



2019

HUADIAN POWER INTERNATIONAL CORPORATION LIMITED

Environmental, Social and Governance Report



華電國際電力股份有限公司

HUADIAN POWER INTERNATIONAL CORPORATION LIMITED

Stock code: 600027, HK.1071

About the Report

This Environmental, Social and Governance Report (hereafter referred to as the “**ESG Report**”) is the fourth annual standalone ESG report published by Huadian Power International Corporation Limited (the “**Company**” or “**Huadian Power International**”) and its subsidiaries (collectively referred to as the “**Group**”), and mainly introduces the annual 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 2019 Annual Report (“**2019 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 2019 Annual Report of the Group, which is 1 January 2019 to 31 December 2019 (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* under Appendix 27 to the *Rules Governing the Listing of Securities* (“**Listing Rules**”) issued by the Stock Exchange of Hong Kong Limited (“**SEHK**”). It also took a reference to the *Guidelines on the Preparation of Corporate Social Responsibility Report* issued by the Shanghai Stock Exchange. 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, and adopting a materiality assessment to identify the Group’s material issues for the reporting period, and compiling the ESG Report around these material issues.
- 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, 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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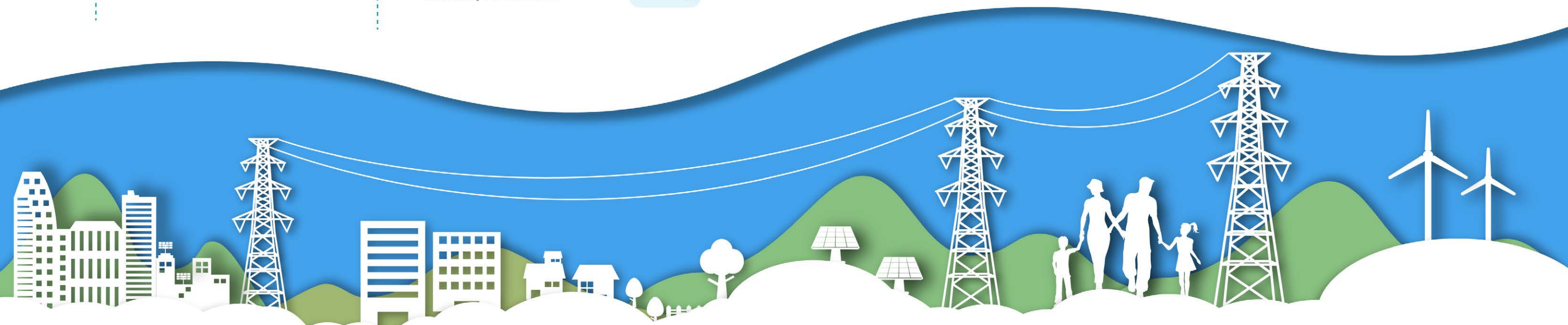
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Message from the Management

2019 was the 70th anniversary of the founding of the People's Republic of China ("PRC"), a key year for the comprehensive establishment of a well-off society, and the 25th anniversary of the Group's inception. After many years of development, the Group has gradually grown from a regional single power generation enterprise under a planned economic system to a nationally listed power generation company with an installed capacity of 56,565.3 megawatts ("MW"), and having both domestic and overseas financing channels. In 2019, the Group continued to face risks arising from the power market, coal market, capital market and environmental protection, etc. The Group has always adhered to the ambition of scientific development, seizes opportunities, promotes reform and innovation. To promote the Group's sustainability, implement environmental, social and governance work, and cultivate high-quality development, the Group carries out major areas of work as outlined below.

Deepen corporate governance, standardize corporate management.

The Group firmly establishes the philosophy of legal corporate governance, enhances risk awareness, comprehensively promotes standardized operations, conducts legal reviews in the whole process of important work, and strengthens system construction, preventing systematic compliance risk. In addition, in order to further promote environmental, social, and governance work, the Group has refined its social responsibility management structure. The strategic committee of the Board is responsible for strategic planning, policy formulation, and target setting in environmental, social, and governance.

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 2019, the Group successfully generated 215.11 million megawatt-hours ("MWh") of electricity, an increase of 1.84% compared with the previous reporting period after data restatement; 118.38 million gigajoules ("GJ") of heat supply was generated, a year-on-year increase of 13.77%.

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 stably supply of energy and safeguarding people's livelihoods. In 2019, 35 power plants of the Group in total were awarded the honorable title of "Intrinsically Safe Five-Star Power Generation Enterprise"; 12 thermal power plants and 4 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 16 times on a year-on-year basis and 20 units achieved "zero unscheduled downtime".

Pay close attention to clean production, and protect the surrounding environment.

The Group diligently pursues "good results in performance indicators and leading in environmental protection". The Group announces and implements relevant environmental protection policies and requirements in a timely manner, continues to promote pollution prevention, fully reducing pollutant emissions, implements energy benchmarking and consumption reduction measures, and gradually increases the proportion of renewable energy installed capacity, continues to promote the high-quality development of renewable energy projects, actively responding to climate change. In 2019, the installed capacity attributable to renewable energy was 13,330.3 MW, accounting for a record high of 23.57%. 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, making the best record in history.

Build a united team, and take steps to grow together.

A strong 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.

Build a harmonious relationship, and care everywhere.

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, make 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 another 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, gas turbine power generation, nuclear power generation and coal industry. As of the end of 2019, the installed capacity of the Group reached 56,565.3 MW, of which 13,330.3 MW was generated by clean energy, accounting for 23.57%.

The operation philosophy of the Group: 

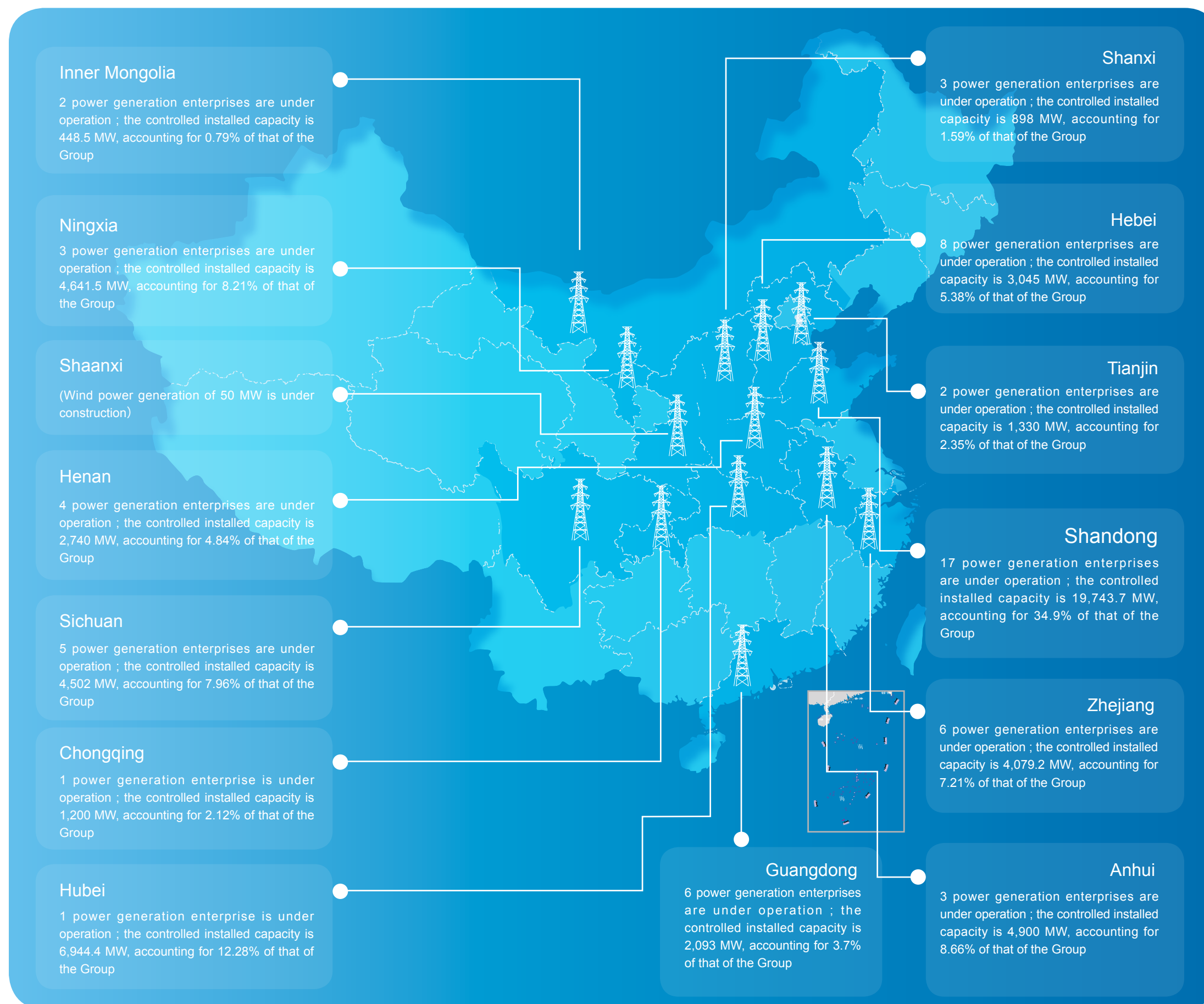
pursuit of the harmonious integration of shareholder value, social responsibility and employee interests to provide the public with safe, clean, reliable and low-cost electricity

The vision of the Group: 

energy giant, industry vanguard and international first class

Business Distribution

As at the end of 2019, the Group had 43,235 MW controlled coal-fired generating units, 6,874.1 MW gas-fired generating units, 3,626.2 MW wind power generating units, 2,165.4 MW hydropower generating units, and 664.6 MW solar power generating units. For further information on power generating units, please refer to the information disclosed in the 2019 Annual Report.



25 Years' Development

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 installed capacity of the Group amounted to 10,000 MW.

2005

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.

2004

On December 28

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

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.

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

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 May 9

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

2003

On April 1

China Huadian Corporation Limited ("China Huadian") became the Company's controlling shareholder.

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.

1999

On June 30

the Group issued its H-stock and got listed on the SEHK.

1994

On June 30

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

2007

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

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.

2008

On August 1 and December 7

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.

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.

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.

2009

On April 14

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.

2010

On April 20

On May 21

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

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

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

2011**2012**

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.

2013

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.

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 the "zero" in Shenzhen's energy market.

2019

The Group newly put into operation 62 MW of hydropower, 197.3 MW of wind power, 34 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 installed clean energy capacity increased to 24%.

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.

2018

On May 31

the grid-connected solar power generation project, "pioneer", of 100 MW of Huadian Shandong New Energy Company ("Shandong New Energy Company") in Wenshang, Jinan, 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.

2017

The 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%.

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.

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 installed capacity to increase by 5,120 MW to 400,000 MW and marking the Company's expansion to Hubei.

2014

In September and November

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



Take Responsibility at Heart, Prudent Corporate Management

Nothing can be accomplished without standards. 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 the improvement of the structure for social responsibility management, maintains communication with stakeholders, and promotes corporate sustainable development.



Corporate Governance



Stakeholder Communication



Social Responsibility Management Structure

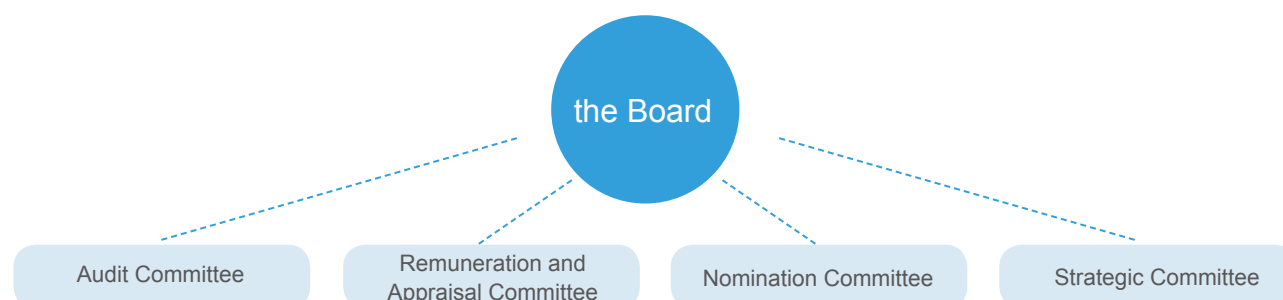


Materiality Assessment



Corporate Governance

The Company has always attached great importance to corporate governance and continuously promoted management innovation. The Group acts in strict compliance with the *Company Law of the PRC*, the *Securities Law of the PRC*, the *Rules Governing the Listing of Stocks on Shanghai Stock Exchange*, the Listing Rules 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 specify 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 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 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 and reviewing the effectiveness of 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 its 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 should assess the residual risks and report to the management of the Company, the Audit Committee and the Board after considering the counter-measures against major risks.

Social Responsibility Management Structure

In order to further implement the Group's environmental, social and governance management and promote the implementation of its sustainability strategy, during the reporting period, the Group reviewed its existing social responsibility management promotion mechanism, and refined its social responsibility management structure with reference to the Group's operational status and relevant environmental, social and governance requirements of SEHK.

As a result, the Group has strengthened the management of environmental, social and governance matters at the Company's decision-making levels, and designates the Strategic Committee to be responsible for the Company's strategic planning, policy designation and targeting in environmental, social and governance matters, thereby deepening the social responsibility management promotion mechanism to form a Board, Strategic Committee, senior management, environmental, social and governance leading departments, followed by departments and subsidiaries as the structure to implement a hierarchical management system 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, and 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 Department of Securities Management takes the lead in organizing and coordinating relevant departments to carry out social responsibility work, which is implemented and accomplished by each department and subsidiary.









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 social responsibility management system, and the Group identifies and evaluates its environmental, social and governance risks in accordance with the requirements under the Group's risk management and internal control system.

Stakeholder Communication

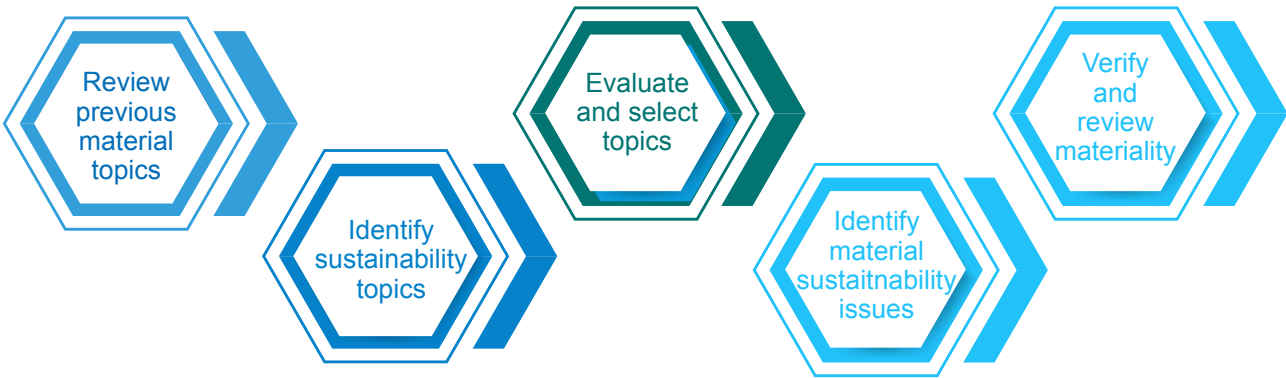
Maintaining smooth communication with stakeholders is the Group's responsibility, and an essential and effective way to promote the Group's sustainable development. It is necessary to normalize stakeholder communication, and consider and implement it comprehensively. The Group actively maintains communication 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
 <div>Government and regulatory departments</div>	Discipline Compliant operations Compliant tax payments Safe energy supply Optimizing structure Energy saving and emission reduction Ecological protection	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 heat supply; Proactively respond to national strategy, improve self-discipline of ecological and environmental protection
 <div>Shareholders</div>	Sales income Company profit Corporate governance Regular communication	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
 <div>Employees</div>	Employee rights and benefit Occupational health Educational training Colorful life	Meetings Communication with employees Labor contracts Employee activities	Regular Irregular	Improve human resource management system and protect employee 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
 <div>Customers</div>	Stable supply Customer service Quality and safety management	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 heat; Provide sound customer service on the sale of electricity and heat; Improve operation management system; Promote scientific and research innovation to increase production efficiency
 <div>Suppliers and other partners</div>	Fair and just Win-win cooperation	Contracts and agreements Product services	Annual Irregular	Ensure fair and transparent bidding and procurement processes; Adhere to the fulfillment of contracts and agreements
 <div>Community</div>	Stable energy supply Targeted poverty alleviation Community development Environmental protection	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 volunteer activities; Implement environmental protection measures; Organize public open day activities, and strengthen community awareness of power plants

Materiality Assessment

Different stakeholders have different focal points of the Group's development, however issues that are broader in relation to the Group's sustainability may not necessarily be significant during the reporting period. In order to respond to the material issues 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 issues related to sustainability.

In the preparation of the materiality assessment, the Group reviewed its material issues identified in 2016 and 2018, and used this as an important point of reference to compile its database of sustainability issues. Next, in the stage of updating the database of sustainability issues, the Group conducted in-depth research of relevant national policies, sustainability reporting guidelines published by SEHK and other bodies, and undertook peer-benchmarking analysis to identify and update relevant sustainability issues. Following this, as part of the materiality assessment phase, 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 issues for the reporting period, and this formed the materiality assessment results. In the course of the assessment, the Group not only took the impacts of the topics to the Group and stakeholders into account, but also considered the impacts on the economy, environment and society. After this, the senior managers 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.



Well-run Operations, Promote High-Quality Development



The Group carefully implements the national energy strategy and the Outline of the 13th Five-Year Plan for the National Economic and Social Development of the PRC (the “**13th Five-Year Plan**”), adheres to the new development philosophy, as well as standardized operations and legal corporate governance as a foundation, makes effort to achieve the shift from scale expansion to efficiency improvement, accelerate 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 for hand in hand with suppliers, excel in supply chain management, and strives to build a strong, competitive and comprehensive energy enterprise.



Standardize Company Operations



Actively Explore the Market



Drive Lean Management



Drive 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 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, Listing Rules, etc. The Group also implements and continuously improves the *Evaluation Standards on the System of Accountability for Improving the Conduct of the Communist Party of China and Upholding Integrity* and other internal policies, and during the reporting period, reviewed and updated the *Measures for the Implementation of the "Major Issues, Major Personnel Appointments and Dismissals, Investments in Major Projects and Use of Large Sums of Money"*, the *Measures for Non-compliant Responsible Investments and Operations*, the *Regulations on the Implementation of Employees' Performance of Duty*, and the *Measures for the Treatment of Clues to Problems*.

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. 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. During the reporting period, the Group did not have any corruption proceedings.

During the reporting period, the Group held two training sessions on the standardized operations of enterprises, and held "don't forget the original aspiration, remember the mission" educational activities to provide warning and integrity education for employees, and strengthened the Group's standardized operations.



The Company held the 2019 Working Conference and the Second Staff Conference, the Clean Government Construction of the Communist Party of China ("CPC"), and Anti-corruption Work Conference



In order to further strengthen the awareness of law and discipline of CPC members and cadres, and to build up the ideological defence line against corruption, the Company organised all CPC members and cadres at headquarters to watch "Question the Original Aspiration" warning education film. Through watching the warning education film, CPC members and cadres' sense of discipline and awareness of rules were further enhanced, and this served as a good warning education tool for improving anti-corruption abilities.



The Hebei Branch of the Group held a rule of law working meeting and a training course on legal affairs from 8 to 10 May 2019. The training course provided systematic training on the *Company Law of the PRC*, the *Contract Law of the PRC*, the *Administrative Penalty Law of the PRC* and other relevant management systems and operational affairs such as tendering and contracts, and strengthened participants' awareness of the rule of law.



The Hebei Branch of the Group held a training course for the secretaries of CPC branch on the theme of "don't forget the original aspiration, remember the mission" from 8 to 10 November 2019 to strengthen the development of the theme's educational work, accurately grasped the methodology for requirements on education for the theme, and abstained from formalism and effectively grasped rectification, and this formed an example of anti-corruption and integrity.

Actively Explore the Market

In terms of the electricity market, there have been impacts from domestic and international economic environments, and China's economy has faced downward pressure, leading to greater uncertainty in the electricity consumption growth, and a decline in the use of electricity poses downward risks. With the further implementation of the electricity market-oriented reform in the nation, the electricity pricing mechanism will be more complex with increasingly fierce competition on trading, which will pose challenges for the marketing work of the Group. Furthermore, in terms of the coal market, local accidents and production limitation policies have brought impacts on operating performance of the Group, so inflicting a certain systematic risk.

Facing risks from the power market, the coal market, etc., the Group is guided by the ideology of "committing to running a strong and excellent main business, committing to differentiated development, committing to enhancing relative competitiveness", and actively adopts the following strategies and measures, and strives to occupy a leading position.

- Strengthen the analysis and policy research of the power and coal market to advise the group on high-quality development;
- Continue to do a good job in energy saving and consumption reduction and optimize unit's performance indicators;
- Continue to do a good job in generating power and economical operations;
- Strengthen the research of 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;
- 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.

Drive 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.

Highlight

Huadian warmth in action

Huadian Weifang Power Generation Company Limited ("Weifang Company") passed the on-site confirmation of AAAAA-level "standardized good behavior enterprise"

During the reporting period, the establishment of the AAAAA-level "standardized good behavior enterprise" of Weifang Company passed on-site confirmation and acceptance of an expert group organized by the China Electricity Enterprise Association ("CEC"), becoming the only company in Shandong to pass on-site confirmation of the AAAAA-level "standardized good behavior enterprises".

Weifang Company regards the creation of a "standardized good-behavior enterprise" as an effective starting point for lean management, grasps the theme of "foundation, development, harmony, innovation, and leanness", integrates 7S management, lean management, and star-level enterprise creation requirements, and applies scientific management philosophy and management tools, systematically analyzes and optimizes the company's production operations and management business processes, integrates the company's various management systems, and establishes a sound, unified, and company-standard system.

Drive Continuous Innovation

In the 21st century, the information industrial revolution is accelerating, and the 4th industrial revolution has also been launched. In the information age, 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 invested 112,997.9 thousand RMB in scientific and technological research and development, obtained 191 patent authorizations, and completed 98 scientific and technological projects.

Highlight

Huadian warmth in action

Anhui Huadian Wuhu Power Generation Company Limited ("Wuhu Company") pursues lower energy consumption, continuously strengthens research, conscientiously learns from the successful experience of similar types of generating units, extensively carries out technological innovation for efficiency, and continuously improves the stability, efficiency and environmental protection effectiveness of generating units. Its 22 innovations have obtained national patents, including 2 invention patents. Wuhu Company has successively introduced and adopted advanced technologies such as low-low temperature economizers, high-efficiency desulfurization and dust removal integration, digital coal yards, and deep waste heat utilization of flue gas, and energy consumption indicators have been continuously optimized. The # 1 unit of Wuhu Company won the first prize of the CEC Power Generation Unit Competition, and the performance attained a leading domestic level.

22

innovations have obtained national patents

won

the first prize

of the CEC Power Generation Unit Competition



Wuhu Company wall of honor

Under the tide of digital transformation, Huadian Zibo Thermal Power Company Limited ("Zibo Company") has actively expanded and adopted information technology to implement a hyper-convergence cloud computing architecture during the reporting period. The implementation of this hyper-convergence is to converge resources such as computing, network storage, security, and server virtualization with computing to form a unified resource area, enhancing the scalability and security of business systems.

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 the open, fair, fair 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 black list to control procurement risks. Criteria for supplier assessment mainly include the suppliers' performance of quality, safety and service, whether they are certified by ISO 14001 Environmental Management System, whether they have comprehensive policies and objectives regarding quality and environment, or whether they had adverse social impacts on production, operation or construction due to their performance, 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 71.50%.

The proportion of suppliers applying the Group's supplier-related management measures was

100%

The proportion of suppliers where annual procurement assessments were implemented was

71.50%

As a large-scale power supply enterprise, the main supplier of the Group is 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 also 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.

Number of suppliers by region:

Mainland China	Hong Kong, China	Total
Number of suppliers	Number of suppliers	Number of suppliers
9,965	4	9,969



Safety first, Implement Safe Operations

Being a solid foundation in safety is a prerequisite for stable development. 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.



Consolidate Safety in Production



Ensure Occupational Health



Stable and Reliable Supply

Consolidate Safety in Production

Without tightening the secure string, the production tone cannot be played. 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 have a significant impact on the Group. The Group has established and implemented 17 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*. Additionally, the Group has established and continuously improved the work safety inspection and protection system, implemented the work safety responsibility system for all employee. The headquarters of the Group, branch companies and subsidiaries have all established work safety committees and three-level (factory-workshop-team) safety supervision networks. The Group had a total of 514 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.

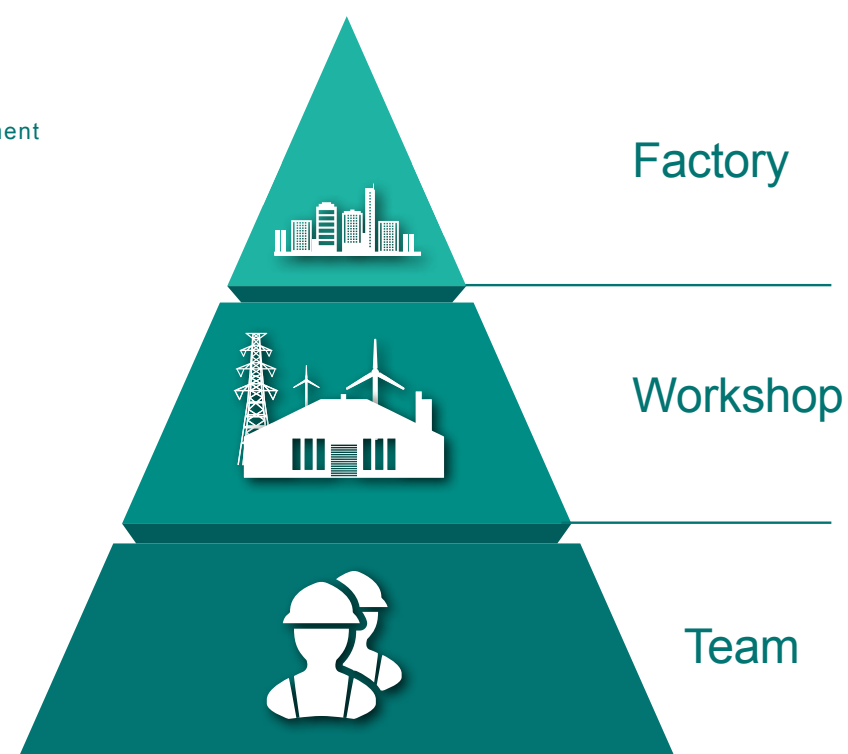
17

work safety management systems

The Group had a total of

514

safety specialists



The Group's three-level safety supervision networks



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.

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

-
-
-
-

During the reporting period,

74,934

employees of the Group passed safe production examinations



Safe operation experience hall established by Huadian Xinxiang Power Generation Company Limited



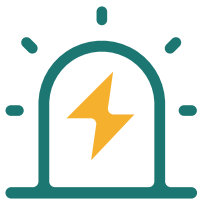
Wuhu Company safety knowledge competition

Stable and Reliable Supply

"Word of mouth is king". As a power company, the Group's customers are mainly electricity grid companies, electricity users and heat users. The supply of electricity and heat are not only projects for people's livelihood, but also a guardian of light and warmth for millions of households, and are an important responsibility and guarantee for social development. It is the Group's responsibility to strive to provide sustainable and efficient energy for the society, and to secure the provision of a stable supply of energy. It is also an effective way to satisfy customers and is an effective way to interpret the service concept of "Huadian thermal power, warming tens of thousands of families".

The *Regulations on Emergency Response to Production Safety Incidents* was officially promulgated on 17 February 2019, marking a significant progress in the legislation on safe production emergency management. This regulation strengthens the main position of emergency preparedness in emergency management and clarifies the relevant parties' responsibilities in emergency production safety incidents. In response to this, the Group promptly follows regulatory requirements and in accordance with these requirements, strengthens emergency management in production operations.

The Group has established emergency management mechanisms, and formulated 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 heat supply are ensured, and special inspections and works to ensure the supply of electricity and heat are performed.



During the reporting period, the Group conducted

1,783

safety emergency drills

Highlight

Huadian warmth in action



Implement specific work to ensure electricity supply in various ways and by multiple measures

Huadian Qingdao Company Limited ("Qingdao Company"): doing its best to ensure electricity supply as part of the "70th anniversary" of the founding of the PRC

Qingdao Company takes ensuring electricity supply as an important task to celebrate the 70th anniversary of the foundation of the PRC and implemented specific work in various ways and by multiple measures to ensure electricity supply. Qingdao Company formulated and issued specific safety and environmental control and working plans to ensure electricity to celebrate the 70th anniversary of the foundation of the PRC in advance. By initiating the work of ensuring electricity supply in advance, Qingdao Company could ensure the reliable electricity supply, safety, and environmental protection during the celebration. One the one hand, Qingdao Company enhanced the fire control, safeguarding, anti-terrorism by establishing leading organization to stipulate the conditions of the initiation of emergency plans for anti-terrorism and safeguarding and the treatment after emergency response. This company also improved the standardized procedure of emergency response for fire accident. On the other hand, Qingdao Company formatted the control measures for environmental risk and adopted preventive measures for 10 controlled matters including air emissions, on-line monitoring and data submission, dust mitigation and noise control, so as to meet the protection targets and requirements.



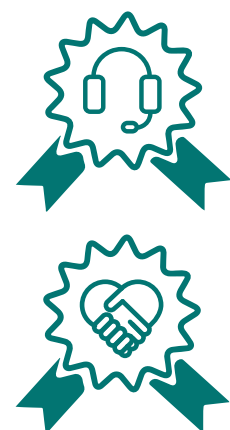
Huadian Luohe Power Generation Company Limited liquid ammonia leakage emergency drill



The customer service center of Huadian Qudong Power Generation Company Limited

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 review and update 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.



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.

Information security is more and more important as the information age is developing. 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.

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:

- As for newly built generating units, the occupational hygiene facilities were designed, constructed, put into production and operated in accordance with the national "three simultaneous" management requirements for occupational health in construction projects. Furthermore, they were assessed and reviewed by national qualified institutions;
- Strengthen the management of occupational health facilities in operation to ensure that they are complete and standardized;
- Formulate the hazard monitoring and assessment of occupational diseases, occupational health surveillance and archive management; regularly monitoring the potential hazards of occupational disease such as dust, noise, toxic and hazardous substances and electromagnetic radiation, etc. that may occur on-site;
- Set up announcement boards and offering notice cards at the entrances of workplaces, and setting warning signs of occupational disease hazards at the striking positions in workplaces;
- Configure dust removal facilities in areas such as coal transportation systems where dust hazards may exist, strengthening the containment of toxic materials in locations with ammonia gas and other locations where toxic substances are present, avoiding direct operations and open-air layouts, and equipping toxic gas concentration monitoring and spraying facilities.

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

- Strengthen the inspection, management and maintenance of occupational health equipment, and ensuring it is effective;
- Enhance employee protection measures by providing work clothes, insulated shoes, protective glasses, earplugs, dust masks, and anti-toxic protective equipment, etc. to employees as required;
- Uphold the principle of "prevention crucial", organizing occupational health knowledge training and enhancing promulgation of occupational safety and health knowledge;
- Enhance the diagnosis and treatment of occupational diseases by orderly organizing employees to have health examinations of occupational disease and continuously improving medical and health protection measures;
- Under the conditions of high summer temperatures, provide good logistical support, promptly implement measures to prevent heatstroke, and carry out activities such as the promotion of heatstroke first aid knowledge, delivery of heatstroke cooling items to the front line, and distributing "cooling" to effectively ensure the health of personnel and equipment during peak summer periods.

During the reporting period,

the Group's death toll due to production accidents was

0

The work-related death rate per 200,000 man-hours was

0%



Develop Harmoniously, Protect Lucid Waters and Lush Mountains



Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own. The Group not only provides light and warmth to users, but also spares no effort to protect the beautiful earth of human beings. Always upholding its corporate mission of “providing reliable, clean and economical energy”, the Group proactively responds to the national environmental protection policy, efficiently promotes structural adjustments and proactively develops clean energy to tackle climate change. Moreover, the Group continues to invest in energy saving and environmental protection and develop green and low-carbon power generation, resulting in the promotion of concurrent high-quality development and ecology and environmental protection.



Tackle Climate Change



Strictly Control Pollutant Emission



Efficiently Save Resources



Strictly Protect Ecosystem



Environmental Key Performance Indicators



Tackle Climate Change

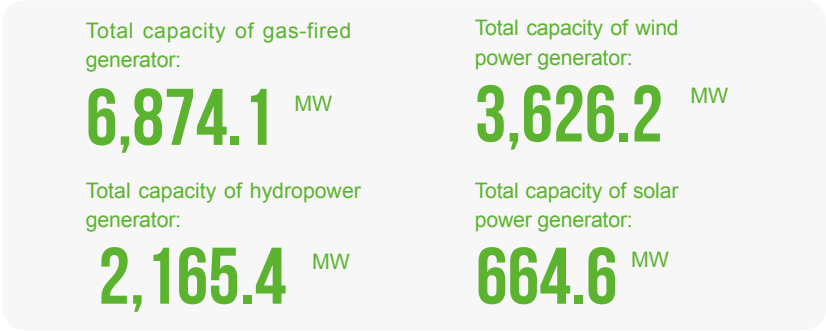
China has further implemented the work of tackling climate change since 2018 and adopted a series of policies and measures to control greenhouse gas (“GHG”) emission. In the meantime, China proactively participates in global climate governance and promotes its progress cooperating with other units. During the implementation of the policy of tackling climate change, China has carried out actions from various aspects, including enhancing the implementation of major energy saving renovation projects, stimulating non-fossil energy sources development and reinforcing the control of GHG and air pollutants. Therefore, the Group proactively responds to relevant policies by promoting the transformation to a green, low-carbon, clean and efficient energy structure. The Group continues to develop clean energy and promote the renovation of coal-fired ultra-low emission power plants, increasing the efficiency of energy saving and emission reduction. Moreover, carbon emission management is implemented.

Controlling GHG emission 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

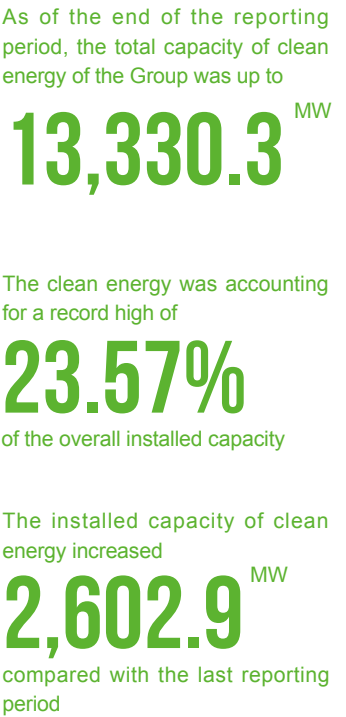
power generation units to reduce reliance on energy from fossil fuels to some extent. On the other hand, the Group takes energy saving and consumption reduction as an important measure for improving quality and efficiency, including improving operational efficiency of equipment and promoting technological 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.

The Group formulated the “13th Five-Year Plan” of *Huadian Power International* to determine development and targets on the basis of the national “13th Five-Year Plan” and the Groups’ condition. On the front of clean energy development, the Group steadily moves forward to meet targets by strictly controlling general coal-fired power generation, actively developing gas-fired power generation, sequentially developing renewable power generation projects and increasing the proportion of installed capacity of the renewable energy power generators’ installed capacity in relation to the energy mix. The total installed capacity of clean energy accounted for 21.48 % of the overall installed capacity in the last reporting period. Compared to this, as of the end of the reporting period, the total capacity of clean energy of the Group was up to 13,330.3 MW, accounting for a record high of 23.57% of the overall installed capacity with an increase of 2,602.9 MW compared with the last reporting period, including



Taking the “13th Five-Year Plan” as a target, the Group plans that the installed capacity of hydropower generator will strive to reach 2,500 MW, that of wind, solar and other power generators will reach over 6,000 MW and further increase the proportion of clean energy generator.



As the impacts from climate change become increasingly adverse, like the increasing occurrence of extreme weather, global warming becomes 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.

Highlight

Huadian warmth in action

Huadian Laizhou Power Generation Company Limited ("Laizhou Company"): successfully fighting against typhon "Lekima"

The number 9 super typhoon "Lekima" in 2019 arrived at Shandong Province on 11 August. It brought heavy rains to Laizhou City when it arrived. Hence, Laizhou Company organized and made preparations to combat the typhoon in advance. When the typhoon arrived, Laizhou Company initiated emergency plans in the event of typhoon and flooding. The company persisted in the idea of "safety first, always being prepared, crucial prevention and sparing no effort to rescue" and upheld four implementations of "thought, organizing, measures and supplies" and three resources of "personnel, measures and work". A 24-hour follow-up working mechanism was established. Every working plan and arrangement of combatting the typhoon were sent by WeChat group in real-time. Every department fulfilled its own responsibility, including enhancing the checking of onsite hazards and reinforcing the protection for doors, windows, large equipment, etc., so as to ensure the safety of people's life and property and the operation of power grid during the arrival of the typhoon. During the typhoon's arrival, Laizhou Company intensified the management of personnel on duty and stay highly alarmed to carry out onsite inspection and solving problems immediately.

Strictly Control Pollutant Emission

During the operation of power generation and corporate, the generated emissions of the Group mainly include air pollutants like sulfur oxides, 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. Therefore, power generation companies need to advocate and implement relevant national policies and requirements in time and enhance their environmental protection management system and measures. Moreover, they need to proactively implement technological renovation and related measures for environmental protection to ensure the normal operation of environmental protection equipment, increasing their capability 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 include 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 did not have any significant environmental pollution accidents nor any significant environmental incidents. The total fines due to violation of relevant laws and regulations were 400,000 RMB.

Air Pollutant

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 compliant with requirements.

The power generation industry is a major industry for energy saving and 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 used mainly for large technological renovation of the Group was 1,447.00 million RMB, 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 41,960 MW, which accounted for 94% of the overall capacity of coal-fired power units. The sulfur dioxide, nitrogen oxides and soot emissions per electricity generation of the Group's coal-fired power decreased by 6.9%, 1.1% and 1.1% respectively compared to the previous reporting period.

During the reporting period, Fengjie Plant of the Group received the *Reply from the Office of Chongqing Ecology and Environment Bureau regarding Approval of the Environmental Protection Acceptance of the Ultra-low Emission Construction Project for No.2 Generator of Fengjie Plant of Huadian Power International Corporation Limited*. This meant that all emissions of the No.2 generator of this plant met the national requirement of ultra-low emission and the ultra-low emission renovation (denitrification) for the No.2 generator. After operation, the concentration of nitrogen oxide emission has been reduced to 50 milligram/standard cubic meter or below from the denitrification device outlet of No. 2 generator, and met the national standard of ultra-low emission of nitrogen oxides.



Highlight

Highlight——progress of the coal yard dust control renovation project

As of the end of the reporting period, the accumulated completed investment was

1.473 billion RMB

In order to implement dust control and minimize impacts of dust from coal yards to the surrounding environment, the Shandong Branch of the Group has initiated the open coal yard sealing renovation project covering thermal power plants that have been running in Shandong since 2017. As of the end of the reporting period, the accumulated completed investment was 1.473 billion RMB. 22 coal yards of 9 power plants including Zouxian, Shiliquan, Laicheng, Qingdao, Weifang, Zibo, Zhangqiu, Tengzhou, Laizhou, etc., were fully sealed. It is expected that all 26 coal yards in the Shandong area will be fully sealed in the first half of 2020.



The sealed coal yard of Zouxian Plant

Approximately

150 tones

of dust could be reduced on an annual basis

Huadian Tengzhou Xinyuan Thermal Power Company Limited (“**Tengzhou Company**”): successfully passing the environmental protection acceptance

The sealing project of coal yards of Tengzhou Company successfully passed the acceptance of the Tengzhou Environmental Protection Bureau. It means the company responded to the national call of fighting “the battle for prevention and control of pollution” and “defending the blue sky” and fulfilled the responsibility of providing clean energy to society by actual moves. Through this project, approximately 150 tones of dust could be reduced on an annual basis.

Weifang Company showcasing its responsible attitude by green actions

As a power generation plant located in the city, Weifang Company remembers its social responsibility and continues to implement technological renovation for environmental protection and strives to be a leader in green development with a strong sense of responsibility. After “green” actions including the technological renovation of denitrification, renovation of desulfurization and increasing capacity, renovation of electric precipitation, etc., the company thinks highly of intelligent upgrades and renovations and implementing “active moves” of environmental protection through the coal yard dust control renovation project, showcasing its responsible attitude by its green and ecofriendly brand.

Wastewater

As for the generating wastewater during operations, the Group has implemented practices pursuant to relevant national and local requirements and ensure the requirements of wastewater handling and discharge are met. The power generation projects of the Group upholds 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.

In the upcoming work, the Group will enhance wastewater discharge management and achieve the zero discharge of wastewater. Ten thermal power plants controlled by the Shandong Branch of the Group have initiated the preparation for the renovation of comprehensive wastewater control since 2016. At present, 5 plants have started the project. Zouxian, Weifang, Laicheng, Zhangqiu and Shiliquan plants have finished the standardized control and renovation for the improvement of water usage and drainage pipe system. Currently, 10 plants have gradually implemented practices of wastewater reuse and advanced control and renovation. The accumulated completed investment was approximately 2 billion RMB. The project is expected to be finished before the end of 2020. By that time, all 10 thermal power plants of Shandong Branch of the Group will meet the environmental emission standard. Apart from Laichegn Power Plant, whose discharge meets requirements, other 9 power plants will achieve “zero discharge” of wastewater in the plants.

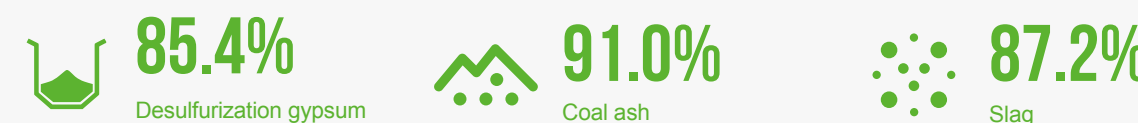


The construction site of wastewater control of Huadian Zhangqiu Power Generation Limited

Waste

As for the generating wastes during operations, the Group has implemented practices pursuant to relevant national and local requirements and ensure 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 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 wastes, the Group proactively promoted circular economy, and desulfurization 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 85.4%, 91.0% and 87.2% respectively.



The comprehensive utilization rate of waste

Efficiently Save Resources

China published the “13th Five-Year” plan for energy development in 2016 and focused on promoting the transformation of the ways of energy use in production. During the development in the 5-year plan period, 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 implements national energy policies 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 278.8 g/kWh and decreased by 2.9 g/kWh compared to last year. By continuously promoting energy saving practices and taking energy conservation and emission reduction as a target, the Group estimates that the standard coal consumption of power generation of 2020 will further decrease on the basis of that of 2019.

Water is an essential resource in the operation of power generation enterprises, especially for the Group’s thermal power and hydropower business. Understanding the 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.

Water consumption rate of electricity supply is one of the important indicators in power generation plants. Every branch and subsidiary of the Group carefully formulates water usage plan 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 will implement practices of wastewater reuse and renovation of wastewater control. The treated wastewater will be reused after meeting requirements, which increases water usage efficiency. As for water sourcing, 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 decreased by 1.5% compared to last year.

Highlight

Huadian warmth in action

Conserving water and reducing consumption of Laizhou Company

For a long time, Laizhou Company had used tap water for cooling when the industrial water overheated, which consumed large amounts of tap water. To solve this problem, employees of the water pump team of the company actively thought and searched for a solution and innovatively came up with a solution of adding an industrial water booster pump using industrial water for cooling to decrease temperature of industrial water. Since the addition of the booster pump, it significantly increased the heat exchange efficiency of the heat exchanger, which solved the problem of high temperature of industrial water at its root cause, and ensured that the circular water pump, air compressor and other important facilities could operate as usual in summer. Meanwhile, by reducing tap water loss due to exchange and discharge, more than 20,000 tones tap water per year has been saved, which has a positive effect of energy saving and consumption reduction.

Strictly Protect Ecosystem

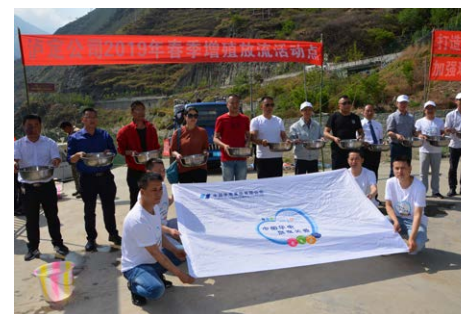
Environmental protection policies in China have become increasingly stringent. With the increasingly strong binding force of ecological protection redlines, minimum environmental quality requirements, upper limits on resource utilization and the negative list for environmental access, they impose stricter 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), and the *Notice of Implementing the Emergency Response for Environmental Emergencies in 2019*, 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.

Highlight

Huadian warmth in action



On April 26, 2019, Luding Hydropower Company carried out the 2019 fish proliferation and release activity in spring under the theme of “protecting the nature, caring about the river”. It was the first show of the proliferation of “care everywhere”, which demonstrated a good image of protecting the ecological environment and fulfilling the responsibility of the Huadian brand of Luding Hydropower Company. There were 2 kinds of rare fish released in Dadu River this time, including *Schizothorax davidi* and *Schizothorax prenati* (commonly known as “Yayu”), releasing 100,000 fish in total. Luding Hydropower Company will continue to uphold the concept of “beautiful you and me, green and low-carbon, cooperating with partners, participating in charity” and further carry out event of “care everywhere”, so as to develop resources, improve economic and environment and serving people.



On 23 October, 2019, Wuhu Company carried out the proliferation and release event of “protecting environment and securing the river” in the Wuhu section of the Yangtze River, releasing over 950,000 fish spanning 6 different species of fish including black carp, grass carp, silver carp, etc.



Luding Hydropower Company carried out the tree planting event of “planting trees and moving forward at present”. This was the fourth time the company had carried out the event of voluntary tree planting, which responded to the call of “promoting afforestation” stated by General Secretary Xi Jinping, as well as supporting the reconstruction project for the landscape of power generation stations.



Tianjin Branch of the Group carried out a voluntary publicity activity with the theme of “sorting garbage on my own and creating a beautiful life together”. The general knowledge of sorting garbage was presented by distributing flyers and ecofriendly shopping bags to citizens, filling out questionnaires and other ways.

Environmental Key Performance Indicators¹

Indicators	Unit	Performance in 2019	Performance in 2018	Performance in 2017	Remarks for 2019
Total input in environmental protection	Ten thousand RMB	144,700	267,699	558,667.5	Capital input
Air pollutants ²					
Sulfur dioxide emissions	Tons	15,154	15,950	-	/
Sulfur dioxide emissions per unit of electricity generation	g/kWh	0.08	0.08	0.14	/
Nitrogen oxides emissions	Tons	26,582	26,329	-	/
Nitrogen oxides emissions per unit of electricity generation	g/kWh	0.13	0.13	0.19	/
Soot emissions	Tons	1,623	1,608	-	/
Soot emissions per unit of electricity generation	g/kWh	0.01	0.01	0.02	/
GHG ³					
Total direct GHG emissions	Ten thousand tons CO ₂	16,785.8	16,430.9	14,696.0	/
Total indirect GHG emissions	Ten thousand tons CO ₂	7.3	3.9	10.2	/
Total GHG emissions	Ten thousand tons CO ₂	16,793.1	16,434.8	14,706.2	/
GHG emissions per unit of electricity generation ⁴	kg/kWh	0.8	0.8	0.7	/
GHG reduction by planted trees ⁵	Tons CO ₂	982.4	742.88	-	/
Use of resource					
Total electricity consumptions of thermal power plant	MWh	13,568,230.8	13,728,604.8	12,309,400.8	/
Total natural gas consumptions	Ten thousand cubic meters	278,474.1	150,296.7	144,293.2	/
Total diesel consumptions	Ten thousand tons	1.5	1.4	1.3	/
Total coal consumptions	Ten thousand tons	8,606.3	8,633.6	7,784.5	/
Standard coal consumptions of power generation	g/kWh	278.8	281.6	282.2	/
Total water consumptions	Ten thousand tons	29,657.7	29,943.1	28,220.2	/
Water consumption rate of electricity supply ⁶	g/kWh	1,378.5	1,399.3	1,417.1	/

Waste					
Spent catalysts generated	Tons	1,030.91	2,004.7	1,517.8	All recycled and reused by catalyst manufacturers
Spent machine oil generated	Tons	553.67	547.8	768.8	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	23,879.00	17,568	18,916	The recycled rate was 100%
Used batteries generated	Tons	146.71	85.2	-	They were recycled and treated by the employed qualified third parties
Total coal ashes generated	Ten thousand tons	1,541.88	1,943.3	1,878.7	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 ashes	%	91.0	83.5	88.3	
Total slag generated	Ten thousand tons	339.63	410.8	396.3	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	%	87.2	72.9	81.1	
Total desulfurization gypsum generated	Ten thousand tons	533.57	600.1	481.5	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	%	85.4	80.6	83.0	

¹Unless otherwise stated, the data were sourced from a total of 41 thermal power plants (including electricity and heat supply) belonging to the Group. The statistical scope is wider than the previous year.

²The data of air pollutants were from the real-time monitoring data at the thermal power plants.

³The 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. According to the requirement to the *Notice of Implementing 2019 Carbon Audit Reporting and Verification and Reporting the List of Major Emission Entities of the Power Generation Industry*, every regional administrative department in China will entrust third-party audit institutions to verify the provided GHG data of the Group. The review of the audit report will be finished before May 31, 2020. The verified GHG emission data according to the review shall prevail. The 2019 GHG emission data may be adjusted with reference to the audit result.

⁴The listed data refer to the GHG emissions per electricity generating of electricity supply, not including the heat supply.

⁵The calculations of GHG reduction by planted trees were set out based on the *Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Building (Commercial, Residential or Institutional Purposes) in Hong Kong* published by Electrical and Mechanical Services Department and Hong Kong Environmental Protection Department.

⁶The listed data refer to the water consumption rate of electricity supply, not including the heat supply.

United Team, Develop and Move Forward

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 equipping with knowledge, technology and innovation and stimulate rapid development.



Protect Employee Rights and Benefits



Promote Talent Development



Colorful Employee Activities



Human Resource Indicators

Protect Employee Rights and Benefits

The Group strictly complies with and implements 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 and 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 employee information is strictly reviewed during recruitment to prevent child labor, resolutely objecting to hire child labor under 16 years old. Employees have legally entered into labor contracts with the Group, which specify 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, and also prohibited 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% and the additional commercial medical insurance coverage rate reached 96%.

As of the end of the reporting period, the labor contract signing rate of the Group reached

100%

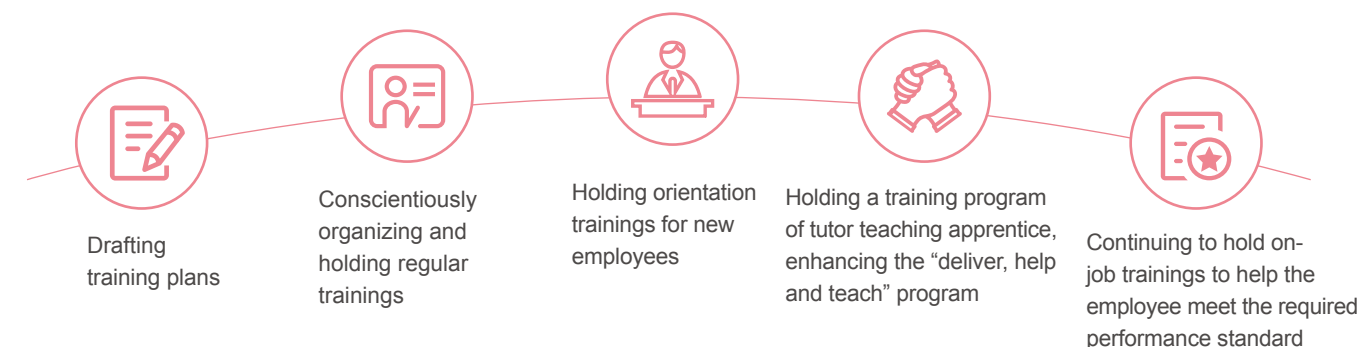
the additional commercial medical insurance coverage rate reached

96%

Promote Talent Development

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 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 trainings; holding orientation trainings 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.



Anhui Huadian Suzhou Power Generation Company Limited ("Suzhou Company") adopted the "three steps and five stages" orientation training mode for new employees to promote their growth and development. Suzhou Company required that training should follow "three steps": analyzing the need of training, formulating training plans and contents, checking and accepting the result of training. "five stages" are: orientating training, general company training, targeted and rotational internship, checking and accepting the result of training, tutor teaching apprentice, achieving certification and performing duty. By adopting the "three steps and five stages" training mode, Suzhou Company has stimulated new employees to quickly adapt the workplace and to enable the improvement of their knowledge, skill and qualification in all aspects as well as understanding their job nature.



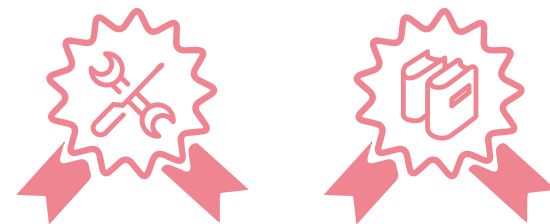
The safety training for new employees of Suzhou Company



Fuyuan Thermal Power Company participated in the second training class for internal trainers. The teacher presented internal training in detail from four sections, as "art of teaching", "presentation skills", "preparing training materials" and "performance in the class". A training mode of "teaching, training, presenting and evaluating" was adopted and the teacher focused on teaching theories in the centralized training and solving questions individually.

Colorful Employee Activities

The Group proactively creates an energetic, active and united workplace to create a team with more cohesion and to simulate 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.



Shandong Branch of the Group sent employees to participate in the Second National Young Trainer Skills Competition of Power Generation Industry. The team of internal trainers of the company performed its spirit of hard-working and determination to forge ahead in this competition, which promoted the building of the first-class trainers of the company and enhanced the way of talent cultivation.



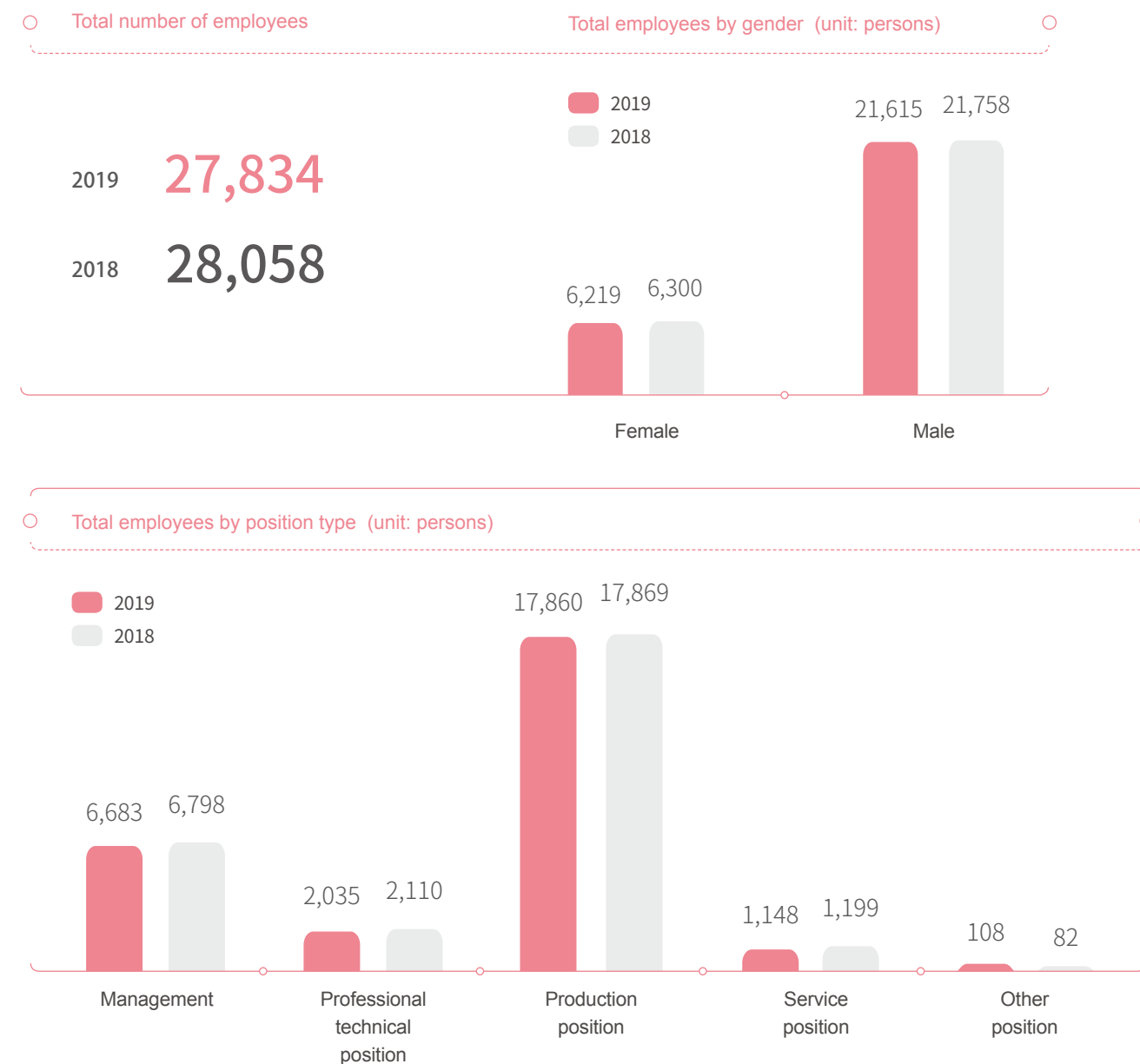
Shandong Branch of the Group held the Fourth (Electrical Safety) Skills Competition



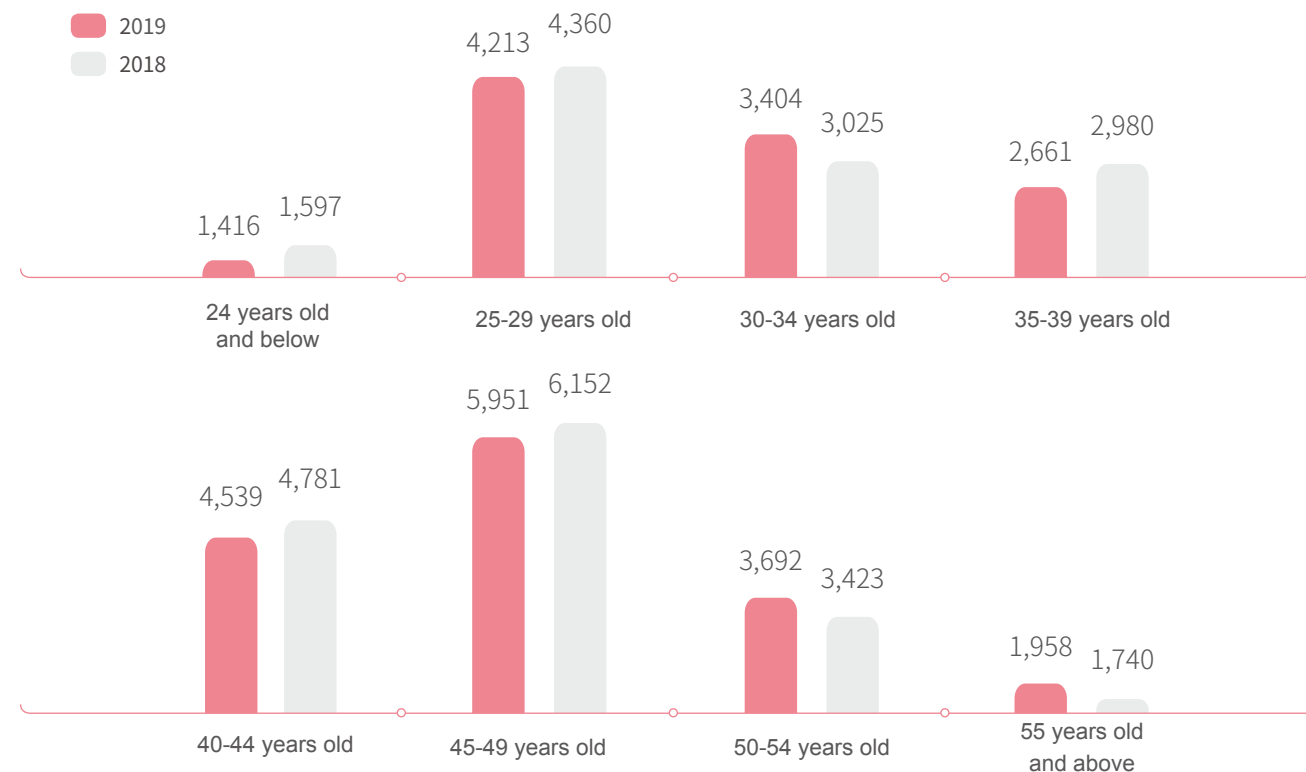
Zouxian Plant of the Group organized and held various activities, like reading activities named "reading on March 8", theme party, fun relay race, with the theme of "shouldering new missions, women making new contributions"



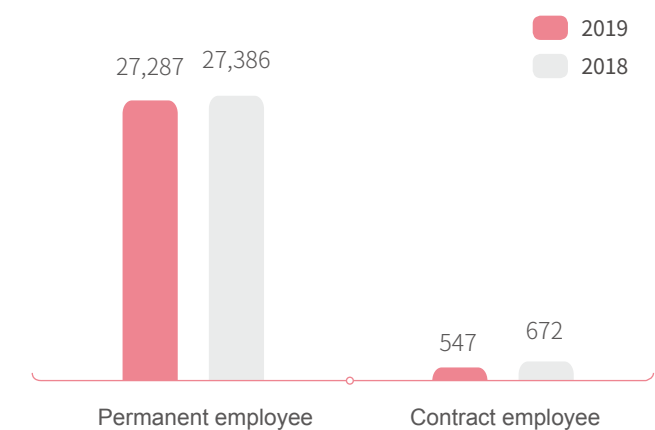
Human Resource Indicators



Total employees by age group (unit: persons)



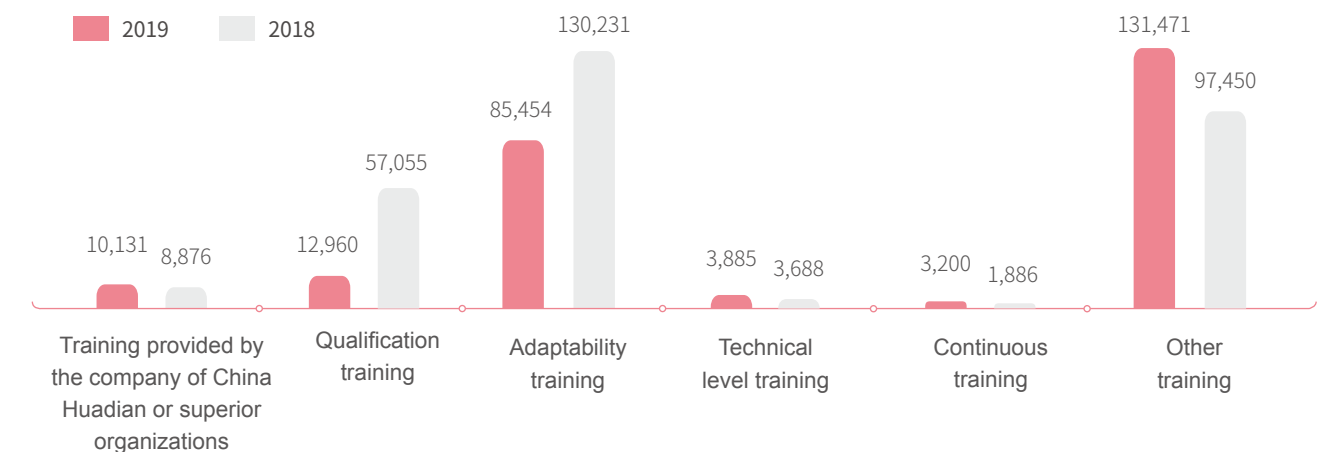
Total employees by employment type (unit: persons)



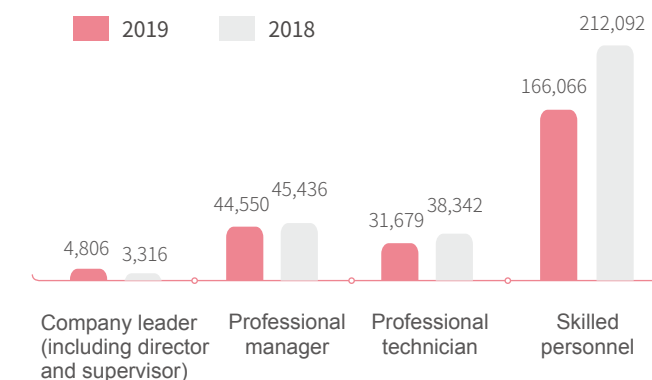
Indicators ⁷	2019 (unit: persons)
Employee turnover by gender	
Male	284
Female	64
Employee turnover by age group	
24 years old and below	36
25-29 years old	156
30-34 years old	84
35-39 years old	24
40-44 years old	10
45-49 years old	18
50-54 years old	10
55 years old and above	10

Indicators ⁷	2019 (unit: persons)				
Employee turnover by geographical region					
Beijing	0	Sichuan	27	Tianjin	13
Shandong	32	Zhejiang	18	Shanxi	37
Hubei	27	Hebei	29	Inner Mongolia	11
Anhui	34	Henan	16	Others	25
Ningxia	19	Guangdong	60		

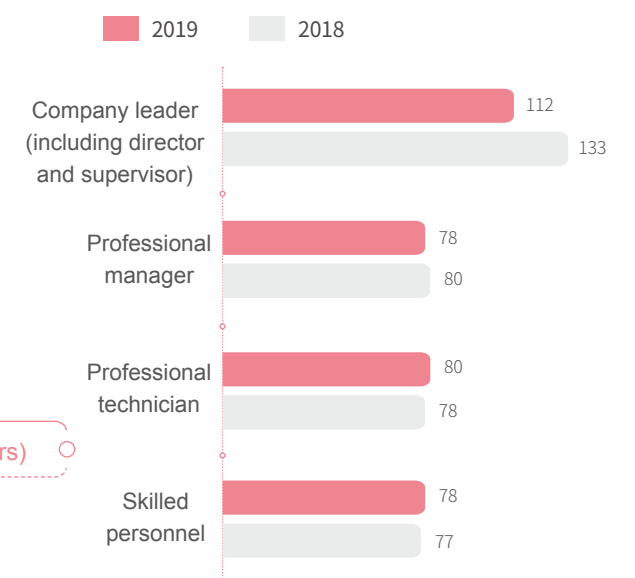
Total employees trained by training type (unit: person-times)



Total employees trained by employee type (unit: person-times)



Average training hours per employee by employee type (unit: hours)



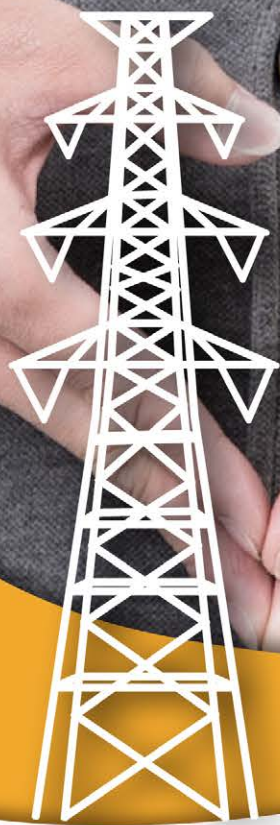
Average training hours per employee by gender⁸ (unit: hours)



⁷The following indicators of employee turnover are new disclosures in the ESG Report of the Group.

⁸This indicator is a new disclosure in the ESG Report of the Group.

Support Prosperous Community, Implement the Spirit of Caring Everywhere



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 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.



Work Together for Poverty Alleviation



Care about the Community

Work Together for Poverty Alleviation

The 19th National Congress of the CPC (the “**19th CPC National Congress**”) articulated that focused assistance should be provided to areas of extreme poverty and ensure that all rural residents living below the current poverty standard are lifted out of poverty by 2020. Hence, the Group responds to the national call of “winning the battle against poverty” by further implementing the work of poverty alleviation. The Group supports the community by precisely identifying families in need and implementing various plans of poverty alleviation and make contributions to build a moderately prosperous society in all aspects. During the reporting period, the Group invested 0.48 billion RMB in total in targeted poverty alleviation, including investment in poverty alleviation, charity donation, etc.

Highlight

Highlight——poverty alleviation in old revolutionary base areas, bringing warmth to the mountains

Lu'an is located in the western part of Anhui Province and the interior of Dabie Mountain. It is a district that has the most number and widest distribution of people in poverty in Anhui Province and has the challenging tasks of poverty alleviation. Anhui Huadian Lu'an Power Generation Company Limited (“**Lu'an Company**”) thinks highly of poverty alleviation and persists in various alleviation modes to “broaden sources and creating incomes”. The company broadens its view of development and develops and adopts various kinds of poverty alleviation measures according to local conditions. The company actively implements poverty alleviation through distinctive local businesses, e-commerce, financial services, medical services, education and other targeted poverty alleviation projects to increase the ability of people in need to “create income” and lifting themselves out of poverty.



The working team of poverty alleviation of Lu'an Company staying at the Zushimiao Village paid a visit during the Dragon Boat Festival



Zibo Company held a donation activity of “caring everywhere, volunteer first, caring about Shandong Province by poverty alleviation”



Care about the Community

The Group held various volunteer activities and an open day of power generation plants to strengthen communication with the community and deepen their understanding of the operation of power generation plants.

Highlight

Highlight——public open day

On May 19, 2019

Huadian Shandong New Energy Company held the first public open day with the theme of “continuing the idea of environmental protection, sharing green energy”. The company introduced its basic information and corporate culture to the visitors and presented relevant knowledge of solar power generation systems.

In June 2019

Qingdao Company held a public open day with the theme of “big hands holding small hands, everybody goes green” on environment day. The company let participants know its green and eco-friendly development by giving a detailed presentation.

In October 2019

Laizhou Company held a public open day with the theme of “celebrating the National Day and seeing the development” and letting students, their parents and teachers go into the plant. The company introduced the technological, eco-friendly, clean and efficient process of coal-fired power generation and the company's basic information in detail and promoted its brand of “intelligent, eco-friendly, beautiful” to more Laizhou citizens.



“Hello, I like you!”—Zibo Company went to a special education school and taught the knowledge of power generation

Look into the Future

2020 is a year to check and review the result of the Group's "13th Five-Year Plan" as well as the beginning of the next 5 years for a new journey.

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; will continuously increase input in energy saving and environmental protection plans by enhancing technological renovation for environmental protection equipment, so as to promote the low-carbon and efficient operation of the power plants; will keep implementing wastewater control; 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 and advocate 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; Strictly Control Pollutant Emission
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; Strictly Control Pollutant Emission
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	Strictly Control Pollutant Emission
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	Efficiently Save Resources
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	Efficiently Save Resources
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	Efficiently Save Resources
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	Not applicable ⁹

⁹ 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. Social		
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 Resource Indicators
KPI B1.2	Employee turnover rate by gender, age group and geographical region	Human Resource 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; Promote Talent Development
KPI B3.2	The average training hours completed per employee by gender and employee category	Human Resource 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 Production Safety; 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



華電國際電力股份有限公司

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