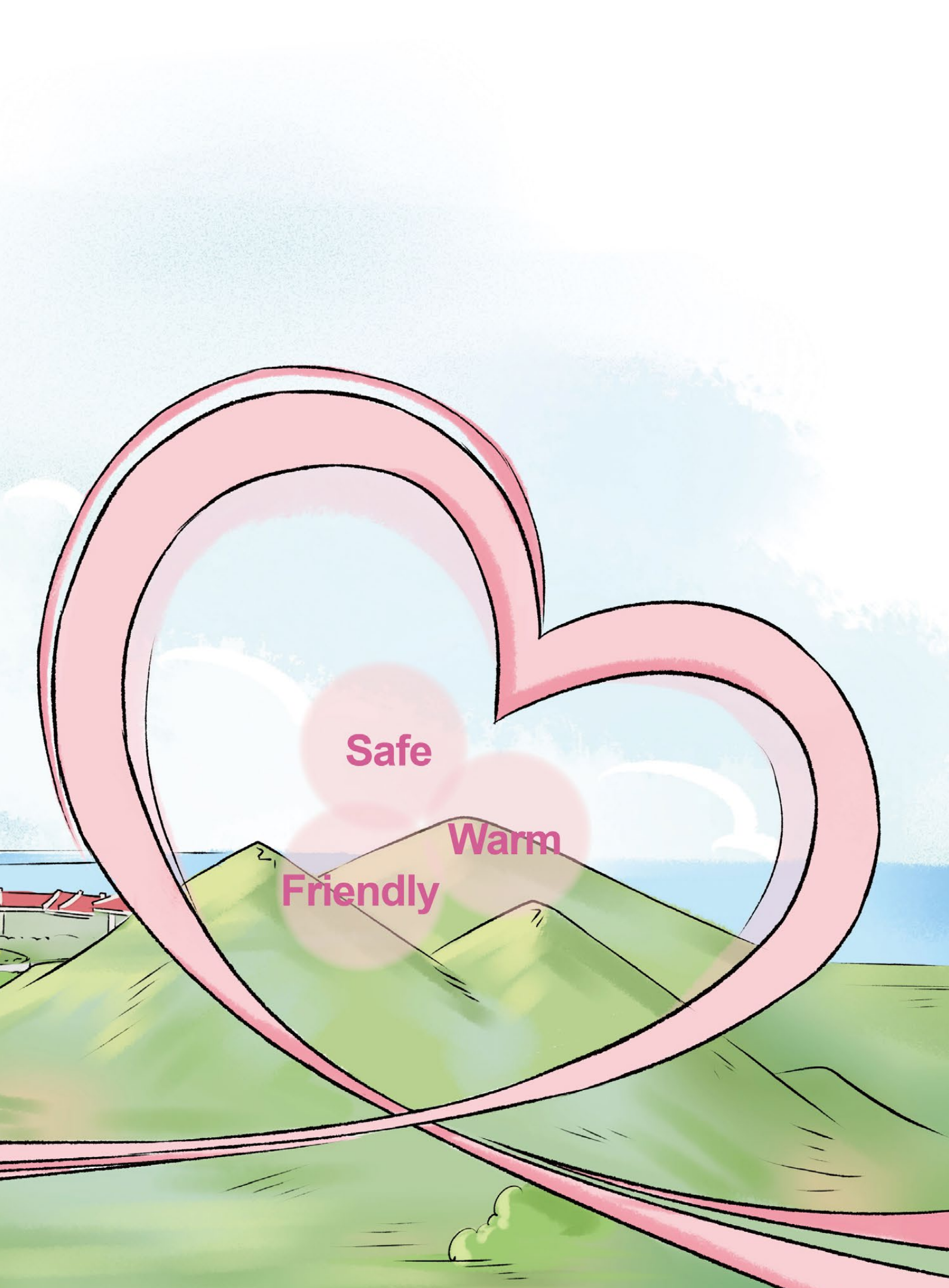
With the implementation of the nuclear safety law, regulatory control on nuclear power safety continues to tighten. Meanwhile, the intensifying market competition due to power market reform sets a higher requirement for our partners. On December 24, 2018, DNMC and 11 key partners held a high-level meeting at Daya Bay Base, during which they exchanged views in-depth on safety of NPPs in 2018, improvements on self-management of the partners and further improvements to be made on management, etc., laying a good foundation for win-win cooperation.

Case The Fifth International Nuclear Power Operation and Maintenance Conference Held at Daya Bay Nuclear Power Base

On September 5, 2018, the fifth international nuclear power operation and maintenance conference was held at Daya Bay Nuclear Power Base in Shenzhen. As is currently the only platform in Asia focusing on nuclear power operation and maintenance, this conference, with "sharing operational experience, promoting the development of technology, and setting up the industrial benchmarking" as the theme, aims to foster communication on nuclear power safety, economy, operational management and maintenance technology application, building the bridge of sharing and communications between domestic and international nuclear power operation and manufacturing companies. More than 700 delegates from over 220 companies from more than 20 countries and regions, including China, the United States, Britain, France, Russia, Canada and South Korea, attended the conference. The delegates represented government agencies, nuclear power operators, design institutes, inspection and maintenance services companies, operation and maintenance services providers, equipment suppliers and scientific research institutions, etc.

Cherish the Neighborhood

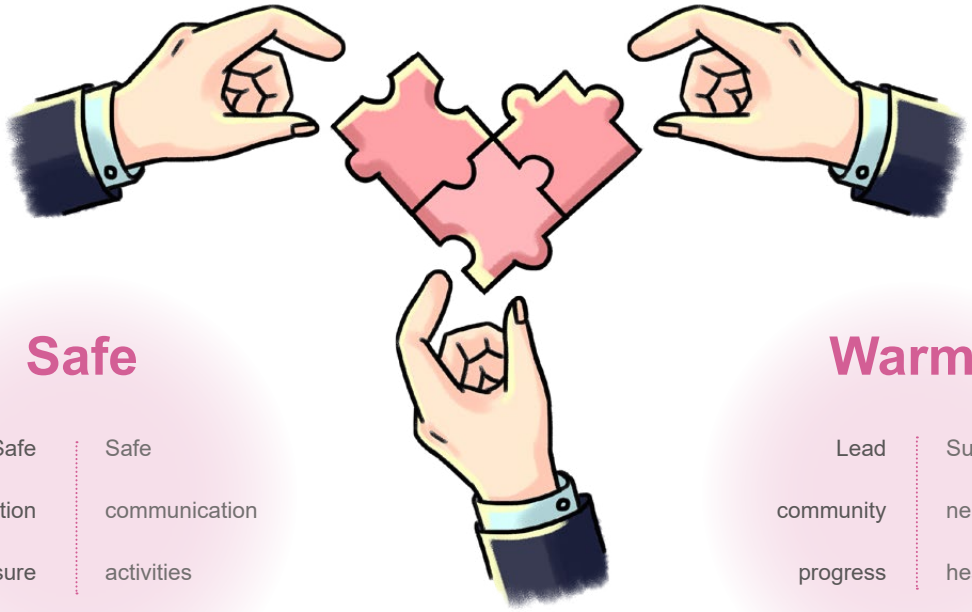



Safe
Warm
Friendly

Through safe and stable nuclear power operation, CGN Power has ensured the power supply for the production and living activities of tens of millions of people. In addition to the hard work of our employees, our success today relies upon the understanding and trust of the public. We also incorporate the concept of corporate social responsibility in the Company's development strategy and daily operations. Upholding the “Safe Neighborhood, Friendly Neighborhood and Warm Neighborhood” - “3N” community development idea, we eagerly participate in social practice and proactively communicate with the community to understand their development demands and contribute to a harmonious community.

3N Harmonious Community

N=Neighbor



Safe

Safe	Safe
information	communication
disclosure	activities

Warm

Lead	Support
community	neighbor
progress	health

Friendly

Protect	Promote
ecological	humanistic
environment	development

Transparent Information to “Safe” Neighborhood

We have constantly explored and improved the communication mechanism, provided unimpeded communication channels, maintained high information transparency, and continuously conducted public communication to deepen public understanding and trust in nuclear power.

Publicize Nuclear Power Operation Performance

To enhance the public's understanding and trust in the operation of NPPs, we are committed to increase transparency in information disclosure, establishing nuclear safety information reporting and disclosure system, and actively building a platform for communication with the community. In order to be closer to the public, we have communicated with the public through various means, such as press conferences, Weibo, WeChat and public open days. We respond to the public's major concerns about the development of nuclear power and ensured the public's right to know and supervise the safe operation of nuclear power.

Press Conferences	In 2018, the Company and nuclear power bases held 15 press conferences to announce major events in relation to our corporate development and construction and operation of NPPs.
Environmental, Social and Governance Report	We release Environmental, Social and Governance Report every year since 2015 to disclose our strategies, management, actions and performances in relation to sustainable development.
New Media	NPPs operated and managed by the Company have opened Weibo and WeChat accounts to disclose latest information.
Publicizing Operational Data on Websites	All NPPs publish monthly operation data and event information through the nuclear safety information column on websites, and all operation events above grade zero will be announced within two working days (72 hours during holidays).

Popularize Knowledge of Nuclear Power

As a nuclear power enterprise, the Company has been undertaking the responsibility of cultivating public knowledge of nuclear power. In addition to communicating with the public through traditional media and new media, we have set up nuclear power exhibition halls in all our NPPs. We have invited the public to visit the NPPs and arranged a series of activities in various forms to cultivate knowledge of nuclear power, promoting the development history of nuclear power, nuclear safety and the idea of carbon reduction and environmental protection. In addition to offline reservations for group visits, we also launched the online system for the public to apply for visiting NPPs since September 2018. Visitors only need one minute to complete the application online. By the end of 2018, the number of public visits to nuclear power bases has exceeded 700,000.

To better promote the public's understanding of nuclear power, we have also continued to promote the activities “nuclear science popularization on campus and in the classroom” (**“the Activity”**), to popularize nuclear power knowledge among primary and secondary school students in a vivid and interesting way, and to contribute to the cultivation of national reserve talents in nuclear science and technology. The Activity has been promoted in areas close to the NPPs, including Guangdong province, Liaoning province, Fujian province and Guangxi Zhuang Autonomous Region. As of December 31, 2018, more than 15,000 students from more than 150 schools have participated in the Activity.

14 permanent science exhibition halls

More than 700,000 public visitors visited our nuclear power bases

More than 500 certified nuclear science lecturers

More than 10,000 volunteers actively participated in promoting nuclear power

Over 15,000 students from more than 150 schools involved in the Activity

It only takes 1 minute to reserve a visit on our WeChat public account "Hebao Families"

Case **DNMC and Fangchenggang Nuclear Received 12 "China Nuclear Science Popularization Worker Award"**

On March 29, 2018, DNMC and Fangchenggang Nuclear received the honor of "China's Advanced Nuclear Science Popularization Unit" at the award ceremony of the 2017-2018 "China Nuclear Science Popularization Award" hosted by the China Nuclear Society. Yang Weizhi and Gao Yuanshun from DNMC and Hongyanhe Nuclear were awarded the "China's Advanced Nuclear Science Popularization Worker" .

China's Advanced Nuclear Science Popularization Unit and Worker, and other honors are high recognition by the industrial organizations for our work in science popularization. We will continue to innovate science popularization practices, improve the internal and external science popularization publicity network, strengthen the interaction and communication with the public, and constantly improve the public's recognition and acceptance of nuclear clean energy.

Case **HPR1000 Was Selected in the "National Brand Scheme" to Meet the Audience in the Large-scale Television Program**

On October 26, 2018, we signed a memorandum of cooperation with China Media Group on CCTV National Brand Plan - National Major Projects, a public welfare communication project. In the coming year, public welfare advertisement of CPR1000 will be broadcast on CCTV channels to demonstrate the achievements of China's development in nuclear power, and the front-line staff who devoted to nuclear power projects.The safety and performance of CPR1000 have reached the advanced level of the international third-generation nuclear power technology, and is economically advantageous.

In 2018, we further upgraded our responsibility communication, actively innovated channels of communication, and carried out transparent communication practices favored by the public.

CGN Power Public Open Day Held on August 7

On August 7, 2018, the sixth "August 7 Public Open Day" was held in Daya Bay, Taishan, Yangjiang, Ningde, Hongyanhe and Fangchenggang Nuclear Power Stations. The theme of the Public Open Day is "Vivid Demonstration of Clean Energy and Making Joint Efforts to Build a Beautiful China".

At Daya Bay Nuclear Power Base, the main venue of the Public Open Day, creative events such as "The Release of the First Robot for Nuclear Science Lecture ", "Green China Persons of the Year Appointed as Nuclear Science Ambassadors" and "The Establishment of Clean Energy New Media Alliance" were well received by visitors, the media and the public.

The First Robot Nuclear Science Lecturer Released

After more than half year's preparation, the first robot science lecturer in the nuclear power industry, Hebao, was officially unveiled on the Public Open Day. In addition to its cute appearance, the robot is also equipped with an interactive question-and-answer function featuring common knowledge of nuclear power. It not only transforms the complex knowledge of nuclear power into vivid and interesting language, but also combine science and technology with a likable voice, encouraging the public to communicate and interact through a more innovative and popular form of new media.

CGN Power Public Open Day Held on August 7

Green China Persons of the Year Appointed as Nuclear Science Ambassadors

"Green China Person of the Year" is an award given by the Chinese government for environmental protection. As of 2018, 75 individuals and groups across the country have been honored. Nine of the winners came to the "August 7 Public Open Day" and were appointed as "Nuclear Science Ambassadors". In the future, they will actively publicize the national strategy of green development and low-carbon development, actively participate in the popularization of clean energy activities such as nuclear power, and continue to promote the "Clean, Safe and Environmental-friendly" characteristics of nuclear power among the public.

Establishment of Clean Energy New Media Alliance Contribute to the Popularization of Nuclear Power

In order to maximize the effectiveness of communication and enable new media to play a greater role in public communication of nuclear power, we have teamed up with 10 influential new media platforms to form the first "Clean Energy New Media Alliance". The nuclear science cultivation platform of nuclear power "Hebao Families" went online in early 2018, becoming the first "leader" of the alliance for its accurate positioning and vivid and interesting science popularization contents for the public. On the site of the "August 7 Public Open Day", the person in charge of "Hebao Families" said that they would establish an alliance platform to conduct public communication in a diversified and multi-dimensional way, so that society can better understand clean energy such as nuclear power, and that clean energy can better serve the society.

Caring for People's Livelihood to "Friendly" Neighborhood

We continue to carry out activities such as caring for students, so as to facilitate the development of basic education in the areas of our business operations and fulfill corporate social responsibility.

In addition, while focusing on targeted poverty alleviation, we have deepened our understanding of the needs of poverty-stricken areas, donated funds and materials, participated in the construction of infrastructure, organized several nuclear power job fairs and volunteer activities, and exerted efforts to help local residents solve employment problems and improve their quality of life.

Case **28 Students from Peripheral Areas Won "Yangjiang Nuclear Young Eagle Scholarship"**

In order to promote the development of community basic education, Yangjiang Nuclear has established "Yangjiang Nuclear Young Eagle Scholarship" since 2014. By commending and rewarding students who have performed well in the annual college entrance examination of Yunbo village, we encouraged them to continue to study hard and contribute to the construction of their hometown in the future.

On August 28, Yangjiang Nuclear held the award ceremony of "Yangjiang Nuclear Young Eagle Scholarship" in 2018 to commend and reward 28 students who performed well in the college entrance examination and middle school entrance examination in nearby Yunbo village.

The Party Branch Secretary of Yunbo village believes that "Yangjiang Nuclear Young Eagle Scholarship" is the strong support of Yangjiang Nuclear for the development of education and plays an important role in the development of Yunbo village education. In recent years, the number of students admitted to universities has increased significantly.

Targeted Poverty Alleviation

In 2018 when China's poverty alleviation work has entered a crucial stage, CGN Power formulated poverty alleviation projects, helped strengthen infrastructure construction by providing funds, materials and employment opportunities, and contributed corporate strength to targeted poverty alleviation.

Case A Warm Gift from Yangjiang Nuclear Power Station in Freezing Winter

In order to help the poor in Kongtong village, Yangchun city, Guangdong province, and bring warmth to them, Yangjiang Nuclear has invested more than 9 million Yuan from 2017 to 2018 in helping and assisting the local people, completed 7 sponsorship projects, and carried forward 2 projects of industrial poverty alleviation, sponsored dilapidated housing renovation for 12 families, construction of 11 village stairs and renovation of 2 bridges, solved drinking water problems of 39 families, sponsored 1 school building renovation and 15 students in poverty, and provided medical assistance to 4 people in serious illness.

In order to provide better medical aids for the community, Yangjiang Nuclear Power Station and CGN Operations, together with the Municipal Chinese Medicine Hospital, carried out free clinical activities, provided free treatment and medicine delivery to local villagers. There were six departments including internal medicine and rheumatology, and most of the elderly villagers who arrived were suffering from rheumatic bone pain and hypertension. According to statistics, at present there are 130 poverty-stricken households consisting a total of 392 people in the village. Due to economic difficulties, these people could only suffer the pain and were not willing to spend money to see a doctor in the hospital. Since 2017, Yangjiang Nuclear has organized an annual medical service to the countryside to solve the problem of poor access to medical services.

On June 28, 2018, Yangjiang Nuclear won the title of the "Star of Donation" of the Guangdong Poverty Relief Day for its outstanding performance in targeted poverty alleviation.

Case Fangchenggang Nuclear Held Job Fair for Targeted Poverty Alleviation

Fangchenggang Nuclear adheres to the poverty alleviation strategy of “paying equal attention to funds, talents and employment in poverty alleviation” to accurately identify poor households around the NPP and solve the problem of employment. In the morning of March 23, 2018, Fangchenggang Nuclear Power Station and the government of Guangpo town jointly held the "Job Fair for Targeted Poverty Alleviation". Five companies under the management of Fangchenggang Nuclear Power Station provided 248 jobs of more than 30 professions and categories. A great number of people came to apply and consult for jobs. The special job fair was successfully held, and nearly 100 people registered to apply for jobs. It not only provided much-needed workers for all units of the NPP, but also provided employment platforms for the poor people, the relocated families due to the construction of NPP and the surrounding people, contributing to the realization of the goal of "Stable Employment for One Person and Poverty Alleviation for One Family".

Helping Communities to “Warm” Neighborhood

At the same time as the Company develops, CGN Power also adheres to the volunteer spirit of “Dedication, Love, Mutual Assistance and Progress” and are proactively involved in social public welfare undertakings. We strive to contribute to the economic development and civilization construction of the community. By the end of 2018, we have over 10,000 volunteers in total with 27,000 person-times participating in public welfare service and accumulative service time of over 35,000 hours.

CGN Engineering Volunteer Team

Voluntary Poverty Alleviation

- Assist in building "Egret’s Dream Bookstore"
- One-to-one donation to poor primary school students
- One-to-one assistance to minority students in poor counties

Volunteering with Expertise

- First volunteer team of water treatment experts in Shenzhen
- Disability assistance volunteer team
- Culture and activity serving volunteer team

Awards Obtained

- "Green and Future”: the "Four 100" best volunteer service projects of “Learning Leifeng” in China in 2018, the gold award of the Central Enterprise Youth Volunteer Service Project Competition, and the key cultivation project of "Yimiao Plan" in Guangdong province
- "We Blue Shenzhen”: cultivation and growth project of Guangdong “Yimiao Plan” and excellent project of Shenzhen
- Instrument Control Institute of the Design Institute: "Demonstration Area in Guangdong Province of Learn-from Lei Feng Activities"

Blue - Science Popularization

- Summer camp “Future Scientists”
- Served China International Nuclear Industry Exhibition, Beijing Science Fair, Shenzhen Hi-tech Fair and 2017 Asia-pacific Social Conference

Green - Environmental Protection

- "Green and Future" river conservation activities
- "Nuclear and You" joint coastline protection activities
- "Hiking for health and environmental protection” activity
- "Planting trees with big and small hands, protecting green water and mountains" tree planting activity
- Environmental protection and cleaning projects of urban parks and green areas

Red – Care and Love

- The "Arm-in-arm Blood Donation" project won the honor of "Gas Station of Love" and "Advanced Collective of Voluntary Blood Donation"
- Care activities for the elderly of nuclear power
- Caring for employees and family-themed activities

Case **Fangchenggang Nuclear Held Charity Activities to Encourage Donating Clothes**

In January 2018, Fangchenggang Nuclear launched a charity activity to donate old clothes. More than 400 people participated in the activity, and more than 3,000 pieces of clothes, mainly cotton clothes were collected. Recycled old clothes are sent to poor families, students and left-behind children by Fangchenggang Love Cube Association to bring them warmth in winter.

Case **Companies from Yangjiang Nuclear Power Station Held Chongyang Activities for the Elderly**

On October 16, 2018, the “Caring for the Elderly” team of Yangjiang Nuclear Power Base came to Dongping Nursing Home for the aged and the nearby Yunbo village to carry out various activities for the aged. On the day of the activity, Yangjiang Company engaged professional catering volunteers and made exquisite dim sum for the elderly. In addition, the team also entered many homes of the elder people in Yunbo village, communicated with the aged and spent the holiday together.

Outlook for the Future

Safe Development of Nuclear Power

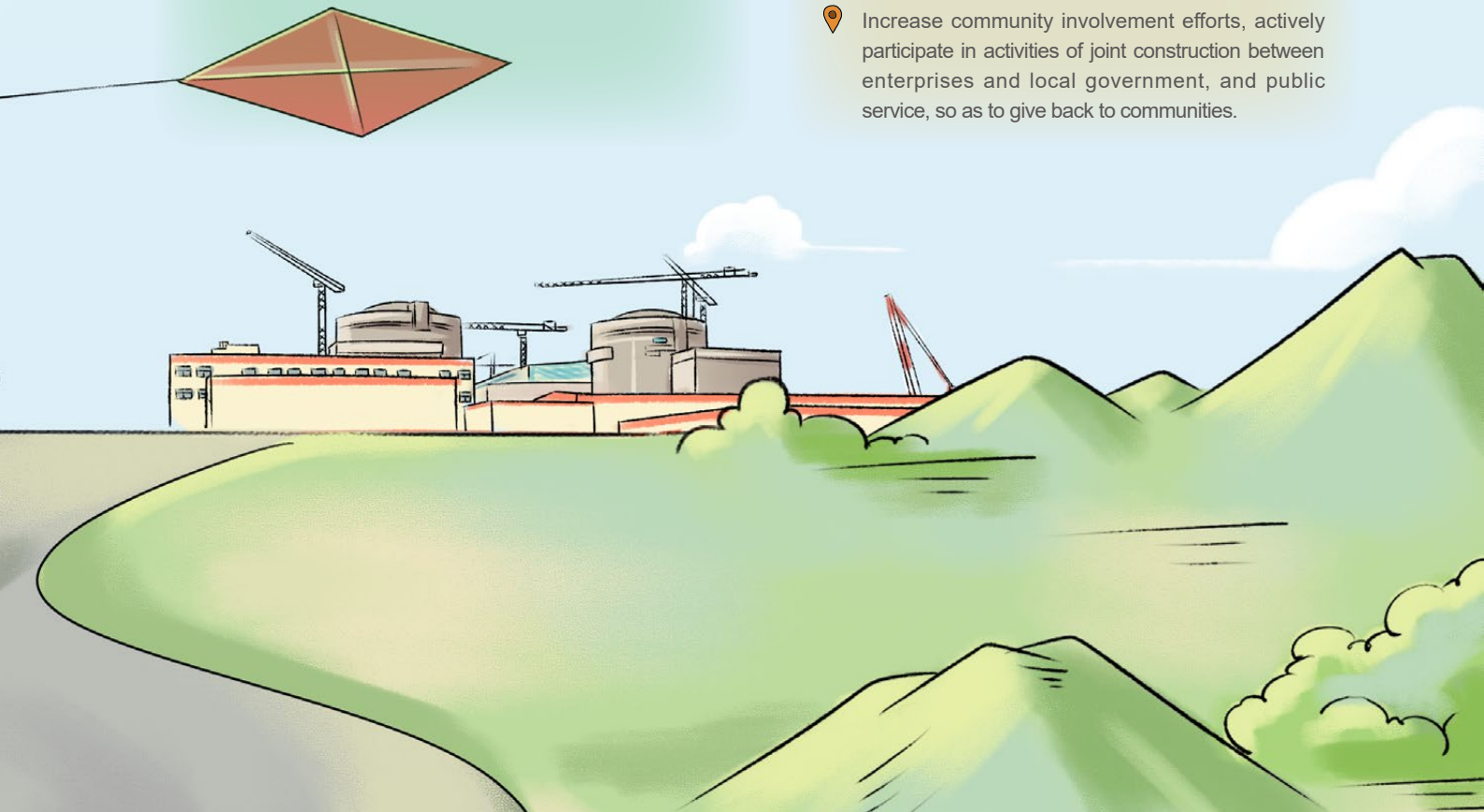
- Promote the construction of nuclear power units according to the plan, with safety and quality assurance as prerequisites.
- Fully implement actions and responsibility of nuclear power safety management to support the safe operation of nuclear power units in operation.
- Take full advantage of nuclear power industry, further enhance the safety performance of nuclear power units and advance corporate sustainable development by science and technology-led, market-oriented independent innovation driving new business, transformative application of innovative scientific and technological achievements and technological transformation.

Friendly Co-existence with the Environment

- Continuously advance the development of nuclear power energy and endeavor to generate more capacity.
- Enhance energy utilization efficiency, strengthen carbon management, reduce greenhouse gas emissions.
- Proactively practice environmental protection regulations, improve nuclear fuel efficiency, control and reduce pollutant emissions and lower the impact on the environment.
- Continuously carry out environmental monitoring, intensify the cooperation with research institutions and protect the wildlife around the Nuclear Power Bases.

Promotion of Common Development

- Improve talent training plans, enrich employee training forms and resources, optimize performance evaluation and promotion systems to stimulate the vitality of the employee and support employee growth.
- Enhance the mechanism construction on fair competition and supply chain anti-corruption; work more closely with nuclear power industry alliances and enhance the competitiveness of the nuclear power industry chain.
- Continuously implement transparent communication, invite the media and stakeholders to field trips of the Company and accept public oversight, enhance the public recognition and acceptance of nuclear power.
- Increase community involvement efforts, actively participate in activities of joint construction between enterprises and local government, and public service, so as to give back to communities.



List of Key Performance

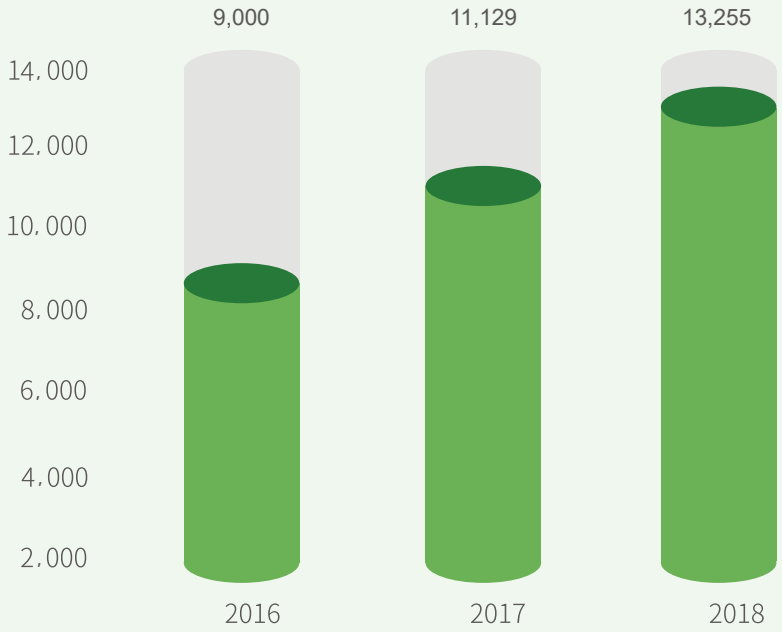
Safety

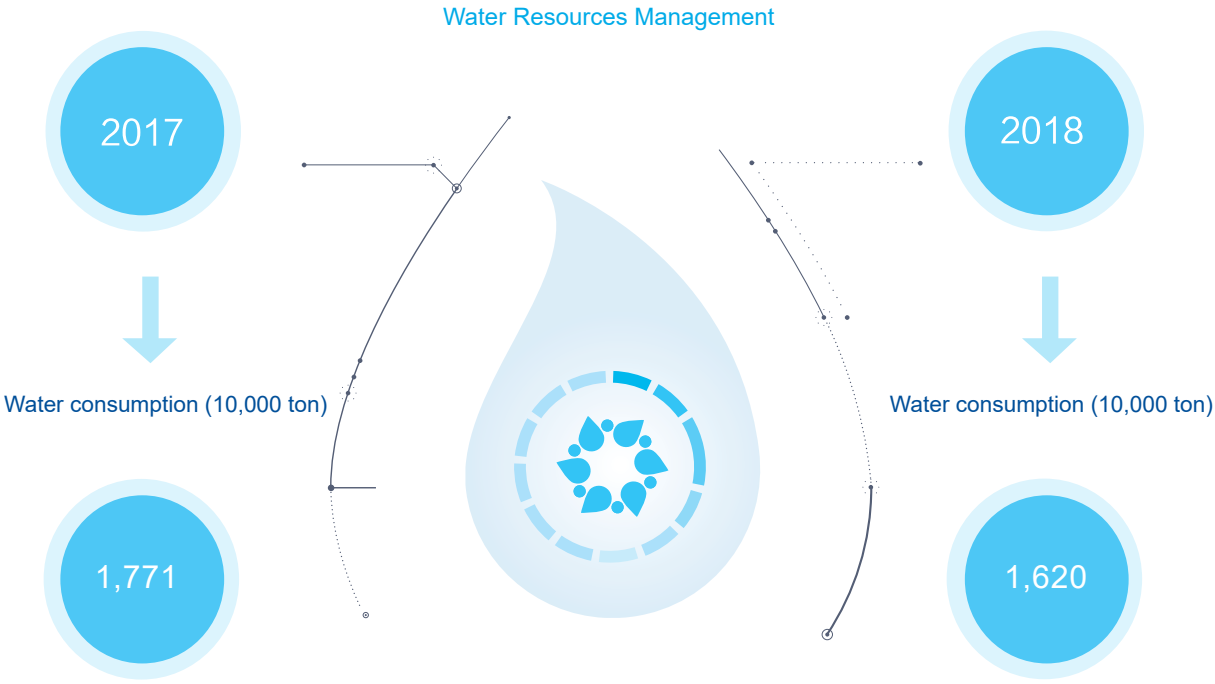
Item	Indicator		Performance Comparison 2017	Performance Comparison 2018
Nuclear Safety	Nuclear power generating units in operation (units)		20	22
	Percentage of advanced value achieved for WANO indicators of units (top 1/4)		73.75%	78.79%
	Unplanned automatic scram (times)		2	2
	Operation events * (times)	Level 2 or above nuclear events	0	0
		Level 1	0	0
		Level 0	16	5
Personal Safety (including employees and contractors)	Death (persons)		0	0
	Death rate per 100,000 persons in engineering construction**		0	0
	Serious injury (persons)		0	0
Fire Safety	Fire hazards		0	0
Radiation Protection	Accidental overexposure (cases)		0	0
	Loss of radiation sources (cases)		0	0
	Internal contamination accident (cases)		0	0

* Nuclear incidents are classified into seven levels in the INES published by IAEA according to their impact on (i) people and the environment, (ii) radiological barriers and control, and (iii) defense-in-depth. Level 1 to Level 3 are referred to as "incidents", while Level 4 to Level 7 are termed as "accidents". Events without safety significance are classified as "below scale/ Level 0".

** In 2017, a total of 138 million man-hours were spent on nuclear power projects. In 2018, a total of 117 million man-hours were spent on nuclear power projects.

Environment



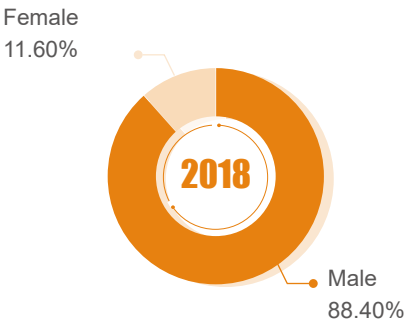


Society

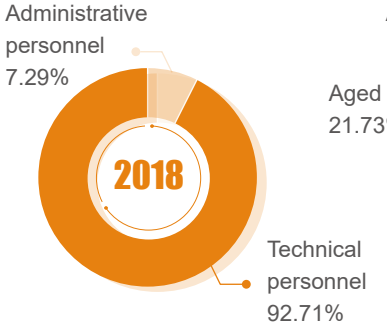
Total Number of Employees 18,663

Proportions of Different Types of Employees

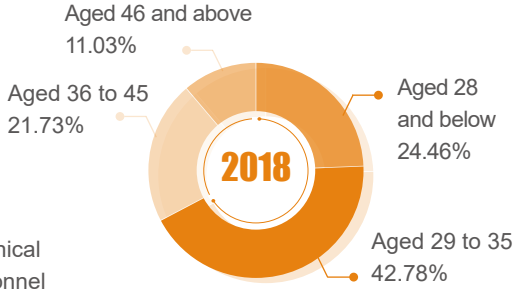
By Genders



By Types of Work



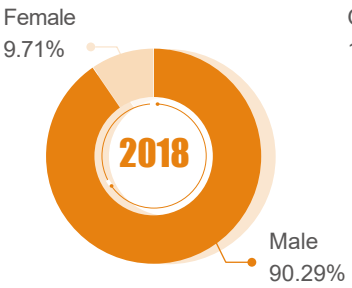
By Ages



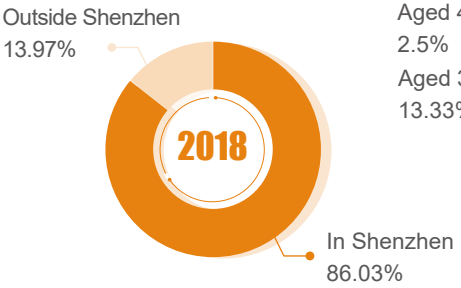
Employee Turnover

Employee Turnover Rate 3.05%

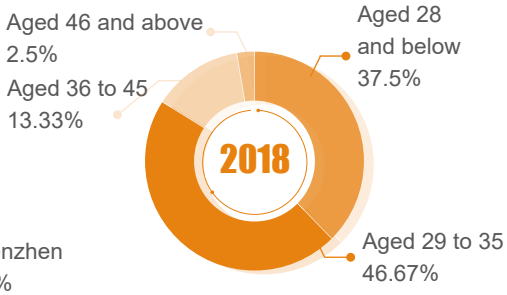
By Genders



By Types of Work



By Ages



2018 Employees Training Summary Table

Average training hours per employee (approximate)	179 hours
The training rate of senior managers	100%
The training rate of middle managers	100%
The training rate of male employees	100%
The training rate of female employees	100%

Public Welfare and Communication with the Public

Category	2017	2018
Total donations (10,000 RMB)	1867.44	1790.15
Volunteering hours	34,674	Over 35,000
News conferences	11	15

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 the SEHK. The table below provides a summary of the report compliance.

Aspect	Indicator No.	Indicator Description	Disclosures	Pages/ 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	●	P41-P48
	A1.1	The types of emissions and respective emissions data	●	P41-P46
	A1.2	Greenhouse gas emissions in total and, where appropriate, intensity	●	P42-P43
	A1.3	Total hazardous waste produced and, where appropriate, intensity	●	P45-P46
	A1.4	Total non-hazardous waste produced and, where appropriate, intensity	●	P42-P44 P46
	A1.5	Description of measures to mitigate emissions and results achieved	●	P41-P50
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	●	P42-P48
A2: Use of Resources	General Disclosure	Policies on the efficient use of resources	●	P43-P44
	A2.1	Direct and / or indirect energy consumption by type in total and intensity	●	P43-P44
	A2.2	Water consumption in total and intensity	●	P44
	A2.3	Description of energy use efficiency initiatives and results achieved	●	P43 P49-P50
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	●	P44
	A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced	This item is not applicable because our product is electricity	
A3: Environmental and Natural Resources	General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources	●	P41-P50
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	●	P41-P50

Aspect	Indicator No.	Indicator Description	Disclosures	Pages/ Remarks
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	●	P53-P55
	B1.1	Total workforce by gender, employment type, age group and geographical region	●	P54 P85
	B1.2	Employee turnover rate by gender, age group and geographical region	●	P54 P85
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	●	P21-P30 P55
	B2.1	Number and rate of work-related fatalities	●	P23 P83
	B2.2	Lost days due to work injury	●	P23
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	●	P55
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	●	P57-P60
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	●	P58 P85
	B3.2	The average training hours completed per employee by gender and employee category	●	P58 P85
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	●	P53
	B4.1	Description of measures to review employment practices to avoid child and forced labor	●	P53
	B4.2	Description of steps taken to eliminate such practices when discovered	This item is not applicable because no child labor or forced labor occurred	
B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain	●	P63-P70
	B5.1	Number of Suppliers by geographical region	●	P64
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	●	P64-P66

B6: Product Responsibility	General Disclosure	nformation 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.	●	Health and Safety: P21-P30 Privacy: P31 The product is electricity, advertising and labelling are not applicable
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	This item is not applicable because our product is electricity	
	B6.2	Number of products and service-related complaints received and how they are dealt with	●	P31
	B6.3	Description of practices relating to observing and protecting intellectual property rights	●	P36
	B6.4	Description of quality assurance process and recall procedures	●	P24-P31 Product recall is not applicable because our product is electricity
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	●	P31
B7: Anti-corruption	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	●	P14
	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	●	P14
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	●	P14
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	●	P73-P80
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	●	P73-P80
	B8.2	Resources contributed (e.g. money or time) to the focus area	●	P8 P73-P80 P85

Feedback Form

Dear readers,

Thank you for reading the 2018 Environmental, Social and Governance Report published by CGN Power Co., Ltd. In order to provide you with more valuable information, and for our improvement in performance, capacity and fulfilment of corporate social responsibility, you are invited to complete the survey below via email, fax or mail. We eagerly look forward to your precious opinions.

Our Contact details:

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

	Very good	Good	Acceptable	Bad	Very Bad
Our efforts and influence in economic, environmental and social aspects highlighted in this report	☐	☐	☐	☐	☐
Clarity, accuracy and completeness of information and indicators disclosed in the report	☐	☐	☐	☐	☐
Readability from the perspective of content layout and design of the report	☐	☐	☐	☐	☐

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

What additional information would you expect to be provided in this report?

Do you have any suggestions for our future publications of Environmental, Social and Governance Report?

This report is printed on environmentally friendly paper

Natural Energy Powering Nature

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