



HUADIAN POWER INTERNATIONAL CORPORATION LIMITED

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2020

HUADIAN POWER INTERNATIONAL CORPORATION LIMITED

Corporate Social Responsibility Report
(Environmental, Social and Governance Report)

About the Report

This Corporate Social Responsibility Report or Environmental, Social and Governance Report (hereafter referred to as the “**ESG Report**”) is the fifth annual standalone ESG report published by Huadian Power International Corporation Limited (the “**Company**” or “**Huadian Power International**”) and its subsidiaries (the “**Group**”), and mainly introduces the performance and progress that the Group’s stakeholders are concerned about with regard to economic, environmental, social and governance aspects. The ESG Report is to be read in conjunction with the “Corporate Governance Report” section of *Huadian Power International Corporation Limited 2020 Annual Report* (“**2020 Annual Report**”), to provide a comprehensive overview on the environmental, social and corporate governance performance of the Group.

Scope of the Reporting Content and Period

Unless otherwise stated, the organizational scope of the ESG Report covers the Company and its subsidiaries. The ESG reporting period is consistent with that stated in the 2020 Annual Report, which is 1 January 2020 to 31 December 2020 (the “**Reporting Period**”). Where necessary, some of the contents goes beyond the aforesaid period so as to enhance the comparability of the ESG Report.

Reporting Guideline

The ESG Report was prepared in accordance with the *Environmental, Social and Governance Reporting Guide* (2016 Edition) under Appendix 27 to the *Rules Governing the Listing of Securities of Stock Exchange of Hong Kong Limited* (“**SEHK**”) issued by the SEHK. It also took a reference to the *Guidelines on the Preparation of Corporate Social Responsibility Report* issued by the Shanghai Stock Exchange, the *Electric Utilities & Power Generators Sustainability Accounting Standard* issued by the Sustainability Accounting Standards Board (SASB), and the *GRI Standards for Sustainability Reporting* issued by the Global Reporting Initiative (GRI). The ESG Report was prepared based on the principles of “materiality”, “quantitative”, “balance” and “consistency”, and is compliant with the “comply or explain” provision set out in the *Environmental, Social and Governance Reporting Guide* by SEHK.

During the preparation of the ESG Report, the Group applied the reporting principles as follows:

Materiality: using the results of stakeholder communication as a reference, adopting a materiality assessment to identify the Group’s material topics for the Reporting Period, and compiling the ESG Report around these material topics.

Quantitative: disclosing the standards and methods used in the ESG Report to calculate relevant data and disclosing applicable assumptions.

Consistency: explaining the data for which the scope of disclosure and calculation methods have been changed.

Document and Data of the Report

The information of the ESG Report content is sourced from the Group’s formal documents and statistical reports. Unless otherwise specified, the currency mentioned is accounted by RMB. The board of directors (the “**Board**”), supervisory committee and directors, supervisors, and senior management of the Company warrant that the ESG Report does not contain any misrepresentations, misleading statements or material omissions, and are jointly and severally liable for the authenticity, accuracy and completeness of the information contained in the ESG Report.

Form of Publication

The ESG Report is published in two languages, Chinese and English. If there is any inconsistency between the Chinese version and English version, the Chinese version shall prevail. You are welcome to access the Chinese and English version of the ESG Report in a PDF format through the Company’s website, www.hdpi.com.cn, website of Shanghai Stock Exchange, and SEHK’s HKEx news website.

Comment and Feedback

Your feedback is immensely important for the Group to continually enhance its environmental and social performance. If you have any comments or feedback, you are welcome to contact us via the following ways:

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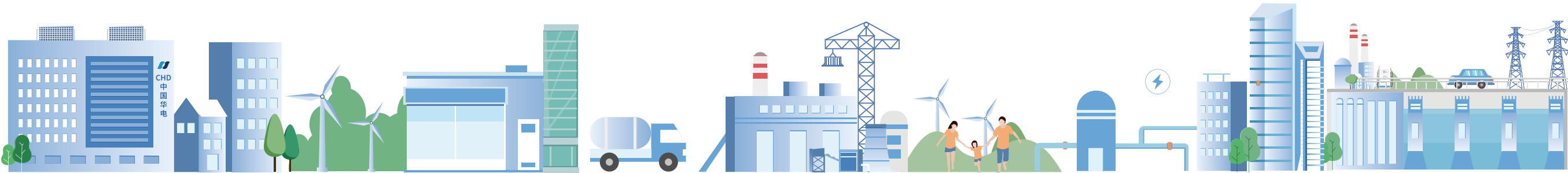
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Message from the Management

The year 2020 was a crucial year for securing a decisive victory in fully completing a moderately prosperous society. It was the final year of the "13th Five-Year" Plan and the 26th anniversary of the Group's establishment. Throughout years of development, the Group has gradually grown from a regional single power generator under the planned economy system to a national listed power generation company with a controlled installed capacity of 57.70 gigawatts ("GW") and with both domestic and overseas financing channels.

At the beginning of 2020, the COVID-19 epidemic rapidly spread. The Group issued a proposal to all its employees, leading all employees to carry out the epidemic prevention and control work in an all-around way and to carry out all tasks in a united and orderly manner. The Group adhered to the dual emphasis of fighting the epidemic and becoming a first-class company, implemented and completed annual tasks in an orderly manner. In the epidemic prevention and control work, the employees worked as one and made their concentrated effort to implement the spirit of the Central Committee of the Communist Party of China ("CPC"), the arrangements of the Party Committee of China Huadian Corporation Limited ("China Huadian"), and the epidemic prevention and control work. On May 6, 2020, based on the staggered work resumption after holiday peak return to work, the Group realized full work resumption, and actively provided a stable and reliable energy supply for the social work resumption and production.

Promote standardized operation and deepen the governance system. The Group has always adhered to the concept of law-based governance of enterprises, further deepened the law-based governance of enterprises, continued to promote the standardized operation, constantly improved the quality of legal audit and check, and strengthened the construction of institutional system to prevent and control risks related to corporate law, environment, society, and governance. At the same time, the Group continues to improve its social responsibility management structure, actively preparing and carrying out strategic planning on environmental, social, and governance, policy formulation and goal setting according to relevant requirements, the actual development of the enterprise and the expectations of its stakeholders.

Focus on improving quality and efficiency and promote high-quality development. The Group continues to strengthen research on the power market and policies, firmly establishes market awareness, proactively adapts to new requirements of power marketization reforms, strengthens the control of key performance indicators, optimizes strategies, improves marketing, continuously advances scientific research and stimulates technological innovation, and comprehensively promotes the quality and efficiency of work. In 2020, the Group successfully generated 207.32 million megawatt-hours ("MWh") of electricity, and 145 million gigajoules ("GJ") of heating supply was generated.

Strengthen safety supervision and implement stable operations. The Group carries out in-depth construction of intrinsically safe enterprises, strengthens safety supervision and management, comprehensively carries out investigation and management of hidden dangers in production safety, taking specific precautions and unwavering measures against matters, ensures production stability, thereby providing a stable supply of energy and safeguarding people's livelihoods. In 2020, a total of 40 of the Group's power plants were awarded the honorable title of "Intrinsically Safe Five-Star Power Generation Enterprise"; 31 thermal power plants, 3 hydropower plants, 1 coal mine and 5 renewable energy companies were awarded as Five-Star Enterprise; the hydropower sector achieved "zero unscheduled downtime"; the "unscheduled downtime" of thermal power generating units was decreased by 14 times on a year-on-year basis and 31 units achieved "zero unscheduled downtime".



Enhance clean production and protect the surrounding environment. The Group diligently pursues "good results in performance indicators and leading in environmental protection". The Group advocates and implements relevant environmental protection policies and requirements in a timely manner, conscientiously implements the new energy security strategy of "four revolutions and one cooperation", continues to promote pollution prevention, fully reduces pollutant emissions, implements energy benchmarking and consumption reduction measures. Meanwhile, the Group actively responds to the national call and requirements of energy and electric power development field, persists in clean and low-carbon development, gradually increases the proportion of renewable energy installed capacity, continues to promote the high-quality development of renewable energy projects, and actively responds to climate change. As of the end of 2020, the controlled installed capacity of clean energy was 14,539.30 MW, accounting for a record high of 25.20%. All thermal power plants of the Group have obtained emission permits and the average emissions of sulfur dioxide, nitrogen oxides and soot remained the same or slightly declined on a year-on-year basis, continuously maintaining good performances. .

Unify talents and take steps to grow together. A strong and cohesive team provides important support for the Group's sustainable development. The Group adheres to the human resources philosophy of "recognizing performance, selecting talent through competition, and rewarding those according to their achievements", continuously improves human resources management rules and regulations, protects the rights and interests of employees, and continuously strengthens personnel training to promote the mutual sustainable development of employees and the enterprise. At the same time, the Group also strives to create a dynamic and comfortable working environment for its employees and works together for the future to build a first-class team and a first-class power generation enterprise. Unify talents and take steps to grow together. A strong and cohesive team provides important support for the Group's sustainable development. The Group adheres to the human resources philosophy of "recognizing performance, selecting talent through competition, and rewarding those according to their achievements", continuously improves human resources management rules and regulations, protects the rights and interests of employees, and continuously strengthens personnel training to promote the mutual sustainable development of employees and the enterprise. At the same time, the Group also strives to create a dynamic and comfortable working environment for its employees and works together for the future to build a first-class team and a first-class power generation enterprise.

Deliver corporate warmth and fulfill social responsibility. As a power generation company, the Group not only shoulders the responsibility of stably generating electricity and ensuring a stable supply of energy, but also needs to build a harmonious relationship with the community, and transfers "Huadian warmth". The Group builds a harmonious relationship with the community based on a sustainable development concept, practices the concept of "China Huadian, caring everywhere", and actively fulfills its corporate social responsibility and gives back to society through holding public open day activities, practicing targeted poverty alleviation, etc.

About Huadian Power International

Company Introduction

The Company is a company specializing in power generation, and is registered in Jinan City, Shandong Province. After years of development, the Company has become one of the largest integrated energy providers in China. The Group mainly engages in constructing, operating and managing power generation plants, including large-scale efficient coal- or gas-fired generating units and various renewable energy projects. Over the years, the Group has always adhered to the scientific outlook on development, highlighted value-based thinking idea, and taken company strategies as the guide to speed up structural adjustment, and made persistent efforts in seizing development opportunities, improving efficiency, reinforcing management and leading working teams. With the building up of its overall strength, the Group has expanded its business locations from Shandong Province to other 14 provinces (municipals) such as Sichuan, Ningxia, Anhui, Henan, Hebei, Zhejiang, Tianjin, Inner Mongolia, Shanxi, Guangdong, Chongqing, Hubei and Shaanxi; and has enlarged its business scope from thermal power generation to hydropower generation, wind power generation, solar power generation, combustion turbine power generation, and coal industry. As of the end of 2020, the controlled installed capacity of the Group reached 57,699.3 MW, of which 14,539.3 MW was generated by clean energy, the proportion rose from 23.57% at the end of 2019 to 25.20%.

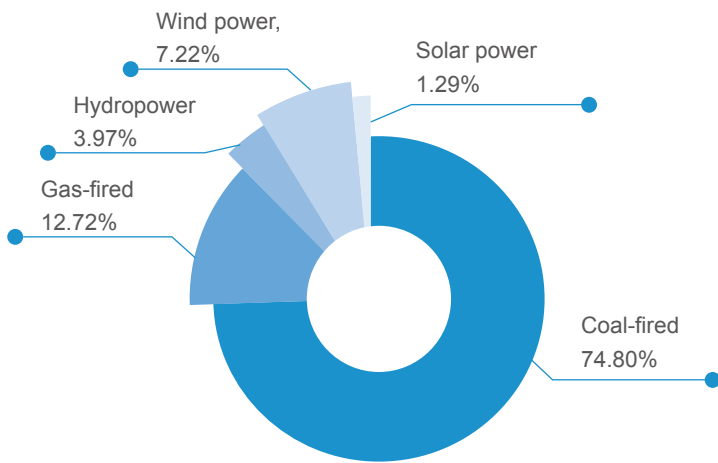
The operation philosophy of the Group:

Pursuit of the harmonious integration of shareholder values, social responsibility and employee interests to provide the public with safe, clean, reliable and low-cost electricity

The vision of the Group:

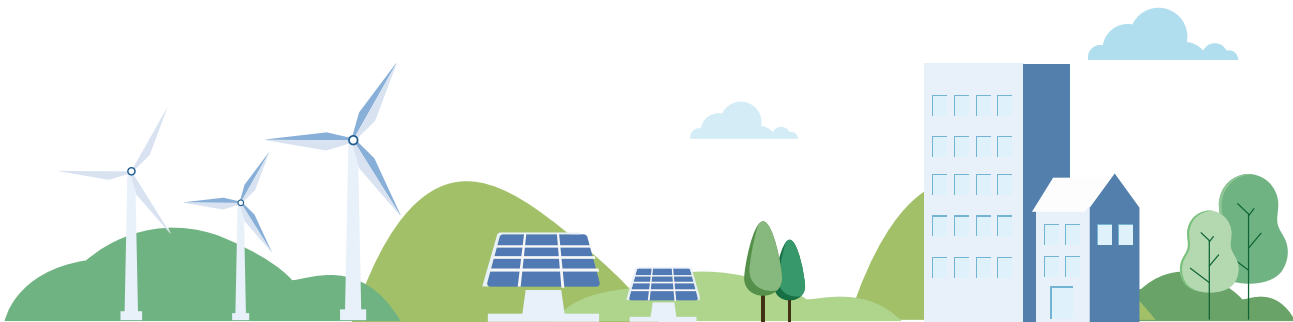
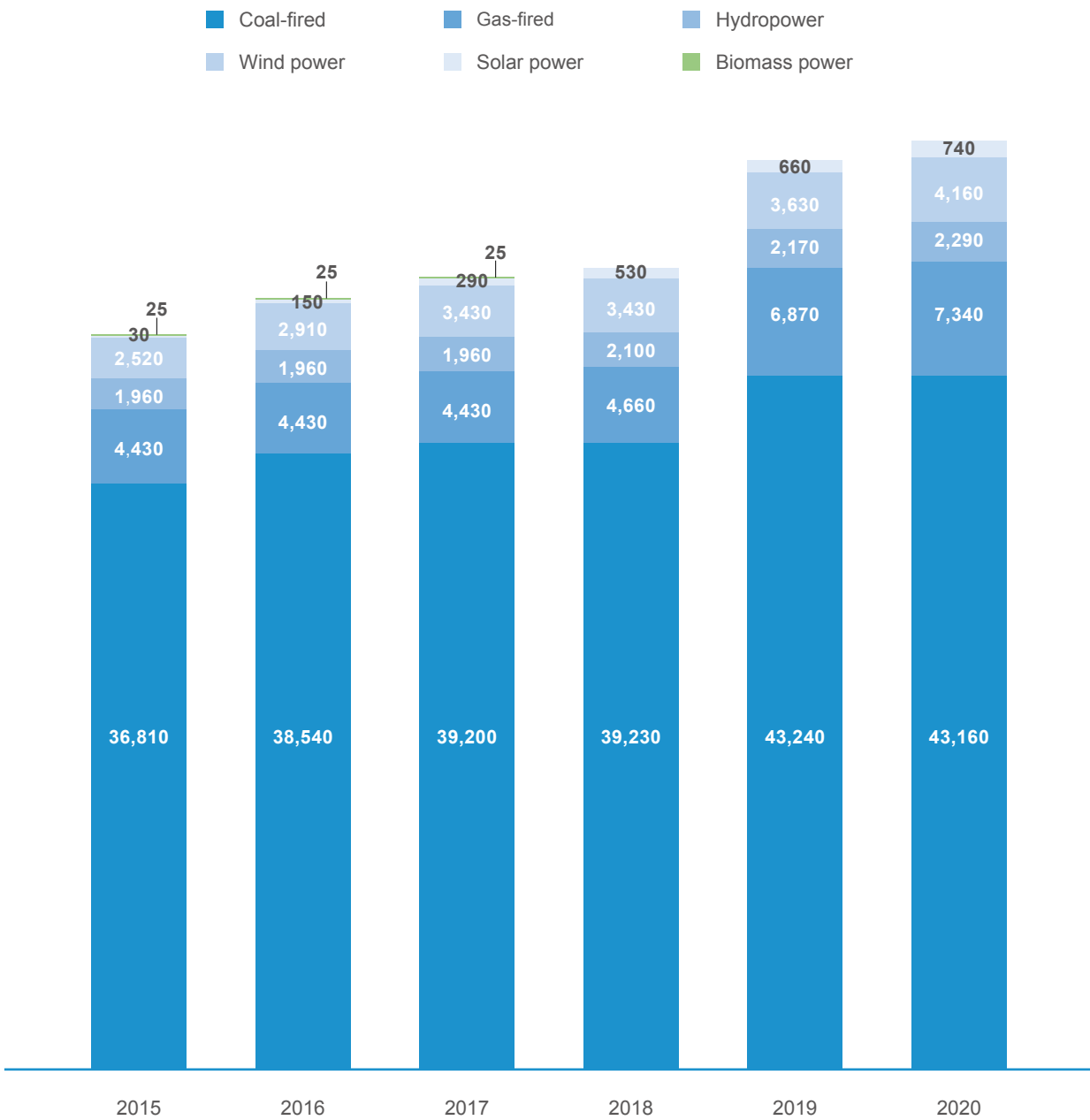
Energy Giant, Industry Vanguard, and International First Class

Business Conditions



As of the end of 2020, the Group had coal-fired generating units with 43,160.0 MW controlled installed capacity, gas-fired generating units with 7,340.3 MW controlled installed capacity, hydropower generating units with 2,289.4 MW controlled installed capacity, wind power generating units with 4,164.9 MW controlled installed capacity, and solar power generating units with 744.7 MW controlled installed capacity.

Change of Power Generation Installed Capacity of Huadian Power International During 2015-2020 (MW)



26-Year Development

1994

On June 30, Shandong International Power Development Company Limited., the precursor of the Group, was registered and officially founded

1999

On June 30, the Group issued its H-stock and got listed on the SEHK

2002

On November 21, the Company bought 20% of the shares of Ningxia Zhongning Power Generation Company, which marked its official entry into the market of the Ningxia Hui Autonomous Region and its first step to develop into a nationwide power generation company from a regional one.

2003

On April 1, China Huadian became the Company's controlling shareholder.

On May 9, the Company acquired 80% of the stock rights of Sichuan Guang'an Power Limited Liability Company, officially entering into Sichuan market.

On August 28, Huadian Xinxiang Power Limited Company was registered and founded, marking the Company's entry into Henan's market. During Phase 1, two supercritical coal-fired generating units with each capacity of 660 MW were constructed.

On November 1, Shandong International Power Development Company Limited was renamed as Huadian Power International Corporation Limited.

2004

On November 18, two generating units with each capacity of 300 MW in Chizhou, Anhui, with the relative controlling shares officially began to be constructed, marking the Company's entry into Anhui's market.

2005

On December 28, Huadian Qingdao Heat Corporation Limited, the first heating power unit in the Group, was officially registered and founded.

On February 3, the Group's A share, the first stock issued to the public for price inquiry in China, was officially listed on the Shanghai Stock Exchange.

2006

On December 4, the first batch of domestic ultra-supercritical units, each with a capacity of 1,000 MW was put into production in Huadian Zouxian Power Limited Company, and became the national "863" science and technology key project, the imported and domesticated support construction project, and the 2005 national annual key construction project. These units set a new record among the national same-type units with regards to the security status, construction speed, engineering quality, debug time, commissioning index, and energy conservation and environmental protection. The total controlled installed capacity of the Group amounted to 10,000 MW.

2011

Units 3 and 4 of Sichuan Huadian Luding Hydropower Limited Company, the Group's first independently constructed hydropower project, smoothly went through its first 72-hour operation.

On May 21, the Company acquired the stock rights of Guangdong Shaoguan Pingshi Power Limited Company (Factory B), marking its expansion to Guangdong.

2010

On April 20, the grid-connected solar power generation of 10 MW was conducted in Ningxia Ningdong Shangde Solar Energy Company for Phase 1, marking the Company as the first amongst the five top power groups to put solar power generation into business.

2009

On April 14, the Company acquired Shanxi Dongyi coal mine and Wangtongyuan Erpu coal mine, marking the Group's expansion to Shanxi and initial entry to the coal industry.

On August 1 and December 7, two biomass power generation units, each with a capacity of 12.5 MW were officially put into production in Anhui Huadian Suzhou Biomass Energy Limited Company for Phase 1, the Group's first comprehensive resources utilization project that entirely based on agricultural straw.

2008

The Company acquired 82% of the shares of Hebei Shijiazhuang Thermal Power Limited Company formerly possessed by China Huadian, 100% of the stock rights of Hebei Huadian Hybrid Storage Hydropower Limited Company, 64% of the stock rights of Hangzhou Huadian Banshan Power Limited Company, and 49% of the stock rights of Sichuan Huadian Zagunao Hydropower Development Limited Company, marking the Company's expansion to Hebei and Zhejiang and new breakthroughs in hydropower project and gas turbine project.

2007

In December, the wind power project of 45 MW for Phase 1 was put into production in Ningxia Ningdong, the first wind power project of the Group, which marked the rapid development of the Group's wind power business.

The "Tens of Millions of Kilowatt" project was carried out. The installed capacity of 6,095 MW during the year was realized and the Group's total installed capacity amounted to 20,000 MW.

2013

On September 10, the distributed energy sources project of Shenzhen Huadian Pingshan was approved, the first distributed energy sources project to be approved in Shenzhen, marking the Company's new breakthrough from "zero" in Shenzhen's energy market.

On April 16, the Group held the opening ceremony of the technical service center, marking its expansion into the field of power technical service and consulting.

In September, the first generating unit with the capacity of 415 MW for Phase 2 of the gas turbine generation project in Hangzhou Huadian Banshan Power Company was handed over for production, it was the Group's first independently-constructed gas turbine project.

2012

The installed capacity of 1,949.5 MW was put into production, indicating that the Company's controlled installed capacity amounted to 30,000 MW.

2014

In September and November, two gas-steam combined cycle power generator units of Tianjin Huadian Fuyuan Thermal Power Company Limited, each with a capacity of 200 MW, were officially put into commercial operation, the Group's first power project operated in Tianjin

2015

In July, the Company successfully acquired 82.56% of the stock rights of Huadian Hubei Power Limited Company formerly possessed by China Huadian, leading the Company's controlled installed capacity to increase by 5,120 MW to 400,000 MW and marking the Company's expansion to Hubei.

2016

On November 24, Huadian Guangdong Energy Marketing Limited Company, the first power marketing company solely invested by the Group, was officially registered and founded, marking the Group's business expansion to the power marketing side.

The Group's Chongqing Fengjie Power Plant put two supercritical condensing coal-fired generating units with a capacity of 600 MW into production for Phase 1, the Group's first supercritical "W-type" flame furnace project in progress that can meet the ultralow emission standard, marking the Group's breakthrough from the "zero" in Chongqing.

2017

The controlled installed capacity of the Group generated by clean energy exceeded 10,000 MW, reaching 10,130.1 MW, accounting for a record high of 20.54%.

2018

On May 31, the grid-connected solar power generation project, "pioneer", of 100 MW of Huadian Shandong New Energy Company in Wenshang, Jining, was conducted and put into production. It applies a novel development model that integrates agriculture and solar power generation by effectively making use of the land in the coal mining subsidence area and solar energy. It is of great political, financial and social significance.

In December, the #3 power generating units of Shenzhen Company and the #1 and #2 power generating units in Guangdong Province that the Group invested was put into commercial operation in succession, making the Group's breakthrough of gas-fired power generation projects in Guangdong Province.

2019

The Group newly put into operation 62 MW of hydropower, 197.3 MW of photovoltaics, 1,839.6 MW of gas-fired and 4,010 MW of coal-fired power units. The total installed capacity of the Group exceeded 50,000 MW, and the proportion of controlled installed capacity of clean energy increased to 24%.

2020

As of the end of 2020, the controlled installed capacity of the Group reached 57,699.3 MW, of which 14,539.3 MW was generated by clean energy, and the proportion rose from 23.57% at the end of 2019 to 25.20%.

In December, the Group's Hebei Huadian Shijiazhuang Thermal Power Company Limited gas turbine #1 unit was put into operation. The unit uses clean energy and natural gas as fuel, and its installed capacity of the unit is 2×453.6 MW, with a maximum heating capacity of 627 MW. It undertakes the industrial steam load and civil heating tasks in the central urban area of Shijiazhuang City.

Corporate governance is vital to the development of an enterprise. The Group keeps corporate social responsibility in mind, adheres to the corporate values of "responsibility, integrity, innovation, and harmony", continuously deepens enterprises' compliance with the law, comprehensively promotes standardized operations, strengthens and improves the structure for social responsibility management, maintains multichannel and regular communication with stakeholders, and promotes corporate sustainable development.



**Take Responsibility to Heart,
Prudent Corporate Management**



Corporate Governance



Stakeholder Communication



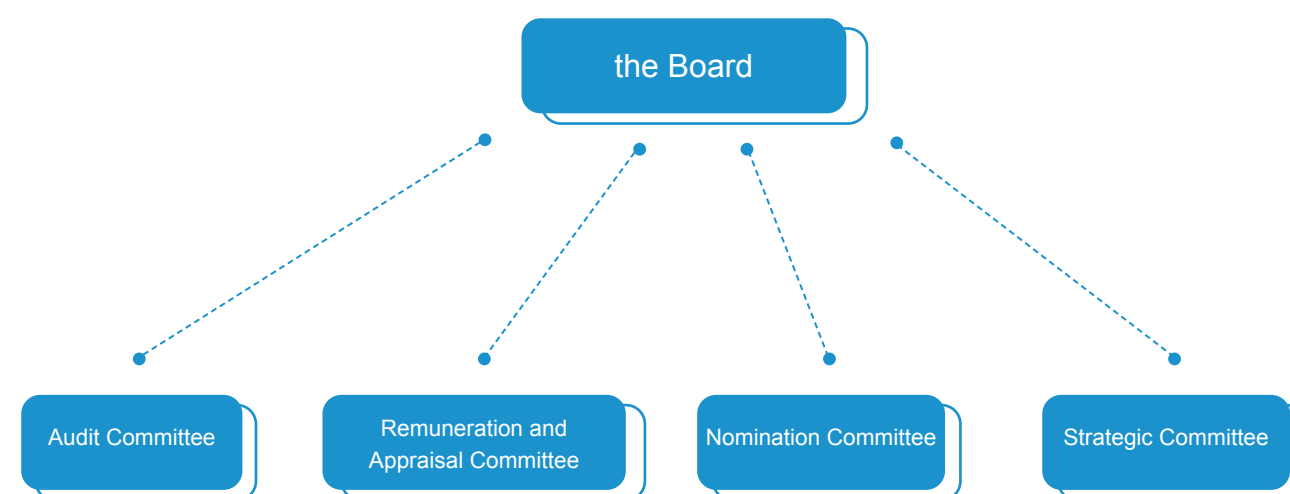
Social Responsibility Management Structure



Materiality Assessment

Corporate Governance

The Company has always attached great importance to corporate governance, strived to maintain high-level corporate governance and continuously promoted management innovation. The Group acts in strict compliance with the *Company Law of the People's Republic of China ("PRC")*, the *Securities Law of the PRC*, the *Rules Governing the Listing of Stocks on Shanghai Stock Exchange*, the *Rules Governing the Listing of Securities of SEHK* and relevant provisions promulgated by domestic and overseas securities regulatory institutions. The Group also keeps improving its corporate governance structure and management system. The Group has established a relatively mature business entity management structure and corresponding organizational regulations, which specifies the responsibility and rights of the general meeting, the Board and the supervisory committee. The Board has four specialized working bodies, namely the Audit Committee, the Remuneration and Appraisal Committee, the Nomination Committee, and the Strategic Committee, and each of these working bodies has different responsibilities.



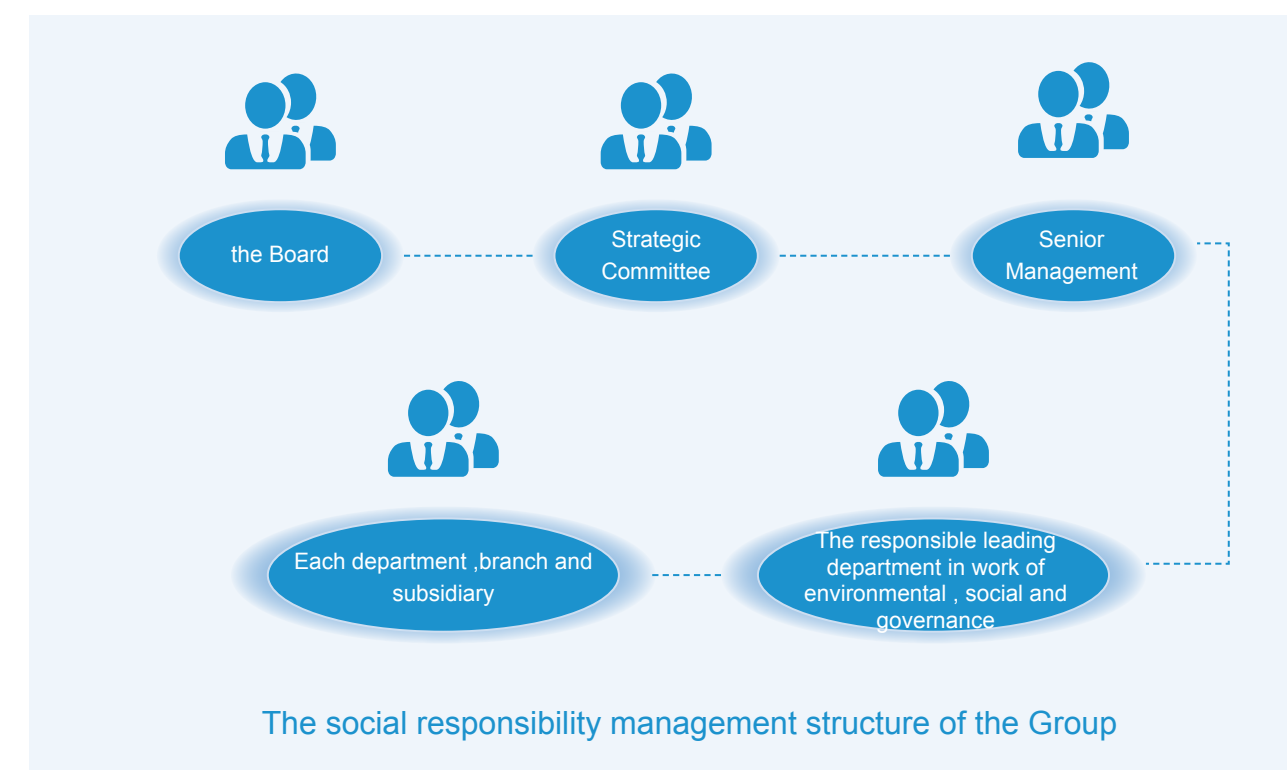
The chart of the Board's working bodies

Good risk management and internal control are essential to the healthy and sustainable development of a company. The Company has developed a relatively healthy risk management and internal control systems based on the Group's business scope and operational status. The Board bears the overall responsibility for overseeing the Company's risk management and internal control systems, and reviews and confirms the effectiveness of the systems in relation to the Group's risk management and internal control. The Company has also established a special department to regularly review the adequacy and effectiveness of the Group's risk management and internal control systems, and the Audit Committee reviews the work report and suggestions on the effectiveness of the key internal control system. During the risk evaluation process, each business department and major subsidiaries that face risks are the first responsible persons to identify the major risks that have reached the target. It assesses the residual risks and reports to the management of the Company, the Audit Committee and the Board after considering the countermeasures against major risks.

Social Responsibility Management Structure

The Group continues to promote environmental, social, and governance management, and actively prepares and carries out sustainable development strategy formulation and implementation. In addition, the Group constantly reviews and improves the promotion mechanism of social responsibility management and the social responsibility management system based on the Group's operational status and the relevant environmental, social, and governance requirements of the SEHK.

For the Group's social responsibility management system, the Group designates the Strategic Committee to be responsible for the Company's strategic planning, policy designation and target setting in environmental, social and governance matters, thereby deepening the social responsibility management promotion mechanism to form a hierarchical management system with the Board, Strategic Committee, senior management, environmental, social and governance leading departments, followed by departments and subsidiaries as the structure to further enhance the systematic and professional level of social responsibility management. The Company's senior management is responsible for following up on the progress of the Company's strategic planning, policies and objectives in environmental, social and governance matters, reporting to the Company's decision-making levels, and deliberating and making decisions based on material social responsibility topics and promoting the integration of social responsibilities concepts with the Company's development strategies and business management.



The social responsibility management structure of the Group

The Board is responsible for the Group's environmental, social and governance strategy and reporting, and evaluating and determining risks related to environmental, social and governance and ensuring that appropriate and effective environmental, social and governance risk management and internal control systems are in place. Environmental, social and governance risk management is an essential role in the Group's risk management. The Group identifies and evaluates its environmental, social and governance risks in accordance with the related requirements under the Group's risk management and internal control system.

Stakeholder Communication

The Group maintains smooth communication with its stakeholders, and this is an essential and effective way to promote the Group's sustainable development. The Group actively maintains normalized communication with all stakeholders and understands their expectation and demand to the Group's sustainable development in various ways, and makes specific plans and responds to them by taking actions. A favorable mechanism of "identify-communicate-evaluate-respond-report" is used, and the Group's responsible communication during the Reporting Period was as follows:

Stakeholders	Expectations	Communication Methods	Communication Frequency	Actions of the Group
Government and regulatory departments	Discipline	Stipulate policies Work reporting Information reports High-level meetings	Regular Irregular	Strict compliance with national laws and regulations; Timely advocacy and implementation of laws and regulations; Proactively cooperate with the regulatory department; Guarantee electricity and heating supply; Proactively respond to national strategy, improve self-discipline of ecological and environmental protection
	Compliant operations			
	Compliant tax payments			
	Safe energy supply			
	Optimizing structure			
	Energy saving and emission reduction			
Shareholders	Ecological protection			
	Sales income	Shareholders' meetings Company announcements Regular reports Roadshows	Annual Seasonal Irregular	Improve economic performance; Improve quality and efficiency, elevate effectiveness; Continuously improve risk management and internal control systems; Strengthen information disclosure and improve information transparency; Communicate on a regular basis and hold communication events
	Company profit			
	Corporate governance			
	Regular communication			
Employees	Employees' rights and benefits	Meetings Communication with employees Labor contracts Employee activities	Regular Irregular	Improve human resource management system and protect employees' rights and benefits; Ensure intrinsic safety work, implement employee occupational health and safety work; Improve talent training mechanism and the knowledge and technical level of employees
	Occupational health			
	Educational training			
	Colorful life			
Customers		Contracts and agreements Customer services Company website Communication meeting	Annual Seasonal Irregular	Improve quality and efficiency and ensure the stable and safe supply of electricity and heating; Provide sound customer service on the sale of electricity and heating; Improve operation management system; Promote scientific and research innovation to increase production efficiency
	Stable supply			
	Customer service			
	Quality and safety management			
Suppliers and other partners	Fair and just	Contracts and agreements Product services	Annual Irregular	Ensure fair and transparent bidding and procurement processes; Adhere to the fulfillment of contracts and agreements
	Win-win cooperation			
Community		Visit communities Poverty alleviation Charitable donations Environmental protection activities Public open day activities	Regular Irregular	Ensure the stable supply of energy; Engage in harmonious community development; Proactively organize volunteering activities; Implement environmental protection measures; Organize public open day activities, and strengthen community awareness on the operation of power plants
	Stable energy supply			
	Community development			
	Targeted poverty alleviation			
	Environmental protection			

Materiality Assessment

Different stakeholders may have different focal points of the Group's development. In order to identify and respond to the material topics that key stakeholders are concerned with and to demonstrate the Group's corresponding performance, the Group conducted a materiality assessment based on the "materiality" principle to identify and assess material topics.

In the preparation stage of the materiality assessment, the Group made reference to the *Environmental, Social and Governance Reporting Guide* under Appendix 27 to the *Rules Governing the Listing of Securities* of SEHK issued by the SEHK, the *Guidelines on the Preparation of Corporate Social Responsibility Report* issued by the Shanghai Stock Exchange, and the *Electric Utilities & Power Generators Sustainability Accounting Standard* issued by the Sustainability Accounting Standards Board (SASB). The Group reviewed the material topics in 2019 and used them as an important reference for the sustainable development topics database in the Reporting Period.

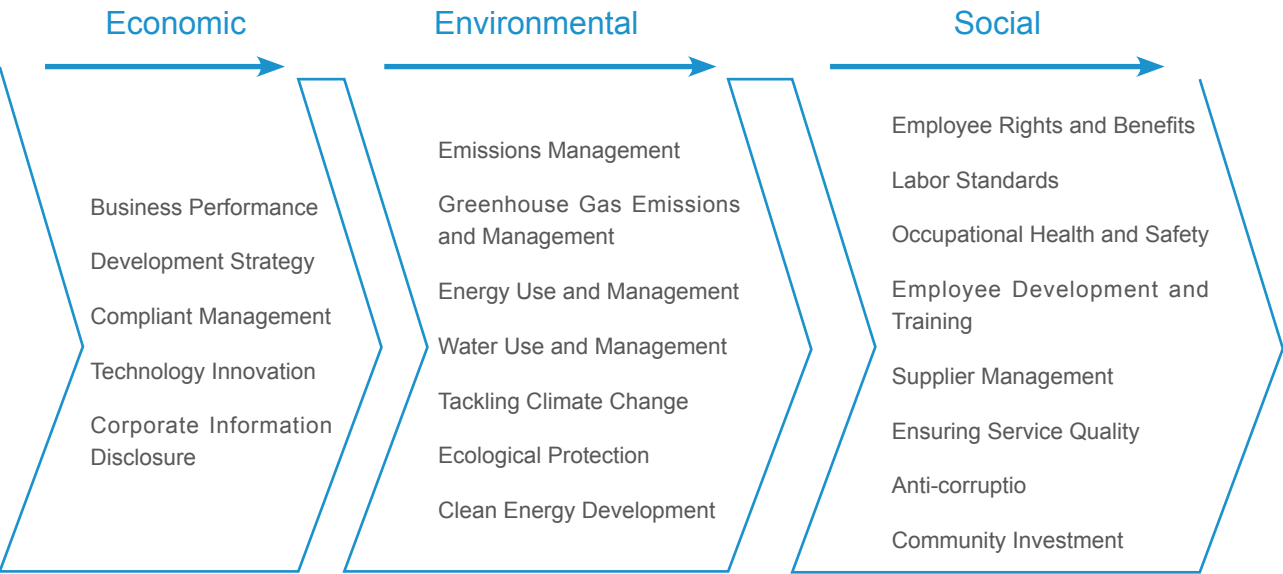
In the stage of updating the database of sustainability topics, the Group conducted in-depth research on relevant national policies, sustainability reporting guidelines published by SEHK and other bodies, and undertook peer-benchmarking analysis to identify and update relevant sustainability topics.

In the stage of materiality assessment, the Group collected, collated and assessed stakeholders' expectations, and fully considered the Group's business nature and development strategy, evaluated and screened sustainability-related material topics for the Reporting Period, and formed the materiality assessment results. In the course of the assessment, the Group not only took into account the impacts of the topics to the Group and stakeholders, but also considered the impacts on the economy, environment and society.

Finally, the senior management of the Group verified and reviewed the assessment result and decided the disclosed themes and contents of the ESG Report.



The selected material sustainable development issues are listed as follows. The ESG Report shows the sustainable development performance of the Group during the Reporting Period according to the topics and relevant reporting guidelines.






The Group adheres to standardize operations and legal corporate governance as a foundation, makes effort to achieve a shift from scale expansion to efficiency improvement, accelerating the high-quality transformation and development. At the same time, the Group actively responds to market changes, continues to run operations well, optimizes production indicators, works hand in hand with suppliers, implements supply chain management, and strives to build a strong, competitive and comprehensive energy enterprise.




Well-run Operations, Promote High-Quality Development

 Standardize Company Operations

 Actively Explore the Market

 Promote Lean Management

 Continuous Innovation

 Sustainable Supply Chain

Standardize Company Operations

Fully abiding by the law is a fundamental requirement for the high-quality development of state-owned enterprises, and an important guarantee for the promotion of state-owned enterprises' strategic upgrade and developmental reform. Power generation companies face potential legal risks in their operations, as well as those associated with anti-corruption matters. In this regard, the Group fully and timely grasps the current policies and requirements in managing enterprises under the rule of law, and constantly strengthens the construction of its legal compliance system, strengthening its effectiveness, legitimacy, and eliminating compliance-related risks.

The Group strictly abides by the relevant laws and regulations that have a significant impact on the Group relating to bribery, extortion, fraud, and money laundering, including but not limited to the *Criminal Law of the PRC*, the *Regulations of the PRC for Punishment of Corruption*, relevant regulations of the State-owned Assets Supervision and Administration Commission of the State Council, etc. The Group also implements and continuously improves the *Evaluation Standards on the System of Accountability for Improving the Conduct of the CPC and Upholding Integrity* and other internal policies, and during the Reporting Period, reviewed and updated the *Measures for the Implementation of the Responsibility System for Building Party Conduct and Governance Integrity*. In addition, the Group has newly formulated the *Working Rules of the Commission for Discipline Inspection Commission (Trial Implementation)*, as well as the *List of Responsibilities for Building Party Conduct, Governance Integrity and Anti-Corruption in Functional Departments and Offices*.

The Group has established a sound risk management and internal control system. The functional departments and affiliated entities of the Company continuously conduct risk assessment and monitoring for their legal risks, anti-corruption matters, and other risks. Meanwhile, the Group has a smooth feedback channel, and constantly strengthens the investigation and reporting of cases reported by letters and visits, and promptly investigates and prosecutes disciplinary violations. Meanwhile, the Group has established secure reporting channels, which allow reports made by relevant personnel to be kept confidential. Reports will be kept in confidence after cases reported by letters and visits are received. During the Reporting Period, the Group did not have any corruption proceedings.

During the Reporting Period, the Company carried out 42 employee awareness and integrity education activities, involving 1,399 person-times participation. The Company hopes to strengthen the standardized operation of the Company through these events.



Case



In January 2020, Huadian Power International 2020 Building of Party Conduct, Governance Integrity, and Anti-Corruption Work Conference was held in Beijing. The conference thoroughly implemented the spirit of the Fourth Plenary Session of the 19th CPC Central Committee and the Fourth Plenary Session of the 19th CPC Central Commission for Discipline Inspection, comprehensively summarized the Building of Party conduct, governance integrity, and anti-corruption work of Huadian Power International in 2019, analyzed and grasped the situation and tasks it faced, and arranged and arranged the work in 2020.



Case



On May 12, 2020, the Company organized the Company's management to watch warning educational videos, reminding its cadres and employees of firming up their ideals and beliefs and strengthening their awareness of law and discipline, and jointly created a good atmosphere of integrity.



Case



At the beginning of 2020, the Ningxia Branch of the Company held a regional meeting on the building of the Party conduct, governance integrity and anti-corruption work, and timely conveyed the spirit and work requirements from China Huadian's conference.



Case



In September 2020, the Zhejiang Branch of the Company held a discipline inspection and supervision skills competition, which created a strong learning atmosphere and provided talent for the comprehensive and strict governance of the Party to develop in an in-depth direction and strengthen the construction of the Party conduct and integrity.

Actively Explore the Market

With the advance of the reform of electric power marketization, the overall price of electricity is faced with the risk of decline due to the further increase in market electricity proportion and other factors. In the coal market, the growth of demand has slowed down, the balance between supply and demand became relatively loose, and there is a risk of fluctuation of the coal price in the market. In the face of such risks, the Group has always taken the guiding ideology of "insisting on making the main business stronger and better, insisting on differentiated development, and insisting on improving relative competitiveness", and actively adopted the following strategies and measures to strive to occupy the leading position.

- 1

Enhance and promote strategy-led and high-quality development, strengthen the analysis and policy research of the power and coal market to advise the Group on high-quality development, and strongly promote projects' construction;
- 2

Continue to do a good job in energy saving and consumption reduction and optimize unit's performance indicators;
- 3

Continue to do a good job in generating power and economical operations;
- 4

Strengthen the research on purchasing strategy, optimize coal purchasing channels, strengthen purchasing strategy management, consolidate the ability to resist coal market risks, optimize the structure of coal purchasing, and effectively control the procurement cost;
- 5

Continuously optimize the Group's energy structure, steadily develop renewable energy sources, and improve the proportion of clean energy and efficient coal-fired power generation;
- 6

Accelerate the development and improvement of the electricity sales business, constantly improve the market development ability, continuously improve customer service level, attract high-quality customers, and ensure that the competitiveness amongst electricity sales companies is at the leading level in the region;
- 7

Optimize and adjust the supply structure of coal- and gas-fired heating, maintain the steady growth of heating supply throughout the year, actively explore new heating industries such as clean energy heating, electric heat storage, and industrial waste heat recovery, and improve heating capacity and efficiency of heating systems.

Promote Lean Management

The Group's goal is to build a comprehensive energy enterprise with strong competitiveness, continuously optimize production indicators, and continue to promote high-quality development of the enterprise through standardization and lean management. Focusing on the development concept of "innovation, coordination, greenness, openness, and sharing", the Group has implemented quality improvement and efficiency improvements to enhance its ability to create value by improving production management models and implementing technological transformation.

Energy Supply performance:

Indicators	Units	2020
Electric bill (price) for wholesale customers	RMB/MWh	368.94
Number of wholesales, commercial, and industrial customers served	Number	2,168
Total marketized electricity	MWh	115,948,787

Continuous Innovation

During the age of informatization, scientific and technological innovation is an important factor for an enterprise to continuously develop its vitality. The Group has always adhered to the corporate spirit of "meticulousness, efficiency and excellence", constantly seeking ways to enhance and develop core competitiveness, actively creating an active atmosphere of innovation, and encouraging the spirit of "bold innovation and careful verification". The Group has invested significant resources in scientific research and actively carried out various scientific research and innovation activities. During the Reporting Period, the Group obtained 274 patent authorizations, and completed 120 scientific and technological projects.

Sustainable Supply Chain

Suppliers are important partners of the Group. The Group's procurement mainly includes fuel, infrastructure equipment, related materials and services, and the Group's business development is inseparable from the management of procurement work and the supply chain. The Group strictly complies with laws and regulations such as the *Public Tendering Law of the PRC*, and formulates and implements the *Materials Procurement Management Measures of Huadian Power International Corporation Limited*, the *Infrastructure Material Procurement Management Measures of Huadian Power International Corporation Limited*, the *Supplier Management Measures of Huadian Shandong Materials Company Limited* and other management measures. At the same time, the Group is committed to ensuring the legal compliance of procurement management and an open, fair, impartial and honest bidding process.

In order to strengthen the Group's material management work and establish a centralized, standardized, and efficient material security system, the Group has formulated the *Material Procurement Management Measures of Huadian Power International Corporation Limited*, which sets out the general objectives of material management, plan management, procurement management, and supplier management, etc. In order to systematically control and strengthen supplier management, ensure the quality of bidding and procurement, and control the environmental and social risks of suppliers, the Group has established a unified supplier network in accordance with the principles of “unified management, dynamic assessment, scientific control, and supporting the superior and eliminating the inferior”. The supplier network implements layer-by-layer checks on each step of supplier selection, supplier pre-qualification review, supplier dynamic quantitative evaluation, annual review, inspection and supervision. Suppliers are managed timely and effectively through the e-commerce platform.

In addition, the Group has established a supplier assessment indicator system to optimize the structure of supplier and has created a supplier blacklist to control procurement risks. Criteria for supplier assessment mainly include the suppliers' performance in quality, safety and service, whether they are certified by the ISO 14001 Environmental Management System, whether they have comprehensive policies and objectives regarding quality and environment, or whether they have had adverse social impacts on production, operation or construction, etc. During the Reporting Period, the proportion of suppliers applying the Group's supplier-related management measures was 100%, and the proportion of suppliers where annual procurement assessments were implemented was 90%.

The main supplier of the Group are coal supply companies. The quality of coal has a direct impact on the Group's power generation efficiency and environmental protection work. On the one hand, the Group actively adopts measures to deal with coal market risks, and on the other hand, it adopts measures to mitigate coal suppliers' environmental risks, thereby improving the implementation of environmental protection work and reducing pollutant emissions. Therefore, in order to better control the environmental risks of coal suppliers, the Group uses coal with high calorific value, low sulfur and ash content. In addition, the Group has established a reference-oriented coal sample system, improved acceptance process tracing mechanisms, built process monitor system and developed standardized labs for incoming coal to control coal source and quality. The incoming coal is required to be tested on whether the quality meets the national requirement and the procurement requirement of the Group before acceptance to ensure that coal quality is under control.

Supply Chain Composition:

Number of Suppliers by Region	Units	2020	2019	2018
Mainland China	Number	11,418	9,965	10,847
Hong Kong, China	Number	5	4	1
Other Countries or Regions	Number	0	0	0



The Group adheres to placing safe production as the number one priority for its operations, and implements the principle of "safety first, prevention crucial, comprehensive treatment". With a rigorous and efficient corporate attitude, it ensures the carrying out of safe production work, continuously improves its safety management and supervisory system, improves safety risk management abilities, implements occupational health and safety management measures, ensures the protection of personnel and assets, and provides communities with stable and reliable energy in a sustainable manner.



**Safety First,
Ensure Safe Operations**



Consolidate Safety in Production



Ensure Occupational Health



Stable and Reliable Supply

Consolidate Safety in Production

The Group has always regarded safety as a top priority, and strictly complies with the *Work Safety Law of the PRC* and other national laws and regulations related to workplace safety and provision of a safe workplace that has a significant impact on the Group. The Group has established and implemented work safety management systems, including the *Safe Production Responsibility System*, the *Administrative Regulations on Hidden Danger Investigation and Management*, the *Safety Management of Major Dangerous Sources*, the *Administrative Regulations on Safety of Contracted Projects*, the *Measure for the Management of Traffic Safety*, and the *Safety Training Management*, and continuously enhanced the implementation of the safety management systems. Additionally, the Group has continuously improved the work safety inspection and protection system, implemented the work safety responsibility system for all employees. The headquarters of the Group, branch companies and subsidiaries have all established work safety committees and, “factory-workshop-team”, a three-level safety supervision network. In 2020, on the basis of comprehensive prevention and control of the epidemic, the Group continued to carry out the construction of intrinsically safe enterprises, conscientiously implemented the safety responsibilities of personnel at all levels, keeping the safety risks under control, and continued to consolidate the foundation of safe production. The Group had a total of 589 safety specialists. During the Reporting Period, the Group did not violate the above laws and regulations on production safety and provision of a safe workplace. The overall situation of safe production was stable. No general or serious personal injuries or deaths occurred, and no general or serious equipment and fire accidents occurred.

In order to strengthen the management and control of safety risks at production sites, the Group has carried out the construction of in-depth safety risk hierarchical management control, increased safety risk identification and dynamic hierarchical management control, and adopted the following safety measures.

- 1

Conscientiously implement safety responsibilities of personnel at all levels, increase the investigation and management of hidden dangers in safe production, and work against regulatory violations;
- 2

Strengthen the formulation, improvement, and implementation of safety and technical measures to keep safety risks under control, and consolidate the foundation for safe production;
- 3

Strengthen the configuration management of safety facilities and environmental management of safety operations, ensuring that the safety facilities at the production site are complete and reliable;
- 4

Strengthen the management of unsafe incidents, investigate and analyze the causes of unsafe incidents in strict accordance with relevant requirements, formulate corresponding preventive measures, and educate relevant responsible personnel;
- 5

Conduct in-depth analysis of the safety production situation and existing difficulties and priorities, and highlight the safety management and control of flammable and explosive areas, major hazards, high altitude operations, and outsourced projects;
- 6

Continue to improve the monitoring and alarming of flammable and explosive gas concentrations and ventilation facilities to ensure that the safety of flammable and explosive areas, major hazards, and outsourced projects is in a controllable and controlled state;
- 7

Encourage basic-level units to apply new technologies to reduce operational risks.

The implementation of safe production is also reliant on practical safety training to enhance employees’ safety skills and awareness. To this end, the Group’s safety training work includes:

- 1

In conjunction with the Group’s safety skills training certification examination system, conduct comprehensive training and education on relevant laws and regulations, safety rules and regulations, and safety production situations;
- 2

Conscientiously carry out training on case studies of typical safety incidents;
- 3

Arrange for safe production management personnel and front-line personnel at basic-level units to regularly participate in safety skills training examinations in accordance with regulations, and only those that have obtained certification can engage in production work at production sites;
- 4

Encourage basic-level units to conscientiously carry out safety practical experience training to enhance employees’ safety awareness.

During the Reporting Period, 61,302 employees of the Group passed safe production examinations.

Case



On June 30, 2020, Anhui Huadian Lu'an Power Generation Company Limited and Lu'an Yu'an District Ecological Environment Branch organized an emergency drill for liquid ammonia leakage. More than 50 related professionals participated in the drill.



Case



Tianjin Huadian Nanjiang Thermal Power Company Limited realized safe production and management by the application of the intelligent operation platform. Based on industrial Internet data centers, the company installed wheeled and rail robots in power distribution rooms. At present, the patrol inspection coverage rate of the wheeled robot equipped with multiple sensor technologies in the steam engine room reached 51%, the coverage rate in the high-risk power distribution room reached 100%, and the recognition accuracy rate of the robot reached 95%.



Case



In order to effectively implement the dual prevention mechanism of risk-graded control and hidden trouble detection and management, Zibo Company used information means to build an essential security control platform for intrinsic safety. The company made full use of computer statistics, analysis and other information technology to achieve a full process of safety management and control, such as the immediate detection of hidden dangers, hierarchical risk management and control, online safety education, and immediate exposure of violations.



Stable and Reliable Supply

As a power company, the Group's customers are mainly electricity grid companies, electricity users and heating users. The supply of electricity and heating is a livelihood project and is an important responsibility and guarantee for social development. Adhering to the service concept of "Huadian thermal power, warming tens of thousands of families", the Group is committed to satisfying customers, persisting in providing sustainable and efficient energy for the society, and doing a good job in guaranteeing and providing stable energy.

The Group continues to improve the emergency response mechanism and formulates an emergency response management system and safe production comprehensive management plans. The Group's subsidiaries have also prepared comprehensive emergency plans and special emergency plans. For basic-level units, in addition to formulating the aforementioned plans, they have also formulated emergency treatment plans for the emergence of leakage of liquid ammonia, personal electric shocks, and power outages throughout the plant. In addition, the Group has strengthened the training and rehearsal of emergency plans, conducts all drills on emergency plans and emergency response plans every two years, and conducts annual emergency response plans for key emergencies to continuously improve employees' emergency response capabilities. For important seasons, such as spring and autumn, summer peak season, and important events (such as National Day), the supply of electricity and heating supply are ensured, and special inspections and works to ensure the supply of electricity and heating are performed. During the Reporting Period, the Group conducted 1,976 safety emergency drills.

The Group is committed to the continuous improvement of service levels, and ensures smooth communication with customers through the continuous improvement of customer service work management, and expects to improve customer service satisfaction with attentive services.

Personal information security and network information security are important issues for power companies. The Group attaches importance to information security, stores the Group's and customers' information securely, and protects the safety of information using appropriate measures in accordance with applicable laws and regulations, non-disclosure agreement and privacy protection, including but not limited to the *Law of the PRC on the Protection of Consumer Rights and Interests*. The disclosure of the information relating to health, advertising and labeling of the power supplied by the Group is not applicable due to its business nature.



Case



In the first quarter of 2020, Tianjin Huadian Fuyuan Thermal Power Company Limited successfully finished its tasks in epidemic prevention and control, made its effort to ensure the stable supply of electricity and heating, earnestly fulfilled its social responsibilities, and provided strong support for the development of Huadian Power International's business in Tianjin.



一、发电企业
 一等奖：华电芜湖电厂、中煤利辛电厂
 二等奖：国投宣城电厂、国电蚌埠电厂、华电六安电厂、神皖马鞍山电厂、国电铜陵电厂
 三等奖：大唐马鞍山电厂、中电投淮南平圩电厂、皖能马鞍山电厂、华能巢湖电厂、大唐虎山电厂

二、供电单位
 一等奖：马鞍山供电公司、霍山供电公司
 二等奖：滁州供电公司、芜湖供电公司、阜阳供电公司、宣城供电公司
 三等奖：宿州供电公司、蚌埠供电公司、淮北供电公司、六安供电公司、亳州供电公司

希望受表彰的单位珍惜荣誉，再接再厉，在今后的工作中再创佳绩。各电力企业要坚持以受表彰的单位为榜样，奋发进取，扎实工作，争先创优，在电力保障工作中进一步强化科学调度，实施精细化管理，确保全省电力安全可靠供应，为全省经济和社会发展作出新的更大的贡献。



During summer peaks in 2020, Anhui Huadian Wuhu Power Generation Company Limited and Anhui Huadian Lu'an Power Generation Company Limited, strengthened equipment management and safety management according to the requirements of Anhui Energy Administration, implemented power grid scheduling in strict accordance with the requirements of electricity generation and electricity supply. During this period, there were no coal-shortage outages, unplanned outages, or other incidents affecting the safety of the power grid. This effectively guaranteed the province's economic development and electricity demand. These two companies respectively won the first prize and the second prize of Anhui Province's 2020 Power Safety Production and Power Supply in Summer Peak Labor Competition, among which Anhui Huadian Wuhu Power Generation Company Limited won the first prize in the first year that its #3 million-watt unit being put into operation, and Anhui Huadian Lu'an Power Generation Company Limited won the second prize for four consecutive years.

Case



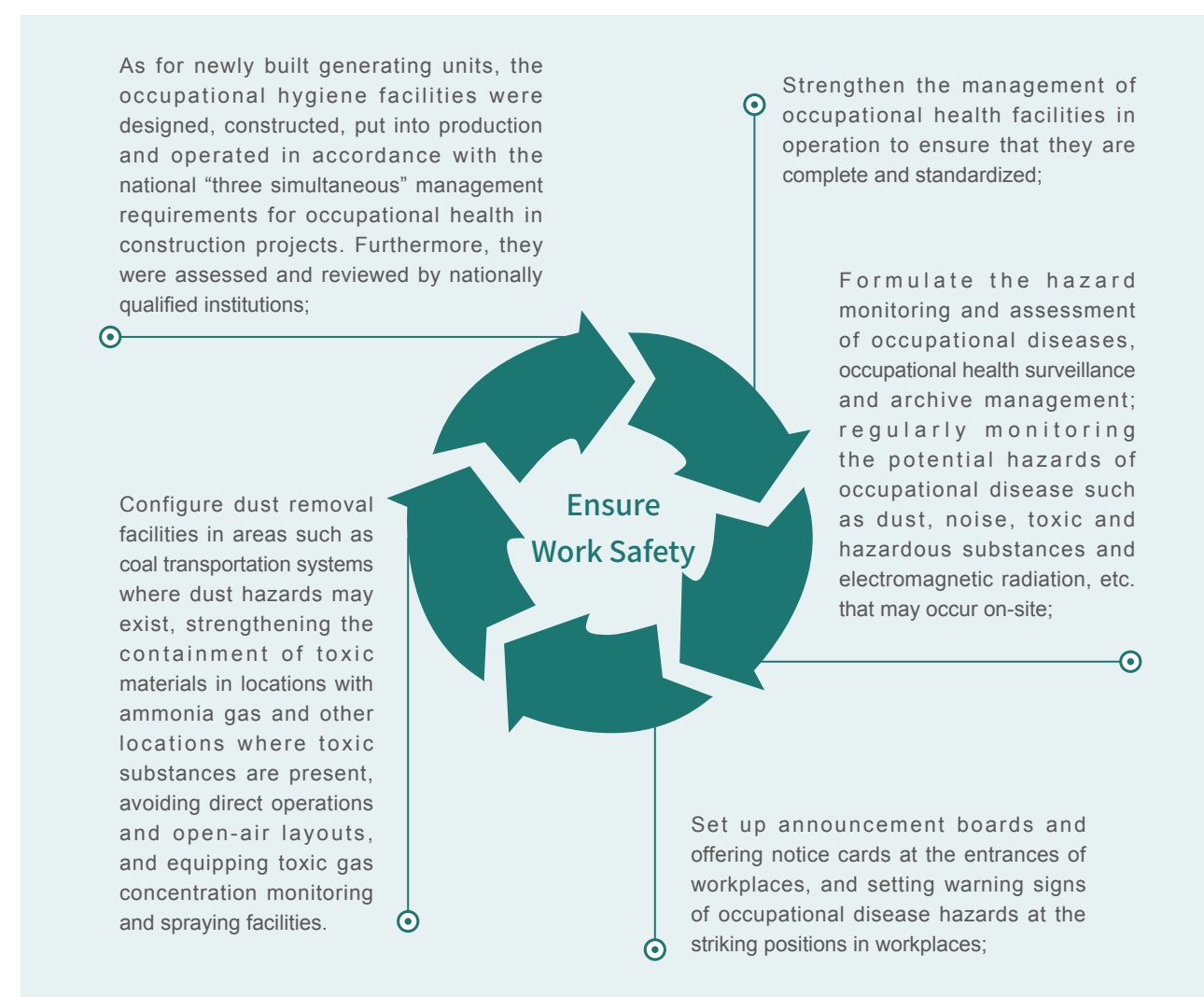
Ningxia Huadian Heat Company Limited's "Suppling Heat from the East to the West" heating project is planned to be completed in two phases. The first phase was completed and put into operation in 2018, providing heating to an area of 40 million square meters. The second phase was put into operation in 2020. The two phases provide heating to an area of 80 million square meters, covering the main urban areas of Yinchuan City. After completion, the project will replace 155 sets of small boilers in urban areas, which can reduce the amount of coal consumption in urban areas by 1.3 million tons per year, and reduce sulfur dioxide emissions by 12,000 tons, nitrogen oxides by 20,000 tons, and soot by 35,000 tons. This is helpful to fundamentally alleviate the air quality, haze, and environmental problems during the period of heat supply in winter in Yinchuan City, with significant environmental effects, social effects, and economic benefits.



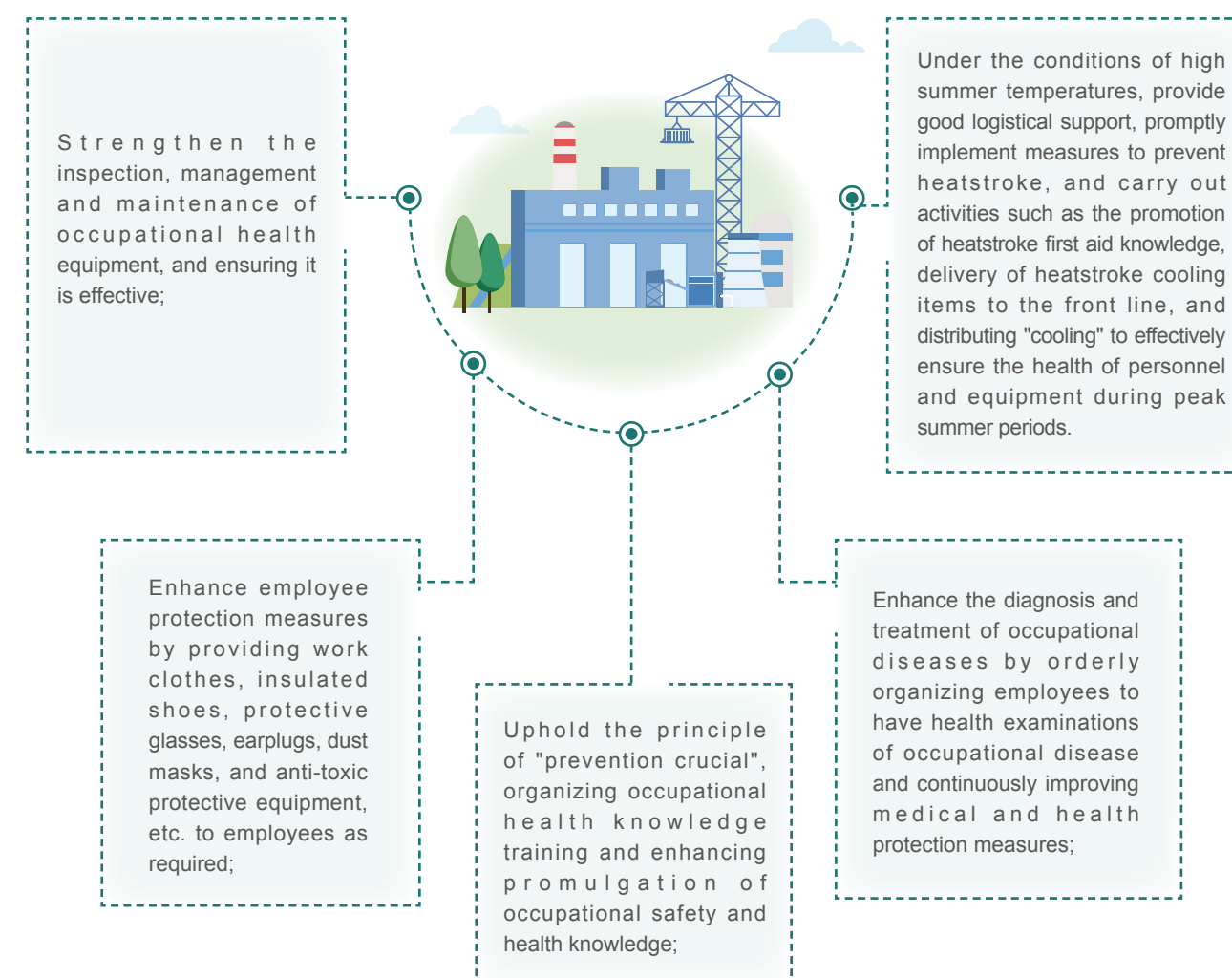
Ensure Occupational Health

The Group strictly abides by the national laws and regulations that have a significant impact on the Group relating to providing a safe working environment and protecting employees from occupational hazards and relevant industrial standards and regulations, including but not limited to the *Law of the PRC on the Prevention and Control of Occupational Diseases* and the *Provision on the Supervision and Administration of Occupational Health at Work Sites*, and has formulated and implemented the occupational health management standard, supervision management system of occupational health and other measures. In order to fully implement the aforementioned laws and regulations, to strengthen the management of the prevention and treatment of occupational diseases, and effectively protect the health and safety of workers during operations, the subsidiaries of the Group have promptly announced and implemented relevant laws, regulations and policies, improved the occupational health management system, and regularly reviewed and updated the system and management measures, thereby implementing the goal of preventing and controlling occupational hazards. During the Reporting Period, the Group did not violate the above laws and regulations on providing a safe working environment and protecting employees from occupational hazards.

In order to strengthen and implement occupational health management work, in terms of safe production on site, the Group implements the following safety protection work:



In terms of employee personal health and safety protection, the Group has implemented the following safety protection work:



During the Reporting Period,



the number of deaths due to production accidents in the Group was

0

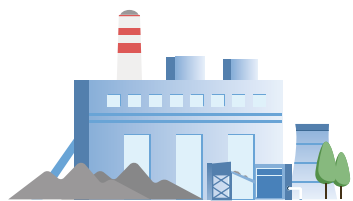


the death rate per 200,000 working hours was

0%



The Group strives to provide electricity and heating to its customers, while making unremitting efforts to protect the beautiful planet. The Group has always adhered to the corporate mission of "providing reliable, clean, and economical energy", actively responded to the national environmental protection policy, effectively promoted structural adjustment, and actively developed clean energy, so as to cope with climate change, and maintained investment in energy conservation and environmental protection. The Group develops green and low-carbon electricity to jointly promote high-quality development, ecological, and environmental protection.



**Develop Harmoniously,
Protect Lucid Waters and Lush Mountains**



Tackle Climate Change



Emissions Management



Energy and Resources Use



Strictly Protect Ecosystem



Environmental Key Performance Indicators²

Tackle Climate Change

China is now the world's largest energy producer and consumer. In 2019, the proportion of non-fossil energy consumption in China reached 15.3%. During the "14th Five-Year" Plan period (2021-2025), China will further innovate its development model, accelerate the development and utilization of clean energy, encourage non-fossil energy and natural gas to become the main part of energy consumption growth, and increase the proportion of clean energy consumption to a greater extent. China's share of non-fossil energy consumption is expected to rise to around 25% by 2030, which means that over 70% of the country's energy growth will come from non-fossil fuels. In response to the relevant policies, the Group actively promotes the transformation of the energy structure to be green, low-carbon, clean and efficient, continues to develop clean energy, continues to promote the transformation of ultra-low emission of coal-fired power plants, and improves the efficiency of energy conservation and emission reduction, and implements carbon emission management.

Controlling Greenhouse Gas (GHG) emissions is an essential act of tackling climate change. During the Group's operation, its GHG emissions are mainly sourced from fossil fuel combustion in thermal power plants. Hence, to manage fossil fuel consumption effectively and decrease coal consumption rate for power supply is a direct way to control GHG emission. One the one hand, the Group develops clean energy in order to increase the proportion of clean energy power generation units to reduce reliance on energy from fossil fuels to some extent. On the other hand, the Group takes energy saving and consumption reduction as an important measure for improving quality and efficiency, including improving operational efficiency of equipment and promoting technological renovation to reduce consumption.

In 2018 and 2019, the Ministry of Ecology and Environment of the PRC circulated the notice of implementing carbon emission reporting and verification. The Group has proactively implemented relevant measures. Depending on the Group's carbon emission statistical information system, the Group continuously improves its carbon emission management to accomplish carbon emission monitoring and reporting. Moreover, every subsidiary of the Group has formulated monthly and annual targets of coal consumption rate for power supply and conducted benchmarking of energy saving to decrease coal consumption in power generation and reduce GHG emission. Meanwhile, the Group proactively responds to domestic and international green and low-carbon development. A study of carbon emissions and carbon assets management has been developed, which enables the effective integration of low-carbon development concept and strategy into the Group's development plan.

In terms of developing clean energy, the Group strictly controls conventional coal-fired power, actively develops gas-fired power, develops renewable energy projects in an orderly way, and increases the proportion of installed capacity of renewable energy in the energy structure. Compared with 23.57% of the total installed capacity of clean energy at the end of the last reporting period, by the end of the Reporting Period, the total installed capacity of clean energy of the Group reached 14,539.3 MW, which accounted for 25.20% of the total installed capacity, an increase of 1,209.0 MW compared with the end of the last reporting period, of which:


Total capacity of gas-fired generators:

 7,340.3 MW

Total capacity of wind power generators:

 4,164.9 MW

Total capacity of hydropower generators:

 2,289.4 MW

Total capacity of solar power generators:

 744.7 MW

During the "13th Five-Year" Plan period, the Group promoted its development with high quality according to the ideas of "actively developing wind and solar power, continuously developing hydropower, orderly developing gas-fired power and prudently developing coal-fired power". From the implementation situation, the actual production capacity of wind and solar power and hydropower was close to the independent development goal planned by the Company. The coal-fired power installed capacity reached the planned target. The self-developed installed capacity of gas-fired power generators was about 2,000 MW lower than the target. The main reason for this result was that some supporting policies of gas-fired power projects have not been implemented for the time being. In order to ensure investment returns and control investment risks, the Group slowed down the development progress.

Case



In May 2020, Xinzang No. 1 and No. 2 units of Sichuan Liangshan Shuiluohe Hydropower Development Company Limited were put into operation for power generation, thus all three units of Xinzang Power Station were put into operation. The Xinzang Power Station, with an installed capacity of 186 MW, is the fourth power station in the Shuiluo River basin developed by Sichuan Liangshan Shuiluohe Hydropower Development Company Limited. The project is designed to produce 777 million kWh of clean electricity annually. Compared with conventional coal-fired power projects, the operation of the project can save 230,000 tons of standard coal consumption each year, and reduce the emissions of carbon dioxide, sulfur dioxide, nitrogen oxides, dust, and so on.

Case



The Ningdong Phase III Photovoltaic Project is located in Majiatan Town, Lingwu City, Ningxia Hui Autonomous Region. The project was officially put into operation in March 2020 with an installed capacity of 70 MW. The project is equipped with high-efficiency single crystal silicon photovoltaic modules. The project is designed to produce 105 million kWh of clean electricity annually. Compared to conventional coal-fired power projects, the project can save about 30,000 tons of standard coal consumption each year and reduce the emissions of carbon dioxide, sulfur dioxide, nitrogen oxides, dust, and so on.

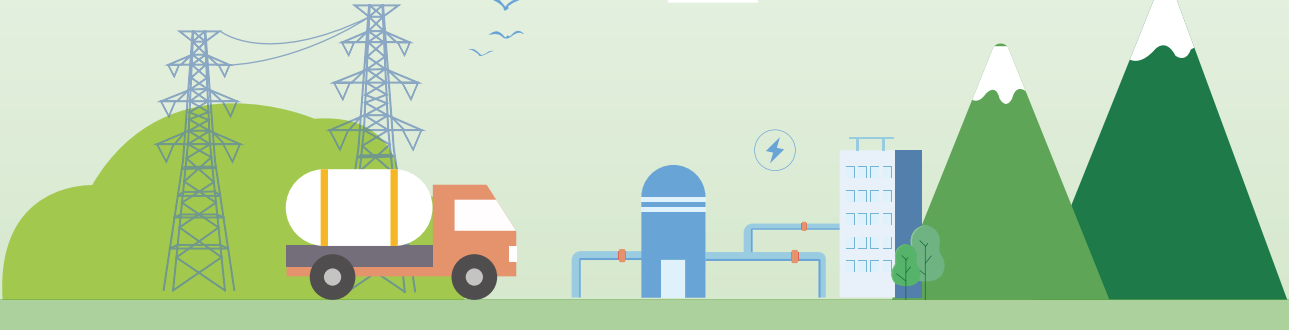
As the impacts from climate change become increasingly adverse, such as the increasing occurrence of extreme weather, and global warming becoming more obvious. Therefore, power generation companies need to improve their risk response capability to cope with the potentially more frequent occurrences of weather with higher temperatures, storms and rainstorms, so as to ensure the operation's safety and stability. Regarding potential extreme weather patterns, each subsidiary of the Group has formulated detailed work plans, emergency plans and drills, such as accomplishing production at the peak of summer, providing power in the event of flooding, management mechanism and drills of preparation against typhoons.

Emissions Management

During the operation of power generation and the corporate, the generated emissions of the Group mainly include air pollutants such as sulfur dioxide, nitrogen oxides, soot, etc., wastewater and solid waste. On the front of environmental protection policy, China continues to enhance pollutant management and intensifies the implementation of a series of special actions including defending the blue sky, and increasing the stringency of atmospheric, soil and water pollution control requirements, especially for thermal power plants. The newly revised *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Wastes*, which has taken effect since September 2020, emphasizes the management of solid wastes. Companies face stricter regulation and greater accountability. In this regard, the Group resolutely implements the deployment requirements of the battle of pollution prevention and control, and timely publicizes and implements the relevant national policies and requirements. The Group strengthens its environmental protection management system and measures, constantly strengthens the operation of environmental protection facilities and the supervision of environmental protection indicators, strictly controls pollutant emission so as to meet standards, tracks and supervises the environmental protection rectification work of its subsidiaries, and ensures the normal operation of environmental protection equipment. The Group focuses on ecological and environmental protection, and constantly improves its ability to cope with environmental risks.

The Group strictly abides by the relevant laws and regulations that have a significant impact on the Group relating to air and GHG emissions, discharges into water and land, and generation and disposal of waste, which includes but are not limited to the *Environmental Protection Law of the PRC*, the *Water Pollution Prevention and Control Law of the PRC*, the *Water and Soil Conservation Law of the PRC*, the *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Environmental Protection Tax Law of the PRC*, the *Environment Compliance Guidance for Coal-fired Thermal Power Enterprise*, the *Emission Standard of Air Pollutants for Thermal Power Plants* and the *Notice of National Development and Reform Commission on Greenhouse Gas Emissions Reporting by the Major Enterprise and Public Institutions*. Moreover, the Group strictly implements and complies with those management measures which have been stipulated according to applicable national laws and regulations relating to environmental protection, such as the *Supervision and Management Measures on Ecological Protection of China Huadian Corporation Limited*, the *Administrative Measures of “Three Simultaneities” for Environmental Protection and Water and Soil Conservation at Construction Projects of China Huadian Corporation*, the *Measures for Managing Emission Permits of China Huadian Corporation*, etc.

During the Reporting Period, the Group received an administrative penalty of RMB595,000¹ due to its violation of environmental protection related laws and regulations. In view of the above-mentioned punishment, the Group has required the related subsidiaries to make rectification according to laws during the Reporting Period. In the future, the Group will take a series of proactive and effective environmental protection measures to strengthen the environmental quality control in the operation process and prevent similar incidents from happening. According to the *State Contingency Plans for Environmental Emergencies*, the Group did not have any environmental emergencies of general or above level during the Reporting Period.



¹During the Reporting Period, the Group received administrative punishment for two violations of laws and regulations related to environmental protection: I. During the Reporting Period, Shijiazhuang Municipal Bureau of Ecological Environment found that Shijiazhuang Huadian Heat Corporation Limited, a subsidiary of the Group, did not adopt effective sealing measures to control the discharge of dust pollutants at the top of the lime powder silo, so it imposed an administrative penalty of RMB80,000; II. During the Reporting Period, Pinglu Branch of Shuozhou Ecological and Environmental Bureau found that the Group's Shanxi Pinglu Maohua Dongyi Coal Industry Company Limited had waste oil drums stacked in the open air and parts of the industrial site were not hardening, so it imposed an administrative penalty of RMB515,000 in accordance with the law. The above two administrative penalties add up to RMB595,000.



Air Pollutants

The Group pays attention to, advocates, and implements national environmental protection policies and regulations in a timely manner. The Group proactively responds to a series of national special actions of fighting the battle for prevention and control of pollution, defending the blue sky, etc., by further implementing pollution control and prevention according to actual conditions. Moreover, the Group improves environmental protection management and the supervision system and maintains the implementation of general management and daily supervision. The overall status of environmental protection, input in environmental protection and pending improvements are included in the Groups' annual summary and plan. Meanwhile, the Group implements emission monitoring and data analysis and summary to ensure that emissions are fully complied with requirements.

The power generation industry is a major industry for energy saving, consumption reduction, and pollution emission reduction. In order to speed up the development of a resource-saving and environmentally-friendly society, China continually shuts down small thermal plants to reduce emissions and energy consumption. Therefore, the Group proactively responds to the shutting down of small thermal plants of “building large thermal plants and shutting down small ones” by adopting the “developing and reducing” method, which includes “reducing” small thermal plants and adjusting energy structure by “developing” renewable energy.

In addition, the Group spares no effort to reduce pollutants emission by technological renovation and enhancing the operation and maintenance management of environmental protection facilities. During the Reporting Period, the investment in environmental protection which were used mainly for large technological renovation of the Group was RMB182.8 million, and the construction of 3 coal-fired ultra-low emission power units with a capacity of 1,200 MW was completed. The Group's ultra-low emissions coal-fired power units comprised a total capacity of 41,140 MW, which accounted for 100% of the overall capacity of coal-fired power units.

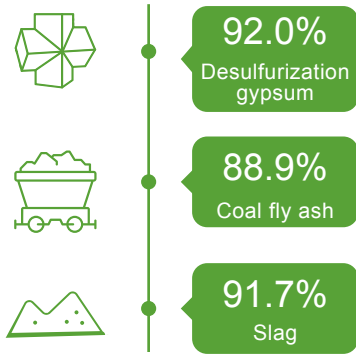
Wastewater

As for the generating wastewater during operations, the Group has implemented practices pursuant to relevant national and local requirements and ensures the requirements of wastewater handling and discharge are met. The power generation projects of the Group uphold the principle of “separating clean and wastewater, separating rainwater and wastewater and using water in multiple ways”. Hence, the wastewater from power supply projects of the Group is treated using effective wastewater treatment systems. The treated wastewater is reused for greening and sanitation in the plant, whilst any remaining wastewater is discharged according to specific requirements.

The Group will strengthen the management of wastewater discharge and strives to achieve zero wastewater discharge. There are 11 thermal power plants under the management of Shandong Branch of the Group, which have started to prepare for comprehensive treatment and transformation of wastewater since 2016. By the end of the Reporting Period, 11 units had been started to conduct related tasks, among which the power plants located in Laicheng, Zhangqiu and Shiliquan had completed the optimization of water usage and the standard management and transformation of drainage pipe network. At present, 11 units have successively carried out wastewater recycling and in-depth treatment and transformation, with a total investment of about RMB715 million. By the end of 2020, all 11 thermal power subsidiaries in Shandong region of the Group have met the environmental protection emission standards.

Wastes

As for the generated wastes during operations, the Group has implemented practices pursuant to relevant national and local requirements and ensures the requirements of waste handling and disposal are met. During the Reporting Period, the generated hazardous wastes of the Group were mainly spent catalysts, spent machine oil, waste bag filters for dust removal, and used batteries whilst the generated general solid wastes were mainly desulfurization gypsum, coal ash, and slag. The generated hazardous wastes were delivered by the Group to qualified third-parties for centralized treatment in accordance with the requirements of relevant environmental protection departments. As for general solid wastes, the Group proactively promoted a circular economy, which desulfurized gypsum, coal ash and slag were reused in various ways or sold, such as in the production of cement concrete, etc., so as to reuse resources. During the Reporting Period, the comprehensive utilization rate of desulfurization gypsum, coal ash and slag was 92.0%, 88.9% and 91.7% respectively.



Energy and Resources Use

During the "13th Five-Year" Plan period, China strives to reform the way it produces and uses energy. In the past 5 years, China continuously enhanced the implementation of major energy saving renovation projects and implemented the renovation of ultra-low emission and energy saving for coal-fired power generation to increase energy use efficiency and reduce coal consumption rate for power supply. As a power generation enterprise, the Group has actively implemented the national energy policy during the "13th Five-Year" Plan period and persists in the strategy of "saving, clean and safe" to increase energy use efficiency and proactively contributes to tackling climate change.

The primary consumed resources and raw materials of the Group include coal, natural gas, diesel and water resources. The Group strictly abides by the laws and industry standards relating to use of resources to carry out power generation, such as the *Cleaner Production Promotion Law of the PRC*, the *Environment Compliance Guidance for Thermal Power Enterprise*, etc. Meanwhile, the Group has formulated energy saving and emission reduction plans and a clean energy development plan. Moreover, the Group constructs its projects with scientific management, careful organization and meticulous construction. Energy and water saving technology renovation are implemented to existing coal-fired power units. The Group constantly improves energy consumption indicator management and implements specific energy and water saving plans after collecting, consolidating and analyzing energy consumption data. By doing so, it is able to gradually form a mature energy consumption management system. Furthermore, the Group continues to promote the research of fuel intelligent management and enhances its fuel information management system which supports full-process tracking, accurately managing fuel. During the Reporting Period, the standard coal consumption of power generation of the Group was 290.4 g/kWh and decreased by 4.88 g/kWh compared to last year.

Water is an essential resource in the operation of power generation enterprises, especially for the Group's thermal power and hydropower business. Understanding water abundance and distribution and taking effective water usage management are essential topics in the operation of the Group. In order to effectively control risks related to water resources, the Group considers water source availability during project design and investigates water distribution and precipitation to select a proper construction site. Moreover, the Group actively adopts water saving measures and implements technological renovation of water saving for equipment to increase water usage efficiency during projects' daily operations.

For efficient use of water resource, every branch and subsidiary of the Group carefully formulates water usage plans and management measures, studies and analyses water usage and prevents water wastage. Moreover, equipment upgrades and renovation are conducted to decrease water consumption rate of electricity supply. As stated in the above contents of the ESG Report, some power generation plants of the Group have implemented practices of wastewater reuse and renovation of wastewater control. The treated wastewater is reused after meeting requirements, which increases water usage efficiency. During the Reporting Period, the Group considers water source availability when selecting project locations, so had no difficulty in sourcing water fit for purpose. Attributing to a series of measures, the water consumption rate of electricity supply of thermal power companies decreased by 7.19% compared to last year.

Strictly Protect Ecosystem

Environmental protection policies in China have become increasingly stringent. With the increasingly strong binding force of ecological protection redlines, minimum environmental quality requirements, upper limits on resource utilization and the negative list for environmental access, they impose stricter requirements on work of the Group including preliminary work, capital construction and production. Therefore, the Group adheres to implement ecological and environmental protection and fight the battle for prevention and control of pollution. The Group strictly complies with the relevant policies and management measures relating to minimize the significant impacts on the environment and resources, including but not limited to the *Law of the PRC on Appraising of Environment Impacts (2018 edition)*, the *Comprehensive Evaluation Measures for Ecological Protection of China Huadian Corporation Limited (Trial)*, etc. The Group also ensures that emissions generated from its operations, such as air emissions, wastewater, noise, etc., attain the relevant standards, for example, the *Emission Standard of Air Pollutants for Thermal Power Plants*, the *Integrated Wastewater Discharge Standard*, the *Emission Standard for Industrial Enterprises Noise at Boundary*, etc.

The Group implements soil and water conservation and ecological protection according to relevant requirements. Furthermore, environmental impact assessments for all construction projects have been conducted by the Group according to relevant requirements. By identifying environmental impact factors, the Group has formulated and implemented various environmental protection measures, such as strictly managing the operations of project construction, mining, hydropower, wind power and other projects. Furthermore, the Group proactively contributes to biodiversity by building a green environment with planting trees and constantly holding rare fish release activities.



Environmental Key Performance Indicators²

Indicators	Unit	2020	2019	2018	Remarks for 2020
Total input in environmental	Ten thousand RMB	18,280	144,700	267,699	Capital input
Air pollutants ³					
Sulfur dioxide emissions	Tons	9,584	15,154	15,950	/
Sulfur dioxide emissions per unit of electricity generation	g/kWh	0.05	0.08	0.08	/
Nitrogen oxides emissions	Tons	16,637	26,582	26,329	/
Nitrogen oxides emissions per unit of electricity generation	g/kWh	0.08	0.13	0.13	/
Soot emissions	Tons	915	1,623	1,608	/
Soot emissions per unit of electricity generation	g/kWh	0.004	0.01	0.01	/
GHG ⁴					
Total direct GHG emissions (Scope 1)	Ten thousand tons CO ₂	15,262.3	16,785.8	16,430.9	/
Total indirect GHG emissions (Scope 2)	Ten thousand tons CO ₂	8.9	7.3	3.9	/
Total GHG emissions (Scope 1 and 2)	Ten thousand tons CO ₂	15,271.2	16,793.1	16,434.8	/

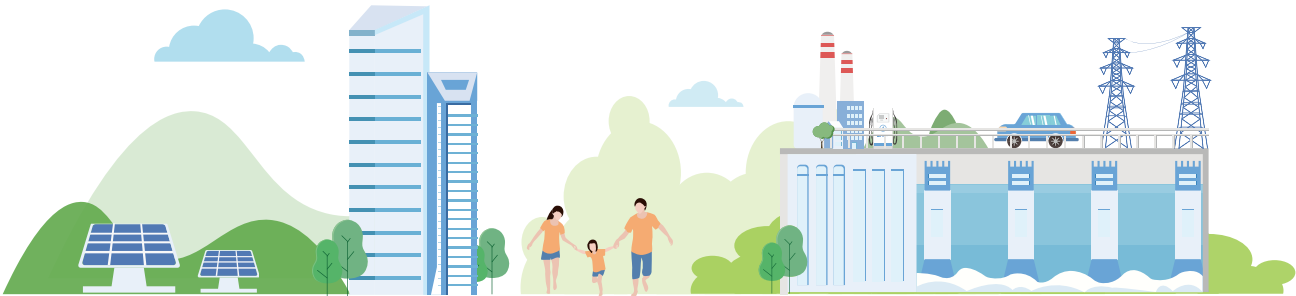
² Unless otherwise stated, the data were sourced from a total of 42 thermal power plants (including electricity and heating supply) belonging to the Group.
³ The data of air pollutants were from the real-time monitoring data at the thermal power plants.
⁴ The calculations of GHG emissions were set out based on the *Guideline of the Greenhouse Gas Emissions Accounting and Reporting for the Chinese Power Generation Enterprise (Trial)*. The data used in the calculation were sourced from the recorded data of the thermal power projects of the Group and best conservative estimates were made based upon historical performance data or benchmarking with similar facilities. The data listed here are only for reference.

Indicators	Unit	2020	2019	2018	Remarks for 2020
GHG emissions per unit of electricity generation ⁵	kg/kWh	0.7	0.8	0.8	/
Use of resource					
Total electricity consumptions of thermal power plant	MWh	12,644,174.4	13,568,230.8	13,728,604.8	/
Total natural gas consumptions	Ten thousand cubic meters	316,093.6	278,474.1	150,296.7	/
Total diesel consumptions	Ten thousand tons	1.5	1.5	1.4	/
Total coal consumptions	Ten thousand tons	8,072.1	8,606.3	8,633.6	/
Standard coal consumptions of power generation	g/kWh	351.9	278.8	281.6	/
Total water consumptions of thermal power plants	Ten thousand tons	26,849.0	29,657.7	29,943.1	/
Water consumption rate of thermal-power electricity supply ⁶	g/kWh	1,295.1	1,378.5	1,399.3	/
Waste					
Spent catalysts generated	Tons	3,606.76	1,030.91	2,004.7	All recycled and reused by catalyst manufacturers

⁵ The listed data refer to the GHG emissions per electricity generating of electricity supply, not including the heat supply.
⁶ The listed data refer to the water consumption rate of electricity supply, not including the heat supply.

Indicators	Unit	2020	2019	2018	Remarks for 2020
Spent machine oil generated	Tons	663.81	553.67	547.8	Those not recovered will be temporarily stored in each power plant and recycled in the next reporting period
Waste bag filters for dust removal generated	Bags	20,776	23,879	17,568	The recycled rate was 100%
Used batteries generated	Tons	155.84	146.71	85.2	They were recycled and treated by the employed qualified third parties
Total coal ashes generated	Ten thousand tons	1,768.05	1,541.88	1,943.3	Those not recovered will be temporarily stored in ash yards in each power plant and recycled and reused in the next reporting period
Comprehensive utilization rate of coal fly ashes	%	88.9	91.0	83.5	
Number of coal fly ash storage fields	Fields	23	-	-	The construction of ash storage fields has passed the environmental impact assessment. The safety assessment of all ash storage fields of the Group is carried out in accordance with the Guidelines for Safety Assessment of Ash Storage Fields of Coal-fired Power Plants issued by the National Energy Administration to ensure the safety of all ash storage fields

Indicators	Unit	2020	2019	2018	Remarks for 2020
Total slag generated	Ten thousand tons	382.54	339.63	410.8	Those not recovered will be temporarily stored in slag yards in each power plant and recycled and reused in the next reporting period
Comprehensive utilization rate of slag	%	91.7	87.2	72.9	
Total desulfurization gypsum generated	Ten thousand tons	597.29	533.57	600.1	Those not recovered will be temporarily stored in each power plant and recycled and reused in the next reporting period
Comprehensive utilization rate of desulfurization gypsum	%	92.0	85.4	80.6	
Total amount of lead pollutants produced	Tons	0	-	-	/
Total amount of mercury pollutants produced	Tons	0	-	-	/





Building an excellent and united team requires growing and moving forward together with employees, so as to achieve the Group's target of sustainable development. The Group persists in the employment concept of "evaluating talents by performance, choosing the best through competition and paying remuneration based on performance". The Group always concerns itself with employees' rights and welfare and strives to build an energetic and active workplace. Moreover, the Group implements the talent development strategy and continuously enhances the talent cultivation mechanism to develop a team equipped with knowledge, technology and innovation to stimulate rapid development.



**United Team,
Develop and Move Forward**

 Protect Employee Rights and Benefits

 Colorful Employee Activities

 Employee Development and Training

 Colorful Employee Activities

Protect Employee Rights and Benefits

The Group strictly complies with the relevant laws and regulations that have a significant impact on the Group relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, other benefits and welfare, and prevention of forced labor, including but not limited to the *Labor Law of the PRC*, the *Labor Contract Law of the PRC* and the *Trade Union Law of the PRC*. The Group has formulated and implemented a human resource management system in accordance with the above laws and regulations, covering recruitment, labor contract, promotion mechanism, compensation and benefit, working hours, dismissal and other management. On the front of preventing child labor, the Group strictly complies with the applicable laws and regulations, such as the *Law of the PRC on the Protection of Minors*. During the Reporting Period, the Group did not violate any of the above laws and regulations relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity and other benefits and welfare, and prevention of child labor and forced labor.

The Group adopts

An open, fair and just talent competition and selection mechanism for recruitment. The applicants' information are strictly reviewed during recruitment to prevent child labor, resolutely objecting to hire child labor under 16 years old.

The Group advocates

Employees have legally entered into labor contracts with the Group, which specifies compensation, position, reasons of dismissal and other issues. The Group advocates the employment policies regarding equality and diversity, and it does not discriminate against employees based on race, nationality, color, gender and other conditions.

In order to attract, retain and inspire excellent employees, the Group has established an objective, impartial, scientific and effective remuneration distribution mechanism and a performance appraisal system for all employees, and formulated a compensation management measure according to relevant requirements and the Group's status. Upholding the principle of distribution according to work, the Group adjusts compensation or promote employees.

To protect employees' rights and benefits, the Group has provided social insurance funds (including basic pension insurance, medical insurance, work-related injury insurance, unemployment insurance and maternity insurance) and housing provident funds to employees, as well as providing supplementary medical insurance to them. Regular health examinations of occupational diseases are also provided to employees. The Group has established people-oriented leave and holiday policies to ensure that employees legally enjoy paid leaves and other public holidays, as well as prohibiting forced labor. Appropriate allowance is provided to those who work beyond ordinary working hours according to relevant requirements.

As of the end of the Reporting Period,



the labor contract signing rate of the Group reached

100%



the additional commercial medical insurance coverage rate reached

96.74%

Employee Development and Training

The Group persists in cultivating talents by upholding the strategy of “developing a competitive enterprise of quality workforce” and establishes the development strategy of talent cultivation and various plans. Each subsidiary of the Group has implemented the Group's strategy of talent cultivation and persists in the people-oriented and lean management. It strives to provide wide-ranging and targeted trainings to employees of different positions by formulating tailored training mode and plans on the basis of the actual need of specific positions, the construction of talent team and employees' career plan. Through these tailored training, employees could continuously improve their skills, knowledge and professional qualification.

Based on the targets of talent cultivation, the Group has mainly carried out the following work for the implementation of talent cultivation: drafting training plans; implementing training plans by conscientiously organizing and holding regular training; holding orientation training for new employees; holding a training program of tutor teaching apprentice, enhancing the “deliver, help and teach” program; and continuing to hold on-job trainings to help the employee meet the required performance standard.

Case



In 2020, the Group continued to implement the training of new employees. Through the phased training of cognitive integration, learning and practice, the Group accelerates the integration of new employees into the corporate environment, makes the employees grasp the basic professional knowledge and realize their role transformation. According to the regional epidemic prevention work arrangement, the Group's centralized training was carried out in the mode of live online teaching and centralized management of offline units, which fully guarantees the learning result and training quality.



Case



In order to accelerate the cultivation of innovative and practical talents, the Group continued to optimize and consolidate regional training resources to improve the intensification and effectiveness of talent cultivation. The Shandong Branch of the Company focused on the practical operation training, and focused on the planning and construction of the practical operation base for the basic skills that are highly professional and require intensive experience.



Colorful Employee Activities

The Group proactively creates an energetic, active and united workplace to create a team with more cohesion and to stimulate the healthy development of employees. Moreover, the Group held various competitions, like skills competition, and created a platform for employees to show their skills and talent, which could continuously enhance their skills. Meanwhile, the Group also organized different kinds of employee activities.

Case



In order to enhance the cohesion of company, the Shaanxi Branch of Huadian Fuel Logistics Co., Ltd. held the Laba Warmth activities. The company prepared Laba porridge and cakes for each employee to express its care to them in winter. The management of the company extended holiday greetings and best wishes to the employees, and encouraged them to strengthen learning, innovation and forge ahead in the coming year to achieve greater success.

Case



The First Badminton Competition of Tianjin Development Area Branch of Huadian Power International was kicked off on September 22, 2020. More than 50 athletes from various departments of the company gathered in the stadium to start a wonderful competition.

Case



Hangzhou Huadian Banshan Power Generation Company Limited successfully carried out walking activities on May 30 and 31, 2020. This activity attracted nearly 400 employees of the company and their families to participate in.

Human Resources Performance Indicators

Indicators	2020 (Unit: Persons)	2019 (Unit: Persons)	2018 (Unit: Persons)
Total number of employees	27,409	27,834	28,058
Total employees by gender			
Male	21,375	21,615	21,758
Female	6,034	6,219	6,300
Total employees by position type			
Management	6,497	6,683	6,798
Professional technical position	2,189	2,035	2,110
Production position	17,703	17,860	17,869
Service position	929	1,148	1,199
Other position	91	108	82
Total employees by age group			
24 years old and below	1,378	1,416	1,597
25-29 years old	3,866	4,213	4,360
30-34 years old	3,733	3,404	3,025
35-39 years old	2,577	2,661	2,980
40-44 years old	3,992	4,539	4,781
45-49 years old	5,554	5,951	6,152
50-54 years old	4,178	3,692	3,423
55 years old and above	2,131	1,958	1,740
Total employees by region			
Beijing	113	Not available	Not available

Indicators	2020 (Unit: Persons)	2019 (Unit: Persons)	2018 (Unit: Persons)
Shandong	11,759	Not available	Not available
Hubei	2,685	Not available	Not available
Anhui	1,198	Not available	Not available
Ningxia	1,047	Not available	Not available
Sichuan	1,512	Not available	Not available
Zhejiang	1,126	Not available	Not available
Hebei	2,625	Not available	Not available
Henan	1,053	Not available	Not available
Guangdong	1,181	Not available	Not available
Tianjin	667	Not available	Not available
Shanxi	1,811	Not available	Not available
Inner Mongolia	141	Not available	Not available
Others	491	Not available	Not available
Total employees by education background			
Master's degree and above	1,016	Not available	Not available
Bachelor's degree	12,274	Not available	Not available
College certificate	8,380	Not available	Not available
Technical secondary school certificate	3,331	Not available	Not available
Vocational school certificate	668	Not available	Not available
High school diploma and below	1,740	Not available	Not available
Total employees by employment type			
Permanent employee	27,116	27,287	27,386
Contractual employee	293	547	672

Indicators	2020 (Unit: Persons)	2019 (Unit: Persons)
Employee turnover by gender		
Male	207	284
Female	29	64
Employee turnover by age group		
24 years old and below	41	36
25-29 years old	89	156
30-34 years old	60	84
35-39 years old	20	24
40-44 years old	7	10
45-49 years old	11	18
50-54 years old	6	10
55 years old and above	2	10
Employee turnover by region		
Beijing	0	0
Shandong	31	32
Hubei	26	27
Anhui	10	34
Ningxia	5	19
Sichuan	17	27
Zhejiang	6	18
Hebei	20	29
Henan	12	16
Guangdong	61	60
Tianjin	7	13
Shanxi	20	37
Inner Mongolia	2	11
Others	19	25

Indicators	2020 (Unit: Person-times)	2019 (Unit: Person-times)	2018 (Unit: Person-times)
Total employees trained by training type			
Training provided by the company of China Huadian or superior organizations	16,184	10,131	8,876
Qualification trainings	9,531	12,960	57,055
Adaptability trainings	70,664	85,454	130,231
Technical level training	27,894	3,885	3,688
Continuous trainings	2,172	3,200	1,886
Other training	67,984	131,471	97,450
Total employees trained by employee type			
Company leader (including director and supervisor)	4,299	4,806	3,316
Professional manager	37,629	44,550	45,436
Professional technician	23,898	31,679	38,342
Skilled personnel	128,603	166,066	212,092

Indicators	2020 (Unit: Hours)	2019 (Unit: Hours)	2018 (Unit: Hours)
Average training hours per employee by gender			
Male	76	86	/
Female	74	51	/
Average training hours per employee by employee type			
Company leader (including director and supervisor)	134	112	133
Professional manager	74	78	80
Professional technician	74	80	78
Skilled personnel	74	78	77



Huadian Power International implements the spirit of “caring everywhere” and spreads “Huadian warmth” by proactively fulfilling corporate social responsibility and serving the society with a sincere attitude and service. The Group proactively understands the needs and benefits of the community. By implementing targeted poverty alleviation, activities of caring about the community, public open days, etc., the Group brings warmth to the family in the community and to its heart.



**Support Prosperous Community,
Implement the Spirit of Caring Everywhere**



Unity in the Fight Against COVID-19



Care About the Community



Work Together for Poverty Alleviation

Unity in the Fight Against COVID-19

After the outbreak of COVID-19 at the beginning of 2020, the Group actively responded to the call of the government, quickly took action and carefully organized the prevention and control of COVID-19. The Group followed the changing situation of the epidemic and adjusted its prevention and control strategies. With firm political consciousness, the Group did a good job in various epidemic prevention and control work. The Group locked down the industrial areas, purchased epidemic prevention materials urgently, strengthened epidemic prevention publicity, implemented prevention and control measures, and made every effort to fight against COVID-19. The Group's employees devoted themselves to the front line, bravely overcame difficulties and made sacrifice and contribution. The Group allowed non-local employees to work from home, and each employee cared about their enterprises and worked in coordination with each other to ensure safe production. In addition, the Group has actively fulfilled its responsibilities as a state-owned enterprise, taking the initiative to donate money and materials to support the worst-hit areas, which shows its caring.

Case



Fengjie Power Plant, a subsidiary of Chongqing Branch of the Company, actively fulfilled its responsibilities as a central state-owned enterprise and complied with the anti-epidemic policies of the national and local governments to ensure the stability of power supply in the region during the special period.



Case



While ensuring power supply, Huadian Laizhou Power Generation Company Limited utilized its professional expertise to produce nearly 6 tons of disinfectant and donate it to the communities near the plant, effectively alleviating the shortage of local epidemic prevention materials.

Case



During the epidemic prevention and control period, Huadian Weifang Power Generation Company Limited in view of the actual situation of checkpoints established at each road and community, the company assigned specific personnel to districts with fixed time-shifts. The personnel carried out uninterrupted equipment inspection to ensure the timely treatment of heating problems.

Work Together for Poverty Alleviation

The 19th National Congress of the CPC has made clear that priority should be given to poverty alleviation in extremely poor areas, and that by 2020, the rural population living below the current poverty line of China would be lifted out of poverty. In response to the call of the state, the Group has deepened and implemented poverty alleviation work and accurately identified the poor households. The Group provides effective assistance through various poverty alleviation programs and contributes to the building of a moderately prosperous society in an all-round way. During the Reporting Period, the Group invested a total of RMB8.518 million in targeted poverty alleviation.

Case

In 2020, the Company collected a total of 881 items of all kinds of donations. The donated goods were also distributed to recipients at the "Huadian Charity Supermarket" in Wakewake Village, Songtake Township, Atushi City in Xinjiang, so as to help the poor people get rid of poverty and make contributions to the building of a moderately prosperous society in all respects.



Case



On August 4, 2020, Anhui Branch of the Company organized a volunteer service activity in Jinxing Village, a designated poverty alleviation village located in Shucheng County. Volunteers gave school bags and stationery to 10 poor left-behind children in Jinxing Village. Volunteers taught villagers how to prevent drowning and to use electricity. They also purchased chickens and ducks from poor villagers, totaling RMB3,300.

Care About the Community

In order to strengthen communication with the community and deepen the community's understanding of power plant operation, the Group has been carrying out volunteer services, the Open Day of power plants, and supporting community infrastructure construction for many years.

Case



On July 11, 2020, Anhui Huadian Wuhu Power Generation Company Limited carried out voluntary service activities for public performance. The company's volunteers regularly participate in rehabilitation training for autistic children. Through sincere company, volunteers guided autistic children to participate in public welfare performances, helping them build a sense of discipline and collective consciousness.

Case

Due to the impact of COVID-19, large-scale offline Open Day activities of power plants could not be held. In order to make the society better understand the operation of power generation companies, Huadian Power International's Zouxian Plant held a power plant Open Day activity in the form of network broadcast in 2020. The event is the first online Open Day for China's power companies in 2020. More than 100 students from Tangcun Town Central Primary School in Zoucheng City, Shandong Province, and four journalists from local media participated in the event.



Look Forward to the Future

The year 2021 is the first year of the Group's "14th Five-Year" Plan. It is very important to kick off with a good start. The Group will adhere to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 19th National Congress of CPC and the Second, Third, Fourth and Fifth Plenary sessions of the 19th Central Committee of CPC, continue to promote reform and innovation, and achieve high-quality and sustainable development of the enterprise. The Group will congratulate and celebrate the CPC's 100th anniversary of the establishment with a more outstanding performance.



In the new journey, the Group will continue to earnestly implement the national energy strategy, to persist in the new development concept, to deepen renovation and innovation, to proactively promote improving quality and efficiency and to further promote the company's transformation and high-quality development.



On the front of social responsibility management,

the Group will always regard compliant operation and legal corporate governance as foundations and continuously improve the management system, strengthening risk awareness and handling capability.



On the front of environmental protection,

the Group will proactively tackle climate change by developing renewable energy projects steadily and increasing the capacity of renewable energy power generator; continuously increase input in energy saving and environmental protection plans by enhancing technological renovation for environmental protection equipment, so as to promote low-carbon and efficient operation of the power plants; will keep implementing the wastewater management control project; and will further improve the environmental protection manage and supervision system.



On the front of safe production,

the Group will further implement the management of intrinsic safety, further enhance the safety management system and safety supervision. Moreover, the Group will carry out emergency management, increase the capability of risk response and implement work of providing sufficient power to guarantee the provision of a stable and efficient power supply to society.



On the front of win-win development of the community,

the Group will thoroughly implement the policy of winning the battle against poverty by carrying out targeted poverty alleviation, advocating the corporate spirit of "caring everywhere" and spreading warmth.



SEHK Environmental, Social and Governance Reporting Guide Index

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
A. Environmental		
Aspect 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	Tackle Climate Change;Emissions Management
KPI A1.1	The types of emissions and respective emissions data	Environmental Key Performance Indicators
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility)	Environmental Key Performance Indicators
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility)	Environmental Key Performance Indicators
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility)	Environmental Key Performance Indicators
KPI A1.5	Description of measures to mitigate emissions and results achieved	Tackle Climate Change;Emissions Management
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	Emissions Management
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	Energy and Resources Use
KPI A2.1	Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g., per unit of production volume, per facility)	Environmental Key Performance Indicators
KPI A2.2	Water consumption in total and intensity (e.g., per unit of production volume, per facility)	Environmental Key Performance Indicators
KPI A2.3	Description of energy use efficiency initiatives and results achieved	Energy and Resources Use
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	Energy and Resources Use
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	Not applicable ⁷

⁷ Due to the business nature of the Group, this disclosure is not applicable to it.

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
A. Environmental		
Aspect A3: Environment and Natural Resources		
General Disclosure	Policies on minimizing the issuer’s significant impact on the environment and natural resources	Strictly Protect Ecosystem
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	Strictly Protect Ecosystem
B. Socia		
Aspect 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	Protect Employee Rights and Benefits
KPI B1.1	Total workforce by gender, employment type, age, group and geographical region.	Human Resources Performance Indicators
KPI B1.2	Employee turnover rate by gender, age group and geographical region	Human Resources Performance Indicators
Aspect 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	Consolidate Safety in Production;Ensure Occupational Health
KPI B2.1	Number and rate of work-related fatalities	Ensure Occupational Health
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	Ensure Occupational Health
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees’ knowledge and skills for discharging duties at work. Description of training activities	Consolidate Safety in Production;Employee Development and Training
KPI B3.2	The average training hours completed per employee by gender and employee category	Human Resources Performance Indicators

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
B. Social		
Aspect 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	Protect Employee Rights and Benefits
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain	Sustainable Supply Chain
KPI B5.1	Number of suppliers by geographical region	Sustainable Supply Chain
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Sustainable Supply Chain
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress	Consolidate Safety in Production; Stable and Reliable Supply
Aspect 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.	Standardize Company Operations
KPI 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.	Standardize Company Operations
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Standardize Company Operations
Aspect 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	Support Prosperous Community, Implement the Spirit of Caring Everywhere
KPI B8.1	Focus areas of contribution (e.g., education, environmental concerns, labor needs, health, culture, sport)	Support Prosperous Community, Implement the Spirit of Caring Everywhere
KPI B8.2	Resources contributed (e.g., money or time) to the focus area	Support Prosperous Community, Implement the Spirit of Caring Everywhere



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