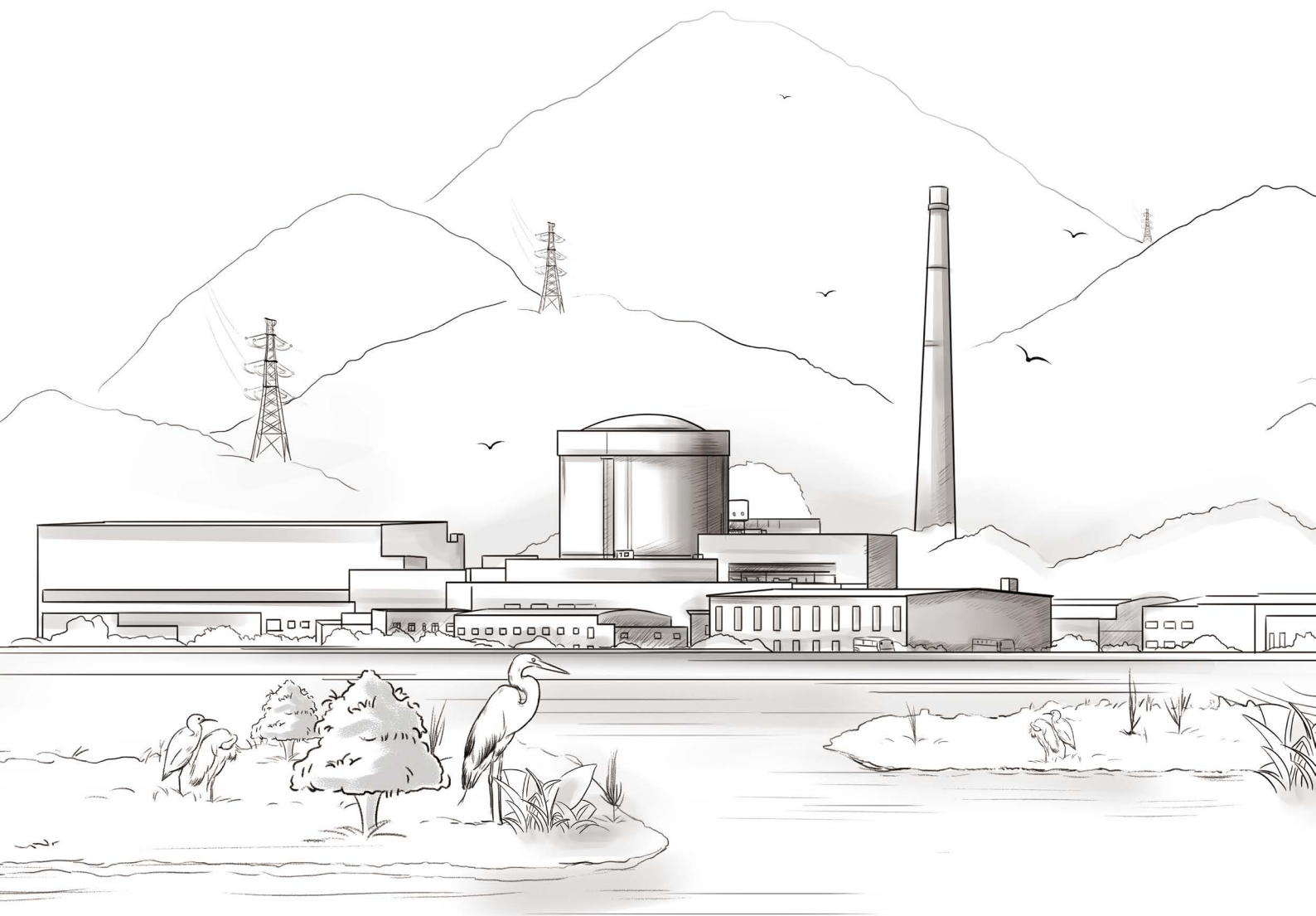




中国核能电力股份有限公司
China National Nuclear Power Co., Ltd.



2019

China National Nuclear Power Co., Ltd.
Environmental Social and Governance Report

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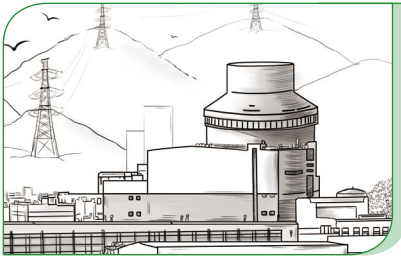
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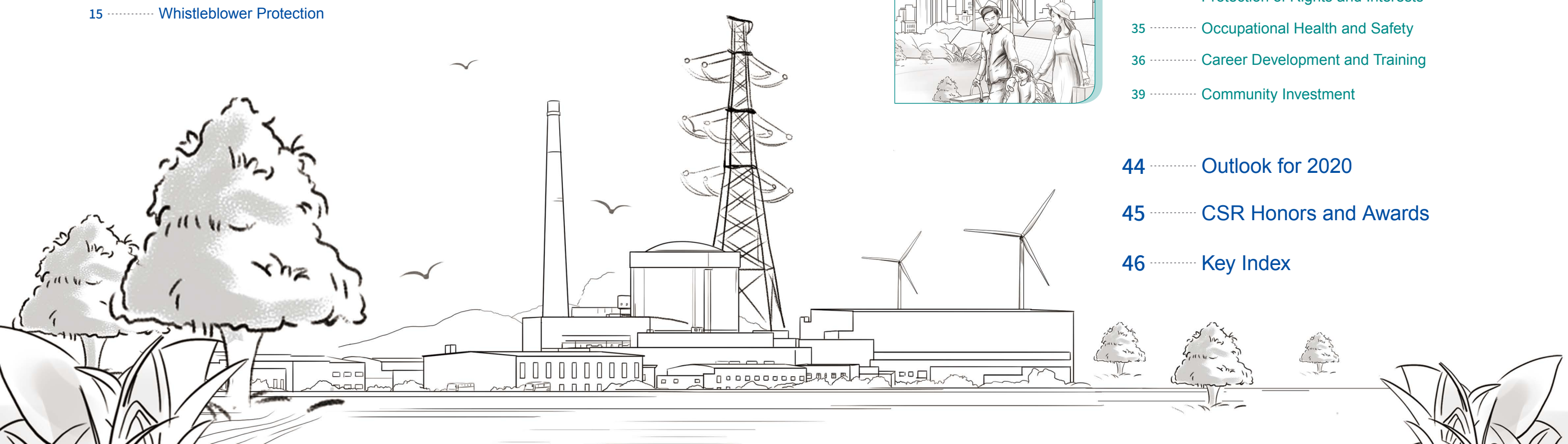
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Letter to Shareholders

Dear Shareholders,

The year 2019 marked the 70th anniversary of the founding of the People's Republic of China, and was a crucial year to achieve the first Centenary Goal of building a moderately prosperous society in all respects, which was also the fourth year since CNNP went public. In 2019, we stayed true to our founding mission, comprehensively implemented the guiding principles of the fourth plenary session of the 19th CPC Central Committee, practiced the new development philosophy, and drew up an ambitious blueprint for remaining true to our original aspiration and achieving innovation-driven development with an enterprising spirit and firm actions.

In 2019, we continuously improved corporate governance. Based on the targets and requirements in our corporate development strategy, we focused on the strategy of "large-scale, standardized and internationalized development", building the Decision-making System Composed of "the Articles of Association, Three Regulations and Four Rules", and adopted the "3655" management system to optimize our business layout, coordinate different tasks, and improve our management capacity. We strengthened risk management to ensure the sound operation by building a compliance management structure featuring division of responsibility, collaboration and coordination, and a comprehensive and multifaceted "macro-supervision" system of "prevention, control and accountability". In 2019, we won the honors of "Enterprises with Outstanding Contribution to the 70-year Development of the People's Republic of China since Its Founding" and "Best Investor Relations (Team) Award", and our information disclosure practices have been rated A by the Shanghai Stock Exchange for four consecutive years.

In 2019, we promoted green development. By continuously improving the environmental management system, enhancing resource utilization, and reducing emissions, we accelerated ecological progress. Guided by the development path of "focusing on five major sectors with nuclear energy as core business, expanding presence in both domestic and global markets, and attaching equal importance to industrial activity and financing", we actively fostered the development of nuclear energy and other clean energy and the application of new energy technologies to provide people with more sufficient and steady supply of clean and low-carbon energy. In 2019, our nuclear power units totally generated 136.214 TWh of electricity safely, which, as compared with coal-fired power generation, was equivalent to reducing 54.4856 million tons of standard coal consumption, and cutting CO₂, SO₂ and NO_x emissions by 135.8054 million tons, 4.0864 million tons and 2.0432 million tons respectively.

In 2019, we made progress with stakeholders and contributed to social harmony. Through cultivating technical staff, skilled workers and management personnel, selecting top talents, and training key production personnel and inter-disciplinary management personnel, we strived to build the best team. Committed to providing support for poverty alleviation by Party leadership, industry development, educational support, project construction, vocational training, and sales of agricultural products, we sent 11 CNNP officials to 10 targeted villages, and invested 6.85 million yuan for poverty alleviation, so as to win the battle against poverty.

In future, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, CNNP will uphold the new development philosophy that features innovative, coordinated, green, open and shared development, follow new trends and seize new opportunities to make new progress in nuclear energy development in the new era. We will pursue excellence with a high sense of responsibility and work tirelessly to build a country with strong nuclear power.

Chairman and Party Secretary, CNNP
Chen Hua



General Manager and Deputy Party Secretary, CNNP
Zhang Tao




About Us

Company Profile

Founded on January 21, 2008 and headquartered in Beijing, China National Nuclear Power Co., Ltd. (SSE: 601985) is one of the largest nuclear power operators in China, which is jointly invested by its controlling shareholder China National Nuclear Corporation (CNNC), China Three Gorges Corporation(CTG), China Ocean Shipping (Group) Company (COSCO), and China Aerospace Investment Holdings Ltd. Its main business scope covers development, investment, construction, operation and management of nuclear power projects and supporting facilities. The Company is also engaged in investment and development of clean energy projects, investment and investment management of power transmission and distribution projects, research of safe technologies for nuclear power operation, related technical and consulting services, and electric power sales.

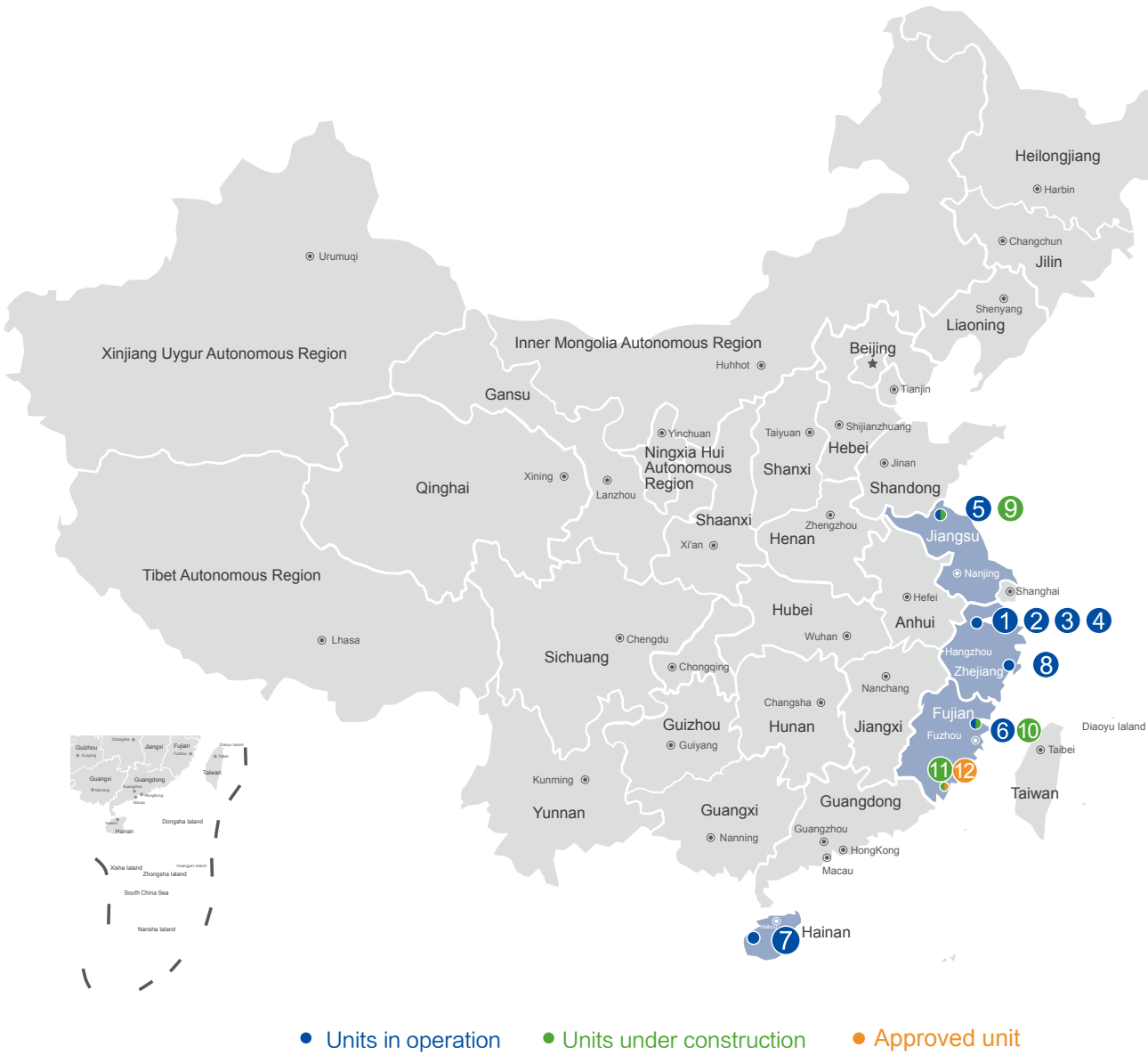
On June 10, 2015, CNNP went public and became the first nuclear power company to issue A-shares. As of December 31, 2019, CNNP had 28 holding subsidiaries and one joint venture and nine companies with direct investment from CNNP. Its total assets reached 340 billion yuan. There were 21 controlling nuclear power units in operation, with a combined installed capacity of 19.112 GW, and five nuclear power units with a combined installed capacity of 5.77 GW were under construction.

1	Qinshan Nuclear Power Plant No.1	Type of reactor: PWR CNP 300 Rated power: 1X330MWe	First nuclear power plant ever built in the Chinese mainland, hailed as "national glory"
2	Qinshan Nuclear Power Plant No. 2	Type of reactor: PWR CNP 600 Rated power: 2X650MWe 2X660MWe	First large commercial nuclear power plant independently designed, built, operated and managed by a Chinese company
3	Qinshan Nuclear Power Plant No. 3	Type of reactor: HWR CANDU700 Rated power: 2X728MWe	China's only commercial HWR nuclear power plant
4	Fangjiashan Nuclear Power Plant	Type of reactor: PWR CNP1000 Rated power: 2X1089MWe	One of the first group of 1 GW reactors independently designed, manufactured, constructed, and operated by a Chinese company
5	Jiangsu Nuclear Power Plant	Type of reactor: PWR VVER1000 Rated power: 2X1060MWe 2X1126MWe	A model of China-Russia cooperation
6	Fuqing Nuclear Power Plant	Type of reactor: PWR CNP 1000 Rated power: 4X1089MWe	One of the first group of 1 GW reactors independently designed, manufactured, constructed, and operated by a Chinese company
7	Hainan Nuclear Power Plant	Type of reactor: PWR CNP 600 Rated power: 2X650MWe	Southernmost nuclear power plant as well as the first nuclear power plant to be built in the minority-inhabited areas in China
8	Sanmen Nuclear Power Plant	Type of reactor: PWR AP1000 Rated power: 2X1250MWe	The world's first AP1000 three generation nuclear power unit
9	Jiangsu Nuclear Power Plant Units 5 and Unit 6	Type of reactor: Improved PWR M310 Rated power: 2X1118MWe	Final nuclear power project in China that started construction during 2011-2015
10	Fuqing Nuclear Power Plant Units 5 and Unit 6	Type of reactor: HPR1000 Rated power: 2X1161MWe	The world's first Hualong One nuclear reactor (Hualong One is a third-generation reactor model independently developed by a Chinese company)
11	Zhangzhou Nuclear Power Plant Unit 1	Type of reactor: HPR1000 Rated power: 2X1212MWe	The bulk production of the "national business card" Hualong One reactor goes well and strives to create a "Clean Energy Park"
12	Zhangzhou Nuclear Power Plant Units 2	Type of reactor: HPR1000 Rated power: 2X1212MWe	The bulk production of the "national business card" Hualong One reactor goes well and strives to create a "Clean Energy Park"

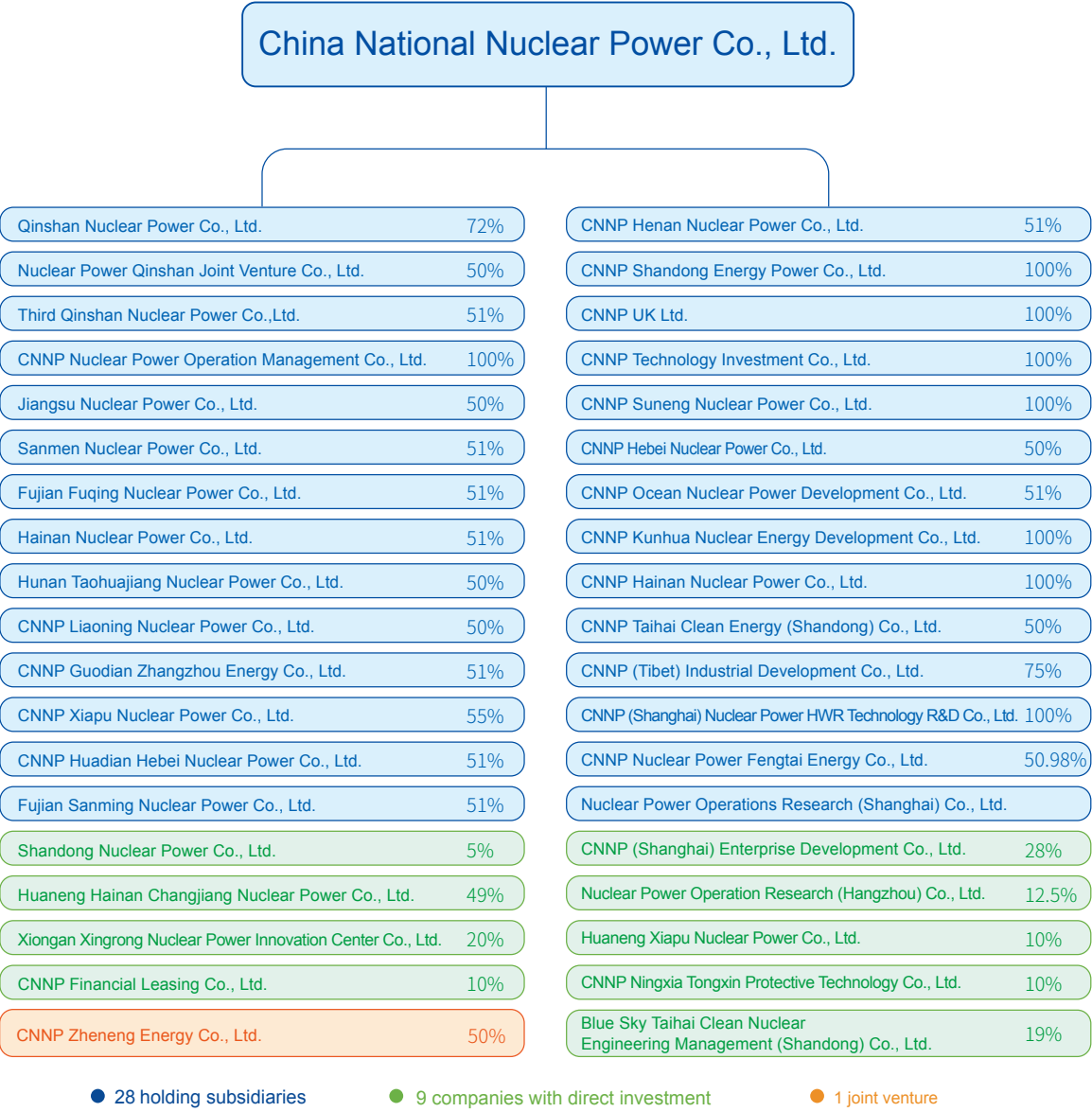
● Units in operation

● Units under construction

● Approved unit



Nuclear power units controlled by CNNP

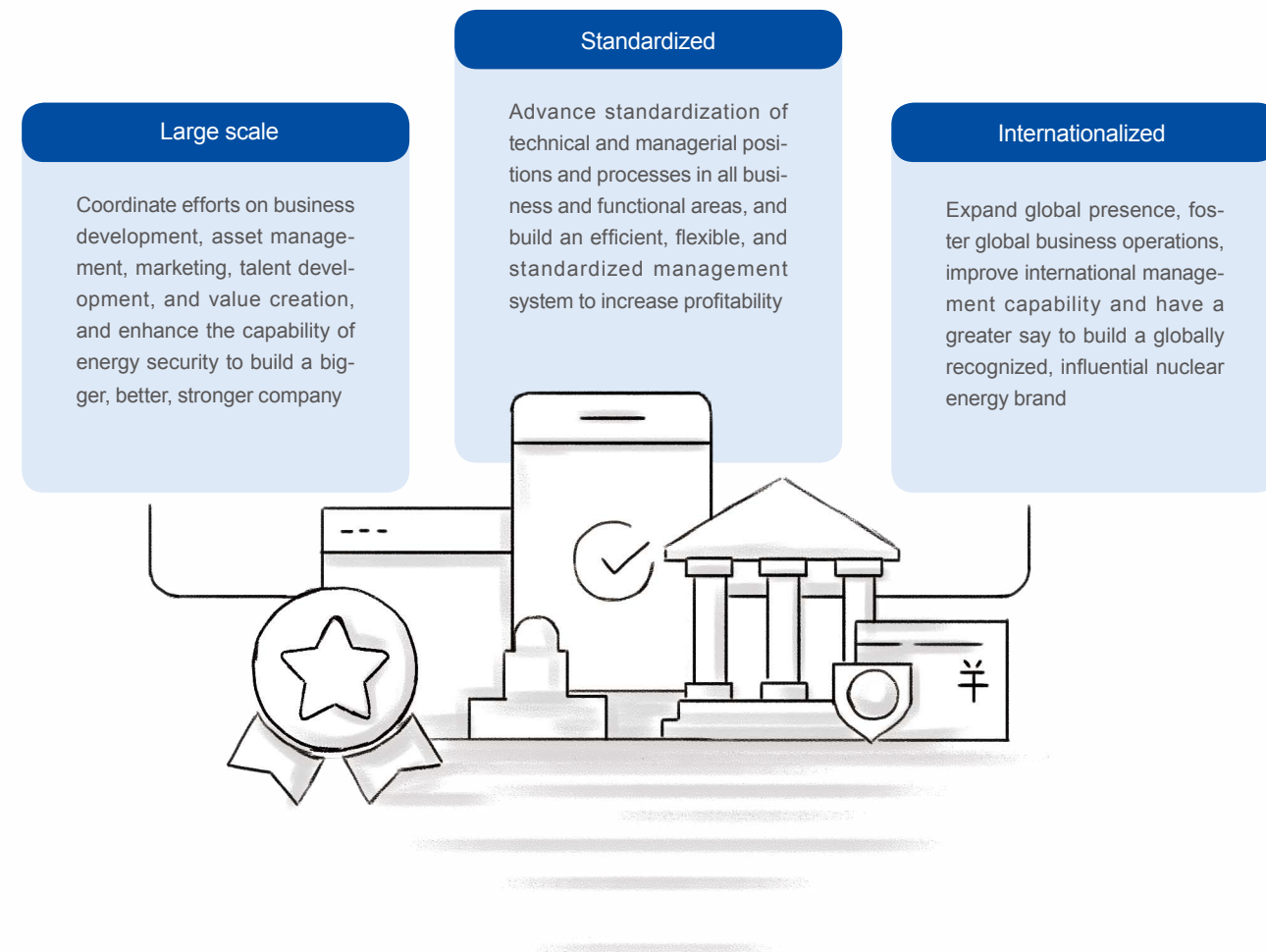


Key Financial Indicators (in billions of yuan)



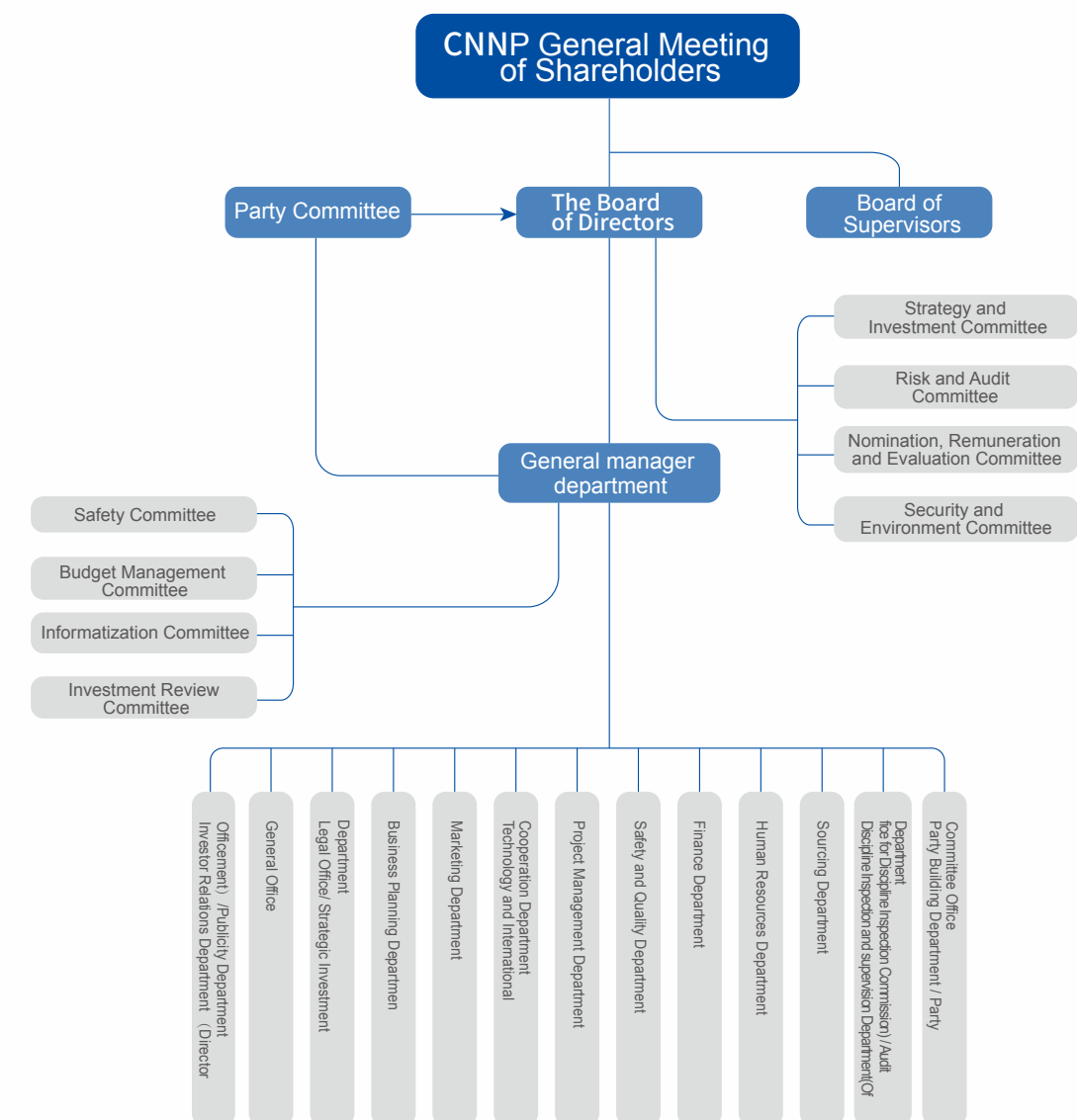
Strategy and Governance

Development Strategy



Governance Structure

In strict accordance with Chinese laws and regulations, such as the *Company Law* and the relevant provisions of the *Articles of Association*, CNNP establishes a governance structure composed of the General Meeting of Shareholders, the Board of Directors and specialized committees, the Board of Supervisors and senior management. All of the organizations orderly promote the related work and steadily improve the Company's governance capacity to ensure the sound operation of the Company.



Corporate Governance Structure

There are four committees under the Board of Directors: the Strategy and Investment Committee, the Risk and Audit Committee, the Nomination, Remuneration and Evaluation Committee, and the Safety and Environment Committee. They are responsible for sound operation of the Company by better governance capacity.

According to the *Rules for Implementation* of the Risk and Audit Committee under the Board of Directors, the independent directors in the committee shall be a majority of its members. At least one independent director shall be an accounting professional and a member familiar with legal business. The chairman should be an independent director with professional experience in accounting or financial management. The current chairman of the Risk and Audit Committee is Bai Ping, an independent director who has the qualification of senior accountant and certified public accountant, and has held the positions related to accounting or financial management for a long time; Yu Jinhui, a member of the committee, has held the positions related to law.

Risk and Audit Committee

The committee communicates with external auditors, verifies external audit and supervises internal audit. It ensures the effectiveness of risk management in all respects and makes decisions on major risks. It is also responsible for establishing and evaluating the internal control system, and giving risk analysis and warning for major projects and investments.

Nomination, Remuneration and Evaluation Committee

The committee selects board directors and senior executives, and gives opinions and suggestions on their evaluation and remuneration.

Strategy and Investment Committee

The committee conducts research and makes suggestions on mid- and long-term development strategies and major investment decisions of the Company.

Safety and Environment Committee

The committee supervises the safety and environment protection performance and gives sensible suggestions for the Company.

Governance System

The Company has taken steps to improve the decision-making process and improve the modern corporate governance system under which "the Party committee plays a leading role, the Board of Directors makes strategic decisions, and the management is responsible for day-to-day operations." Measures have been taken to improve Articles of Association, Rules of the General Meeting of Shareholders, Rules of the Board of Directors, and other corporate systems to ensure the General Meeting of Shareholders, the Board of Directors, and the Board of Supervisors perform their duties and obligations faithfully.

The Company sets binding indicators in safety, environmental protection and other aspects to assess the management, and ties the assessment results to their salary. In 2019, for the first time, the Company organized some directors, supervisors and senior executives to increase their holdings of the Company's shares to fully stimulate CNNP's management vitality.

Board of Supervisors

The third board of supervisors is composed of **6** members.

Including **2** employee representatives.

General Meeting of Shareholders

In 2019, we held **2** general meetings of shareholders on the sound development of the Company.

The organization, submission of proposals, notification, convening and voting of all meetings were in compliance with the Articles of Association and other regulations of the Company.

Board Independence

The Company has an independent board of directors composed of **5** full-time directors from its controlling shareholder CNNC.

1 nominee director from Zhejiang Zheneng Electric Power Company.

1 director from CTG.

5 independent directors.

These 12 directors, accounting for **80%** of all directors, hold no other positions in listed companies. The Company has appointed different personnel to be the board chairman and general manager. Chen Hua, the board chairman, does not hold any senior management positions in listed companies.

Directorates Structure

By the end of 2019, the Board of Directors consists of **15** directors.

Including **5** independent directors,

accounting for **1/3** all directors.

1 employee representative director.

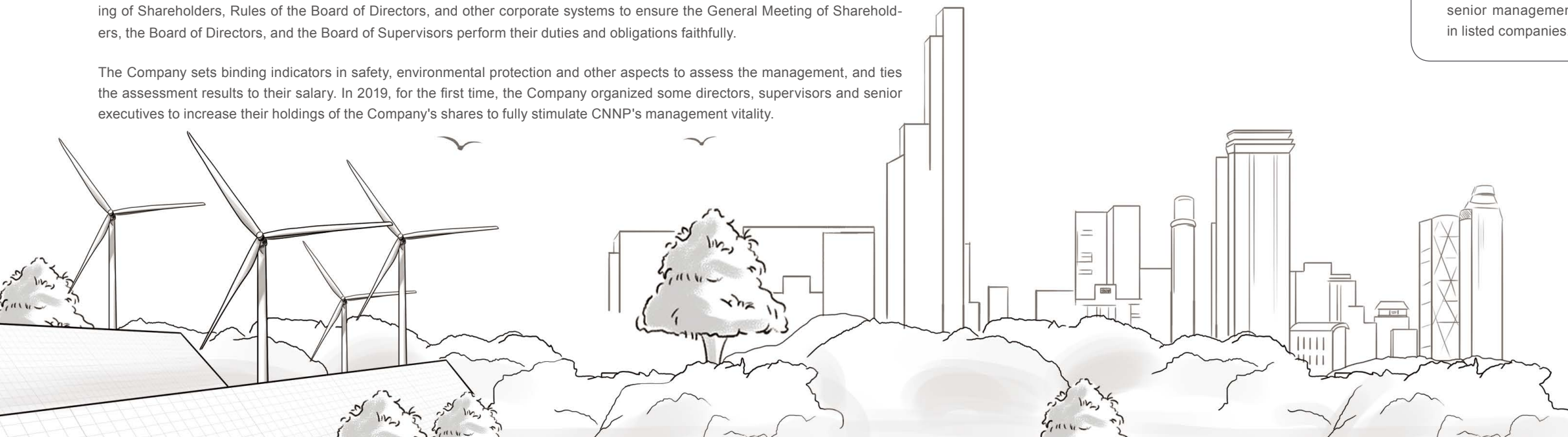
2 female directors (including 1 independent director),

accounting for **13.3%** of all directors.

In early 2019, the third board of directors of the Company is composed of

14 directors,

With **1** vacancy. On June 12, 2019, the general meeting of shareholders deliberated and passed the *Proposal on Election of Directors*, and Yu Guoping was elected as the director of the Company.



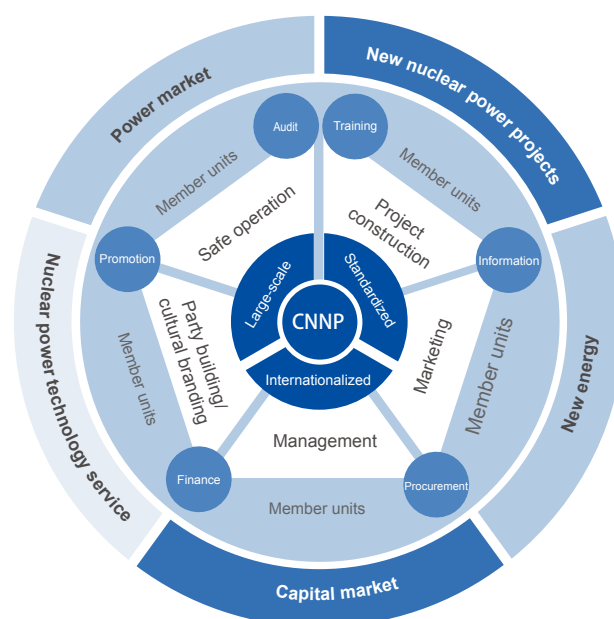
Governance Mechanism

The Decision-making System Composed of “the Articles of Association, Three Regulations and Four Rules”

CNNP improves its corporate governance mechanism to build a modern SOE governance system. Consistently promoting the Party's leadership over SOEs and a modern enterprise system, the Company has actively promoted the establishment of a modern state-owned enterprise system with Chinese characteristics. With the decision-making system composed of “the Articles of Association, three regulations and four rules” and the “3 + 1 + N” list model for the decision making process of the Party committee, we have built a modern state-owned enterprise system with Chinese characteristics, which features combination of “the Party's comprehensive leadership and corporate governance procedures, the Party committee's guidance and strategic decision-making of the board, the reform led by the Party committee and full managerial authority of the management, as well as the Party Committee's coordination of all supervision departments and the establishment of an comprehensive and multi-level supervision structure.

“3655” Management System

According to the three strategies of large-scale, standardized and internationalized development, CNNP continues to promote the “3655” Management System and has improved the functions of six centers for promotion, training, information, procurement, finance and audit. Focusing on the five main lines and five markets of strategic operation, the Company improves its overall business structure, coordinates tasks on all fronts, and strives to improve business capacities for high-quality development.



“3655” Management System

Risk Management and Control

The Company has continuously improved the risk management mechanism of “putting prevention first while imposing punishment”, and established a compliance management structure featuring division of responsibility, collaboration and coordination. We carry out strict prevention and control of risks when making major decisions, and conduct comprehensive legal risk management to promote compliance operation and ensure stable development. In 2019, our Risk and Audit Committee under the Board of Directors held 4 meetings, discussed 18 proposals, reviewed and made decisions on the risks in management and other aspects, ensuring stable operation of the Company.

01 Improving management systems and mechanisms

- We established a leading group for risk control and compliance, conducted centralized risk management by specialized departments, and required subsidiaries to set up corporate governance offices so as to coordinate risk control, internal control and compliance management.
- We integrated internal control manuals with management systems, and combined management systems with risk management. We set unified MKJ assessment targets and coordinated the annual supervision and evaluation plan.
- Three lines of defense for risk management composed of the business departments, risk management department and internal audit department have ensured the effectiveness of the risk management system.

02 Strictly assessing risks in key areas

- With the focus on “winning the battle to prevent and defuse major risks”, we carefully prevented risks before making major decisions and issued 53 special risk assessment reports throughout the year.
- We carried out quarterly, semi-annual and annual risk assessments to identify major risks in key areas. In 2019, major risks were controlled.

03 Carrying out special management of legal risks

- We established a special group for comprehensive legal risk management so as to promote the identification of legal or compliance risks in all respects.
- By sorting out legal risks of the headquarters and subsidiaries in various links of production and operation, we formulated legal risk identification standards.
- We made a manual of prevention and control standards for legal risks, conducted regular supervision and inspection on risk responses, and continuously improved legal risk management.

Compliance Operation

The Company has strictly abided by Chinese laws and regulations such as the *Company Law* to promote compliance management and operation. The internal risk prevention also has been strengthened to ensure law-based management and compliance operation.



Establishing an organizational system for compliance management

- The headquarters established a risk control and compliance group led by the board chairman to coordinate relevant tasks, and the three lines of defense for risk management need to bear the new responsibility of compliance management.
- Subsidiaries set up compliance management departments, which laid the organizational foundation for integrated management by combining compliance management with risk and internal control, legal affairs, and audit-based supervision.



Standardizing compliance management process

- We standardized the early warning and response process for compliance risks, unified early warning indexes and response plans, and included risk countermeasures into the annual plan to coordinate the risk response work.
- We standardized the compliance review process for major projects or issues, and invited our general counsel to join the major decision-making process and give compliance suggestions. In this way we coordinated compliance review and decision-making process for major projects or issues.



Integrating internal control specifications in key areas

- We systematically sorted out legal and compliance risks in key areas such as intellectual property rights, engineering construction, production and operations, safety and environmental protection, etc.
- For each legal risk, we took legal measures. And based on these measures we upgraded relevant systems and optimized related processes and forms.
- We integrated internal control management standards for key business through the “five steps” approach.



Organizing more trainings and exchanges on compliance

- We fostered a compliance culture through on-site trainings, distance learning, benchmarking and exchanges. In 2019, CNNP and its subsidiaries have conducted a total of 20 trainings with 560 participants.
- We set up a research team and sent them to benchmark against and communicate with pilot enterprises designated by the SASAC for compliance management, so as to provide new thought in building our compliance management system.

“Macro-supervision” System

In 2019, the Company integrated resources to build a joint supervision mechanism combining discipline inspection, overseeing, audit, inspections and legal measures, and released a special plan for building the macro-supervision system during the 13th Five-Year plan period, thus establishing a comprehensive and multifaceted “macro-supervision” system of “prevention, control and accountability”.

Increasing efforts in review

By integrating the discipline inspection, audit, and legal functions, and uniting relevant departments of subsidiaries, we have built a more professional supervision team.

Expanding the scope of supervision

Through establishing and improving the supervision system, we strengthened the control of staff, funds and equipment, put discipline and rules into practice, and strengthened supervision and restriction on the exercise of power.

Stepping up efforts in supervision

We kept ensuring accountability for overseeing discipline compliance. While paying attention to clues, we made better use of laws, regulations and disciplines to continuously step up efforts in supervision.

Enhancing the effectiveness of discipline enforcement

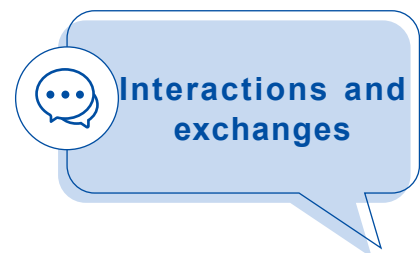
Focusing on performance instead of problems, we conducted comprehensive supervision on Party building, decision-making capability, decision-making effect, and leadership of the management to improve the effectiveness of accountability for overseeing discipline compliance.

Investor Relations

Adhering to the open and transparent operation philosophy, CNNP has continuously enhanced communication and interaction with investors. The timely and objective information disclosure and multiple exchanges helps the Company build harmonious relations and mutual trust with investors and thus promote the healthy development of the Company. In 2019, CNNP was awarded “Best Investor Relations (Team) Award”.



- With authentic, accurate, complete, and timely disclosure of periodic and temporary announcements about the election of the board of directors, 2018 annual report, convertible bonds and equity incentives, the approval for the Zhangzhou project, etc., CNNP's information disclosure has been rated A by the Shanghai Stock Exchange for four consecutive years.



- We promoted interactions and exchanges with investors by organizing Q & A activities through the SSE E-interactive platform, attending brokerage strategy meetings, and inviting investors to conduct on-site investigations.
- We exchanged ideas with industry analysts and institutional investors from dozens of well-known brokers at home and abroad including UBS, Merrill Lynch, CITIC Securities, China Securities, and received more than 300 visitors.

Anti-corruption

Working ceaselessly to improve Party conduct and enforce Party discipline, CNNP has actively promoted the fulfillment of responsibilities, conducted in-depth inspections, rectification and supervision, improved employees' awareness of integrity and self-discipline and their ability to resist corruption, and created a good atmosphere of integrity and entrepreneurship, which has strongly supported the sound development of the Company.

Organizations

The Risk and Audit Committee under the Board of Directors was set up for communicating with external auditors, verifying external audit and supervising internal audit. In business operation, the Discipline Inspection Department (Office for Discipline Inspection Commission) was established to promote the full implementation of discipline inspection and supervision.

Policies

01 We formulated regulations such as *Guidelines for Discipline Inspection and Supervision* and *Guidelines for Internal Supervision* to tighten up accountability for overseeing discipline compliance and build a strong discipline inspection and supervision team.

We integrated resources to build a joint supervision mechanism combining discipline inspection, overseeing, audit, inspections and legal measures, and released a special plan for building the macro-supervision system during the 13th Five-Year plan period, thus establishing a comprehensive and multifaceted “macro-supervision” system of “prevention, control and accountability”.

02

Major Measures

We formulated and released the *Key Tasks for Improving Party Conduct and Fighting Corruption in 2019* to clarify 23 key tasks in 8 aspects, and promoted the implementation of these tasks.

We carried out special supervision and inspections on the performance of Party members and departments in improving Party conduct, and gave 43 suggestions for future improvement, which further enhanced the integrity awareness of officials.

We organized CNNP Party committee secretary and members as well as departments to sign the letter of responsibility for building a clean Party in 2019, so as to promote Party members and officials to take responsibility for anti-corruption while performing their duties.

We conducted in-depth inspections, rectification and supervision, and monitored the rectification of 13 departments and 13 subsidiaries.

Integrity Education

In 2019, the Company carried out more than 10 special education campaigns on various topics such as how to improve conduct, and carried out anti-corruption knowledge contests and quizzes to encourage learning activities. We invited experts, distinguished professors and retirees in nuclear industry to give lectures on integrity for Party members, who were also organized to participate in activities in education bases of red traditions. Through various anti-corruption education activities, the Company has created a stronger atmosphere of integrity, and made disciplines become daily habits of Party members.



In 2019
the headquarters carried out

6 anti corruption trainings

with **391** participants

Whistleblower Protection

We have issued *Discipline Inspection and Supervision - Complaint Management Guide*, and created anonymous reporting channels. Employees and third parties are encouraged to report violations to the Company via hotlines, emails, letters or appointed office, and the information will be kept secret as required.

ESG Management

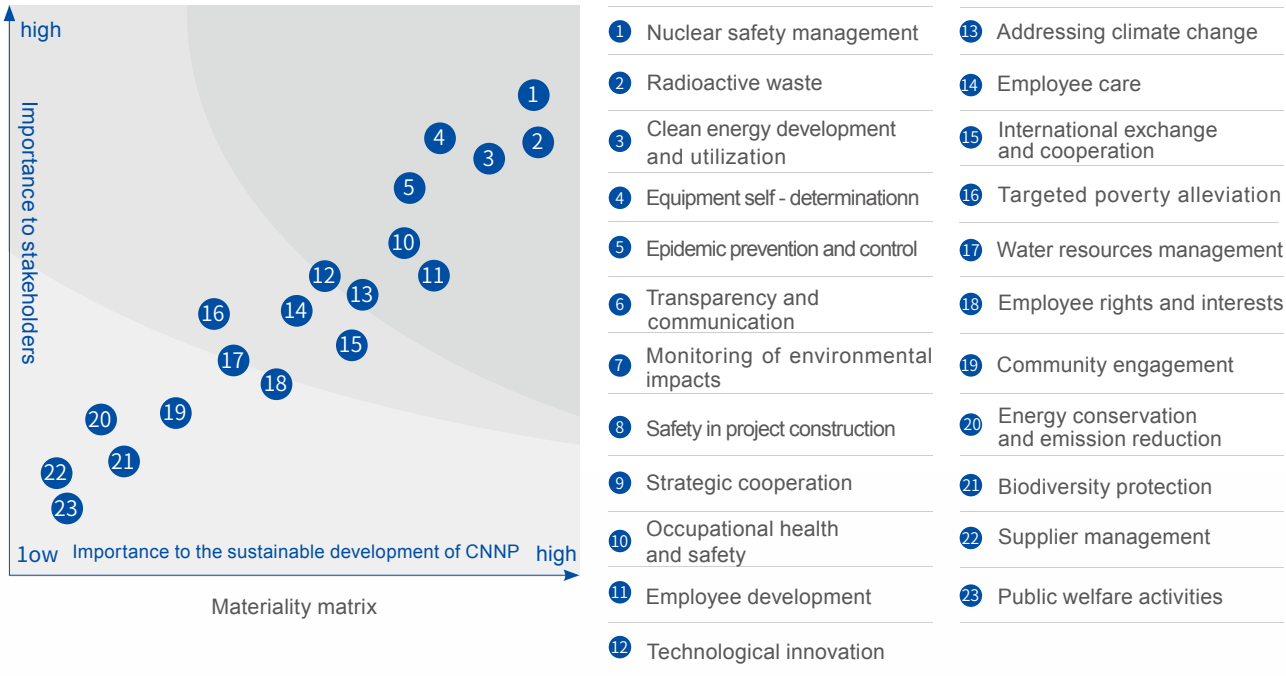
ESG Management System

CNNP attaches great importance to the effective management of environment, society and governance and has established an ESG management system led by the Board of Directors. The Board of Directors performs its functions related to operations, employee interests and rights, work safety, and environmental protection through four committees: the Strategy and Investment Committee, the Risk and Audit Committee, the Nomination, Remuneration and Evaluation Committee, and the Safety and Environment Committee. The Board of Directors and its committees are required to faithfully perform their duties and support the sustainable development of the Company.

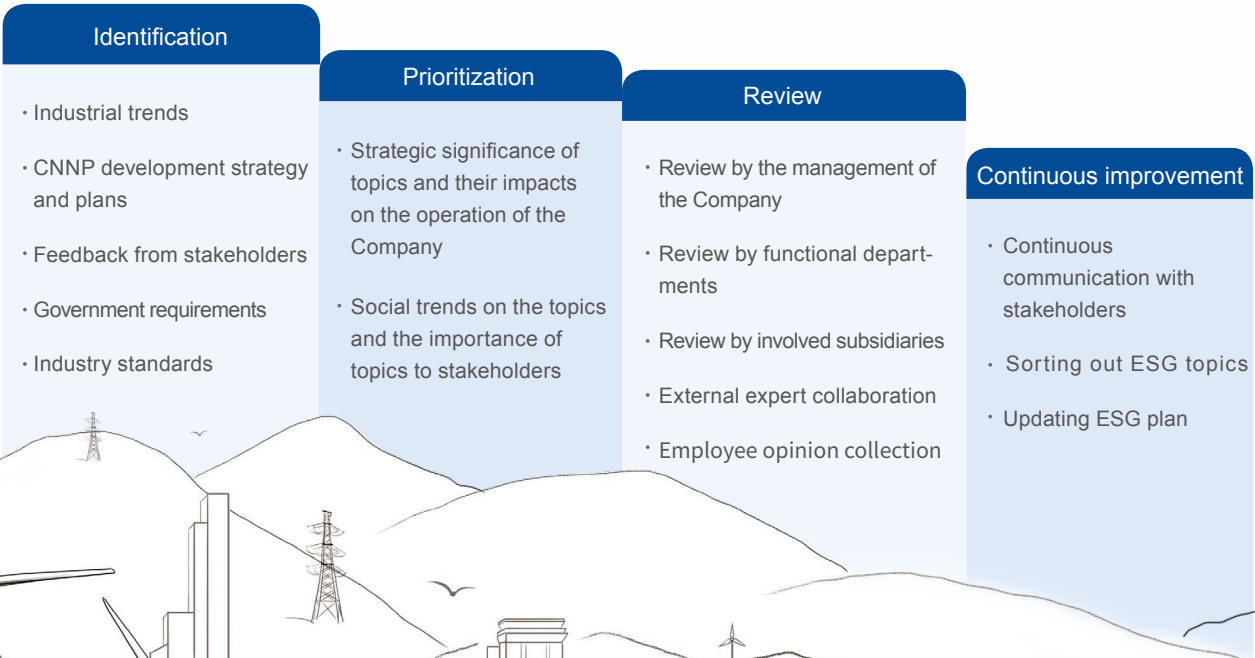
The Company discloses ESG information through its official website, the websites of the Shanghai Stock Exchange and the National Nuclear Safety Administration, the China Nuclear Energy Association and the World Association of Nuclear Operators (WANO), and publishes social responsibility reports periodically since 2012. In 2019, we published the first environmental, social and governance (ESG) report, and established an open and transparent mechanism for environmental, social and governance information disclosure.

Material Topics Management

Based on the macro environment of sustainable development and its own development plan, CNNP, in accordance with the principles of materiality, completeness and stakeholder engagement, comprehensively analyzed and identified the 2019 sustainability material topics from the dimensions of “importance to CNNP’s sustainable development” and “importance to stakeholders” while considering the expectations of stakeholders.



Material topics analysis process



Opportunities and Challenges

The Company has continuously promoted ESG risk identification and management, and ensured steady operation with greater efficiency, higher reliability and comprehensive cooperation.

Domestic and International Environment and Industry Trends	 We are facing a complicated international environment with opportunities and challenges	 Electricity reforms promote the corporate transformation	 The supply-side reform promotes the adjustment of energy structure	 Renewable energy resources will play an important role in adjusting the energy structure	 Technological innovation drives the development of nuclear energy industry	 Communication with the public becomes a major issue in nuclear market expansion
Opportunities and Challenges	<ul style="list-style-type: none"> As AP1000 and EPR third-generation reactors are put into operation, we may face fiercer competition in the international nuclear market. The uncertain and volatile foreign exchange market are very likely to cause exchange losses. Countries along the Belt and Road provide the main market for nuclear power. There is a growing market for operation and maintenance services and decommissioning of nuclear facilities. 	<ul style="list-style-type: none"> As electricity reforms deepen, it exerts pressure on power enterprises in many aspects such as idle capacity, price cuts and peak shaving. Electricity reforms will promote a market-based power industry, which allows high-quality and efficient energy companies to provide power distribution and supply services, and creates opportunities for power companies to transform into comprehensive energy service providers. 	<ul style="list-style-type: none"> There is uncertainty in the approval of new nuclear projects and risks in nuclear project construction and stable operation of nuclear power units. The energy structure shifts to clean and low-carbon energy and encourages the development of nuclear power and renewable energy. As currently it is the only base load energy that can replace fossil energy on a large scale and provide stable and reliable power to the power grid, there is still plenty room for the development of nuclear power. 	<ul style="list-style-type: none"> Renewable energy development is facing a series of challenges such as reduction of industry subsidies, high requirements for power grid dispatch and operation, and difficulties in project financing. The continuous development of renewable energy technologies, promotes great reduction in production costs, and improves energy conversion efficiency. Compared with fossil energy, renewable energy has noticeable competitive advantages, and its growing trend in China's power supply structure will not change. 	<ul style="list-style-type: none"> The government encourages innovation in advanced nuclear technologies, and clarifies the focus and direction of nuclear technology innovation for a period to come. The demonstration projects with third-generation nuclear power technologies have been completed and put into operation, which further proves that our nuclear technology is safe, clean and efficient. 	<ul style="list-style-type: none"> As the government pays more attention to safeguarding the public's rights to know, participate in and supervise major projects, public acceptance has become a decisive factor for the implementation of nuclear power projects. As the public is more and more aware their rights to participate in the management of public affairs. More media channels emerge and the popularity of the Internet penetration rate grows, nuclear power development is facing a "new normal" to be supervised by the public.
Actions of CNNP	<ul style="list-style-type: none"> CNNP closely tracks and makes comprehensive analysis of the changes and risks in the international market, and strengthens communication with relevant stakeholders overseas. By exporting technical services, and carrying out EPC nuclear power projects overseas, CNNP earns foreign currency income and avoids currency mismatch. 	<ul style="list-style-type: none"> CNNP conducts in-depth analysis and research on relevant policies and power trading rules of different provinces, and pays close attention to the local reforms and mechanisms, striving for high-quality and ample supply of nuclear power. Promoting the transformation from a production-oriented enterprise to a service-oriented enterprise, CNNP builds a nuclear power and clean energy brand and establishes a good reputation for its electricity business. 	<ul style="list-style-type: none"> CNNP promotes the plant sites in some difficult provinces and key provinces to be included in the national nuclear power development plan, and focuses on the construction of alternative projects during the 13th Five-Year Plan period. CNNP has set up a special team to carry out project construction risk management and solve major problems in a timely manner. CNNP ensures the stable operation of the nuclear power units in all aspects including business partner management, operator management, safety inspection on power units and risk management. 	<ul style="list-style-type: none"> Adhering to prudence investments, CNNP focuses on regions with higher consumption of new energy and makes full use of the new energy resources surrounding the nuclear power plants. For geothermal and other new energy technologies with development potential, CNNP promotes the combination of industry and finance and builds industry alliances. 	<ul style="list-style-type: none"> CNNP emphasizes making breakthroughs in advanced nuclear technologies, and actively promotes manufacturing of key materials and core components in China. CNNP takes the initiative to follow the requirements of boosting advanced productivity for intelligent development, and vigorously fosters the building of a smart nuclear industry. CNNP increases investments in scientific research and further promotes the application of technological achievements. 	<ul style="list-style-type: none"> CNNP has developed an integrated mode for communication with the public, which features "coordination led by the headquarters coordination, joint efforts of subsidiaries at all levels and professional support". The Company guides all nuclear projects to communicate with the public in an orderly manner, thus improving the public's recognition and acceptance of nuclear power.



Environment

Context

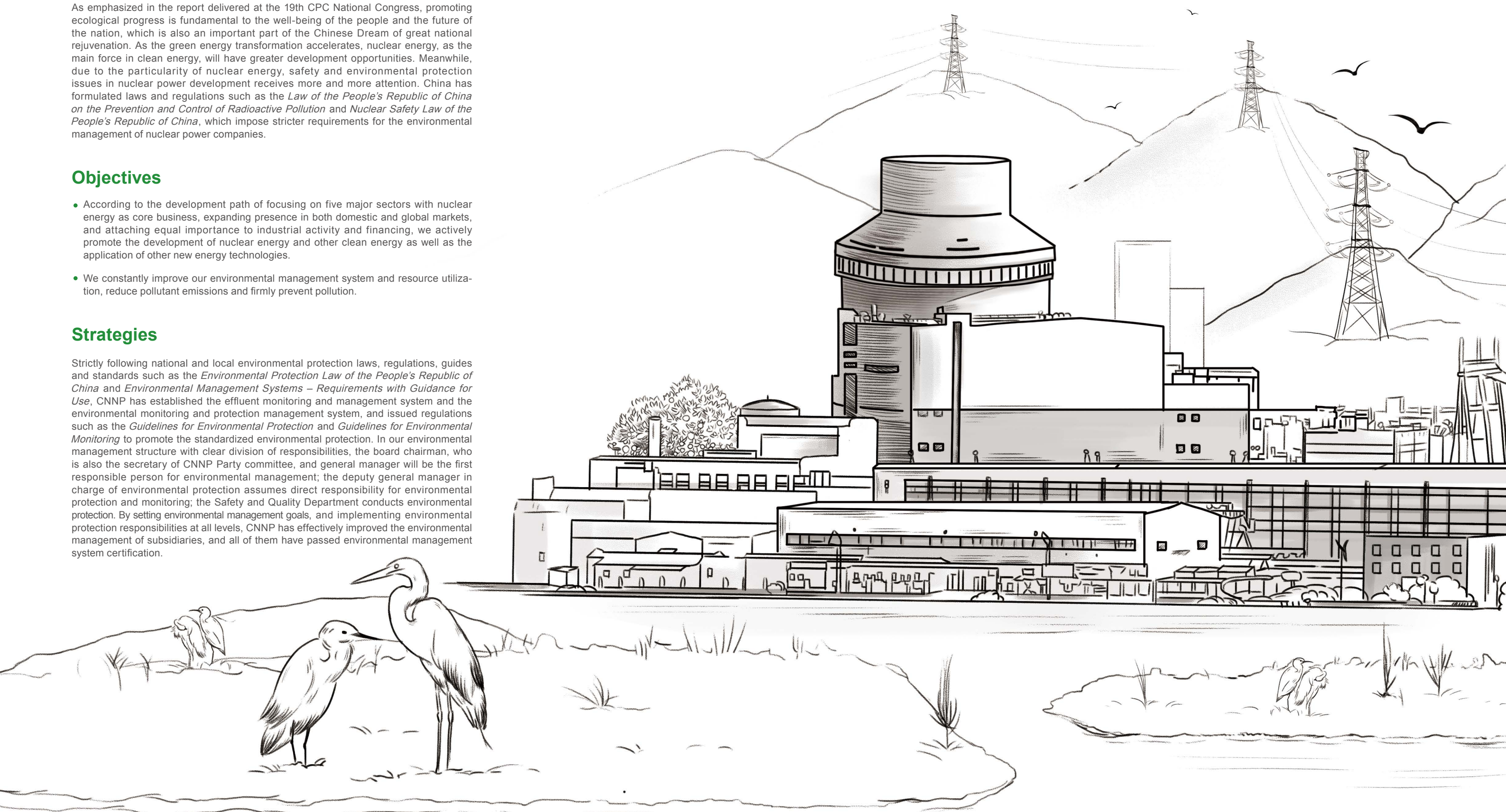
As emphasized in the report delivered at the 19th CPC National Congress, promoting ecological progress is fundamental to the well-being of the people and the future of the nation, which is also an important part of the Chinese Dream of great national rejuvenation. As the green energy transformation accelerates, nuclear energy, as the main force in clean energy, will have greater development opportunities. Meanwhile, due to the particularity of nuclear energy, safety and environmental protection issues in nuclear power development receives more and more attention. China has formulated laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Radioactive Pollution* and *Nuclear Safety Law of the People's Republic of China*, which impose stricter requirements for the environmental management of nuclear power companies.

Objectives

- According to the development path of focusing on five major sectors with nuclear energy as core business, expanding presence in both domestic and global markets, and attaching equal importance to industrial activity and financing, we actively promote the development of nuclear energy and other clean energy as well as the application of other new energy technologies.
- We constantly improve our environmental management system and resource utilization, reduce pollutant emissions and firmly prevent pollution.

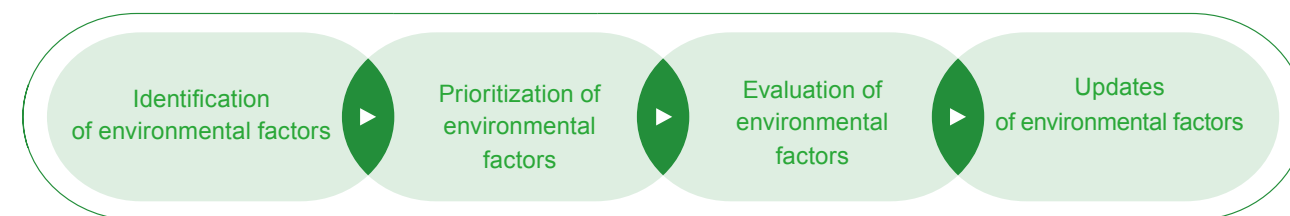
Strategies

Strictly following national and local environmental protection laws, regulations, guides and standards such as the *Environmental Protection Law of the People's Republic of China* and *Environmental Management Systems – Requirements with Guidance for Use*, CNNP has established the effluent monitoring and management system and the environmental monitoring and protection management system, and issued regulations such as the *Guidelines for Environmental Protection* and *Guidelines for Environmental Monitoring* to promote the standardized environmental protection. In our environmental management structure with clear division of responsibilities, the board chairman, who is also the secretary of CNNP Party committee, and general manager will be the first responsible person for environmental management; the deputy general manager in charge of environmental protection assumes direct responsibility for environmental protection and monitoring; the Safety and Quality Department conducts environmental protection. By setting environmental management goals, and implementing environmental protection responsibilities at all levels, CNNP has effectively improved the environmental management of subsidiaries, and all of them have passed environmental management system certification.



Identification and Evaluation of Environmental Factors

The Company has formulated the *Guidelines for the Identification and Evaluation of Environmental Factors* to help comprehensively identify environmental factors in subsidiaries, evaluated their importance and determine management approaches. Representatives of the management examine and approve the lists of environmental factors and significant environmental factors. Each department identifies and evaluates their own environmental factors, and compiles the *Environmental Factor Identification and Evaluation Form* and *List of Significant Environmental Factors*. The environmental emergency division of subsidiaries is responsible for organizing and implementing the identification and evaluation of environmental factors.



Within the scope of the environmental management system (EMS), we need to identify all the processes (activities, products and services) of the Company and subsidiaries and their status, the description of environmental factors, the time when the environmental factors occur and the classification of environmental impacts, etc., through process analysis and on-the-spot investigations.

Based on the impact of environmental factors on the environment, the environmental factors are categorized as critical priority (I), high priority (II), moderate priority (III), low priority (IV), among which the first three categories are significant environmental factors.

According to qualitative evaluation or quantitative evaluation, environmental factors that violate laws and regulations or may result in adverse environmental impacts are determined as significant environmental factors and will be classified and prioritized based on severity. For other environmental factors, we classify them based on the quantitative evaluation and adopt targeted management approaches.

The Company and subsidiaries carry out environmental factor identification and evaluation at least once a year, and update the *List of Significant Environmental Factors* immediately if there is any change. And changes in significant environmental factors are reported in a timely manner according to the process of environmental factor identification and evaluation.

Nuclear Energy

The Company has made use of nuclear power to bring comprehensive benefits. Following the development path of focusing on five major sectors with nuclear energy as core business, expanding presence in both domestic and global markets, and attaching equal importance to industrial activity and financing, CNNP has fostered the development of diverse clean energy while focusing on nuclear power business, thus effectively reducing CO₂ emissions.

We have continued to improve the safety management of nuclear power by strengthening operational management, overhaul management and equipment reliability management of nuclear power units, with a view to ensure the reliable supply of electricity and promote the connection of renewable energy to the power grid. Following the reform policies, we have actively explored transaction modes in the electricity market, and provided direct supply for large customers as well as cross-provincial power distribution and trading services. More green energy options are available for customers. In 2019, CNNP sold 42.823 TWh of electricity with market-based mechanisms.

In 2019, nuclear power units totally generated

136.214 TWh of electricity

136.214	2019 年
117.788	2018 年

an increase of
15.64 %
as compared with 2018

In 2019, on-grid electricity amounted to

127.026 TWh

127.026	2019 年
109.912	2018 年

an increase of
15.57 %
as compared with 2018

reducing standard coal consumption by
54.4856 million tons



reducing CO₂ emissions
135.8054 million tons



reducing SO₂ emissions
4.0864 million tons



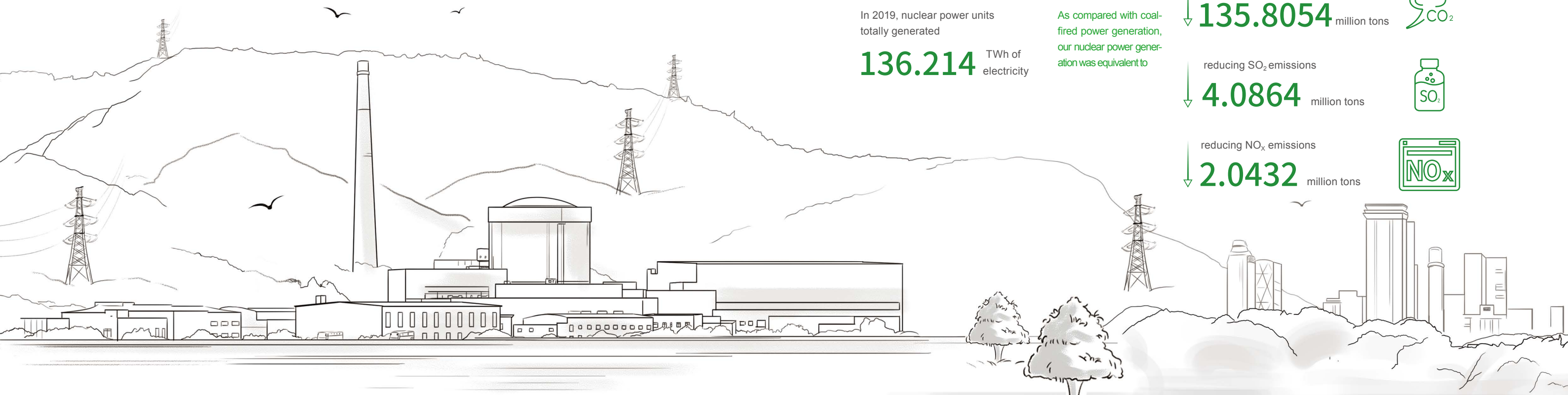
reducing NO_x emissions
2.0432 million tons



In 2019, nuclear power units totally generated

136.214 TWh of electricity

As compared with coal-fired power generation, our nuclear power generation was equivalent to



Other Clean Energy


The Company has set development goals for other clean energy. By actively promoting the wind power and photovoltaic power, etc., increasing related installed capacity and improving its technologies, CNNP has provided affordable on-grid power in some regions and obtained good economic benefits. During the “14th Five-Year Plan” period, our non-nuclear clean energy business will continue to grow, and we will focus on regions with higher consumption of new energy and make full use of the new energy resources surrounding the existing nuclear power plants.

In 2019, the installed capacity of new energy rose by

855.5 MW

the total installed capacity of new energy increased to

1,019.6 MW




Case

CNNC Heiyazi 50MW-Affordable-Wind Power Demonstration Project in Gansu

In August 2019, CNNC Heiyazi 50MW-Affordable-Wind Power Demonstration Project in Gansu was officially put into operation, which was first affordable grid-connected wind power demonstration project. With a total of 25 wind turbines, the project can provide 159.01 GWh of electricity every year, equivalent to reducing standard coal consumption by about 48,600 tons. The project has provided experience for other wind power projects in utilization of wind energy and application of new wind power technologies.

In 2019, the project won the award of

“China Wind Energy • Pioneers”



Carbon Emissions

While developing nuclear power and other clean energy, the Company has carried out environmental protection across the entire process of project construction and operation. By establishing and improving the systems and procedure of energy management, and optimizing energy management with new technologies, processes and equipment, CNNP has continuously reduced CO₂ emissions. The Company also sets targets for carbon emission reduction, identifies sources of carbon emissions and takes countermeasures to improve green management of nuclear power plants.

Sources identification and management of carbon emissions

Category	Sources Identification	Management Strategy
Direct greenhouse gas emissions	<ul style="list-style-type: none">Greenhouse gas produced from oil-fired boilersCO₂ emissions from concreting	<ul style="list-style-type: none">Upgrading energy-consuming equipment to optimize energy efficiencyOptimizing concreting process through technological upgrading
Indirect emissions from energy consumption	<ul style="list-style-type: none">Electricity consumption in production activities at nuclear power plantsElectricity consumption at employee dormitories and offices	<ul style="list-style-type: none">Using LED lights in the plants and promoting the use of energy-efficient equipmentPasting labels about air conditioners and electric lights to strengthen management of electricity use in offices
Other indirect emissions	<ul style="list-style-type: none">Carbon emissions from business travel of employees	<ul style="list-style-type: none">Organizing video conferences as much as possible to reduce business tripsDisseminating the idea of energy-conservation and encouraging employees to use low-carbon means of transport

Emissions reduction of nuclear power plants compared with coal-fired power plants in 2019

Nuclear Power Plant	Power Production (TWh)	Emissions Reduction of Nuclear Power Plants Compared with Coal-fired Power Plants			
		Standard coal (10,000 tons)	CO ₂ (10,000 tons)	SO ₂ (10,000 tons)	NO _x (10,000 tons)
Qinshan Nuclear Power Plant	52.181	2087.24	5202.45	156.54	78.27
Jiangsu Nuclear Power Plant	32.889	1315.56	3279.03	98.67	49.33
Sanmen Nuclear Power Plant	10.671	426.84	1063.90	32.01	16.01
Fuqing Nuclear Power Plant	30.753	1230.12	3066.08	92.26	46.13
Hainan Nuclear Power Plant	9.72	388.80	969.08	29.16	14.58

Water Resources

Responding to the requirements for water pollution control, the Company follows the *Integrated Wastewater Discharge Standard* and *Sea Water Quality Standard*, establishes water consumption regulations such as the *Regulations on Use of Freshwater*, set targets for reducing wastewater discharge, and conducts water management in the whole process of nuclear power plants to improve the utilization of water resources.

Water resources are mainly used for production activities in the nuclear power plants and the daily life of employees living in the plant. As to water consumption in production, we use freshwater based on the *Water Management Regulations*, optimize the water use plan through physical model tests, and reduce the freshwater consumption by mainly using seawater as the cooling water. For domestic water use, the corners of water use at the construction site shall be marked with obvious water saving signs to enhance employees' awareness of water saving.

We also have carried out the upgrading and transformation of wastewater treatment facilities in nuclear power plants. All the treated water is recycled for irrigation or anti-dust purposes. We install online monitoring equipment and flowmeters at the sewage outlets to monitor statistics such as the PH value and COD of the effluents in real time, and measure the wastewater discharge and quality to meet national standards and seawater quality requirements of local regions. We also entrust qualified monitoring organizations to carry out regular monitoring on our wastewater treatment stations to ensure effective wastewater treatment.

Hazardous Discharges/Emissions and Waste

Management of Solid Waste, Waste Water and Waste Gas

In strict accordance with the *Law of the People's Republic of China on Prevention and Control of Radioactive Pollution*, *Regulations on Radioactive Waste Management* and other relevant laws and regulations, we continuously improve the hazardous waste management. The Safety and Environment Committee under the Board of Directors is responsible for safety and environmental protection, which has set up a Safety and Quality Department to establish radioactive waste management systems and procedure, determine radioactive waste management indicators, and promote waste minimization and management. The designated department monitors and controls the discharge of radioactive effluents, and also optimizes and supervises relevant management measures.

We put in place a radioactive waste management accountability system to evaluate waste management practices, the result of which will be a performance evaluation indicator for subsidiaries. Radioactive waste management targets are set to actively promote the minimization of radioactive waste in accordance with *Radioactive Effluent Discharge Management*. By carrying out timely progress tracking, regularly reviewing and analyzing radioactive waste discharge for further improvement, the Company keeps optimizing its management. Besides, the Company actively conducts research on radioactive waste management and takes a series of measures to effectively control and minimize the discharge of radioactive waste through separate collection, delay and decay, clearance and recycling. In 2019, the treatment system for solid waste, wastewater and waste gas ran well with no excessive emissions of radioactive material throughout the year.

Radioactive waste treatment of CNNP

Type of Waste	Treatment Measures
Radioactive liquid effluents	<ul style="list-style-type: none">Carrying out cyclic sampling of radioactive wastewater, and discharge effluents when the analysis results meet relevant standards.Collecting the radioactive resin and evaporation residue generated during the operation and maintenance of the power station, and discharging them to the radioactive waste solidification system for disposal after temporary storage in the radioactive wastewater storage system.
Radioactive gaseous effluents	<ul style="list-style-type: none">Installing radiometers to monitor emissions of waste gas in real time.Treating the radioactive waste gas with the waste gas treatment system to prevent the excessive emissions.
Solid radioactive wastes	<ul style="list-style-type: none">Transporting and incinerating radioactive combustible wastes to reduce the waste volume for treatment.Treating all the radioactive waste with the radioactive waste solidification system.
Spent fuel	<ul style="list-style-type: none">Innovating in the whole-process dry storage technology of spent fuel, and completing the process of storage tank preparation, loading, drying and sealing, transshipment, and storage, and promoting the implementation of dry fuel storage.Sending the spent fuel to designated treatment plants according to national requirements.

Non-hazardous Waste

The Company has established a non-radioactive pollutant management procedure with clear responsibilities and requirements for relevant departments so that effective management on non-hazardous waste including industrial waste and domestic waste can be realized during the project construction and operation. For industrial waste produced in production activities, we provide temporary storage places that meet relevant conditions, entrust qualified transportation and disposal companies to dispose waste in a timely manner. The construction waste is cleaned up and disposed immediately. Domestic waste in the plants is collected separately and disposed by environmental sanitation organizations.

Environmental Impact Monitoring

Strictly abiding by laws and regulations including the *Environmental Radiation Protection Regulations of Nuclear Power Plants* and *Regulations for Environmental Radiation Monitoring of Nuclear Power Plant*, the Company has established regulations and reliable systems for environmental monitoring, and continuously improved the monitoring on environmental impacts.

Samples are collected, processed, analyzed and measured by qualified personnel of CNNP with radiation monitoring equipment, which ensures accurate and reliable monitoring results. Environmental monitoring procedures have been established to guide monitoring activities. The Company prepares periodic radiation monitoring reports and submits them to the Ministry of Ecology and Environment and local environmental protection departments. Environmental monitoring information is disclosed through the official website of the Ministry of Ecology and Environment. In 2019, CNNP nuclear power plants had no perceptible impacts on the surrounding environment during operation or refueling overhaul.



Biodiversity Protection

Strictly following relevant regulations including the *Marine Environment Protection Law of the People's Republic of China*, *Guidelines on Environmental Protection*, CNNP pays close attention to biodiversity protection in project construction and operation and is committed to reducing impacts on biodiversity.

To protect soil biodiversity, the Company has formulated *Chemical Management*, *Safety Management of Hazardous Chemicals* and other management systems about hazardous chemicals, in order to ensure that the transportation, storage and use of hazardous chemicals strictly comply with national regulations and prevented soil pollution.

As for marine biodiversity protection, the Company conducts surveys regularly on marine ecology in surrounding sea areas and assesses the ecological impact of its project operation for better marine ecology protection. The Company also conducts research on marine biodiversity and makes protection plans based on the sampling analysis and monitoring of the water environment.

As for the terrestrial biodiversity conservation, the Company conducts on-the-spot survey on the plants regularly and records the ecological situation. The impact of the construction plan and process on local ecology is taken into account to avoid destruction to the ecological environment, and promote landscaping, in hope of building garden-like plants.



Case

Building Eco-friendly Plants

Tianwan Nuclear Power Plant and Jiangsu Nuclear and Radiation Safety Bureau carried out environmental media monitoring around the nuclear power plant, tracked and assessed the impact of the plant on the surrounding environment, and disclosed the monitoring data to the public on the website of the Ministry of Ecology and Environment and the website of CNNP. As the first nuclear power plant to be awarded Demonstration Base of National Industrial Tourism, Tianwan Nuclear Power Plant also won other honors such as Demonstration Base of Jiangsu Industrial Tourism.

Hainan Nuclear Power Plant has combined biodiversity protection with business development. It planted coconut trees, palms, and ravenala, striving to build a garden-like plant.

In 2019, Qinshan Nuclear Power Plant invested over 20 million yuan to conserve the ecology for creatures in surrounding areas.

Adhering to the principle of "respecting nature and pursuing green development", Sanmen Nuclear Power Plant has implemented biodiversity protection in daily operation and management, and fully achieved the balance of economic, environmental and social benefits.

Society

Context

Global issues such as unequal development opportunities, imbalances in development and income disparity pose serious obstacles to sustainable development. As the basic element of social economy, enterprises should earnestly fulfill their social responsibilities, such as, providing good jobs and career development opportunities in accordance with Chinese laws and regulations, including *the Company Law and the Labor Law* and thoroughly implementing President Xi Jinping's instructions on targeted poverty alleviation to leverage their resources and strength to support the economic, social and environmental development of poverty-stricken areas. Enterprises should help meet people's ever-increasing needs for a better life and build a moderately prosperous society in all respects.

Objectives

In order to achieve common development of employees and the Company, CNNP has been actively building a first-class team. By 2020, the Company will cultivate about 100 top talents in key industries, engineering technologies, and disciplines. A well-structured and sound organizational staff team composed of 14,000 high-quality employees will take shape, which will effectively help build China into a country with strong nuclear power. The Company will combine the poverty alleviation with business development, and take advantage of its strength to help poverty-stricken areas combat poverty, striving to realize the win-win situation.

Strategies

By cultivating technical staff, skilled workers and management personnel, selecting top talents, and training key production personnel and inter-disciplinary management personnel, we devote to building the best team. We facilitate the poverty alleviation by Party leadership, industry development, educational support, project construction, vocational training, and sales of agricultural products, etc.



Protection of Rights and Interests

Strictly abiding by relevant laws and regulations as well as labor policies, CNNP fully protects the legitimate rights and interests of employees, builds an equal and inclusive workplace, and ensures that employees can make the most of their talent.

Diversity and Equal Opportunities

In strict accordance with national laws and regulations including the *Company Law* , the *Labor Law*, the *Labor Contract Law* as well as international human rights norms, as well as the principles of open, fair and just employment, we formulate equitable and diverse recruitment policies to ensure equal employment and make the workplace more inclusive.

We forbid any discrimination, keep equal treatment regardless of gender, nationalities, beliefs, etc., and promote equal and diverse recruitment. For better age diversity, we select young staff for job promotion, make future career plans for leaders approaching retirement age and senior technical and skilled experts while providing policy support for job transfer and postponing retirement. We, together with our subsidiaries, have been exploring a diverse and well-structured workforce composed of senior, middle-aged and young technical and skilled talents so that everyone can realize self-value on an equal and excellent platform.

Type of personnel	Managers	13.91%
	Personnel of business functional units	15.02%
	Specialized personnel	35.93%
	Operational personnel	22.19%
	Skilled personnel	6.92%
	Others	6.03%
Education background	Master's degree or higher	9.09%
	Bachelor's degree	82.38%
	Junior college	6.87%
	Secondary vocational school or lower	1.66%
Age structure	Below 30 years of age	53%
	30-39 years of age	36%
	40-49 years of age	9%
	50 years of age and above	2%



In 2019, we had a total of
13,152 employees

Labor Rules

We strictly abide by national and international labor rules. Before the job interview, we will confirm the basic information of applicants to forbid child labor. In human resources management, any forms of forced labor are prohibited. During the reporting period, we strictly complied with related laws and regulations with no child labor and forced labor.

According to the *Labor Contract Law*, we sign labor contracts with employees, which specify working hours, rights for rest and vacation, compensation and benefits, thus protecting the legitimate rights of employees with the law.

Compensation and Benefits

We have formulated the *CNNP Employee Compensation System* and *CNNP Total Compensation Management Regulations*, and kept optimizing the compensation and benefits system and the salary rise mechanism base on corporate strategies, market, performance and the equity principle. While paying salaries on time and in full, we provide mandatory insurance schemes (pension fund, medical insurance, work injury insurance, unemployment insurance, and maternity insurance), the housing fund, enterprise annuity as well as allowances for shifts, and organize recuperation activities to make employees enjoy decent work and quality life.

In June 2019, the Company officially implemented the first plan for equity-based incentives, rewarded the management and key technical and skilled personnel with options to stimulate their innovation and creativity. CNNP became the first state-owned listed power company in the A-share market to provide equity-based incentives.



Employee contract signing rate
100%



Coverage of social insurance schemes
100%



Democratic Management

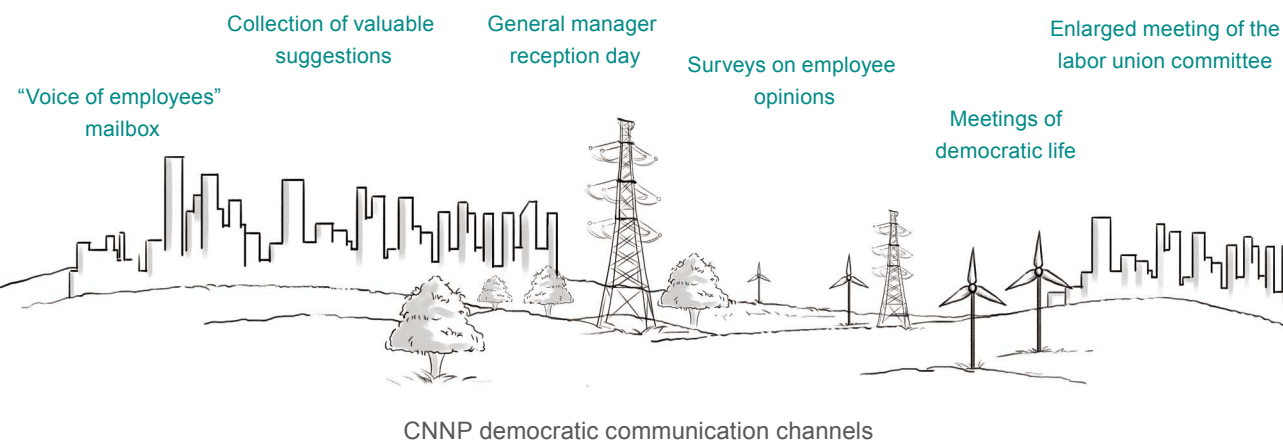
CNNP continuously opens up democratic management channels, improves the democratic management system represented by the labor union and workers congress, and elects employee representatives as directors and supervisors. Besides, the Company establishes multiple communication channels such as the "voice of employees" mailbox to listen to employees, encourages employees to make suggestions and participate in the decision-making process of the Company, thus fully protecting their rights to know, to participate, to express, and to supervise.

To learn about the employee opinions, CNNP conducts questionnaire surveys on corporate culture and employee opinions regularly based on the indicators of sense of happiness, sense of accomplishment, and sense of belonging.

In 2019

11,820 employees were surveyed

accounting for **89.87 %** of total employees
a year-on-year increase of **12 %**



Occupational Health and Safety

While strictly complying with relevant laws and regulations, such as the *Law of Occupational Disease Prevention and Regulations on Workplace Occupational Health Supervision and Management*, CNNP has formulated the *Guidelines for Compliance Evaluation of Environmental Protection and Occupational Health and Safety and Guidelines for Monitoring and Measurement of Environmental Protection and Occupational Health and Safety Performance*, established an occupational health management system that is suitable for the Company and the industry, and carried out safety facility maintenance and monitoring of occupational health hazards. With continuous efforts in safety supervision and inspection, the Company strives to create a healthy and safe workplace with safety culture, and implement the safety principle in production and operation to ensure intrinsic safety.

In 2019, CNNP continued to perform well in occupational health and safety. Throughout the year, the highest radiation dose to an individual worker at all nuclear power plants is far below the target set by the Company and China's regulatory limit.



Health examination coverage

100 %

Work-related fatalities

0 人

Occupational health examinations and surveillance

Carrying out occupational health examinations and assessments; conducting daily monitoring and informing employees of occupational disease hazards such as high temperature and noise; organizing the compliance evaluation of occupational health and safety(OHS) management; making competence assessments for radiation workers; inspecting various operating systems, houses, workshops and equipment; carrying out occupational health surveillance of occupational hazards and establishing occupational health surveillance archives for employees.

Improvement of occupational safety protection facilities

Completing the construction of protective facilities against occupational diseases of nuclear power units; improving warning signs and caution signs for hazards; providing professional cleanup of radioactive contamination of humans.

Raising OHS awareness

Strengthening the nuclear emergency response and medical rescue capabilities, and improving the health protection ability of employees; exchanging ideas and conveying OHS suggestions through annual reports and special meetings to strengthen OHS education and improve employees' awareness of OHS protection.

Mental health care and psychological counseling

Compiling the *Guidelines on Caring for the Mental Health of Employees*, and caring for employees' psychological health through psychological health education activities, such as the "soul harbor", psychological counseling room and mental health website, and the Employee Assistance Program.



Case

Carrying out a survey on the employer branding of CNNP

To build an irresistible employer brand, the Company entrusted a third-party organization to conduct a survey on employer branding of nuclear power companies in China. Through interviews and questionnaires about the brand image, employer culture, organization and management, compensation and benefits, workplace, and trainings, we learned about the opinions and suggestions of all parties on our employer brand image. We also conducted field interviews with 27 employees and leaders from various departments such as the Party Building Department and Human Resources Department. Meanwhile, employees of the Company and college students received a questionnaire survey, and 4,370 and 501 valid questionnaires were collected respectively. The results showed that both employees and college students considered CNNP as a responsible enterprise with great development potential.



Labor Union membership rate

100 %

We collected over

8,500 suggestions in 49 fields

among which

7,150 were very helpful



Case

Fuqing Nuclear Power Plant carries out the EAP program to care for the physical and mental health of employees

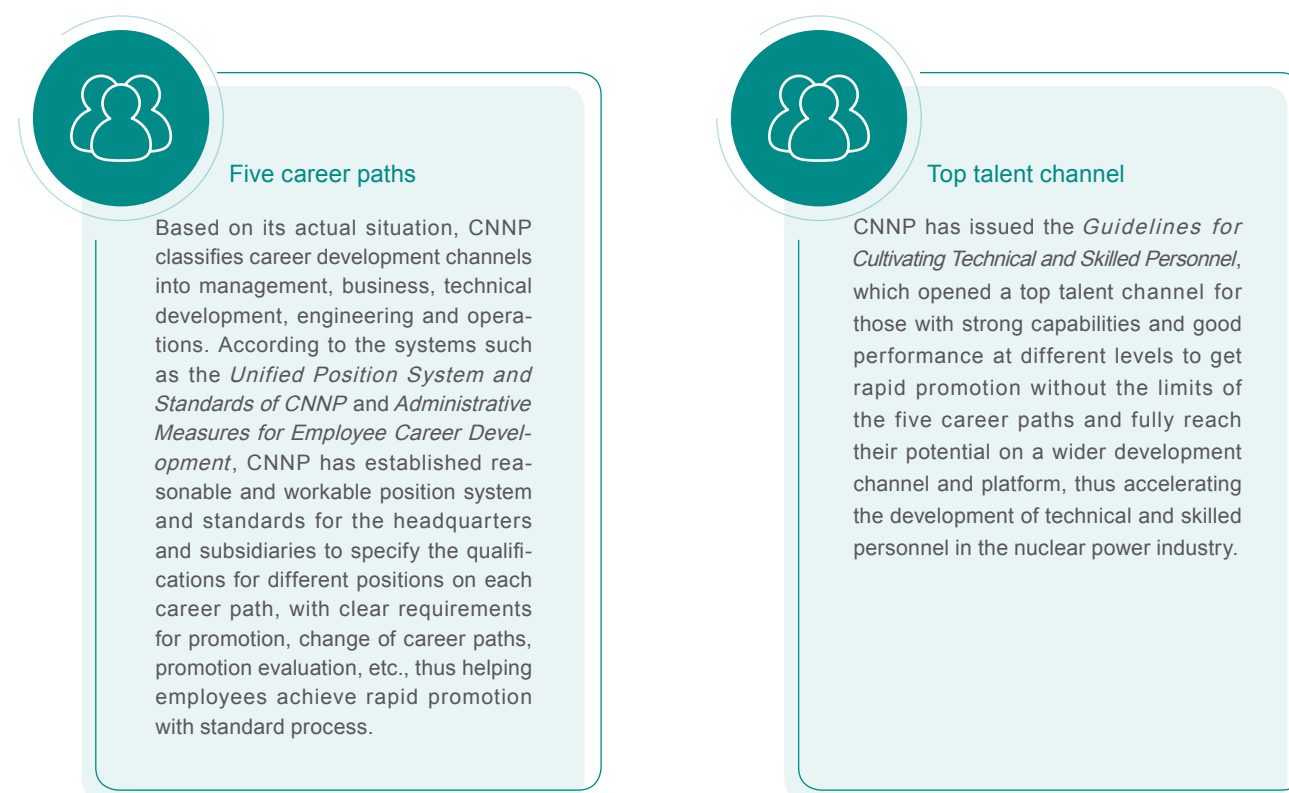
Fuqing Nuclear Power Plant provides psychological tests for employees in its Employee Assistance Program (EAP), in order to learn about their mental and physical health. The plant organizes 8 activities such as mental health courses, group counseling, group discussions and quality development programs, and establishes counseling rooms, sandplay rooms and group counseling rooms to offer relaxing space for employees. It also provides remote counseling and face-to-face counseling as well as monthly open classes through WeChat for all employees and their lineal relatives, which have helped them, especially the operating personnel, in physical and mental health and self-growth. The EAPs effectively facilitates employees enjoy work and life with a more positive attitude.

Career Development and Training

CNNP continues to cultivate technical talents, skilled workers, and management personnel by providing five career paths with a platform for talent cultivation. The Company improves and promotes a hierarchical training system covering different types of positions, and organizes diverse trainings and skill competitions. It is committed to building an influential and leading nuclear power company with a well-structured high-quality team.

Career Development

CNNP's five career paths and a top talent channel enable employees to choose career paths based on their expectations and strength, which benefits their career development and also lays a foundation for the training of technical talents, skilled workers, and management personnel.

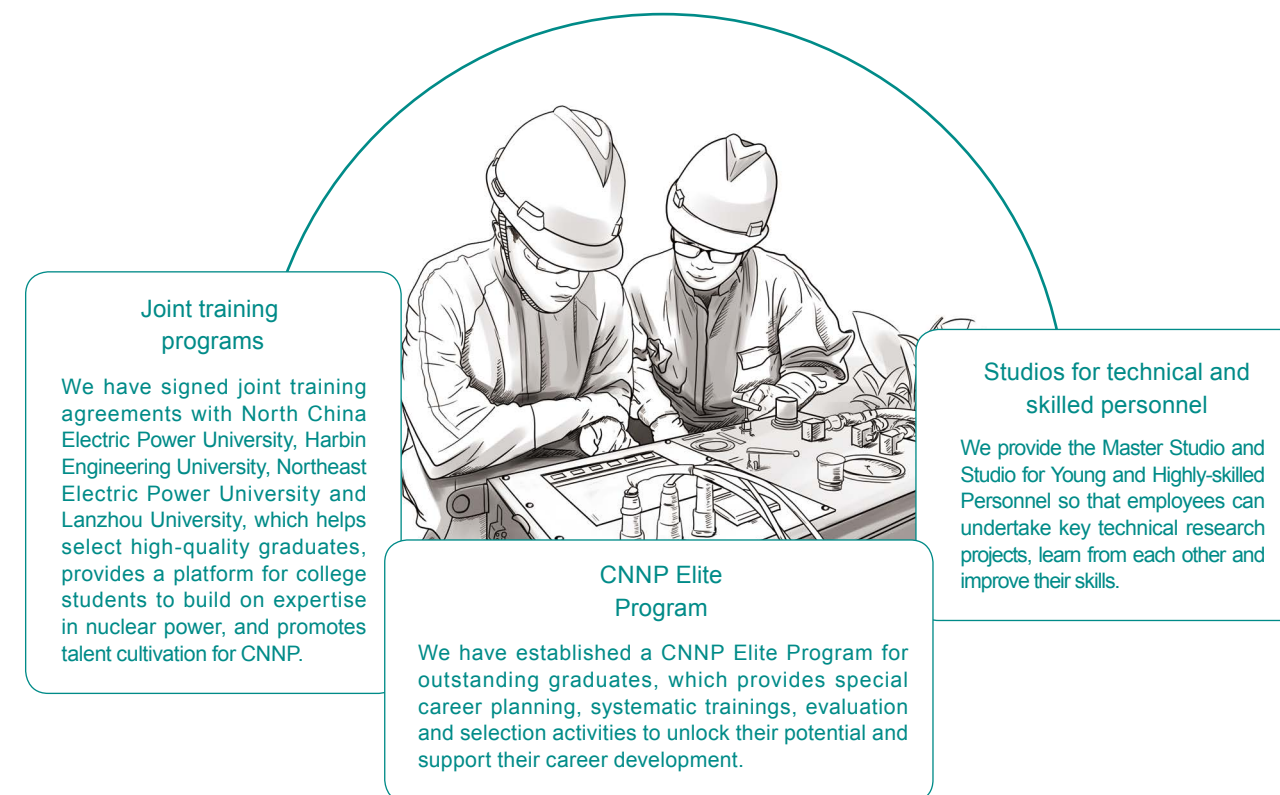


Talent Cultivation

CNNP has set up a talent training platform with various trainings and skill competitions to fully unlock the potential of employees and comprehensively improve their professional quality and competence.

Building a Talent Training Platform

Based on our resources and strength, we have built a training platform for employees to learn nuclear power knowledge and systematically improve their technical skills, aiming to improve the competitiveness of our employees, and reserve talents for the nuclear power industry.



Improving Training Systems

Continuously fostering the standardized building of our training center, we have formulated guidelines for standard training activities, promoted a hierarchical training system covering different positions on the five career paths, and improved the skill competition system. Based on the needs of employees and the actual situation of the Company, we have formulated a talent training plan to provide systematic and targeted on-the-job trainings for employees in different positions and career development channels. The Company organizes orientations for apprentices and new hires, and coordinates organizational, financial, teaching and other resources to support the vocational training and guarantee the rapid growth of employees.



Orientation trainings

- Following the principle of unified organization, standards, training materials, tests and evaluation, we carry out trainings for new hires, which introduce the history, strategic plans and corporate culture of CNNP and basic knowledge about nuclear safety and operation of nuclear power plants, helping them adapt to their roles.

In 2019, a total of **715** new employees participated in trainings.

Trainings for the management

- We have formulated trainings plans for the management, and provided trainings for senior leaders, new leaders of division level and section-level, young leaders, etc. A systematic training program for the management is basically developed. We also cooperate with Renmin University of China and other universities to explore a joint training mode, aiming to introduce modern management philosophy, knowledge and approaches, and carry out open and quality-oriented trainings.

Cultivation of international talents

- Based on our training and practice platform, we strive to promote the cultivation of international talents in various ways, including cooperating with colleges to carry out English, Spanish and other language trainings, selecting technical personnel to participate in the business cooperation and exchanges with international organizations such as IAEA and WANO organizing technical trainings and leveraging the training platform co-established by CNNP, international institutions and peer companies including Lucas-Nülle.

In 2019, **276** employees participated in the international talent training program.

Vocational qualification and certification

- We advance the vocational qualification certification system to ensure consistent evaluation of skilled talents. We have six vocational qualification certification stations. Qinshan Nuclear Power Plant was among the first batch to finish the filing for the pilot vocational qualification certification in the Ministry of Human Resources and Social Security of the People's Republic of China and Zhejiang Province Human Resources and Social Security Department.



Community Investment

CNNP actively undertakes social responsibilities, continuously promotes targeted poverty alleviation and makes earnest efforts to promote public welfare, contributing to the sustainable development of local communities.

Targeted Poverty Alleviation

To thoroughly implement President Xi Jinping's instructions on targeted poverty alleviation, CNNP allocates the tasks in the *Letter of Responsibility for Poverty Alleviation* to the headquarters and subsidiaries based on its targeted poverty alleviation strategy and plan. By visiting and investigating targeted villages, and undertaking research on targeted poverty alleviation of China Nuclear Industry Corporate Culture Research Association, CNNP focuses on the right poverty alleviation direction, and supports poverty alleviation by promoting industry development, consumption and infrastructure construction. The Company has established a poverty alleviation structure featuring "joint efforts of the headquarters and subsidiaries" to contribute to building a moderately prosperous society in all respects.



11

employees were sent to 10 targeted villages for poverty alleviation.

Investment in poverty alleviation

6.85

 million yuan


Case

The 4th CNNP Education Poverty Alleviation Summer Camp held in Sanmen Nuclear Power Plant

In August 2019, the 4th CNNP Poverty Alleviation Summer Camp was held in Sanmen Nuclear Power Plant. 56 teachers and students from Tongxin county in Ningxia Hui autonomous region, Shizhu county in Chongqing, Baihe county and Xunyang county in Shaanxi province gathered in Sanmen county. During the five-day summer camp, three nuclear power workers showed the teachers and students around the AP1000 exhibition hall, analog machines and project sites to feel the third-generation nuclear power technologies. They also visited the Ningbo Museum and Tianyige Museum, the oldest library in Asia. These activities provided a cultural feast to teachers and students, allowing them to feel the culture and inclusiveness of other regions and ethnic groups while improving scientific literacy.



AP1000 "Growing with CNNP" Science Summer Camp



Poverty alleviation through industry development

- Giving full play to our strength, we carried out geothermal power, wind power and PV projects in regions such as Tibet, Tongxin county in Ningxia, Lincheng in Hebei, Guidong county in Hunan, so as to support the industry development and increase the income of local people.

In 2019, we carried out **56** projects to combat poverty through supporting local industry .

We also invested over **230** million yuan to promote industry development in Tibet, Qinghai, and Xinjiang.

- Our projects created jobs for people in Tibet.

The Gulu Geothermal Power Project in Naqu city and the Qiyao PV Project totally spent about one million yuan

hiring **90** local farmers and herdsmen.

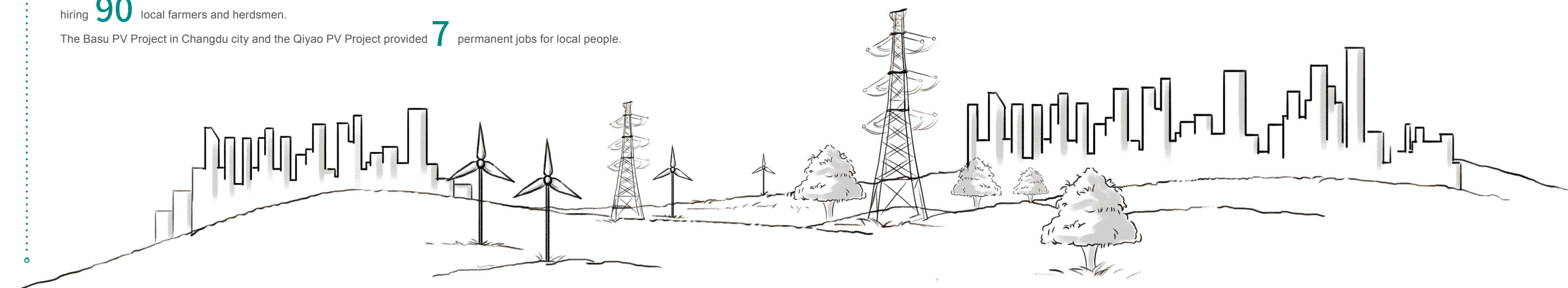
The Basu PV Project in Changdu city and the Qiyao PV Project provided **7** permanent jobs for local people.



Poverty alleviation through increasing consumption

- We signed a three-year procurement worth **58** million yuan with Tongxin County Garment Factory in Ningxia, and already purchased products worth nearly 20 million yuan as of 2019.

- In 2019, we purchased agricultural and animal husbandry products worth over **3.4** million yuan from Tibet. We bought consumer goods worth **3.17** million yuan from the four targeted counties and consumer goods worth 1 million yuan from other regions.



Poverty alleviation through infrastructure construction

- We built local infrastructure such as street lamps, roads and irrigation facilities for targeted villages, which facilitated the production and life of local villagers.

Sanmen Nuclear Power Plant donated **400,000** yuan to Zhugang village in Jiantiao town for road construction.

Hainan Nuclear Power Plant invested **2** million yuan in the pumping irrigation project of Yidong village.



Poverty alleviation through cultural development

- We helped improve the cultural facilities of targeted villages by renovating the culture corridor, protecting ancient trees, and building cultural squares.
- We improved local educational facilities and provided more educational resources by helping build libraries, donating reading materials, and building temporary storerooms.
- We built a volunteer teacher team, and have participated in volunteer teaching activities in poor areas for many years, so as to improve the education of poverty-stricken areas.

Volunteer Services

The Company actively undertakes social responsibilities and makes earnest efforts to promote public welfare. We encourage all employees to engage in volunteer activities, help vulnerable groups such as the elderly, children, and people with disabilities, and take actions to promote the harmonious and orderly development of the society.

Caring for the Elderly and Children

We have built a long-term mechanism to care for left-behind children. By sharing nuclear power knowledge, organizing football and movie-watching activities, and providing psychological counseling for left-behind children, we help enrich their extracurricular life.

We visit and subsidize elderly people in the nursing home. We help the elderly with cleaning, take a temperature and check blood pressure, and give performance for them, bringing happiness and warmth to the nursing home.



Sanmen Nuclear Power Plant organizes the activity themed "We Are Here for You" for left-behind children.



Xiapu Nuclear Power Plant organizes the environmental protection activity of "I Love My Home"

Building a Beautiful Community

We send volunteers to keep the traffic in order, and protect the environment by cleaning up rubbish and dredging the pipelines on the road, so as to promote the harmonious and orderly development of the society.

Wealth and Income Creation

Combining our business development with local development, we cooperate with local governments and enterprises to drive local clean energy industries, and take advantage of our nuclear power bases to help develop scenic spots, promote the development of industrial tourism and create jobs for local areas. With these efforts, we strive to achieve coordinated and common development of CNNP and the local areas.

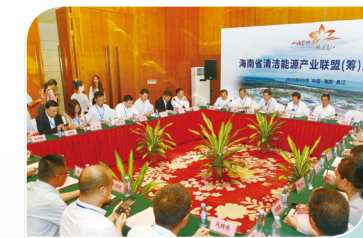


Case

Hainan Nuclear Power Plant leads the establishment of the Hainan Clean Energy Industry Alliance to build a clean energy industrial park with 100-billion-yuan output value

To accelerate the construction of the Hainan Clean Energy Industrial Park for the development of nuclear power and related industries, Hainan Nuclear Power Plant led the establishment of Hainan Clean Energy Industry Alliance in 2019, which is composed of innovative enterprises with advanced technologies and public institutions such as the Nuclear and Radiation Safety Center of the Ministry of Ecology and Environment. A total of 20 companies and organizations (including 6 subsidiaries of CNNC) planned to settle in Hainan Clean Energy Industrial Park to jointly build an international clean energy industrial park with an output value of over 100 billion yuan. The Alliance will

promote the cooperation among the industry, universities and colleges and research institutions, and accelerate the development of the clean energy industry in Hainan.



Hainan Nuclear Power Plant called for the establishment of the Hainan Clean Energy Industry Alliance



In 2019, CNNP paid

5.873 billion yuan in taxes.



Outlook for 2020

As the global trend is going through rapid changes, China is at a pivotal stage of transforming its growth model, improving its economic structure, and fostering new drivers of growth. In 2020, we will keep up with the pace of national reforms, focus on investment, construction and operation of nuclear power projects, and strive to promote the efficient utilization of cutting-edge nuclear technologies and the production of clean and low-carbon energy. We will fulfill our responsibility, ensure nuclear security, improve our innovation capability, and promote coordinated development to set a good example in modern state-owned enterprise system with Chinese characteristics.

Pursuing safe and efficient development

We will continue to advocate the quality demonstrated in the “Two Bombs, One Satellite” project and the spirit of the nuclear industry emphasizing the cause, responsibility, preciseness and endeavor. With a focus on strategies for large-scale, standardized and internationalized development as well as the “3655” management system, we will coordinate the five major tasks of “safe operation, project construction, marketing, management and Party building”, and promote the implementation of “the Fourteenth Five-Year Plan, technological innovation and talent cultivation”. By constantly improving the corporate governance system and ability, we will promote safe and efficient development of nuclear energy, and build China into a country with strong nuclear power.

Pursuing green and low-carbon development

We will promote the development of nuclear energy and other clean energy such as wind power and solar power in an orderly manner, build a clean and low-carbon energy system that is safe and efficient, and conduct supervision and management on radioactive waste, emissions and energy resources to reduce discharge of radioactive waste, greenhouse gas and harmful gases. In strict compliance with national requirements for ecological protection, we will protect biodiversity, and contribute to the economic system featuring green, low-carbon and circular development.

Pursing social harmony and shared development

We will advocate joint contribution and shared development with employees, provide employees with equal career opportunities and jobs, and build a diverse and inclusive workplace. We will also promote social harmony with our resources and strength and help poverty-stricken areas get rid of poverty through boosting local industry and consumption as well as supporting local educational, cultural and economic development, thus contributing to the happiness of employees and social harmony.

CSR Honors and Awards

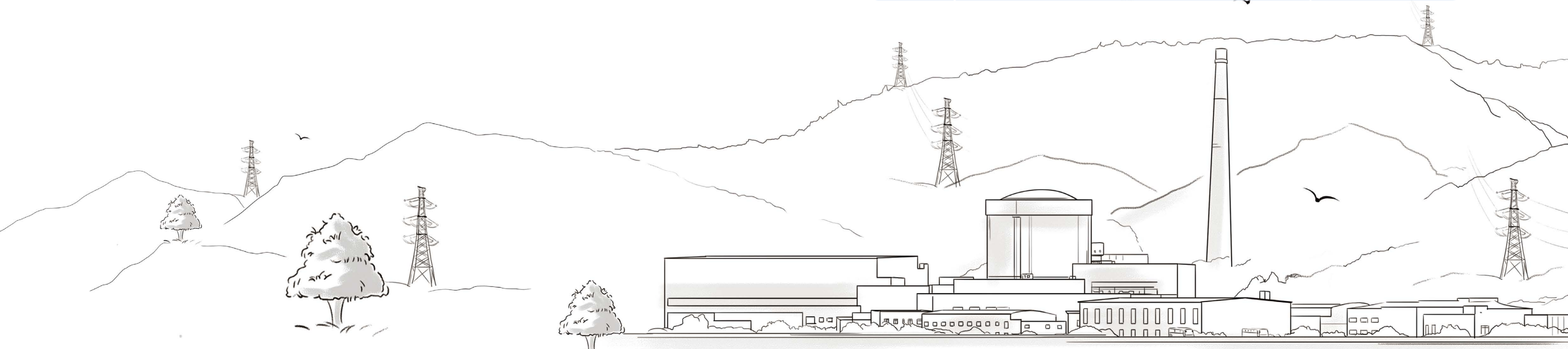
Recipient	Honor/Award	Award Issuer
CNNP	Nuclear Excellence Award	World Association of Nuclear Operators (WANO)
CNNP	Golden Bauhinia Award of China's Securities	Hong Kong Dagong Wenhui Media Group, Listed Companies Association of Beijing, Hong Kong Chinese Enterprises Association, Chinese Financial Association of Hong Kong, Chinese Securities Association of Hong Kong, Hong Kong Institute of Chartered Secretaries, and Hong Kong Securities Professionals Association
CNNP	Golden Round Table Award	China Association for Public Companies, and <i>Board of Directors</i> (journal of Phoenix Publishing & Media Group)
CNNP	Selected as one of the top 100 Companies in "China Brand Development Index"	<i>People's Daily</i>
CNNP	GoldenBee Excellent CSR Report 2019 · Evergreen Award	<i>China Sustainability Tribune</i> directly supervised by Ministry of Commerce
Qinshan Nuclear Power Plant	Enterprise with Best Corporate Culture Practices in China	China Enterprise Confederation / China Enterprise Directors Association
Fuqing Nuclear Power Plant	Golden Award - National Quality Engineering Award	China Association of Construction Enterprise Management



Key Index

ESG Indicator		Performance in 2019
Governance	Total assets (billion yuan)Total assets (billion yuan)	347.639
	Shareholders' equity (billion yuan)	50.054
	Revenue (billion yuan)	46.067
	Net income attributable to shareholders (billion yuan)	4.613
	Net income attributable to shareholders after deduction of nonrecurring profits and loss (billion yuan)	4.395
	Net cash flow from operating activities (billion yuan)	26.069
	General meetings of shareholders	2
	Number of independent directors	5
	Proportion of independent directors	1/3
	Employee representative director	1
	Proportion of employee representative director (%)	6.7
	Number of female directors	2
	Proportion of female directors (%)	13.33
	Training sessions related to integrity	6
	Number of participants in anti-corruption training	391

ESG Indicator		Performance in 2019
Environmental	Accumulated generating capacity of nuclear power units (TWh)	136.214
	—— Reduced consumption of standard coal (million tons)	54.4856
	—— Reduced CO ₂ emission (million tons)	135.8054
	—— Reduced SO ₂ emission (million tons)	4.0864
	—— Reduced NO _x emission (million tons)	2.0432
	Total installed capacity of new energy (MW)	1,019.6
Social	Number of employees	13,152
	Employee contract signing rate (%)	100
	Coverage of social insurance schemes (%)	100
	Labor Union membership rate (%)	100
	Employee health examination coverage (%)	100
	Number of work-related fatalities	0
	Training investment (million yuan)	47.225
	Total employee trainings (man- month)	16,029.79
	Investment in poverty alleviation (million yuan)	6.85
	Tax payment (billion yuan)	5.873





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