



中國高速傳動設備集團有限公司*

China High Speed Transmission Equipment Group Co., Ltd.

(incorporated in the Cayman Islands with limited liability)

(Stock Code: 658)

ENVIRONMENTAL,
SOCIAL AND GOVERNANCE REPORT

2022

For reference purpose only

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| Overview

China High Speed Transmission Equipment Group Co., Ltd. hereby presents the seventh Environmental, Social and Governance ("ESG") Report ("the Report") to demonstrate its philosophy and practice of sustainable development. The Report aims to help all stakeholders gain a better understanding of the Company and further to drive the Company forward. The Report has been approved and supervised by the Board of Directors.

| Reporting Scope

The Report, centering on China High Speed Transmission Equipment Group Co., Ltd., covers our major manufacturing business segments (independent R&D, design, manufacture and sales of wind power gear transmission equipment and industrial gear transmission equipment) during the period from 1 January 2022 to 31 December 2022 ("the Reporting Period"). Some of the contents of the Report are appropriately extended to previous and subsequent years to enhance comparability and forward-looking. Compared with the 2021 Environmental, Social and Governance Report of the Group, the Report has no major change of the reporting scope.

| Reporting Standards

The Report has been prepared in accordance with the *Environmental, Social and Governance Reporting Guide* ("the ESG Guide") under Appendix 27 to the Rules Governing the Listing of Securities ("the Listing Rules") published by The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange"), aligning with the Global Reporting Initiative (GRI) Standards published by Global Sustainability Standards Board and the UN Sustainable Development Goals "UNSDGs".

| Reporting Principles and Source of Data

The Report is written from the four reporting principles, namely, Materiality, Quantification, Balance, and Consistency in the *Environmental, Social and Governance Reporting Guide* by the Hong Kong Stock Exchange. The Company identifies material and relevant issues to our businesses through industry and material evaluation, with material issues disclosed first. The data or information we quote are sourced from the Company's statistics documents and files collected, compiled, and checked by the Company. The Report uses qualitative and quantitative data and information to show our previous and latest performance regarding sustainable development. Unless otherwise noted, the data are calculated in a consistent method. Financial data mentioned in the Report are measured in RMB unless otherwise stated.

China High Speed Transmission promises that the Report does not contain any false or misleading statement or record, and we are accountable to its authenticity, accuracy, and integrity.

| Designation

For the convenience of description, "China High Speed Transmission", "China Transmission" or "the Company" refer to China High Speed Transmission Equipment Group Co., Ltd. and its subsidiaries (collectively referred to as "the Group", "We").

| Access to the Report

The Report is available in both Traditional Chinese and English, which can be found on the HKEX's website at www.hkexnews.hk and the website of the Group at www.chste.com. In case of discrepancies or inconsistencies between the English and Chinese versions of the Report, the Chinese version shall prevail.

| Corporate Profile

The Group is principally engaged in the research, design, development, manufacture and sales of a broad range of mechanical transmission equipment that are used in wind power and a wide range of industrial applications. We have strong technical force, rich production experience and advanced manufacturing technology. We have become a leading supplier of gear transmission equipment globally featuring stable growth, reliable quality and perfect service.

As a leader in transmission equipment for wind power, the Group leverages its strength in research, design, and development. We manufacture various megawatts transmission equipment for wind power, onshore and offshore, of which quantities of our 2MW to 8MW wind power transmission products have been supplied to Chinese and overseas customers. This bears testimony to our world-leading technologies for products.

The Group's industrial gear transmission equipment business positions itself as being "fully ranged, clearly layered, and precisely segmented". While realizing our customers' diversified and differentiated needs, the Group delivers on the customers' core expectations for higher efficiency and lower emissions. By independently researching and developing efficient, reliable, and energy-saving transmission equipment, the Group empowers green and low-carbon development.

| Business Layout

As globalization progresses, the Group has finalized our strategic business layout in Europe, America, and Asia Pacific, dedicated to offering quality products and services to our customers all over the world and elevating our brand influence. The Group penetrates the market trend with a forward-looking insight and keeps doubling down on our R&D in state-of-the-art technologies. By organically linking research and production, the Group maintains the iteration speed and optimizes our product matrix. Meanwhile, the Group joins domestic and foreign industry associations, engages in expos, promptly gets the core demands of customers, and keeps the standards in line with the industry-leading companies. In this way, the Group upgrades the management of the product life cycle and upgrades the core functions of our products to grow more competitiveness in the international arena.

About Us

• Operation regions

• Service offices



Build the global network of markets, technologies, and services

Corporate Culture

As an expert in providing the global solutions of gearbox and transmission technology, China High Speed Transmission has been upholding the spirit of “climbing up the summit step by step, striving for perfection bit by bit”, and bearing in mind the mission of being “Geared for a Better Future”. Embracing the corporate vision of being the leader in the global transmission equipment industry and creating a world-class brand, we value elaborate craftsmanship, reinforce zero-defect management philosophy, and advance the green development notions. Under the strategic framework of moving gear equipment technologies global, we build our core competitive edges around “innovative mindset, zero-defect quality, professional services, and close to customers”. With our stakeholders, we are writing a new chapter for a green future and sustainable development.

Spirit of the Company

Climbing up the summit step by step
Striving for perfection bit by bit

Mission of the Company

Geared for a Better Future

Annual Honors and Awards

	Honors and awards	Bestowed by
	"2022 National Technological Innovation Demonstration Company"	Ministry of Industry and Information Technology
	Passed the review of "manufacturing champion in an individual field"	Ministry of Industry and Information Technology
	"Enterprise of Excellence for Outstanding Contributions to Manufacturing in Jiangsu Province"	Jiangsu Provincial Committee of the Communist Party of China, Jiangsu Provincial People's Government
	"2022 Jiangsu Provincial Governor Quality Award (for Organizations)"	Jiangsu Provincial People's Government
	Listed as a strategic pilot for the emerging industry and standardized service industry in Jiangsu Province in 2022	Jiangsu Administration for Market Regulation, Jiangsu Development and Reform Commission
	Gained the approval for building "the technological research center for the high speed heavy duty machinery transmission system" in Jiangsu Province	Jiangsu Provincial Department of Science and Technology
	"Jiangsu Provincial Four-Star Internet Connected Company"	Jiangsu Provincial Department of Industry and Information Technology
	"Listed in the top 100 companies in Nanjing and top 100 manufacturing companies in Nanjing"	Nanjing Enterprise Confederation, Nanjing Enterprise Directors Association
	Honorary title of "Top 50 Supplier of Engineering and Machinery Parts in China"	The Global Top 50 Construction Machinery Summit
	2021-2022 "Environmentally Friendly Player" in the treatment of metallurgical solid wastes and industrial exhausts in China	2022 China's Fifth Convention on the Technologies to Treat and Use Metallurgical Solid Wastes and Industrial Exhausts
	Outstanding equipment supplier of the cement industry in China in 2021 Energy-saving equipment supplier of the cement industry in China in 2021 Top 100 equipment supplier of the cement industry in China in 2021 Reputable equipment supplier of the cement industry in China in 2021	2022 China Cement Industry Summit and Top 100 Award Ceremony hosted by the China Cement Website

Annual Honors and Awards



"Listed in the top 100 of China's machinery industry in 2022"

China Machinery Industry Federation



Top 100 of China's building materials service industry

China Building Material Enterprise Management Association



"Globally Famous Brand of Engineering and Machinery Parts"

CMII 2022 (Construction Machinery Industry Internet Conference) · The 13th Brand Grand Meeting



"2022 Extraordinary Employer"

Initiated by Liepin, a recruitment site, and co-hosted by professional associations, excellent employers, renowned media companies, and influential business insiders



Listed in the enterprise brand value of machinery industry

2022 China Brands and the 16th Annual Convention jointly hosted by TopBrand Union and China Convention and Exhibition Society

Key ESG Performances

Environmental KPI

0.23 MWh/RMB 10,000
Intensity of energy consumption

30,294.74 MWh
Renewable energy
(solar photovoltaic energy)

0.12 tCO₂e/RMB 10,000
Emission intensity of GHG
(scope1+scope2)

0.43 m³/RMB 10,000
Intensity of water consumption

5.35 kg/RMB 10,000
Intensity of wastes

100%
Percentage of production sites
certified by environmental
management systems

Social KPI

RMB 744,816,000
Total R&D input

4.53%
R&D input ratio in wind power
gear transmission equipment
business segment

5.67%
R&D input ratio in industrial
gear transmission equipment
business segment

22.20 Hours/person
Average training hours
completed per employee

85.77 scores
Customer satisfaction

RMB 10,164,000
Expenditure in donations

Economics KPI

RMB 15,320,850,000
Sales revenue¹

RMB 13,274,367,000
Sales revenue of wind power
gear transmission equipment

RMB 2,046,483,000
Sales revenue of industrial
gear transmission equipment

Remark:

1. The data on the Group's sales revenue covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses.

1

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Material issues in this chapter

- Corporate Governance
- Business Ethics
- ESG Governance
- ESG Risk Management
- Communication with Stakeholders on ESG issues

UNSDGs in this chapter

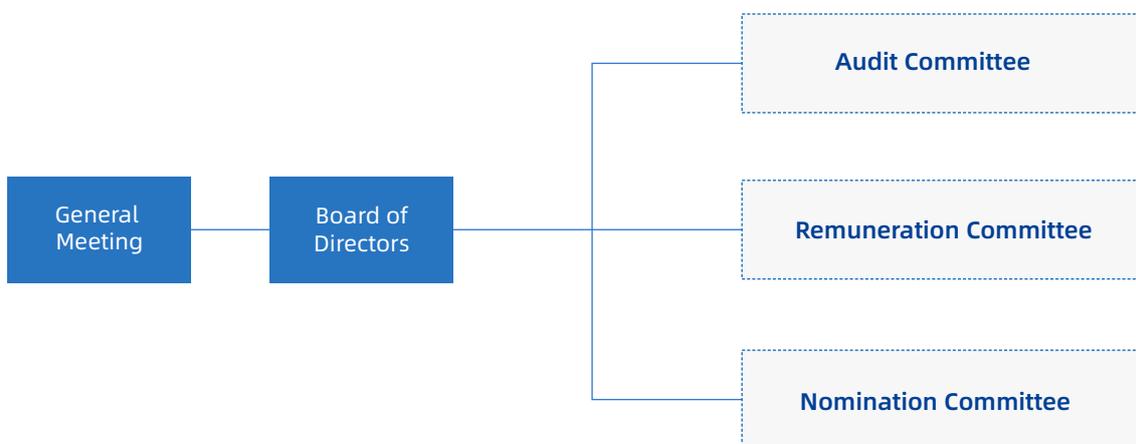


Corporate Governance and Sustainable Development Management

Strengthen Corporate Governance

China High Speed Transmission abides by laws, regulations, and supervisory rules, including the *Company Law of the People's Republic of China*, the *Securities and Futures Ordinance*, and the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited*. The Group continues to optimize the corporate governance system and operate under the Board's instructions that drive corporate governance towards compliance, scientific, and quality development.

The Board is responsible for guiding and monitoring the business and strategic plans for the Group and corporate management. Under the Board are the Audit Committee, Remuneration Committee, and Nomination Committee as shown below. Each performs its own functions to assist the Board to fulfill its missions as above, propelling the Group to form a management system that features coordination, effective checks and balances, efficient operation, and scientific decision-making. In 2022, we held one general meeting and four board meetings. In addition, the number of meetings of the the Audit Committee, Remuneration Committee, and Nomination Committee are shown below.



	Number	The number of executive directors	The number of independent non-executive directors	The proportion of independent non-executive directors	The number of meetings convened in 2022
Audit Committee	3	-	3	100%	2
Remuneration Committee	3	1	2	66.7%	1
Nomination Committee	3	1	2	66.7%	1

Improve ESG Governance

Sustainable Development Management Framework

During the Reporting Period, the Group has established a Sustainable Development Leadership Group represented by Chairman of the Board. The Sustainable Development Leadership Group puts a high priority building an energy management system and continues to set up independent panels to establish and improve the sustainable development management system. In addition, the members of the Sustainable Development Leadership Group and other project execution groups will regularly identify internal ESG risks, sharing ESG cases of excellent peer enterprises, and holding ESG seminars, ESG training, and workshops to update and expand the knowledge network of ESG management.

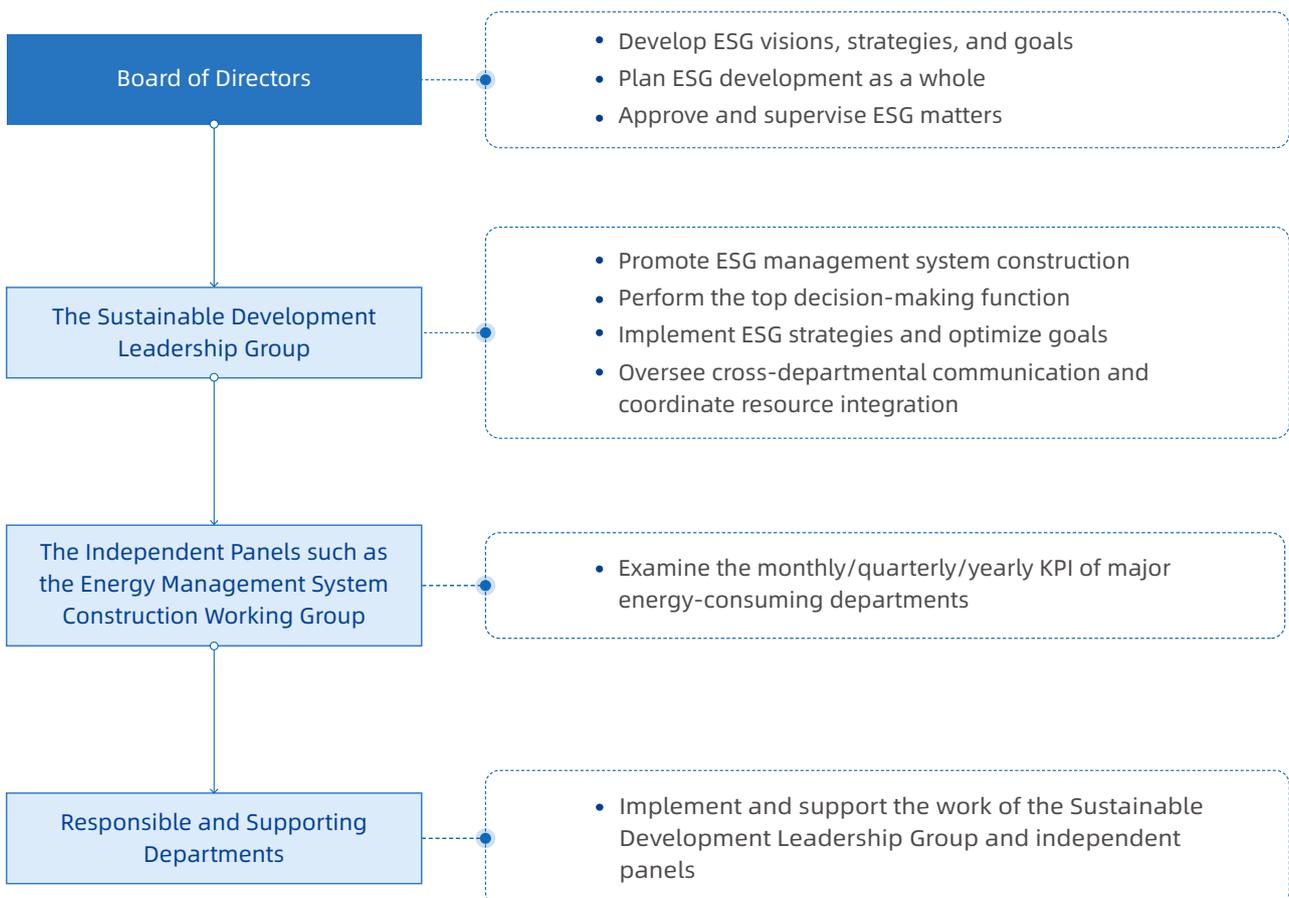
Key performances:

During the Reporting Period, the Sustainable Development Leadership Group has launched discussions of many significant projects through raveling out the global ESG development trend.

In 2022,

1 meeting held by the Sustainable Development Leadership Group

1 motion submitted to the Board of Directors



Sustainable development management system of the Group

Main tasks of the Sustainable Development Leadership Group during the Reporting Period



-  Focus on the certification of Green Factories, improve the energy efficiency management related system, and promote energy and carbon emissions management, including the building of energy management system.

-  Conduct internal and external materiality assessments, identify highly material ESG issues, and confirm key disclosures in the 2022 ESG Report.

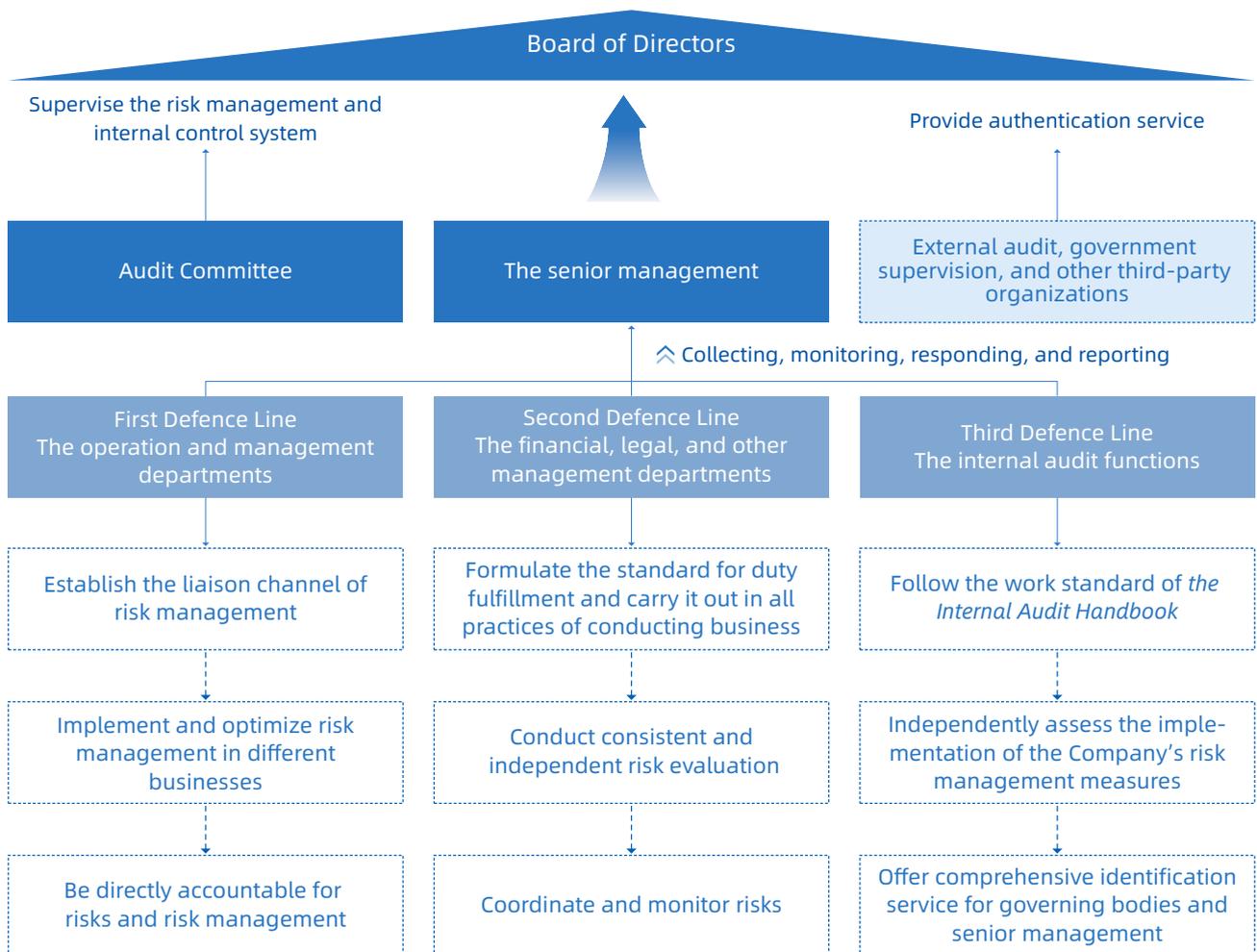
-  Improve the management mechanism of environmental performance data covering energy, air emissions, and water resources to lay the foundation for setting out scientific middle to long-term measurable ESG targets.

Compliance and ESG Risk Management

Compliance Risk Management

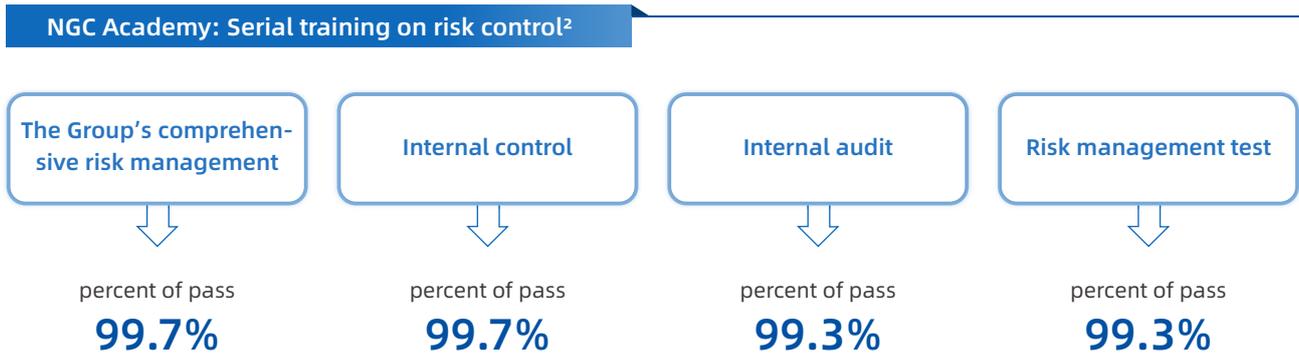
The Group follows the compliance management guidances issued by the relevant national ministries and commissions, the applicable national or regional laws and regulations in the course of the Group's operation, and the *Corporate Governance Code* as set out in Appendix 14 of the Listing Rules. We have also established a risk management framework based on the COSO Enterprise Risk Management Framework and ISO 31000:2018 Risk Management System and formulated the *Comprehensive Risk Management System*. Specifically, the Group has identified "Three Defense Lines" against risks and set up a standardized and effective corporate risk management system within its operation range to obtain the strategic and business objectives with high efficiency.

As stakeholders of these lines of defense, the Board and the senior management are tasked with setting the Group's strategies, its goals to achieve the strategies, its governance structure, and its management procedure. This way minimizes the potential risks and ensures that the "Three Defense Lines" work effectively.



The Risk Management Framework "Three Defense Lines "

The Group tailors their risk management training to their employees to promote their risk awareness. In employee orientation and specified training at different levels given by different functional departments, we place a high emphasis on boosting employees' risk awareness to make sure that the Group and our employees detect and forestall risks based on telltale signs, nip risks in the bud, and prevent risks from spreading, multiplying, evolving, and deteriorating.



Remark:

2. The risk management training covers the Group's employees in positions higher than managers in the wind power and industrial gear transmission equipment business segments.

| Business Ethics

The Group stays committed to operating pursuant to laws and regulations, building a compliance culture featuring honesty and integrity, and building a whole, flexible, and efficient compliance system. We are dedicated to honesty and ethics, requiring all employees to strictly follow the laws and regulations on anti-money laundering, anti-fraud, the protection of copyrights, trademarks, trade secrets, confidential information, and occupational health and safety that are in effect on the bases of the Company and countries (regions) including the locations of company's buildings, offices, and businesses. We have formulated internal management rules including the *Anti-Corruption Policy*, the *Whistleblowing Policy*, the *Employee Handbook*, the *Employee's Commitment of Compliance*, the *Business Conduct and Ethics Guidelines*, the *Non-Disclosure Agreement*, the *Transparency Agreement*, and the *Procedure for Anti-Fraud Reporting Management Procedure*. By doing so, we demand employees to bear in mind professional ethics and keep away from insider dealings while conducting business. We ask our partners and contractors to abide by rules and regulations and prevent unfair competition and corruption from happening by organizing anti-corruption training for our suppliers and requiring them to sign the *Transparency Agreement*.

⚙️ Anti-Corruption

The Group strictly complies with such laws and regulations as the *Company Law of the People's Republic of China* and the *Anti-Unfair Competition Law of the People's Republic of China* and the *Interim Provisions on Banning Commercial Bribery*. In Hong Kong, we also refer to the *Prevention of Bribery Ordinance*. We have set down and implemented rules and regulations in all key business fields, and banned convenience fees, bribes, and benefits bestowed to others by stealth. We forbid employees from taking kickbacks or commissions and pursuing benefits that break corporate regulations such as money laundering and tax evasion. We hold zero tolerance towards bribery, blackmail, and corruption, cracking down on graft and fraudulent practices. Any employees in violation of these rules shall be subject to stringent punishments by the Company.

The Group has formulated the *Codes of Business Conduct and Ethics*, laying out a clear definition of stakeholders, and clarifying the hiring, position, payment, and business interaction of stakeholders. We require employees to regularly report their stakeholders to reduce their susceptibility to corruption and thus create an honest and transparent working environment.

Every year, we carry out checking, audit, internal control, and special inspection on 24 business cycles, covering business ethics and anti-corruption. Also, we will make adjustments to the inspection plan based on the risk level and industry dynamics, summarize the problems based on the inspection results, and make continuous improvements. In 2022, the Group's internal audit covered 100% of the businesses scope of the wind power and industrial gear transmission equipment.

Key performances:

Over the past three years,
NO
corruption-related litigation cases has occurred in the Group

NO
employee was dismissed or disciplined due to corruption

NO
termination of contracts with business partners due to corruption-related violations

Measures against Corruption



To urge our executives to act as role models in probity and self-discipline, our CEO signs and releases the *Commitment Letter of the Management* annually



To enhance employees' awareness of compliance and monitor their own conduct, the key employees must attend the anti-fraud training organized by NGC annually and all employees holding key positions must sign the *Employee Compliance Commitment*



To put an end to business bribery altogether, all organizations and individuals with purchasing interactions (except monopoly suppliers of water, electricity, and gas and companies with a contracted transaction of less than RMB 50,000) with the Group must sign the *Transparency Agreement*. So far, 455 of our qualified suppliers that meet the conditions have signed the agreement (not including overseas companies), accounting for around 100% of our qualified suppliers in use.

⚙️ Against Unfair Competition

The Group strictly abides by China's and international laws and regulations including the *Contract Law of the People's Republic of China*, and *Anti-unfair Competition Model Regulations of the People's Republic of China*. To establish an honest and fair competition mechanism and prevent unfair competition from happening, we set out special investigations based on reported evidence. Over the past three years, we have never received any lawsuit papers on the charge of unfair competition.

⚙️ Protection of Complainants and Whistleblowers

The Group encourages all stakeholders to report any incidents that might violate the regulations on business ethics. To ensure a prompt and effective response to the requests of stakeholders, we have issued the *Anti-Fraud Reporting Management Procedure*, which serves as a mechanism for complaining and reporting and regulates the reporting practices. Real-name or anonymous reporting may be conducted in the following ways:



To safeguard the independent and impartial reporting reception and investigation work, the Group has appointed the Risk Control Department to be specialized in anti-fraud investigations and present their findings directly to the Chairman of the Board. The Group requires the Risk Control Department to deal with complainants' names, workplaces, and home addresses with complete confidentiality. We forbid any revenge against complainants. Any individual who seeks revenge shall be punished, including the termination of the employment contract.

To encourage stakeholders to report practices against business ethics, the Group has set up an exemption right. In other words, if our partners report or explain their own practices that are proven true, we will continue our cooperation and exempt them from further investigation and punishment depending on their accountability.

⚙️ Business Ethics and Probity Education

Through various promotion, education, and training events, we promote the anti-corruption messages across to our employees and promote a culture of probity and self-discipline. We incorporate training on business ethics and anti-corruption into our training system for all employees, requiring them (including part-time or contracted workers) to complete these training sessions and clarifying the bottom line of legal compliance. To ensure that our employees understand and act in accordance to the *Codes of Business Conduct and Ethics*, we organize online training and tests annually for employees holding key positions.

Key performance:

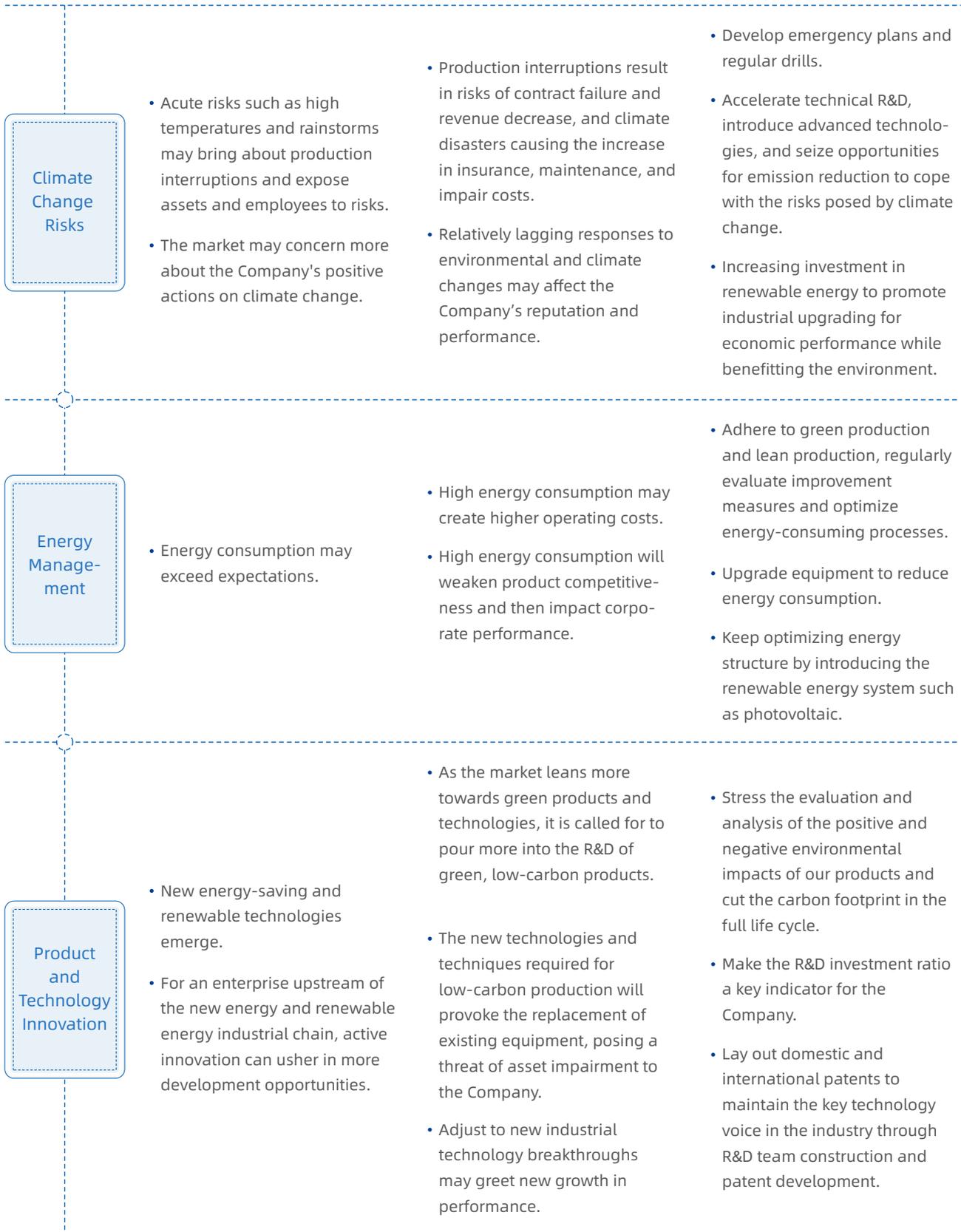
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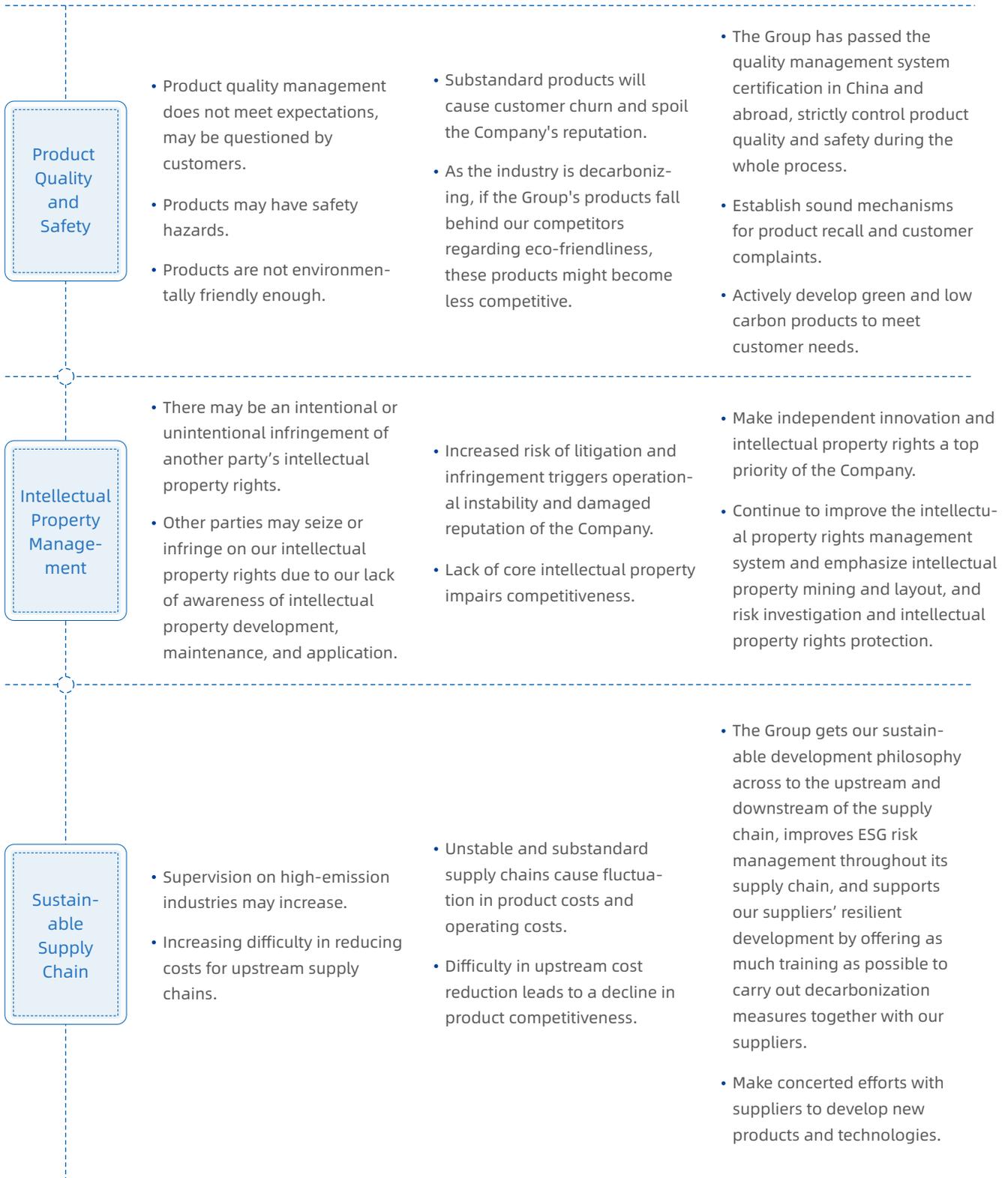
completion rate of employee training on business ethics and anti-corruption

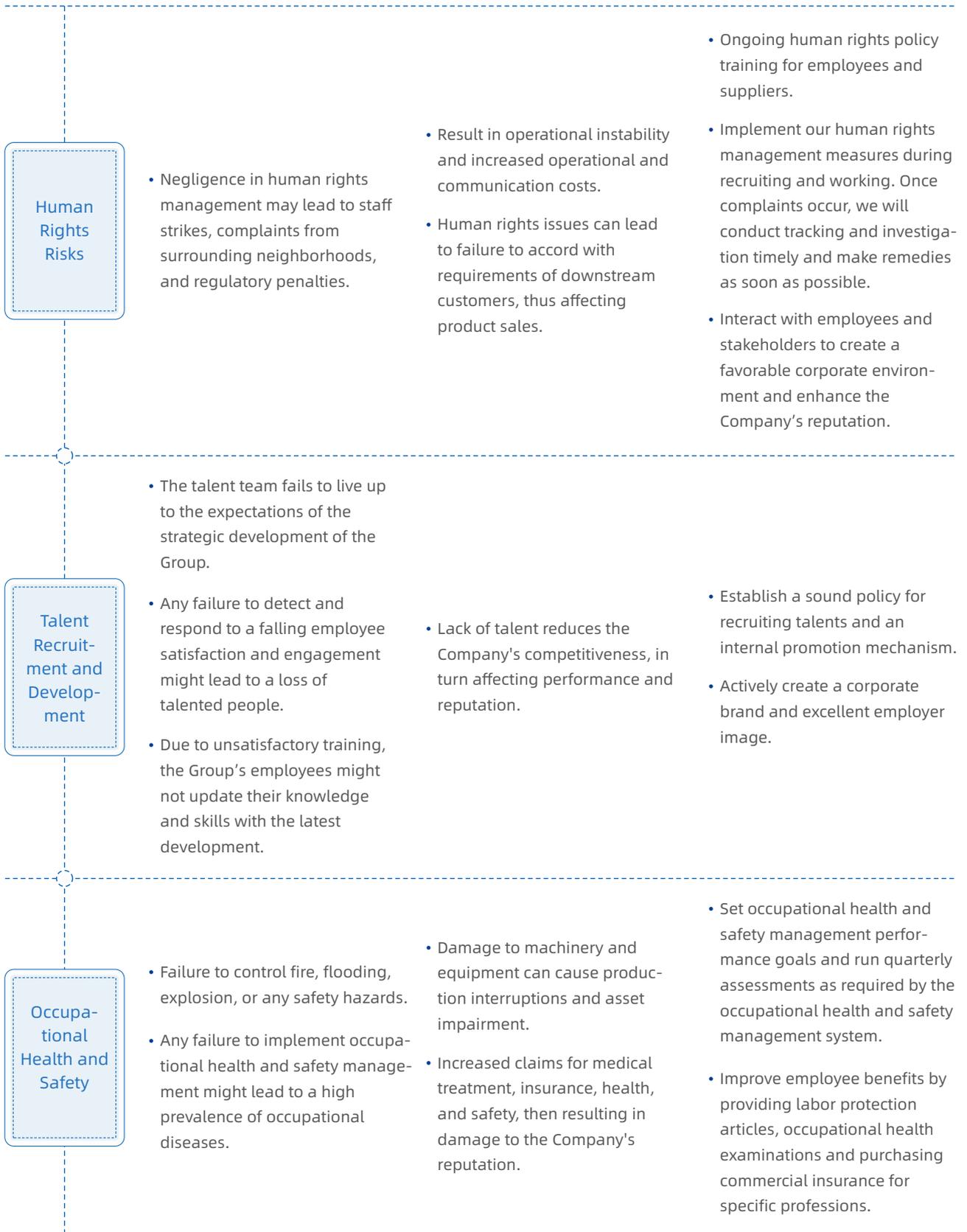
ESG Risk Management

The Group incorporates ESG risks into the overall risk management system. The Risk Control Department and Environmental, Occupational Health and Safety (EHS) Department cooperate with all business departments and functional departments to identify and evaluate ESG risks and opportunities and formulate solutions in reviewing the Group's business and process. The summary is as follows.

Risks	Potential ESG Risks/Opportunities	Potential Influence	Main Solutions
<div style="border: 1px dashed blue; padding: 5px; text-align: center;">Policies and Legal Risks</div>	<ul style="list-style-type: none"> The Group continues to globalize our business. If we fail to understand and comply with the local policies, regulations, and standards in a timely and effective manner, we may face certain risks of geopolitics, changes in policies and regulations, and nearby neighborhoods. Governments are likely to tighten the supervision of energy-intensive industries. 	<ul style="list-style-type: none"> This may impact products that fall below local standards and affect relationships with local communities. Strengthening supervision threatens price inflation of many fundamental materials, further leading to higher product costs. 	<ul style="list-style-type: none"> Comprehend the latest policies and regulations of the client's region and conduct training timely. Enhance the R&D about cost reduction and efficiency improvement in the Group and upstream supply chain.
<div style="border: 1px dashed blue; padding: 5px; text-align: center;">Waste and Pollutants</div>	<ul style="list-style-type: none"> Potential risks of excessive emissions. Potential risks of pollutant leakage. Potential risks of illegal disposal of hazardous waste by outsourcing units. 	<ul style="list-style-type: none"> The impact on the environment leads to increased penalties, reputation damage, and poor management. 	<ul style="list-style-type: none"> Ensure the smooth functioning of exhaust gas, waste water, and solid waste treatment equipment and the implementation of management measures, and commission third-party supervisory bodies to monitor the emission of pollutants according to applicable standards to make sure that the emissions are within the limit of laws and regulations. Examine the qualifications of the outsourced disposal unit and access to our disposal technical information. Improve the comprehensive utilization of hazardous waste and reduce the amount of hazardous waste generated.







Stakeholders and Material Issues

Communication with Stakeholder

China High Speed Transmission attaches great importance to communication with stakeholders and determines the key stakeholders based on our influence scope of sustainable development and industry characteristics. We adhere to the principles of integrity, interaction, equality, and transparency, respect the requirements of the stakeholders, and have established efficient communication and feedback mechanism. The Group is committed to strengthened regular and irregular communication with stakeholders through various measures, invites stakeholders to participate in decisions and activities related to corporate sustainable development, and listens to opinions and suggestions from government, shareholders, customers, partners, nearby neighborhoods, and employees. Targeted to improve its ESG performances, the Group is effectively responding to the needs and concerns of all parties and striving for a harmonious win-win result for all stakeholders.

Stakeholders' Requirements and The Group's Responses			
Stakeholders	Requirements and expectations	Ways of communication	Responses and results
 Customers	<ul style="list-style-type: none"> Integrity and honesty Improve service quality Handle the advice and complaints Protect customer privacy Circular economy 	<ul style="list-style-type: none"> Exchange visits with customers Customers' Days Official website and official account of social media platforms Customer hotline communication via the customer hotline and meetings Customer satisfaction survey Communication of routine business activities 	<ul style="list-style-type: none"> Compliance sales service Guarantee service quality Complaint handling mechanism Customer information confidentiality mechanism Product R&D and innovation
 Suppliers	<ul style="list-style-type: none"> Integrity and honesty Training and empowerment Open and transparent management Mutual benefit and win-win result 	<ul style="list-style-type: none"> Visit to a supplier or a supplier's visit Meetings of suppliers Official website and official account of social media platforms Communication of routine business activities 	<ul style="list-style-type: none"> Sincere cooperation Responsible sourcing and regular monitoring Active communication
 Shareholders/ Investors	<ul style="list-style-type: none"> Increase return on investment Reduce operational risks Protect shareholders' rights and interests 	<ul style="list-style-type: none"> General meeting Regular reports and company announcement Exchange meeting 	<ul style="list-style-type: none"> Improve operating efficiency Perfect management system Maintain mutual trust with investors

	<ul style="list-style-type: none"> • Information disclosure • Operating with integrity 	<ul style="list-style-type: none"> • Official website and official account of social media platforms 	<ul style="list-style-type: none"> • Regularly disclose financial reports
 <p>Employees and the trade union</p>	<ul style="list-style-type: none"> • Complete compensation and benefits package • Employees' development and promotion • Occupational health and safety • Equal opportunities 	<ul style="list-style-type: none"> • Meetings of employee representatives • Internal meetings • Email and mailbox for the general manager • Internal publications • Official account of social media platforms 	<ul style="list-style-type: none"> • Reasonable remuneration • Diversified training channels • Protection of labor rights and interests • Open recruitment • Develop whistleblower protection methods
 <p>Government and supervisory authorities</p>	<ul style="list-style-type: none"> • Compliance management • Information disclosure • Promote local economic development • Fulfill corporate social responsibilities 	<ul style="list-style-type: none"> • Policies and guidelines • Meetings of government • Notices of regulation • Site investigation • Government visit 	<ul style="list-style-type: none"> • Comply with local laws and regulations • Regularly submit regulatory reports • Pay taxes and respond to national policies
 <p>The general public and the neighborhood</p>	<ul style="list-style-type: none"> • Focus on charity • Participate in community construction • Promote community development 	<ul style="list-style-type: none"> • Live interviews • Charitable activities • Official website and official account of social media platforms 	<ul style="list-style-type: none"> • Organize activities for the neighborhoods • Improve the imbalanced educational resources • Support rural revitalization • Promote employees to volunteer activities • Open up complaint channels
 <p>Industry associations/chamber organizations/academic institutions/the media</p>	<ul style="list-style-type: none"> • Committed to driving quality development in the industry • Establish partnerships with non-governmental organizations 	<ul style="list-style-type: none"> • Symposiums and presentations • Industry exhibitions • Official website and official account of social media platforms 	<ul style="list-style-type: none"> • Actively participate in lectures and professional associations • Actively participate in standardization organizations • Collaborate with academic institutions
 <p>Environment</p>	<ul style="list-style-type: none"> • Responses to climate change risks • Improve resource efficiency • Emissions and waste management 	<ul style="list-style-type: none"> • Official website and official account of social media platforms • Visit reception • Standards and policies development 	<ul style="list-style-type: none"> • Energy saving and emission reduction • Advocate green manufacturing and operation • Implement green office • Explore low-carbon smart manufacturing

Description of Material Issues

Principles of Defining Material Issues

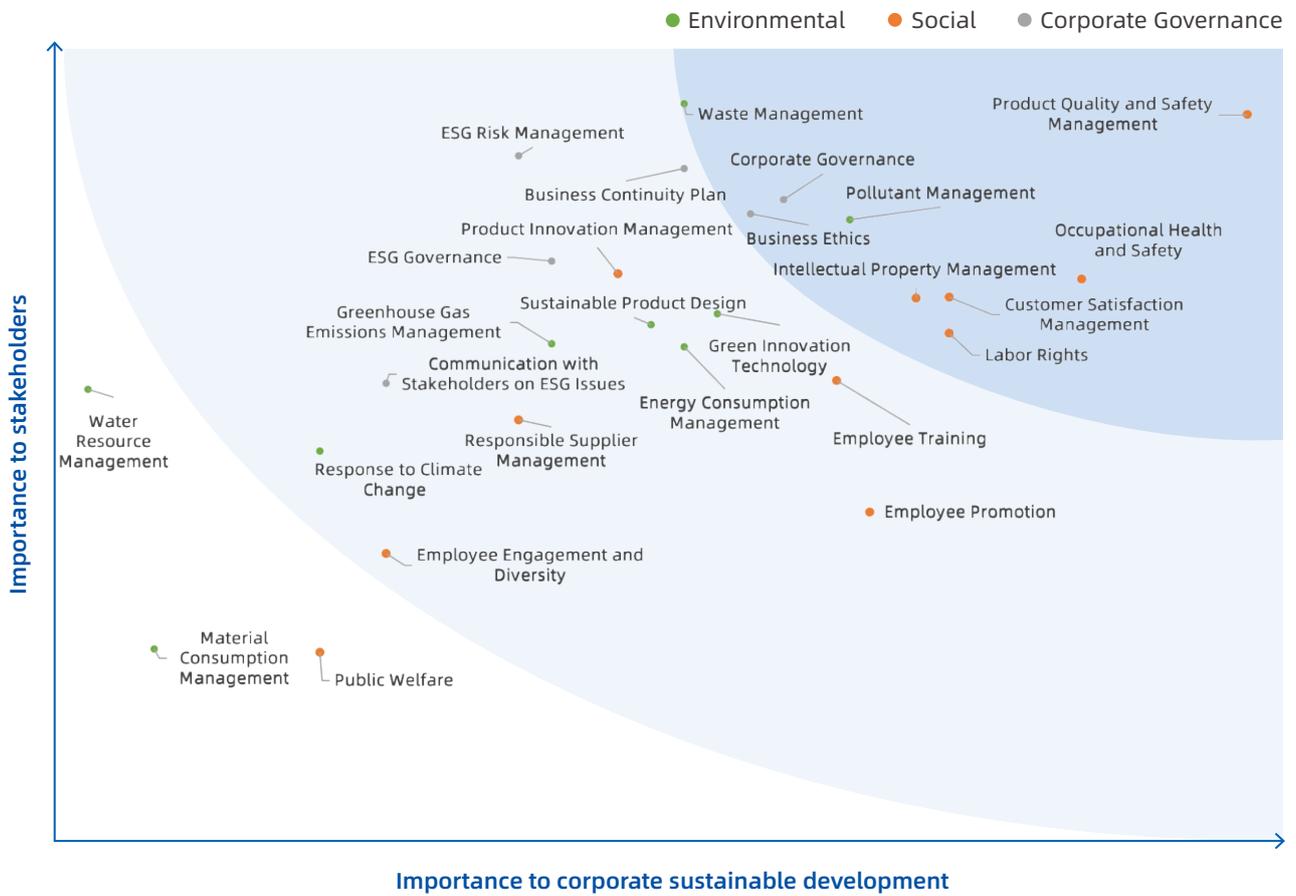
Based on the Group's determination of material issues in 2021, the Group through peer benchmarking, stakeholder questionnaires, interviews, mainstream disclosure standards analysis, and rating concerns, grasp the latest national strategic directions and stakeholder requirements, update the determination of material issues on the environment, social and corporate governance in 2022, and categorize and rank the issues to ensure that the information disclosed in the Report covers all key concerns of the Group and its stakeholders.

Identification Process of Material Issues

With the 269 stakeholder questionnaires received, the Group has identified 26 material ESG issues for the Group, which form the focus of and will be detailed in the Report.



Materiality Matrix



Risks	Environmental Issues	Social Issues	Corporate Governance Issues
High Importance	<ul style="list-style-type: none"> Waste Management Pollutant Management 	<ul style="list-style-type: none"> Labor Rights Occupational Health and Safety Product Quality and Safety Management Intellectual Property Management Customer Satisfaction Management 	<ul style="list-style-type: none"> Corporate Governance Business Ethics
Moderate Importance	<ul style="list-style-type: none"> Energy Consumption Management Greenhouse Gas Emissions Management Responses to Climate Change Green Innovation Technology Sustainable Product Design 	<ul style="list-style-type: none"> Employee Training Employee Promotion Employee Engagement and Diversity Responsible Supplier Management Product Innovation Management 	<ul style="list-style-type: none"> Business Continuity Plan ESG Risk Management ESG Governance Stakeholders on ESG Issues
Low Importance	<ul style="list-style-type: none"> Water Resource Management Material Consumption Management 	<ul style="list-style-type: none"> Public Welfare 	-

On account of the position of the material issues in the matrix, we have adopted the following strategies.



-  We will give high priority to allocate resources for issues important to both internal and external stakeholders.

-  We will maintain communication with external stakeholders on issues they focus on and respond to their concerns by addressing these hot-spot issues.

-  We will continue to invest in issues that are of high concern to our internal stakeholders and devote our attention to improving our business.

-  We will monitor issues of low interest to internal and external stakeholders on an ongoing basis, and keep compliance to avoid penalties and losses.

⚙️ Explanation of the Differences from 2021 Material Issues

Material Issues	Differences	Reasons for Adjustment
Labor Rights	New Issues	Protecting the basic rights and interests of employees is the cornerstone of practicing human rights protection and ensuring the sustainable development of company business, thus we have added this issue into our system.
Intellectual Property Management		Intellectual property is a crucial production factor, and the sound process management of intellectual property rights has become an indispensable competitiveness. Hence, the intellectual property previously listed in the product R&D and innovation is now presented as a separate material issue.
Green Innovation Technology		To strengthen the R&D and innovation of green and low-carbon technologies and reduce the environmental and social impacts during the product life cycle, green Innovation technologies and sustainable product design are now listed as material issues.
Sustainable Product Design		Developing sustainable plans and management processes for risks that may break the chain is a key aspect of ensuring that critical business functions can continue to operate.

ESG Governance	<p>In 2022, we established the Sustainable Development Leadership Group to optimize the management of corporate management, human resources, and social capital. To improve sustainability as a whole, we listed ESG governance as a material issue.</p>
Business Continuity Plan	<p>Developing sustainable plans and management processes for supply chain disruption risks is a key aspect of ensuring that critical business functions can continue to operate.</p>
Customer Satisfaction Management	<p>To better cope with the fierce market competition, it is inevitable to develop guidelines, policies, commitments, or management measures to enhance or maintain customer satisfaction.</p>
Corporate Governance	<p>We aim to keep good governance and guarantee appropriate decision-making processes and controls to safeguard the balance of interests of all stakeholders.</p>
Business Ethics	<p>It has become the solid basis for the Company's compliance operations to adhere to shared values and principles and create a clean and transparent internal and external environment.</p>
ESG Risk Management	<p>It has turned into a main pillar for sustainable development to integrate ESG risks (including climate risks) into the risk management system and implement them consistently.</p>

**Increased
Materiality**

2

Make the Best Use of Resources: Build a Green Ecosystem

Environmental Management	27
Energy and Carbon Emissions Management	30
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Pollution Prevention and Control	44

Material issues in
this chapter

- Waste Management
- Pollutant Management
- Energy Consumption Management
- Greenhouse Gas Emissions Management
- Response to Climate Change
- Water Resource Management
- Material Consumption Management
- Business Continuity Plan

UNSDGs in
this chapter



Environmental Management

Improve Systematic Construction

In order to promote industrial transformation and green development, while speeding up the ecological civilization construction, the Group has strictly complied with such laws and regulations in China such as the *Environmental Protection Law of the People's Republic of China*, the *Environmental Protection Tax Law of the People's Republic of China* and the *Cleaner Production Promotion Law of the People's Republic of China*. It has also developed the *Environmental and Occupational Health and Safety Management Manual* in accordance with the requirements of ISO 14001:2015 and other standards, thereby establishing and continuously improving the environmental management system. With the General Manager as the top management of the environmental management system, the Safety and Environment Department is established and is responsible for setting environmental objectives, operation and control, performance evaluation, internal audit, and continuous improvement for the effective operation of all procedures. Meanwhile, the Group invites third-party professional organizations to conduct regular external audits on the ISO 14001:2015 Environmental Management System as required by the system certification to ensure the continuous adaptability, adequacy and effectiveness of the system. In 2022, the Group's environmental management system completed and passed the external audit, and all documents and relevant management procedures are in compliance with the standard requirements.

Certification of the Group's Environmental Management System

Environmental management system complies with the standards

Scope of Certification

Certificate of Accreditation

GB/T24001-2016
ISO 14001:2015

The design, development, manufacture and related management activities of wind power main gearboxes account for 100% of the operating scope of the Group's wind power gear transmission equipment business.



GB/T24001-2016
ISO 14001:2015

The design, development, manufacture and related management activities of various general-purpose, high-speed, and heavy-duty gearboxes account for 100% of the operating scope of the Group's industrial gear transmission equipment business.



In terms of performance management, the Group has formulated the *EHS Performance Assessment Regulation*, which will analyze the fulfillment of EHS responsibilities of each department on a quarterly basis and impose corresponding incentives or penalties based on the results. The Safety and Environment Department will also conduct annual EHS performance assessment on the management at all levels at the end of each year, and present the results to the General Manager and HR Department, which will be credited to the promotion and salary increment of the management.

The Group has obtained ISO 14001:2015 Environmental Management System Certification and ISO 50001:2018 Energy Management System Certification, and will continue to push forward with the construction of province-level Certification of Green Factory, which commenced in mid-2022. During the Reporting Period, the Group conducted the annual internal audits of its environmental management system across 37 departments. There were no material non-conformities and all such non-conformities have been rectified to ensure the effective operation of the environmental management system.

Key Responsibilities of Safety and Environment Department



Implementation of EHS policies

- Implement a "zero environmental impact and clean production" strategy with a systematic, standardized and digitalized management approach



Planning development

- Adhere to national and local laws and regulations, and develop control procedures regarding EHS risk and opportunity management, environmental objectives, indicators and plans



Execution and operation

- Identify the responsibilities of different departments and establish appropriate communication channels to ensure the timely and accurate flow of information
- Create an EHS culture through employee training and establishment of EHS performance assessment regulation
- Conduct regular testing or drills on emergency procedures and response measures



Inspection and correction

- Conduct quarterly inspection on the implementation of environmental objectives, indicators and plans
- Conduct regular internal audits on the effectiveness of the implementation of environmental management systems and identify the possibilities for improvement



Management review

- Convene at least one management review meeting each year, chaired by the General Manager and with the participation of the Vice-General Manager and heads of relevant departments
- Primarily review the environmental management system and take corrective measures to address existing and potential issues

Build an Environmental Protection Culture

The Group is also actively engaged in the building of its EHS culture. We strengthen the learning of relevant knowledge on environmental laws and regulations, air pollutants, wastewater, hazardous wastes and solid waste management by integrating online and offline training for each department and emergency drills for environmental emergencies to enhance the awareness of all employees and their sense of responsibilities for environmental protection. In addition, the Group has also set up examinations on green enterprise and green management, green procurement, hazardous waste management, environmental emergency plans and internal audit of the system to review the effectiveness of training and enhance the capabilities of environmental management of key positions. We also provide appropriate environmental management and awareness training for external parties, and in particular, we will conduct assessment regarding the *Safety, Environment and Occupational Health Agreement* to ensure that such parties are aware of responsibilities for EHS management.



Case: Promote the green vision in the Group



The Group integrates the green vision into the life cycle of our products through the promotion of environmental protection awareness among the management of front-line employees. To begin with, the environmental protection philosophy is embedded in management while we are illustrating its importance through different perspectives of environmental studies, resource science and economics, and implementing the green management through design, purchase, manufacturing and recycling. We conduct the green promotion and training through the following five perspectives for the construction and development of building an environmentally friendly company.



Case: Environmental emergency drills



Scene of the environmental accident drill of waste oil leakage

The Group has conducted environmental accidents drills for leakage of waste oil according to the *National Environmental Emergency Response Plan, On-site Handling Plan for Leakage of Waste Oil*, and other regulations. We have simulated environmental accidents such as the leakage of gear oil, fire in hazardous waste storage, and the leakage of LPG and propane for thermal treatment and organized an orderly evacuation and rescue. Analysis of the accident investigation and site restoration are then conducted to improve the contingency capabilities of front-line operators for the proper handling of all kinds of environmental accidents.

Energy and Carbon Emissions Management

Promote Systematic Construction

The Group has formulated the *Energy Management Manual*, *Energy Management Regulation* and other regulations in accordance with the ISO 50001:2018 Energy Management System, and established an exclusive working group on building energy management system under the Sustainable Development Leadership Group to promote the building of energy management system and effectively carry out the management of low carbon and energy saving. At the same time, we have set up energy managers for the key energy-consuming departments, requiring them to report the monthly electricity consumption figures of key energy-consuming equipment and the production volume or equivalent working hours, so as to keep track of the trend of total energy consumption and intensity changing of the Group in a timely manner.

In addition to the continuous promotion of the building of energy management system, the Group also focuses on collaboration and cooperation among relevant departments. On one hand, we communicate actively with different departments on performance management through writing and videos; on the other hand, we strengthen the communication with external parties through our website and energy utilization reports.

Meanwhile, the Group also values the participation of all employees in its efforts to raise the awareness of energy saving of them (including contractors) through internally planned and organized activities such as National Energy Saving Week and Energy Saving Knowledge Contest. We provide training courses for our management on the knowledge of energy management system and laws and policies on energy saving, and also organize regular training for operators of energy-consuming equipment on the normative use and energy saving.

Key performances:

During the Reporting Period, the number of courses of online training on energy management was

17

the total duration was

1,585 hours

and the number of attendances was

25,527



Energy Management System Certificate



Online training on energy management provided by the Group

⚙️ Setting of Energy Management Goals

The Group has set up the short-term energy efficiency goals for further reduction of energy consumption and has specified the approaches for monitoring, measuring and analyzing of energy performance, including process specifications for energy auditing and energy saving monitoring. The Sustainable Development Leadership Group and the Equipment Power Department set annual energy-saving plans and targets based on the energy consumption and output in the previous year and run quarterly assessments of energy-using departments. Meanwhile, the Sustainable Development Leadership Group has mandated that at least one internal energy audit be conducted per year to continuously improve the building of existing energy management system.

Short-Term Energy Consumption Target of the Group's Wind Power Gear Transmission Equipment Business³

Goals for 2022

Electricity consumption per unit of output value⁴

≤0.245 MWh/RMB 10,000

Comprehensive energy consumption per unit of product⁵

≤0.960 MWh/ton

----->

Progress in 2022

Electricity consumption per unit of output value was

0.204 MWh/RMB 10,000

Comprehensive energy consumption per unit of product was

0.936 MWh/ton



Annual target achieved

| Facilitate Refined Management

⚙️ Full Life Cycle Management

The Group has progressively shifted to a more refined management model in terms of energy management and has formulated respective strategies and measures throughout the life cycle of products, from energy input, consumption to the recycling stage. We follow the four procedures of "reviewing the status quo, benchmarking, optimization and assessment of efficiency" in terms of energy saving, and conduct inspection and analysis of energy-consuming equipment in each department to identify the sections that have the highest energy consumption. We will also identify the processes and equipment with the greatest energy-saving capacity through benchmarking, and timely optimize or remove the outdated equipment and processes, and continuously assess the feasibility of efficiency after upgrading, so as to improve the efficiency of energy utilization.

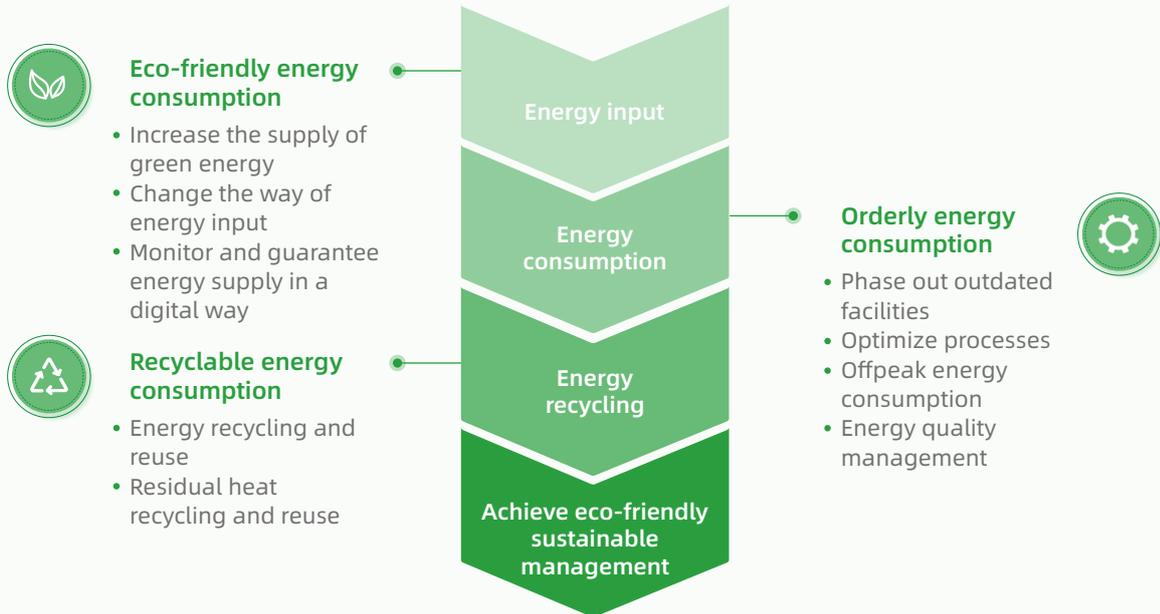
Remark:

3. Given the large number of product series covered by the Group's industrial gear business, there are significant variations in the weight and value of different types of products. The "comprehensive energy consumption per unit of product" and "electricity consumption per unit of output value" are not sufficient to indicate the energy management performance of the Group's industrial gear business, and therefore the relevant indicators are not included.

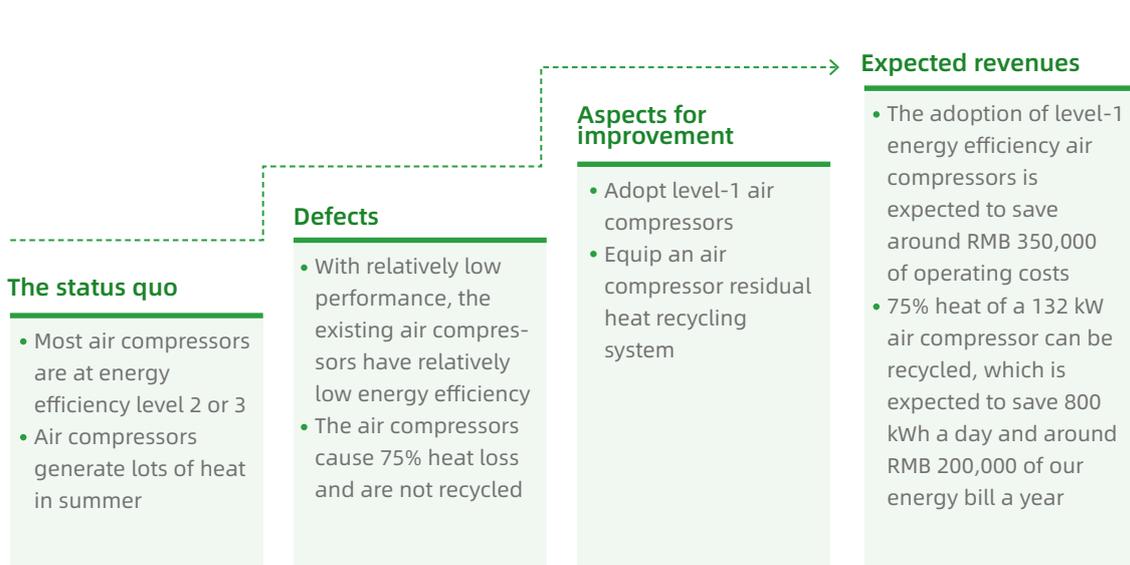
4. Calculation formula: Electricity consumption per unit of output value (MWh / RMB 10,000) = consumption of purchased electricity during the Reporting Period / total value of manufactured products during the Reporting Period

5. Calculation formula: Comprehensive energy consumption per unit of product (MWh / ton) = total energy consumption during the Reporting Period / the weight of products manufactured during the Reporting Period, where the total energy consumption includes direct energy consumption and indirect energy consumption, converted in MWh.

Eco-friendly sustainable management strategy



Case: Formulation of energy saving strategy for air compressors



The formulation process of the energy saving strategy for air compressors

⚙️ Digital Management

The Group leverages technologies such as the IoT and AI algorithms to promote the utilization of multiple intelligent platforms such as the heat treatment scheduling system and power monitoring system to facilitate the efficient monitoring and control of energy management. With the introduction of Smart Cloud Platform for Electricity, the power monitoring system will be upgraded in many aspects:

Optimized reporting management:

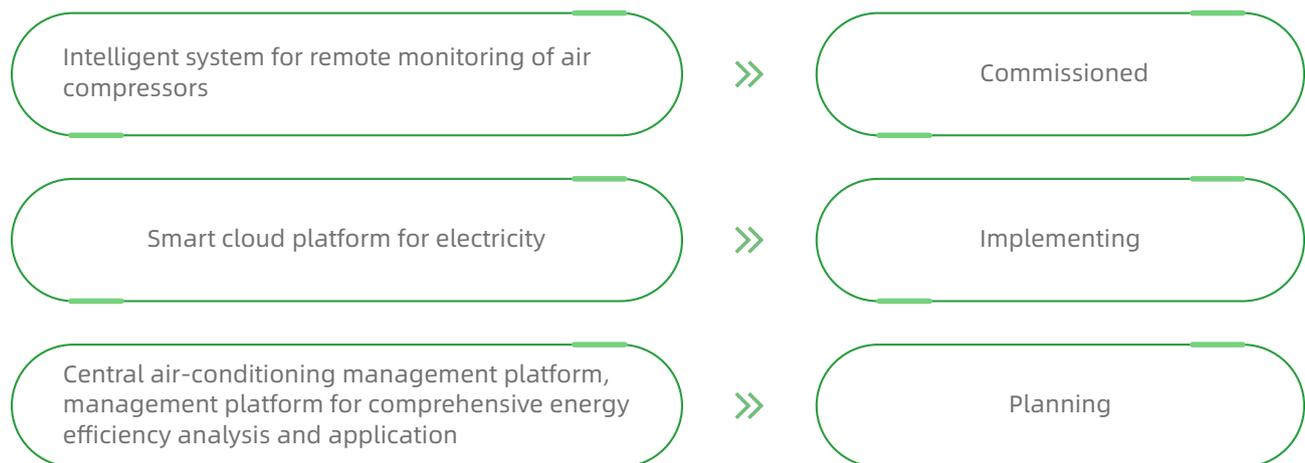
Improving the metering of enterprise's energy, covering statistics of electricity, load, raw value, safe electricity consumption, etc., and upgrading the refined management on the Group's bottom-level data.

Improved maintenance management:

Linking the energy, manufacture, equipment and other sections, and analyzing the abnormalities of energy consumption through data, while maintaining all the functions of the platform. All data can be shared with employee's work phone to realize the real-time monitoring.

Compared with the traditional energy management system, the Smart Cloud for Electricity and other digital platforms highlight the smart use of energy. It provides data analysis support for power saving and cost reduction, and overcomes the geographical limitations to realize the real-time and precise feeding of abnormalities and full life cycle monitoring, facilitating the Group's goals in building green factories by integrating the objectives of "human control" and "technological control".

Implementation of Intelligent Platform in the Group



Energy Saving and Carbon Reduction Measures

The Group enhanced the energy efficiency by strengthening the management of energy consumption process, eliminating outdated equipment, upgrading processes and equipment facilities and other energy saving measures during the Reporting Period in order to actively pursue the energy efficiency targets. In addition, the Group has also formulated relevant policies such as *Management Rules for Electricity Saving* and *Management Rules for Central Air Conditioning* to regulate the electricity consumption in production and office to minimize energy waste.

With respect to carbon emissions management, the Group continues to reduce carbon emissions from energy consumption through energy management. Apart from that, we are continuing to increase the number of solar power systems in our plants through collaborations with the upstream and downstream players of the new energy industry.



Introducing photovoltaic power generation system to optimize energy structure



The Group actively implements the "oil to electricity" conversion and fully adopts electric forklifts

Key performances* :

During the Reporting Period, the Group implemented a total of

40
projects for energy saving improvement

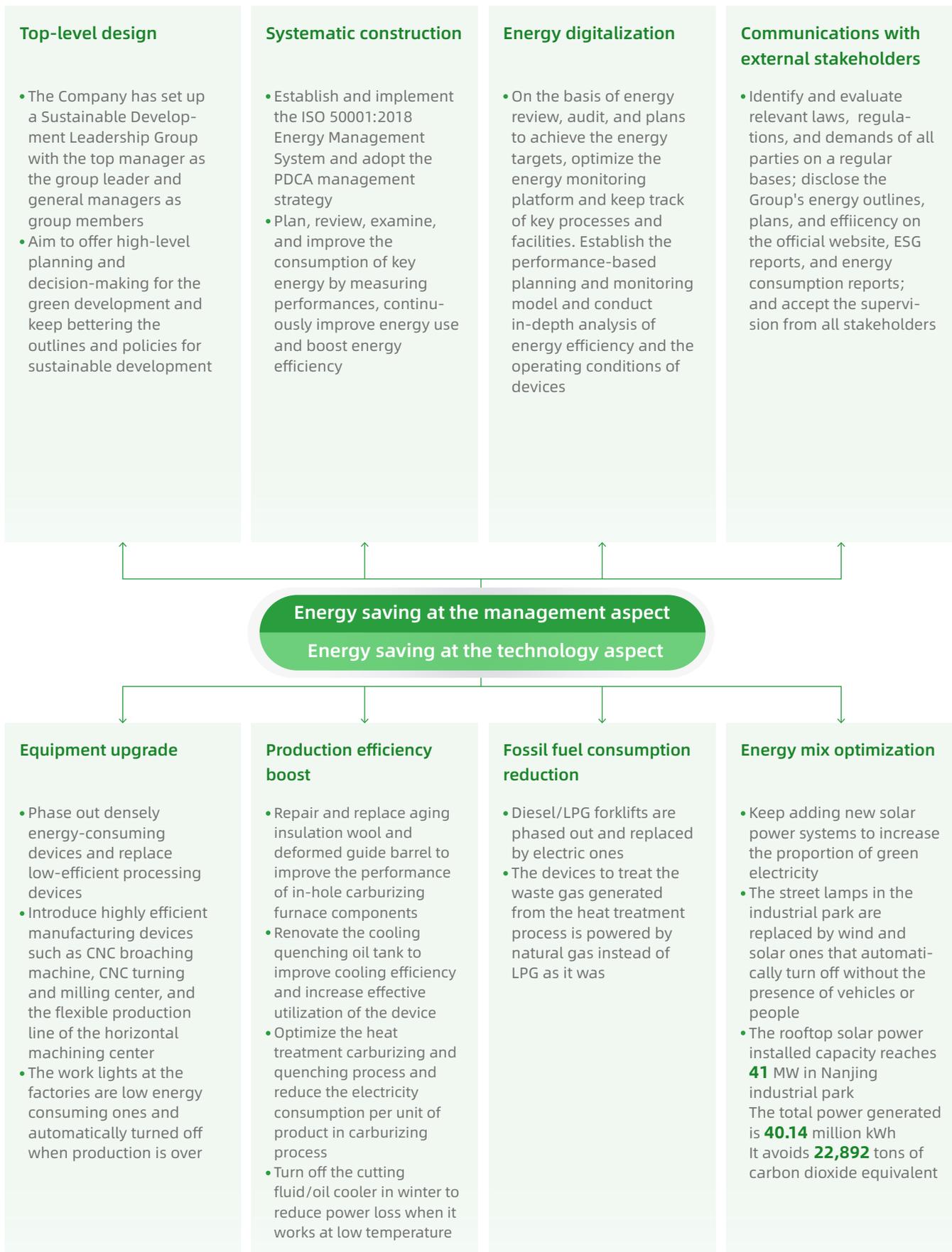
with an estimated annual energy saving of

15.37 million kWh

and a total carbon reduction of

8,766 tons
of carbon dioxide equivalent.

*The data does not include the Group's rooftop photovoltaic projects and the corresponding energy savings and carbon reductions in the Reporting Period.



Energy saving and carbon reduction measures of the Group

In 2022, the Group's total emissions of GHG⁶ reduced year-on-year

19.61% ↓

GHG emissions (Scope 1)⁷ reduced year-on-year

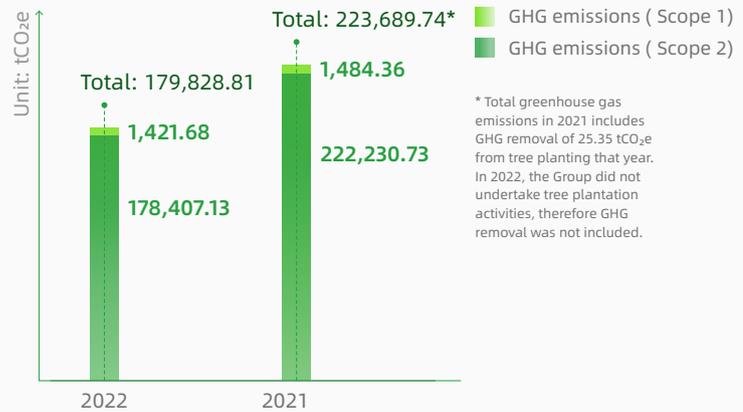
4.22% ↓

GHG emissions (Scope 2)⁸ reduced year-on-year

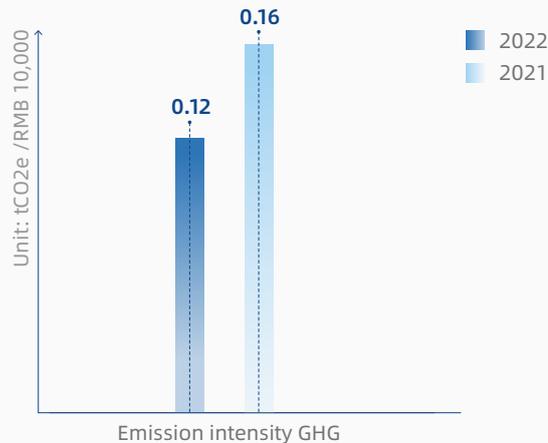
19.72% ↓

Data on GHG Emissions⁹

• Emission of GHG from 2021 to 2022



• Emission intensity of GHG from 2021 to 2022



Remark:

6. The GHG inventory covers Carbon dioxide (CO₂) generated from purchased electricity, diesel, gasoline, LPG and natural gas. The GHG calculations are presented in CO₂e. In 2022, the Group did not undertake tree plantation activities and therefore GHG removal was not included.

7. GHG Scope 1 (direct emissions) includes GHG emissions from operations directly controlled or managed by the Group, primarily originated from the consumption of energy. The calculation of greenhouse gas GHG emissions refers to the *Guidelines for Accounting Methods and Reporting of Greenhouse Gas Emissions of Machinery and Equipment Manufacturing Enterprises (Trial)* published by National Development and Reform Commission (NDRC) .

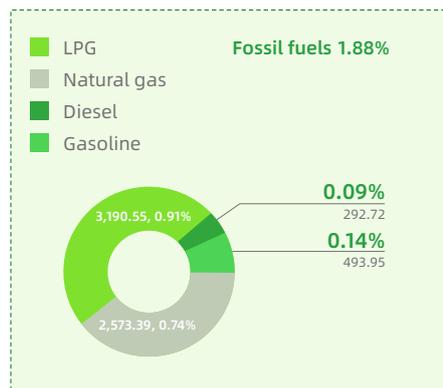
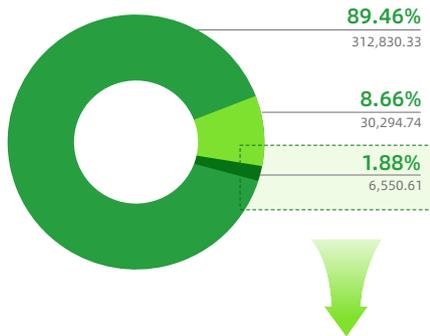
8. GHG Scope 2 (indirect emissions) includes indirect emissions from purchased electricity outside of the Group. The coefficient for 2022 is the average grid emission factor of 0.5703 tCO₂/MWh published by NDRC, while the coefficient for 2021 refers to the 2012 China Regional Power Grid Average Carbon Dioxide Emission Factor.

9. The data on energy consumption and GHG emissions covers the Group's wind power gear transmission equipment business and industrial gear transmission equipment business. The parameter used in the calculation of intensity of energy consumption and emission intensity of GHG in the Report is the sales revenue of the Group's wind power gear transmission equipment business segment and industrial gear transmission equipment business segment in the corresponding year.

• Energy consumption¹⁰ in 2022

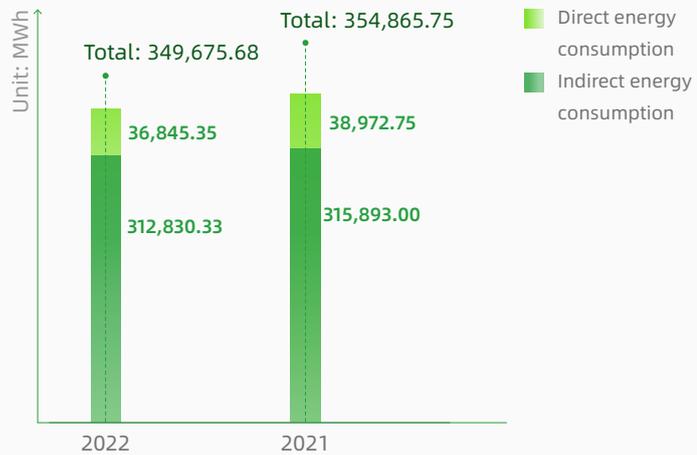
(Unit: MWh)

- Purchased electricity
- Renewable energy (solar photovoltaic energy)
- Fossil fuels

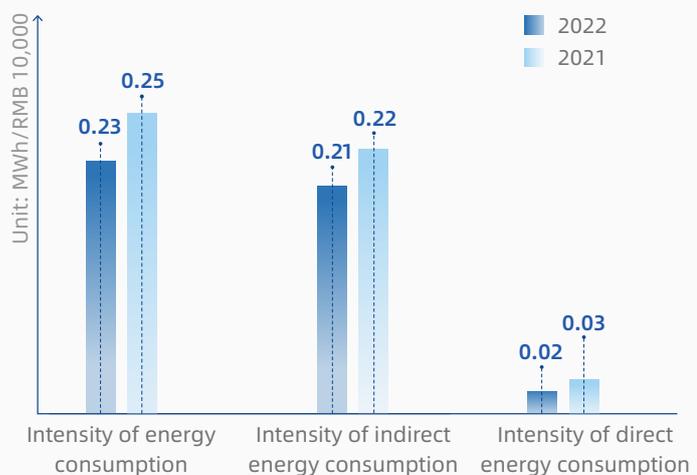


Data on Energy Consumption⁹

• Energy consumption from 2021 to 2022



• Intensity of energy consumption from 2021 to 2022



Remark:

9. The data on energy consumption and GHG emissions covers the Group's wind power gear transmission equipment business and industrial gear transmission equipment business. The parameter used in the calculation of intensity of energy consumption and emission intensity of GHG in the Report is the sales revenue of the Group's wind power gear transmission equipment business segment and industrial gear transmission equipment business segment in the corresponding year.

10. The major energy consumption of the Group includes direct energy consumption and indirect energy consumption. Direct energy consumption consists of diesel, gasoline, natural gas, LPG and renewable electricity generated from self-owned solar photovoltaic power generation units, in which diesel and gasoline are mainly consumed by self-owned vehicles, and natural gas and LPG are mainly consumed in manufacturing and operating processes. Indirect energy consumption consists of electricity consumed during the manufacture and operation, office activities, etc. The calculation of energy consumption refers to the *Guidelines for Accounting Methods and Reporting of Greenhouse Gas Emissions of Machinery and Equipment Manufacturing Enterprises (Trial)* published by National Development and Reform Commission.

Response to Climate Change

The Group contributes to the national strategy of "3060 Double Carbon" and identifies the risks and opportunities of climate change according to the Task Force on Climate-Related Financial Disclosures (TCFD) by including them in the risk control and assessment of the Company.

Responding to Task Force on Climate-Related Financial Disclosures (TCFD)

Governance

- The Board is responsible for overseeing and decision-making on climate change related issues, including responding to the matrix analysis of material issues covering "climate change responses" and related disclosures in the ESG report
- The Sustainable Development Leadership Group is responsible for the identification of ESG-related risks and opportunities, such as climate change and GHG emissions issues; and its working group on energy management system development is responsible for the refinement of the Company's energy management system to advance the management on GHG emissions

Strategy

- Identify the physical and transitional climate risks and opportunities according to the Company's business features and geographical locations and determine their potential financial impact. Please refer to the "Identification and Response of Risks and Opportunities related to Climate Change" section of this report for details

Risk management

- Integrate climate-related risks into the risk control and assessment of the Company, and set forth the responses to natural disasters in the *Emergency Response and Ready Control Procedure*

Metrics and targets

- Set the annual targets and indicators for energy consumption, continuously deploy the renewable solar photovoltaic power generation system, optimize the energy portfolio, and disclose the indicators related to climate change, including all types of energy consumption and GHG emissions, for the assessment of the Company's management performance in response to climate change. Please refer to the "Energy Saving and Carbon Reduction Measures" section for details

Identification and Response of Risks and Opportunities Related to Climate Change

The Group has incorporated climate risks into its risk management system. The Sustainable Development Leadership Group, along with the Risk Management Department, has been detecting and assessing the influence of climate-related physical and transition risks on the Group's businesses. The Group thus renews its risk list and response measures. The detected major climate risks and opportunities as well as main response measures are as follows:

Types of risks/ opportunities	Detailed description	Potential financial impact	Main response measures
Physical risks - acute physical risks	<ul style="list-style-type: none"> Rainstorms, typhoons, floods and other catastrophic conditions may cause damage to the Group's operating facilities, production equipment and storage areas, resulting in additional operating and maintenance expenses, work stoppages, or output reductions; Extreme temperatures (extreme high and low temperatures) may pose a threat to the occupational health and safety of employees, which in turn may lead to increased investment in employee safety or impair productivity 	<p>Operating costs ↑ Existing assets ↓</p>	<ul style="list-style-type: none"> Create the <i>Potential Incidents, Emergencies, and Responses List</i> to specify the preparations for and responses to natural disasters To tackle the extreme weather, create an emergency plan for typhoons and floods and take targeted measures according to meteorological disaster warning signals
Physical risks - chronic physical risks	<ul style="list-style-type: none"> Continuous high temperature weather may result in more demanding high temperature protection measures for front-line employees as well as higher requirements for performance and maintenance of cooling equipment 	<p>Operating costs ↑</p>	<ul style="list-style-type: none"> Supply employees working at high temperatures with first-aid kits including heatstroke medicines and equip the workplace with air coolers and air-conditioned lounges for these employees Commission third-party bodies to regularly detect hazards related to high temperatures and take mitigating measures according to test results
Transition risks - policy and regulatory risks	<ul style="list-style-type: none"> As the transformation of the energy structure towards low carbon further advances, governments across the world may introduce and implement more stringent policies on carbon emissions reduction (including the expansion of the carbon trading market, and the introduction of carbon taxes), and the Group's production and operating costs of carbon emissions may increase 	<p>Operating costs ↑</p>	<ul style="list-style-type: none"> Screen laws and regulations through government organs and on the internet and renew our rules accordingly to ensure operating compliance Keep boosting energy efficiency and doubling down on the investment in renewable energy to cut carbon footprint and resulting carbon emission costs

<p>Transition risks - technological risks</p>	<ul style="list-style-type: none"> Tighter requirements for the carbon footprint of upstream and downstream products have led to the earlier replacement of existing high-energy-consuming equipment, leading to increased investment in the R&D of low-carbon transformation technologies related to high-energy-consuming processes in the production and processing of products 	<p>Operating costs ↑ Existing assets ↓</p>	<ul style="list-style-type: none"> Increase the use of energy-saving or renewable energy-powered equipment, such as replacing fuel forklifts with electric ones Advance the construction of green factories, conduct precise management in line with the full life cycle philosophy, detect and analyze the energy consumption of all equipment in all departments, and phase out outdated equipment and processes
<p>Transition risks - market risks</p>	<ul style="list-style-type: none"> Accelerated decarbonization in the industry. As customers place increasingly stringent requirements on the management of Scope 3 emissions in the supply chain, the decarbonization level of products and services will likely become an important criterion for customers in selecting suppliers. If the carbon emissions of our products fail to meet standards, there might be a lower product demand 	<p>Operating income ↓</p>	<ul style="list-style-type: none"> Verify carbon emissions within the Group, make the data of greenhouse gas emissions more precise, and tap into the potential of energy-saving production Hold supplier conferences, engage in technology exchange meetings, and reduce energy consumption and the environmental impact in the full life cycle by working with our suppliers
<p>Transition risks - reputation risks</p>	<ul style="list-style-type: none"> Increasingly stringent requirements from regulatory authorities, investors, customers and other stakeholders for the transparency of information on climate risks and carbon emissions may lead to increased investment in performance management so that the Company will not be subject to reputation damage, stock price declines or financing disruptions due to improper climate performance and disclosure 	<p>Operating costs ↑ Financing costs ↑</p>	<ul style="list-style-type: none"> Regularly communicate with stakeholders especially government organs, investors, and customers, to fully understand and manage their expectations Better our measurement methods for energy with digitalized management and gradually conduct transparent and reliable carbon data tracing to disclose more accurate, consistent, and timely information
<p>Opportunities</p>	<ul style="list-style-type: none"> With more investment institutions signing up to the Principles for Responsible Investment (PRI), or declaring their support for the <i>Paris Agreement</i>, there will be more investment flowing towards green and low-carbon industries, which will in turn promote the development of the wind power industry featuring the support of low-carbon energy transformation 	<p>Operating income ↑ Financing costs ↓</p>	<ul style="list-style-type: none"> Enhance the development and application of wind power gear transmission equipment and relevant low-carbon technologies, propel the application of eco-friendly products, and expand their use scenarios Actively expand new markets, especially in regions where the demand for green, low-carbon energy such as wind power is high, to boost our revenues

Efficient Use and Reuse of Resources

To use resources effectively and raise environmental benefits, the Group has formulated the *Energy and Resources Control Procedure* to manage the consumption of water, raw materials, and office supplies. Our purpose is to use and recycle resources properly.

Water Resource Management

The Group has implemented many measures to save water. For example, we detect and try to prevent water leakage by detecting the plumbing system of all departments. In addition, we make a detailed ledger on the amount of water consumption and collect monthly data. By comparing the month-on-month water consumption, we analyze the reasons behind unusual cases and make targeted improvements.

Water-saving Measures Adopted by the Group

Measures	Detailed Description	Achievements
Build a scientific water consumption measurement system	The Group promotes water balance test. By installing water meters and readers in the primary and secondary plumbing system and key water consumption devices, we analyze how to balance the water intake and output and how reasonable it is. Meanwhile, we locate water leakage points by analyzing the flowing statistics and listening tests	Control unusual water consumption, make detailed data management of water resources, and make a reasonable water-saving plan
Promote the intelligent centralized fluid supply system	It is imperative to dilate cutting fluids with water before using them. The Group has built an intelligent centralized fluid supply system to extend the life of cutting fluids and reduce the frequency of cutting fluid changes. The purpose is to reduce the waste of working time, materials, and water caused by cutting fluid changes	During the Reporting Period, the consumption of cutting fluids was reduced by around 60,000 liters and the consumption of diluted water was down by nearly 1,500 tons.
Strengthen the Management of Water-Using Equipment	Strengthen the control of water-cooled units and pipeline water valves, and repair the failed water valves in time	Decrease the consumption of cooling water and tap water
Introduce new cooling towers	A new type of closed cross-flow cooling tower is adopted for air-conditioning equipment to reduce water drift and dispersion	Decrease water loss of cooling towers

Key performances:

The Group's water source is local municipal water, and there is no risk of water shortage

During the Reporting Period, the Group consumed a total of

657,324.00

cubic meters of water resources

representing a decrease of

5.98%

from last year

Our intensity of water consumption was

0.43

cubic meters per RMB 10,000

representing a decrease of

14.19%

from last year



The Short-Term Target of Water Consumption of the Group's Wind Power Gear Transmission Equipment Business

Goals for 2022

Water consumption per unit of output value¹¹

≤0.58 tons/RMB 10,000



Progress in 2022

Water consumption per unit of output value

≤0.4 tons/RMB 10,000

Annual target achieved

The Short-Term Target of Water Consumption of the Group's Industrial Gear Transmission Equipment Business

Goals for 2022

The water consumption went down by

10% from the 2021 level



Progress in 2022

The water consumption went down by

21% from the 2021 level

Annual target achieved

Data on Water Resource Consumption

Indicators ¹²	Unit	2022	2021
The water consumption	m ³	657,324.00	699,110.00
Intensity of water consumption	m ³ /RMB 10,000	0.43	0.50

Efficient Use and Reuse of Resources

The Group adopts measures to boost resource efficiency and recycling to improve resource efficiency in raw material consumption, production, packaging and transportation, office supplies, among other processes.

The Group's Measures for Efficient Use and Reuse of Resources

Measures	Detailed Description	Achievements
Efficient use of raw materials	<ul style="list-style-type: none"> Formulate scientific production processes, encourage relevant departments to adopt new technologies and skills, set the quota for raw material consumption, and minimize the use of toxic chemicals Value the utilization rate of materials and the qualification rate of products in each step during production 	<ul style="list-style-type: none"> Decline the environmental pollution, material loss, and waste loss

Remark:

11. Calculation formula: water consumption per unit of output value (tons / RMB 10,000) = water consumption in the Reporting Period / total value of production in the Reporting Period

12. The data on water resource consumption covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses. The parameter used in the calculation of intensity of water consumption in the Report is the sales revenue of the Group's wind power gear transmission equipment business segment and industrial gear transmission equipment business segment in the corresponding year.

Upgrade and recycling of cutting oil (fluids)	<ul style="list-style-type: none"> When it comes to cutting oil, the Group works closely with suppliers to better the formulas of cutting oil and make it more environmentally friendly. All cutting oil (fluids) that we use are environmentally friendly as they are low in sulfur, phosphorus, chlorine, and formaldehyde Extrude and separate, filter and test, and then recycle the cutting oil in the grinding area of the plant 	<ul style="list-style-type: none"> Curb pollutants from the source, simplify the treatment process and improve the environment in the workshops Improve the recycling rate of cutting oil and further reduce resource consumption
Introduction of micro-lubrication technology	<ul style="list-style-type: none"> By replacing traditional cutting oil lubrication with micro-lubrication in machining operations, we can inject precisely measured amounts of micro-lubricants into the machining area, reducing the cutting fluid consumption while ensuring effective cooling and lubrication 	<ul style="list-style-type: none"> Effectively reduce the cutting oil or fluids consumption
Recycling of packaging	<ul style="list-style-type: none"> Build a packing recycling mechanism with our customers and packaging suppliers. Packaging suppliers manufacture recyclable packaging shelves according to the Group's recyclable packaging scheme. These packaging shelves, after being transported to customers' factories along with finished products, will be temporarily stored there. We will recycle them regularly and return them to our suppliers for maintenance and repair 	<ul style="list-style-type: none"> During the Reporting Period, the Group saved around 200 cubic meters of wood and over 5,500 tons of steel for packaging
Green office	<ul style="list-style-type: none"> Initiate electronic work platforms for human resource management, including the NGC Academy and electronic signing system, so that all human resource data and process management could be entirely paperless, and ultimately paperless office will be materialized Encourage our employees to use duplex printing and copying, recycle one-side printed waste paper, and examine the use of office supplies. By setting regulatory mechanisms in place, we are practicing green office The Group's annual report is printed on environmentally friendly paper made from basically chlorine-free bleached and dyed pulp, using chemical-free rinsing plate and soy ink 	<ul style="list-style-type: none"> Promote a paperless office and reduced paper use

Data on Packaging Material Consumption

Indicators ¹³	Unit	2022	2021
Total packaging material consumption	Ton	9,424.10	9,304.87
Intensity of packing material consumption	Kg/RMB 10,000	6.15	6.70

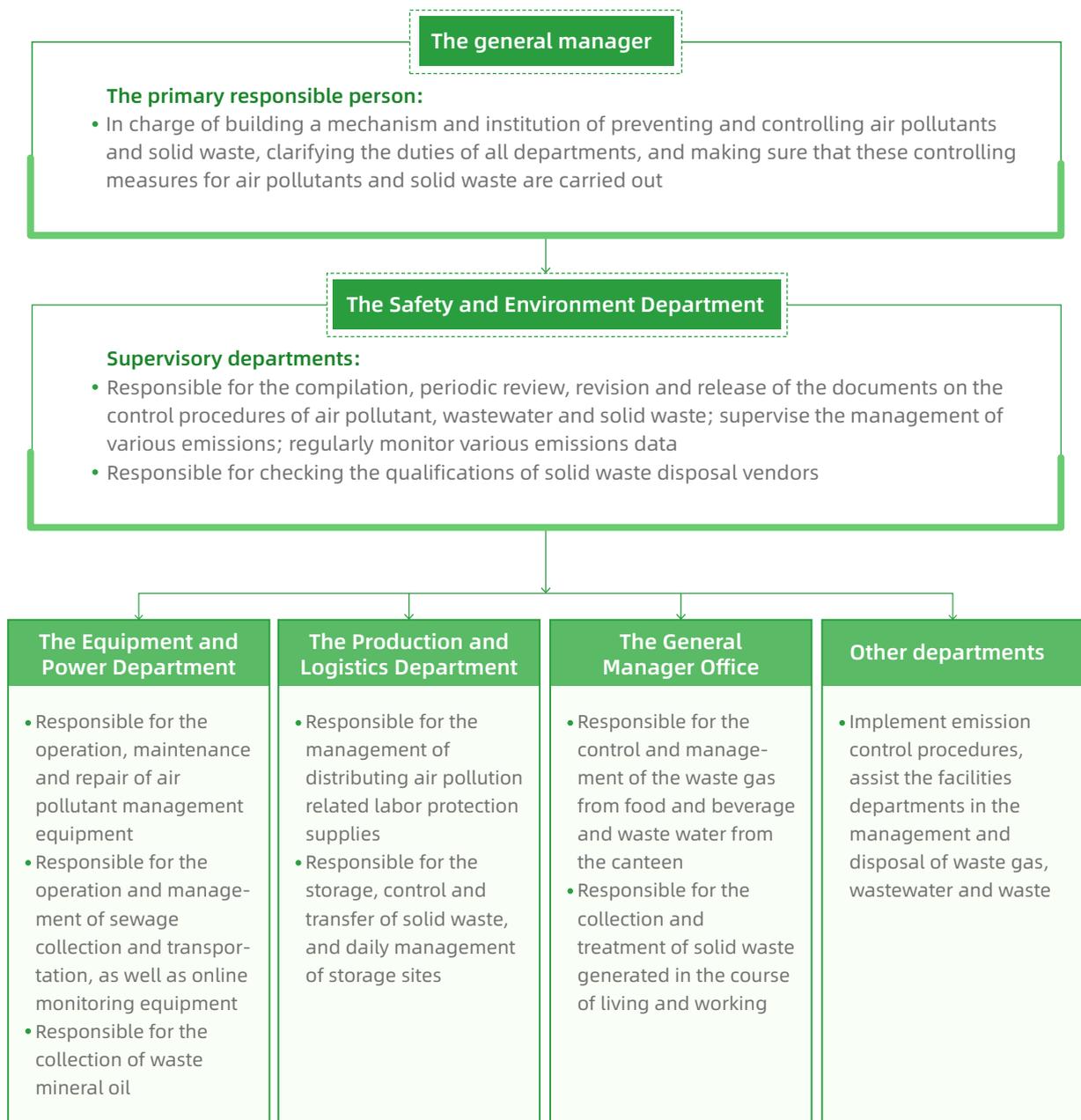
Remark:

13. The data on packaging material consumption covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses. Packaging materials include wood, steel, and plastics used in the sales and transportation of products by the Group. The parameter used in the calculation of intensity of package material consumption in the Report is the sales revenue of the Group's wind power gear transmission equipment business segment and industrial gear transmission equipment business segment in the corresponding year.

Pollution Prevention and Control

Pollutant Control

The Group complies with the laws and regulations related to air pollutants, water pollution, and solid waste, and has formulated rules at all levels based on the Group's realities. By clarifying responsibilities for every division and department, we have been improving pollutant control.



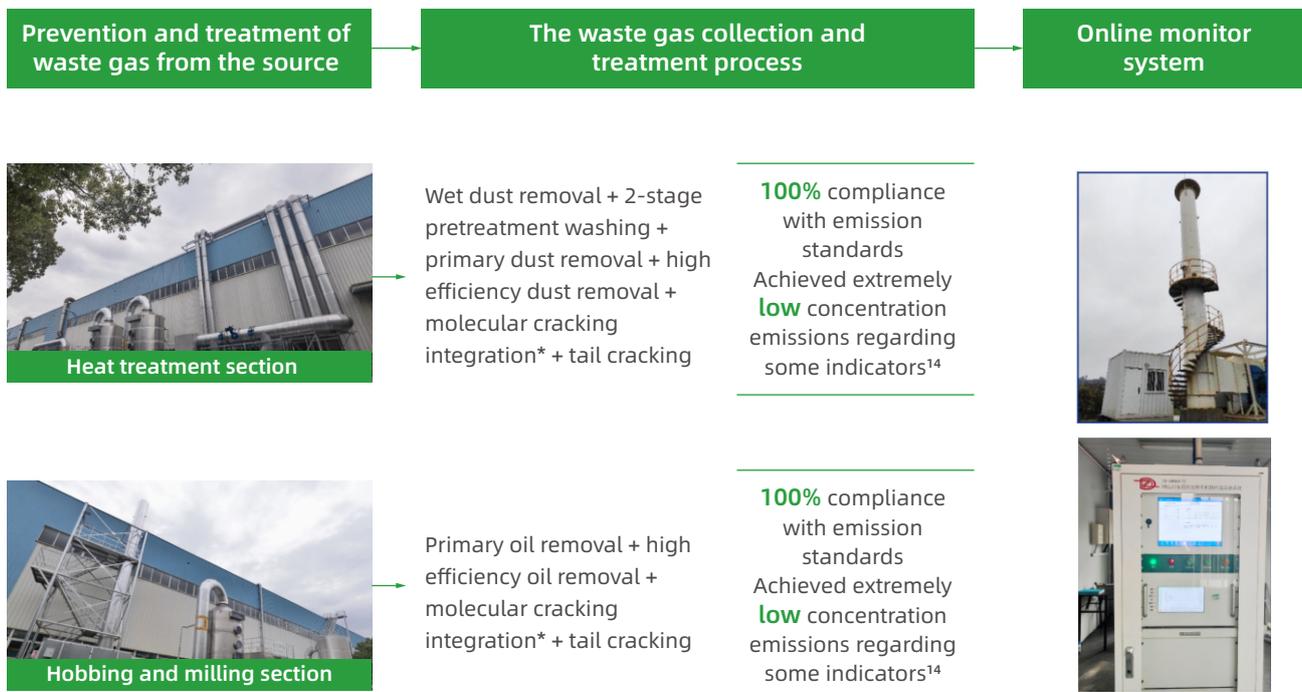
Framework of pollutant control

Also, the Group has commissioned qualified third-party monitoring agencies to check the air pollutants emitted by the Group according to emission criteria. Also, these agencies are responsible for the annual monitoring of sewage emitted by the Group. If any of the pollutants exceed the standards, we will immediately shut down the emitting devices, find out the reasons, and correct our approaches in time. During the Reporting Period, the Group did not break emission requirements and not being punished.

In addition, as required by the environmental authorities, the Group's Safety and Environment Department reports exhaust gas emissions on the National Pollutant Discharge Permits Administration Information Platform regularly for government and public supervision. To effectively manage emissions, the Group has set up the *EHS Performance Assessment Regulation*. The Safety and Environment Department checks the exhaust gas and sewage emitted by different departments and identifies awards or punishments accordingly.

Air Pollutants

Following the *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*, the Group has formulated the *Air Pollution Prevention and Control Procedure*, to strengthen the control of air pollutants including exhaust gases and dust. In this way, we ensure the emission of air pollutants is within the limit. During the Reporting Period, the Group's subsidiary, Nanjing High Speed & Accurate Gear (Group) Co., Ltd. (Qiande Road factory area) gained the A-level qualification for its high standard of air pollution control and the exemption right at the performance rating of key industries regarding air pollution control in autumn and winter in Nanjing.



Remark:

14. It is in line with the local standard of Jiangsu Province: *Integrated Emission Standard of Air Pollutants* (DB32 4041-2021).



Coating section

Zeolite rotor + catalytic combustion + activated charcoal adsorption + desorption condensation

Treatment efficiency increased to **95%**



Cleaning section

Scrubber tower + dry filtration + desorption + condensation recovery

Treatment efficiency increased to **90%**



Polishing section

Venturi wet dust removal + mist removal

Treatment efficiency increased to **90%**

Real-time observation:

Discharge data are directly connected to supervisory departments, and online monitor emission concentration and rate of exhaust pollutants to detect unusual data in time, reducing the risk of exceeding the emission standard

Emergency mechanism:

Two new emergency response mechanisms were added during the Reporting Period. If any data are unusual, the alarm device will be activated immediately to alert the personnel on site. This mechanism has improved the response efficiency

The Group's measures to control air pollutants

*We have adopted an advanced high-pressure system, microwave and oxidation catalyst technology for the molecular cracking equipment, which can effectively degrade complex macromolecules into small molecules and remove all smelly pollutants, and add tail scrubbing device to eliminate odor.

During the Reporting Period, the Group attached importance to equipment renewal and process optimization, and carried out 12 environment projects for exhaust gas collection and treatment, installing 12 sets of waste gas collection and treatment facilities as well as 3 sets of dust collection and treatment facilities. By using various advance processes, we have greatly improved the efficiency of exhaust gas treatment. In addition, the Ministry of Ecology and Environment issued pollutant discharge permits for every air pollutant, and the Group's actual emissions, according to every indicator, were far below the requirement. All air pollutant emissions were within limits.

Data on Air Pollutants			
Indicators ¹⁶	Unit	2022	2021
Emission of nitrogen oxides ¹⁷	Kg	546.59	1,269.21
Emission of sulfur oxides ¹⁷	Kg	68.19	12.24
Emission of particulate matter ¹⁷	Kg	20.34	23.57

The Short-Term Target of Air Pollutants of the Group's Industrial Gear Transmission Equipment Business¹⁵

Goals for 2022

The emission of air pollutants went down by

10% ↓↓

from the 2021 level



Annual target achieved

Progress in 2022

The emission of air pollutants went down by

25.36% ↓↓

from the 2021 level

Wastewater

Following laws and regulations such as the *GB8978-1996 Integrated Wastewater Discharge Standard*, the Group has formulated the *Waste Water Control Procedure* to strengthen the control and management of discharging sewage. Also, we carry out multiple measures to control and prevent sewage and bring the discharge under the requirement.

Key performances:

During the Reporting Period, the Group discharged

211,319.00

cubic meters of wastewater

down by

8.14%

from the previous year



Remark:

15. After the upgrade and overhaul of facilities used for the Group's wind power gear transmission equipment business, the pollutant emissions are very low. However, as the data are rather small, they are under great influence of the fluctuating tolerance of testing factors (change of testing personnel or differences in detecting methods). Given the fluctuations, the departments usually do not set a fixed indicator for assessment.

16. The data on air pollutants covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses. Under the local standard of Jiangsu Province: *Integrated Emission Standard of Air Pollutants* (DB32 4041-2021), the emissions of air pollutants are within limits.

17. Emissions of nitrogen oxides, sulfur oxides, and particulate matter are converted with reference to the *How to Prepare an Environmental, Social, and Governance Report* of the Hong Kong Stock Exchange. In 2022, nitrogen oxides emissions were lower than the previous year due to fewer emission outlets and testing errors as a result of the turnover in testing personnel; sulfur oxides emissions were higher than the previous year due to an increase in the size of the emission statistics and more emission outlets.

Sewage Prevention and Control Measures Adopted by the Group		
Measures	Detailed Description	Achievements
Surface the ground with anti-seepage materials	<ul style="list-style-type: none"> During the Reporting Period, the Group surfaced the ground with anti-seepage materials in sewage stations, hazardous waste storage sites, and hazardous chemical storage sites Chemicals that drip on the ground during production will be treated and thus will not be directly washed into sewers 	<ul style="list-style-type: none"> Avoid leakage of sewage from key areas and seepage into the soil or into the sewers
Renovate underground sewage pipes	<ul style="list-style-type: none"> In order to prevent direct seepage of sewage into the soil due to the leakage and difficult maintenance of underground sewage pipes, we switched underground pipes to above-ground open ones and realized remote pumping through electric control 	<ul style="list-style-type: none"> Solve the problem of transporting sewage at the terminal equipment such as heat treatment equipment and avoid soil contamination caused by leaking underground pipes
Replace cutting fluids	<ul style="list-style-type: none"> We changed the way of independent addition by operators to centralized fluids supply, so as to prevent leakage and carry out regular inspection 	<ul style="list-style-type: none"> Reduce the consumption of cutting fluid and the frequency of replacement due to deterioration, thus reducing wastewater discharge
Monitor data online	<ul style="list-style-type: none"> During the Reporting Period, two sets of online monitoring systems were added in the plant to monitor and control the wastewater discharge data in real time. Both systems were networked to the national monitoring data platform 	<ul style="list-style-type: none"> Timely detect unusual data to reduce the risk of exceeding standards

Data on Wastewater			
Indicators ¹⁸	Unit	2022	2021
Total wastewater discharge	m ³	211,319.00	230,054.00

Remark:

18. The data on wastewater discharge covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses. In 2022, the Group introduced an online monitoring system to reduce conversion errors. Therefore, the total amount of wastewater discharge went down from the 2021 level.

Waste

In compliance with the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*, the Group has formulated the *Solid Waste Control Procedure and Waste Management Regulation* to tighten the control over waste and bring the discharge under the requirement.



The full-cycle management process for solid waste

The Group monitors the solid waste in a full lifecycle and has formed a traceable line from its production, collection, storage, and transfer. In addition, we combine the full-cycle record with the responsible person system. Upholding the principle that “whoever produces, registers, and transfers the waste should be held accountable”, the Group has made solid waste traceable and controllable.

Solid Waste Management Measures Adopted by the Group

- 

During the Reporting Period, we replaced the highly volatile primer and topcoat with a high solid paint integrated with the bottom and the surface, so that the use of paint was more environmentally friendly and paint consumption decreased by about **35%**
- 

A large number of oily pollutants produced in the wastewater treatment process can form a sludge cake with a water content of about **75%** after being pressed and filtered. Through introducing sludge drying equipment, the water content of sludge cake can be reduced to about **25%**, and our factories can reduce nearly **70** tons of hazardous waste each year

The Short-Term Target of Waste Emissions of the Group's Wind Power Gear Transmission Equipment Business

Goals for 2022

Hazardous waste emissions per unit of output value

≤1.4 Kg/RMB 10,000



Progress in 2022

Hazardous waste emissions per unit of output value

0.63 Kg/RMB 10,000

Annual target achieved

The Short-Term Target of Waste Emissions of the Group's Industrial Gear Transmission Equipment Business

Goals for 2022

Hazardous waste emissions

≤576 tons



Progress in 2022

Hazardous waste emissions were

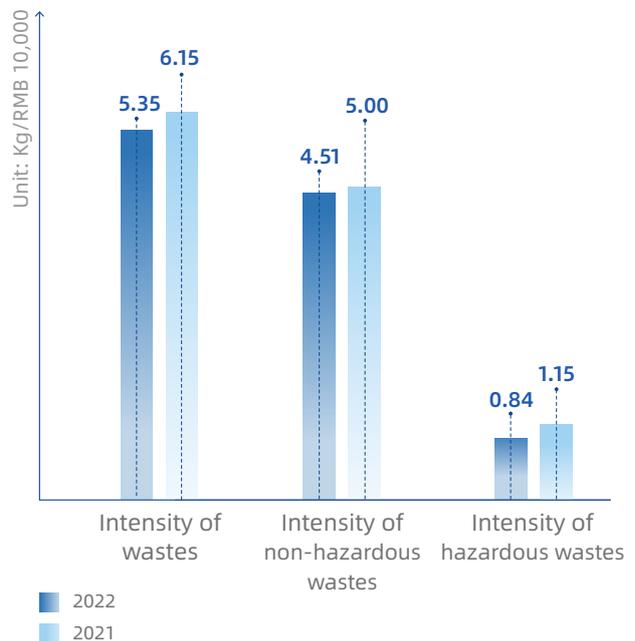
518 tons

Annual target achieved

• Wastes¹⁹ from 2021 to 2022



• Intensity of wastes²² from 2021 to 2022



Remark:

19. The data on discharged waste covers the wind power gear transmission equipment and the industrial gear transmission equipment businesses.

20. Non-hazardous waste includes grinding metal chips and wood generated during the production operations of the Group.

21. The classification of hazardous waste is based on the *Directory of National Hazardous Wastes (Version 2021)*. In 2022, the Group did not generate waste quenching fluid. Because the emissions of some hazardous waste fluctuate at a large range due to the demand of production processes and the conditions of facilities, and the Group was upgrading production processes in 2022, total hazardous wastes were down from the previous year.

22. The parameter used in the calculation of intensity of wastes in the Report is the sales revenue of the Group's wind power gear transmission equipment business segment and industrial gear transmission equipment business segment in the corresponding year.

3

Adhere to Ingenuity: Lead Green Manufacturing with Supreme Quality

Lead Technological Innovation	52
Pursue Supreme Quality	62
Respond to Customer Demands	71

Material issues in
this chapter

- Green Innovation Technology
- Sustainable Product Design
- Product Quality and Safety Management
- Intellectual Property Management
- Customer Satisfaction Management
- Product Innovation Management

UNSDGs in
this chapter



Lead Technological Innovation

Create an Innovative Environment

Scientific Research Platform Construction

The Group has integrated innovative thinking into its corporate development, focusing on transmission technology innovation that are used in wind power and industrial gearbox, and is committed to becoming a technology leader in the industry through “special and system integration” technology innovation. We have several national and provincial recognized enterprise technology centers which effectively collect and absorb innovation resources and talents, and drive the industry innovation technology iteration with competitive independent innovation and R&D capability. In 2022, we continued to strengthen our scientific research strength and promoted the construction and continuous operation of a number of technological innovation platforms.

Key performances:

By the end of 2022 we had

3

national technology innovation platforms

4

provincial technology innovation platforms

R&D Investment

Indicators	2022	2021
Total Investment in R&D (RMB 10,000)	74,481.60	66,778.20

The Group's Technology Innovation Platform Construction

List of R&D centers owned by the Group	Certification units
Nationally Recognized Enterprise Technology Center	National Development and Reform Commission Ministry of Science and Technology, Ministry of Finance, General Administration of Customs, State Taxation Administration
Key Laboratories of the Wind Power Gear Transmission System, Heavy-Duty Transmission Engineering Research Center of the Machinery Industry	National Machinery Industry Association
Heat Treatment Technology Innovation Demonstration Bases	China Heat Treatment Society
Jiangsu Wind Power Gear Equipment Engineering Technology Research Center	Jiangsu Provincial Department of Science and Technology
Provincial-level Enterprise Technology Center in Jiangsu Province	Industry and Information Technology Department of Jiangsu, Jiangsu Provincial Development and Reform Commission
Jiangsu Province Industrial High-speed Fine Gear Transmission Device Engineering Research Center	Jiangsu Provincial Development and Reform Commission
Jiangsu Industrial Gear Engineering Technology Research Center	Jiangsu Provincial Department of Science and Technology

Talent Echelon Construction

Adhere to creating value for our customers, the Group has established the building of an international product development team with technical leadership as a long-term goal. Based on the principle of "internal training and external attraction to make up for the shortcomings", we have formulated the *Measures for Talent Introduction Management*, attaching importance to talent training and recruitment and creating an international expert group to adapt the strategic development of the Company.

The Group formulates training plans each year based on the employee competency matrix and employee's training needs, including new employee training (induction training), senior technician training (technical competency enhancement), cross-departmental technical exchanges, information communication, timely sharing, etc.

The Conditions of the Group's R&D Team Construction

Indicator	Conditions in 2022
 Number of R&D team members	558
 R&D investment ratio of wind power gear transmission equipment business segment*	4.53%
 R&D investment ratio of industrial gear transmission equipment business segment*	5.67%

*R&D investment ratio of wind power and industrial business segments = R&D investment in each segment / sales revenue in each segment

Key performance:

2022, Professional training for R&D technicians reached

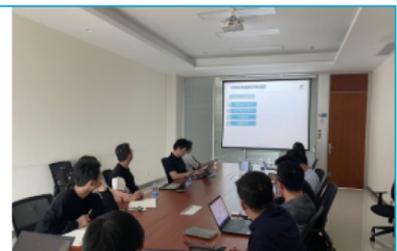
188 hours per capita



Quarterly innovation point PK



Senior Engineer Course series



Publicize the drawing review process



Job training for new employees



"Close to College students" job rotation training



Internal and external technical exchanges

Training courses developed for employee competency matrix

Integration of Industry, Education and Research

The Group actively seeks cooperation with universities in project research and talent training in the process of technological innovation, bringing together the cutting-edge scientific research strength of universities and research institutes to accelerate the breakthrough of core technology in the industry. The Group has built a strategic cooperation platform of "Integration of Industry, Education and Research" for global R&D institutions and universities, continuously improving the scientific research strength in the transmission field.

Key performance:

By the end of 2022 ,
the Group established

15

Integration of Industry,
Education and Research projects.

Part of the Industry-Education-Research Projects of China High Speed Transmission

Project	Cooperation Unit
National key R&D programme: Key technologies and industrial test platforms for large wind power gear transmission systems	Chongqing University, Dalian University of Technology
National key R&D programme: Key technology and industrial verification platform for high power wind turbine spindle and speed booster box bearings	Henan University of Science and Technology, Nanjing University of Technology
Wind power gearbox stress test	Beijing Jiaotong University
Numerical simulation analysis and prediction of continuous billet casting quality of gear parts	East China Branch of Beijing General Iron & Steel Research Institute
Large modulus gear precision grinding process research and simulation software system development project for wind power	Dalian University of Technology
Development of large domestic wind turbines on land adapted to high altitude and low temperature	Tsinghua Shenzhen International Graduate School, Inner Mongolia University of Technology
Fatigue strength test of FZG gear	The Gear Research Center of Technical University of Munich
Research on key technologies of high linear speed lightweight gear transmission system	Southeast University, Shanghai Jiaotong University, Chongqing University and Nanjing University of Aeronautics and Astronautics
Major project of the intelligent prediction of errors of mining equipment and health management system	Southeast University and Nanjing University of Aeronautics and Astronautics
Development and industrialization of high-speed and high-efficiency gear transmission device for steam turbine	Southeast University and Nanjing University of Aeronautics and Astronautics
Development and industrialization project of high-torsional parallel twin-screw gearbox for large extrusion granulator	University of Science and Technology Beijing, Beijing University of Chemical Technology and Xilin Gol League Mingyang New Energy Company



Case: Cooperated with the Gear Research Center of Technical University of Munich

The Group worked with the Gear Research Center of Technical University of Munich in the fatigue strength test of FZG gear, aiming to verify the bending and fracture resistance of the Group's large MW wind power gears and improve their reliability. In 2022, the Group mainly assisted FZG in the research on fatigue strength tests of gears of different sizes, made by different processes, and with different service life spans. We have completed the plans for testing and are working on the processing test of gears.

🌀 Innovation Incentive Mechanism

The Group is equipped with sufficient research resources for its R&D personnel based on the *R&D Organization Management System*, *R&D Investment Accounting Management System*, and *R&D Expense Separate Account Management System*. In addition, we have formulated the *Implementation and Incentive System for the Transformation of Scientific and Technological Achievements*, *Monthly Performance Evaluation for Engineers*, and *Management System for Professional and Technical Credentials of Technical and Project Engineers* to enhance the enthusiasm and initiative of technical personnel in innovation, creating a good atmosphere for scientific research.



Case: Held the technical innovation conference to stimulate employees' sense of innovation



Since 2020, the Group's wind power business has held an annual technology innovation conference to collect innovative thoughts from employees and apply them to actual business, inspiring them to innovate while promoting the technological development of the business. In 2022, we carried out the activity with the topic of "wind power gearbox product appearance design and optimization", more than 60 employees contributing more than 10 innovative ideas to the application, such as the improvement of anti-corrosion appearance at the non-fitting place of LSS rotating frame, optimization of anti-corrosion spray painting on the end face of manifold lug, and optimization of appearance of a series product platform.

| Promoting Product Iteration

🌀 Ecological R&D

The Group believes that sustainable development begins with R&D. We are committed to reducing the environmental footprint of our products at the source by taking the green benefits of the life cycle into account during the design and development stages, focusing on the three major product iteration requirements including low cost, high reliability, and low carbon.

Ecological R&D and Environmental Benefits of Wind Power Business

	Ecological Benefits	Sustainable Design Principles
 <p>Production Process</p>	Reduction of pollutant emissions	Insist on replacing pollutants from the source, such as the choice of low VOCs (VOCs-free) cleaning agents and other auxiliary materials for production and processing.
	Economical use of raw materials	Our "chain-integrated, multi-planetary driven" wind power gearboxes have been developed to reduce weight by more than 15% and reduced the use of raw materials.
 <p>Usage Process</p>	Save land resources	The integrated design of the gearbox makes the drive chain size reduced by 2 to 5 meters compared with traditional ones, and the wind turbine covers a smaller area with the same power generation efficiency, effectively reducing the land use area.
	Harmless treatment at the end of the product's life	Avoid choosing materials that contain toxic and harmful metal elements and other environmental hazards to minimize the generation of hazardous waste at the end of the product's life.
	Economical use of integrated resources	By improving product reliability and durability, prolonging the service life of the product, reducing the frequency of product replacement, so as to reduce all kinds of resource input caused by maintenance replacement of the unit in the process of operation.



Case: "Permanent Magnet-Gear Drive System" succeeded in piloting, empowering the ecological R&D of products



Permanent Magnet-Gear Drive System

In 2022, the Group's industrial business sector adopted an innovative integrated mechatronics structure of permanent magnet motors and gears in the drive system. This innovation not only makes our products more reliable and easier to be maintained, but also makes the products' weight lighter by at least 30% and thus more efficient and energy-saving in operation. Since the release of the product, it has been successfully applied in many cement enterprises, helping customers to reduce carbon emissions from productions.

Technology Breakthrough

Technological self-reliance and self-improvement are the core of maintaining competitiveness in the industry. The Group focuses on the core technology areas of the gearbox industry and continues to break through the barriers of technological innovation, so as to reduce the external dependence of key links in the upstream and downstream of the industry chain. Through the cooperation with upstream and downstream, we carry out a number of national and provincial key scientific research projects, follow the latest trends of industry development, forward-looking input into the research of cutting-edge technologies, and break through a number of "bottleneck" key technical problems in the gearbox industry.

National, Provincial, and Municipal Projects Conducted by the Group in Collaboration with Client Companies

Project	Initiator
National key R&D program: key technology and application of sliding bearings for wind turbines	Ministry of Science and Technology
National key R&D program: key technology and industrial verification platform for high-power wind power spindle and speed increase box bearings	Ministry of Science and Technology
National key R&D program: key technology and industrial test platform for large wind power gear transmission system	Ministry of Science and Technology
Special projects for industrial base reengineering and high-quality development of manufacturing industry: development and application projects of high-power wind power main bearings, gearbox bearings, and wind power hub	Ministry of Industry and Information Technology
The major science and technology special project of carbon peaking and carbon neutrality in the autonomous region: research on domestic large onshore wind turbines adapt to high altitude and low temperature (8MW)	Inner Mongolia Science and Technology Department
Technology identification of new products in Jiangsu Province (7 new products)	Ministry of Industry and Information Technology of Jiangsu Province
International joint R&D project of Jiangsu province: 3.XMW wind power gearbox with high reliability and lightweight jointly developed with GE	Jiangsu Provincial Department of Science and Technology/Nanjing Municipal Science and Technology Bureau
Special fund for the commercialization of research findings of Jiangsu province: offshore 7MW and above high-power wind power gearbox R&D and industrialization	Jiangsu Provincial Department of Science and Technology

Technology and Innovation Awards Received by the Group in 2022

Awards and Recognition	Award Unit	Award Pictures
Nationally Recognized Enterprise Technology Center	National Development and Reform Commission	
National Technology Innovation Demonstration Enterprise	Ministry of Industry and Information Technology	
Top 500 Chinese Brands	China Brand Communication Alliance, China Convention/Exhibition/Event Society	
Outstanding Enterprise of Jiangsu Manufacturing Outstanding Contribution Award	Jiangsu Provincial Committee of the Communist Party of China	
High-tech Enterprise	Jiangsu Provincial Department of Science and Technology, Department of Finance of Jiangsu Province, Jiangsu Provincial Tax Service	
First Prize in Mechanical Technology Progress in Jiangsu Province	Jiangsu Mechanical Engineering Society	
Third Prize in Mechanical Technology Progress in Jiangsu Province	Jiangsu Mechanical Engineering Society	

⚙️ Patent Management

The Group attaches importance to patent and intellectual property protection and has formulated the *Patent Management System*, *Copyright Management System*, and *Infringement Retrieval Process Management Regulations* to improve the patent and intellectual property protection management system through standard processes of patent risk control, patent mining, patent portfolio, and patent knowledge training. To minimize the risk of infringement of significant products or technologies, we conduct FTO (Free To Operate) patent searches for inventions involved in new products at the beginning of their development and production and design around technologies at risk of infringement. In addition, we regularly conduct trainings on patent application, drafting, and mining to improve the quality of patent drafting and the ability to respond to patent policy changes of our R&D staff. We have achieved a year-on-year increase in the number of patents in the past three years. By the end of 2022, the Group has been granted a total of 762 patents authorized by the state, and 436 patents have been submitted for approval.

During the Reporting Period, the Group was not involved in patent infringement lawsuits. In the future, we will continue to strengthen patent risk control and reduce the risk of infringement.

Key performance:

By the end of 2022, the Group has been granted a total of

762

patents authorized by the state.



Patent risk control

- Incorporate patent evaluation into the product evaluation process
- Conduct FTO search before the R&D of new products or technologies
- Conduct avoidance design according to the search results to largely reduce the risk of infringement

Patent layout

- We have carried out patent layout in many key countries and regions, and so far have carried out the layout of many international patent applications in Europe, the United States, Brazil, and India.

Patent exploration

- By setting up performance indicators for R&D engineers in new technology patent applications, we encourage R&D personnel to carry out technological innovation
- Patent engineers and R&D engineers work together to explore patent applications for new technologies and generate more patent extensions

Patent management training for professional staff

- Organize patent engineers to attend training held by intellectual property organizations on a regular basis to enhance the professional ability of patent engineers
- Conduct regular patent knowledge training for R&D engineers within the Group to enhance the patent awareness of R&D engineers

The Group's patent management process

Contribution to the Industry

Exchanges in the Industry

As the world-leading supplier of gear transmission solutions, China High Speed Transmission gives full play to its role as the industry leader, pulling all resources available together to drive technological innovation within the industry. In 2022, we brought our products to the International Turbine Tech Conference, American Clean Power Exhibition, and Wind Energy Hamburg Exhibition, where we showcased our latest products to customers from all over the world and exchanged our views on cutting-edge technologies to empower high-quality development of the industry.



Case: MTG series products made their debut at the 2022 International Turbine Tech Conference, demonstrating our technology prowess to the world

In September 2022, the Group brought our MTG products to the 2022 International Turbine Tech Conference where we made exchanges with distinguished guests from universities, research institutes, gas-fired power plants, and renowned companies in the industry. As our most celebrated products, the MTG series cover a wide range of options in terms of the size of center bores, turbine rotational speed, and power, thus meeting more customers' demands. Also, they have passed the test of the market practice and received recognition from customers such as Siemens Energy and Dongfang Electronics.



The Group was present at the 2022 International Turbine Tech Conference



Case: China High Speed Transmission attended the American Clean Power Conference and Exhibition to discuss the solutions to “creating a clean energy economy” together

In May 2022, China High Speed Transmission participated at the American Clean Power Exhibition to discuss the issues on the sustainable development of wind power gearbox technologies. As early as 2008, the Group started its layout in the US market by setting up its American business headquarters. Apart from supplying products to the market, we offer a whole set of on-site professional services including product assembling, engineering training, and maintenance, to meet American market needs.



The Group showed up at the 2022 American Clean Power Conference and Exhibition

Industry Standard Construction

The construction of industry standards is inevitable for improving industrial quality. As a director of the Wind Power Equipment Branch of the China Association of Agricultural Machinery Manufacturers, and a member of the Wind Power Professional Committee of the Chinese Renewable Energy Industries Association, the Group has hosted and engaged in the compilation of national, industry, and group standards. We have compiled national standards including *Wind turbine - Design requirements for gearbox GB/T 19073*, *GB/T 3480.5-2021 Calculation of load capacity of spur and helical gears - Part 5: Strength and quality of materials* and *GB/T 40082-2021 Wind turbines - Drive train ground test specification*. In total, we have hosted or joined in the formulation of 12 standards, which fuels the technological upgrades of the industry.

Key performance:

By the end of 2022, the Group has hosted or joined in the formulation of

12 standards



Case: The Group’s “High-power Wind Energy Gearbox Standardization Pilot” were listed in the province-level projects



In June 2022, the Group’s “High-power Wind Energy Gearbox Standardization Pilot” were listed in the standardization pilot projects in Jiangsu Province. These pilots have helped the Group improve the standardization management process of core businesses, foster talented people to implement these standards, optimize the standards for all businesses, and incorporate advanced technologies into standards that are in turn shown in our products. In this way, we are promoting high-quality sustainable development across the industry.

Pursue Supreme Quality

Product Quality and Safety Management

Quality management system

A company's brand value is derived from its reliability and exceptional product quality. Five decades into the transmission technology, the Group has been regarding the guiding principle of "Quality First, Customer First, Excellent Quality Service and Honesty" as the cornerstone of corporate development. Abiding by laws and regulations including the *Product Quality Law of the People's Republic of China*, the Group has formulated the *Performance Evaluation System for Quality Management and Quality Management Handbook*. Meanwhile, we advance the integration of multiple systems to reach the goal of "Zero Defects." Aiming at the annual and monthly quality objectives and quality evaluation frameworks set by responsible departments, we are dedicated to transforming ourselves into a role model for companies in the industry. By the end of 2022, the Group had obtained the certification of ISO 9001: 2015 Quality Management System, ISO 10012:2013 Measurement Management System, ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories, and GB/T23001 Integration of Informatization and Industrialization Management Systems. Meanwhile, we are accelerating the building of the system for GB/T 19580 Criteria for Performance Excellence.



Quality Management System Certificate



Laboratory Management System Certificate



Measurement Management System Certificate



Integration of Informatization and Industrialization Management Systems

In addition, the Group keeps in line with the aerospace standard, as many of its special operation processes including magnetic particle inspection, heat treatment, and shot peening process technology, part of heat treatment (induction hardening and carburizing), have passed the TPG certification²³. This means that our customers can enjoy more reliable and better-functioning wind power gearboxes of higher quality. In addition, as a member of an international trade association APQP4Wind²⁴, we optimize our R&D of new products as required by the APQP4Wind system. When designing our products, we identify and control potential risks to product quality as early as possible.

Remark:

23. TPG (Transportation and Power Generation) is a certification for special processes to suppliers based on the requirements of GE company on transportation and energy equipment. This certification is in line with the Nadcap (National Aerospace and Defense Contractors Accreditation Program) standard. The certified companies will be listed on the PRI (Performance Review Institute) website as the top choices for all manufacturing buyers in the world.

24. APQP4Wind is a quality standard and optimal practice for the entire wind power industry to plan and implement quality assurance throughout the supply chain from manufacturer to component supplier, with the aim of making the production quality assurance requirements process and production part approval process (PPAP) as clear as possible.



TPG certification



Honors and awards the Group has gained over the past three years for our product quality



2022 Jiangsu Provincial Governor Quality Award



2021 “Products of Excellence” Certificate



2020 Nanjing Municipal Mayor Quality Award

Quality Improvement Management

Committed to the corporate spirit of “climbing up the summit step by step, striving for perfection bit by bit,” we have introduced quality improvement tools such as “Zero-Defect Management”, Continuous Improvement Process (CIP), “Failure Mode Effect Analysis (FMEA)”, “Six Sigma Management”, “VDA6.3 Process Audit”, and “RCA Quality Closed-loop Management”. To achieve excellent performance, we have continuously empowered our quality management system in the following dimensions: product reliability design, talent cultivation, customer focus concept, quality control during the whole manufacturing process, and supplier quality management.



Case: CIP closed-loop management mechanism

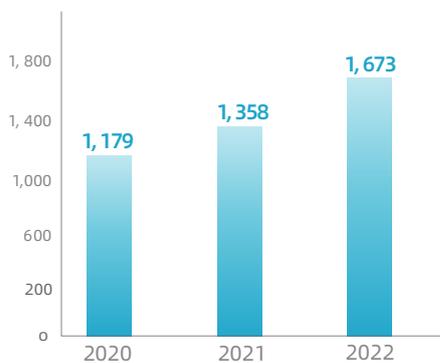
CIP (Continuous Improvement Process) is the Group's closed-loop management mechanism for continuous improvement for employees. CIP is based on the improvement of system processes, management, technology, production, and working sites. Under this mechanism, employees propose and raise improvement projects on their own and advance the project application in the standardized process on a monthly basis, namely, project application - initial departmental evaluation - project assessment - project verification - project award - project promotion. It aims to motivate all employees to keep in mind continuous improvement proposals in key areas such as quality, efficiency, cost, and site management. Over the last three years, the number of applications for CIP projects and total revenues has been rising year by year.



CIP (Continuous Improvement Process) system

Number of CIP applications in the past three years

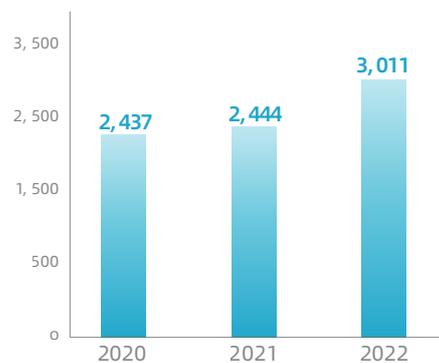
Unit: number



■ Number of CIP applications in the past three years

Revenue of CIP applications in the past three years

Unit: RMB 10,000



■ Revenue of CIP applications in the past three years



Case: Six Sigma management

Six Sigma is a systemic and structured mode for optimizing and innovating businesses. Driven by customer needs, it takes training and seamless partnership as ties and focuses on management results and value creation, helping the operation and management of the Company to be full-fledged in a systematic way. In 2015, the Group introduced Six Sigma management as a complementary method for CIP, in order to bring about breakthrough upgrades and innovation with our employees in a rigorous and scientific manner.

As a management mechanism that improves our product quality and benefits employee fostering, a total of 300 licensed and paid employees have been trained in over 200 Six Sigma projects.

Six Sigma roadmap



Based on our understanding of customer needs, the Group strictly controls the safety, reliability, quality, and specification of our products. Through product evaluation and planning, preparation, implementation, and reporting, we have formed a systemic standard to be implemented for product audits. We check and examine product quality in time, detect quality defects of our products as early as possible, evaluate and analyze the causes by category. In this way, we have found measures and methods to improve the practicality of our products and build a stellar reputation with our excellent product quality.

In addition, by combing through our years-long professional experiences in gearbox R&D and manufacturing, we are improving the internal audit mechanism encompassing the system audit, process audit, and product audit.

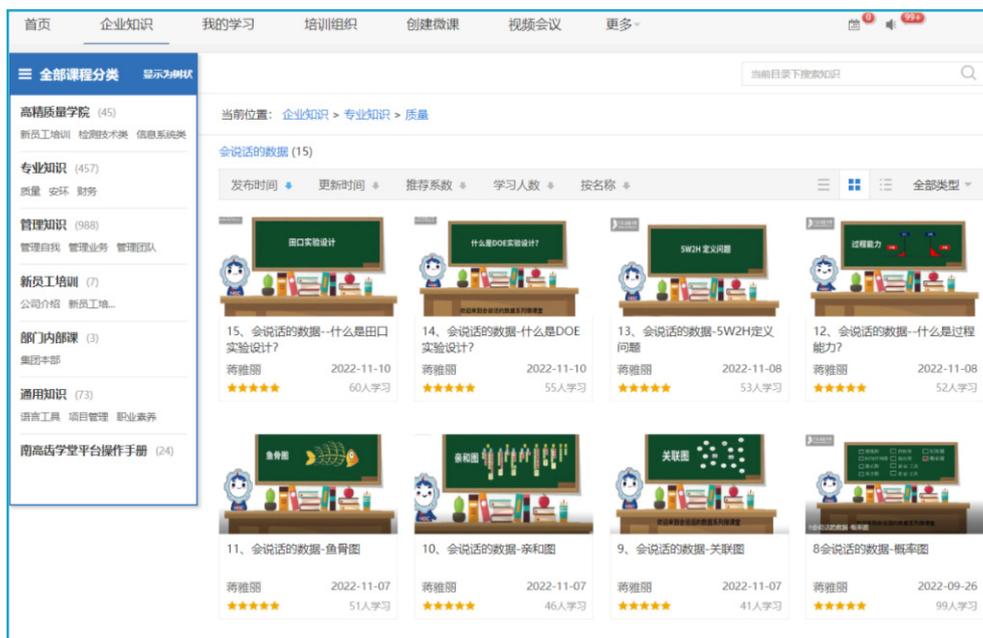


Audit framework

On top of that, the Group has put in place first-class testing equipment for high precision, such as gear measuring instruments, grinding burn detection lines, three-coordinate measuring instruments, and 26 MW main gearbox test stands. These instruments level up the Group’s ability of all-size testing, process evaluation, and product quality review. The Group has passed the ISO/IEC 17025:2017 National Laboratory Accreditation Certificate issued by the China National Accreditation Service for Conformity Assessment. Besides, the testing personnel needs to be trained and proven qualified before they can perform their duties to ensure the stability and reliability of the products.

Quality Culture

A culture that holds product quality the highest is the foundation for the functioning of the quality system. The Group encourages all of our employees to build a quality culture. With the training on quality-related knowledge on the E-learning platform of NGC Academy, we imbue the awareness and spirit of emphasizing quality in every employee. By cultivating the Group's quality-oriented culture, we aim to set a corporate image that values quality as the utmost significance.



Some courses on quality-related knowledge provided by NGC Academy



Case: Organized the Quality Month special event to reinforce the quality-oriented culture

In September 2022, we launched the annual Quality Month special event where we not only reserved traditional ways to promote quality-oriented culture in the past years but also added the form of on-site visits to promote the Group's quality-oriented culture, listen to employees working at the first line of production, and encourage employees to deliver on their promise of quality products.



Snapshots of on-site visits

In addition, to promote quality-related theoretical knowledge and boost the employees' awareness of quality, the Group's Quality Department held a knowledge competition during Quality Month. This competition on quality-related knowledge aims to ignite employees' interest in quality-related knowledge and thus boost their passion for learning.



Webpage of the competition on quality-related knowledge

Smart Lean Manufacturing

Lean Production

With a philosophy to pursue long-term lean production and an efficient structure tool, the Group keeps boosting its productivity, shortening the manufacturing cycle, and further strengthening informational and digital production. We have set up systems of lean production such as *Management by Walking Around*, *the Description of Lean Production Process*, and the *Manual of Visualization Management of Working Sites*. In addition, we hold lean production training regularly, setting our short-term goal of 5% improvement in manufacturing efficiency. In this way, we practice lean production and culture building.

Through continuous 5S improvement, we have optimized the layout of the working sites, improved equipment, and reduced sources of pollution, building a work environment conducive to higher productivity.

Key performances:

The Group's lean production department conducted

10
peripheral inspections

10
monthly inspections

2
targeted improvement activities

Achieved
500+
improvements

Display of the Latest Achievements of Lean Production of the Group's Wind Power Gear Transmission Equipment Business

Areas of lean production	Measures for lean production	Benefits brought by lean production
 Improve on-site services	<ul style="list-style-type: none"> • Visualization planning for the exterior of the factory • Layout and planning of the product line • People and vehicle separation and AGV project planning • Simulation of the traffic of logistics routes 	<ul style="list-style-type: none"> • Deploy employees at the site more effectively to reduce the walking distance for operation • Boost the efficiency of logistics to reduce exhaust gas emissions induced by traffic ingestion
 Smart management of materials	<ul style="list-style-type: none"> • Information gathering of heat treatment and casting production process 	<ul style="list-style-type: none"> • Minimize inventory waste and cut the price by managing materials on an information system
 Optimize equipment operation	<ul style="list-style-type: none"> • Information gathering of heat treatment and casting production process • Single flow production in hobbing workshops 	<ul style="list-style-type: none"> • Improve the efficiency of operating equipment and shorten production time • Reduce energy consumption during the life cycle • Use the information gained from remote monitoring to keep track of work progress and adjust work plans in a timely manner

🌀 Digitalization Empowers Manufacturing

We have been innovating and exploring digital manufacturing to further improve productivity and resource utilization efficiency through visualizing data and equipment operation. At the same time, we employ our private cloud platform to quickly respond to users' needs for information resources, shorten the waiting time for business response, and provide better products and services to our customers.



Awards and Honors

The Group's "Smart Workshop of the Heat Treatment of Large Wind Power Gears" was awarded "2022 Smart Manufacturing Demonstration Workshop in Jiangsu Province" by the Jiangsu Provincial Department of Industry and Information Technology.



The Group's smart workshop of the heat treatment of large wind power gears

Respond to Customer Demands

Customer satisfaction management

Quality management system

Upholding the service philosophy of “customers first”, we are dedicated to building mutually beneficial and win-win cooperation with our customers. With our well-established service system and global service network, we offer our customers reliable and low-cost gearbox products. In addition, the Group keeps track of the changes in customers' demands. For over ten years, we have been doing customer satisfaction investigations annually to motivate and perfect ourselves.

Meanwhile, the Group values customer feedback and complaints. Upon receiving customer complaints, we start investigations as soon as possible and offer prompt solutions accordingly. Also, we keep improving our product and service quality in a closed-loop manner. Over the years, we have won customers' trust with our brand image. Our customer satisfaction and loyalty rank among the top in the industry. With innovation as our driving force, we will build our core competitiveness around an excellent team, technology, lean management, zero-defect process, and an efficient supply chain. By doing so, we will provide our customers with better products and more professional services.

Key performance:

For **5** years

100%

customer satisfaction target achieved



Awards and Honors

The Group's "Smart Workshop of the Heat Treatment of Large Wind Power Gears" was awarded "2022 Smart Manufacturing Demonstration Workshop in Jiangsu Province" by the Jiangsu Provincial Department of Industry and Information Technology.



The Group won the “Best Gearbox Technology Partner” bestowed by Windey Co., Ltd.



The Group won the “2022 Best Strategic Partner Award” bestowed by Windey Co., Ltd.



The Group won the “2022 Excellent Supplier” bestowed by Sinovel Wind Group Co., Ltd.



Case: Fought against the COVID-19 pandemic and stabilize “a ton of supply for Baowu Group”, gaining a commendation

In May 2022, the Group received an appreciation letter from Baoshan Iron & Steel Co., Ltd. for our fast response in keeping logistics smooth during the COVID-19 pandemic. Our efforts ensured a ton of supply for Baowu Group and thus helped the normal operation of the hot rolling mill, for which Baoshan Iron & Steel Co., Ltd. extended their sincere gratitude for our efforts to safeguard their production.

宝山钢铁股份有限公司
欧冶工业品股份有限公司

感谢信

The appreciation letter from Baoshan Iron & Steel Co., Ltd.

⚙️ Data Security and Customer Privacy Protection

In the era of big data, the Group puts more emphasis on protecting customer privacy and data security, having carried out a series of privacy protection and data security activities regarding system, technology and training. We sign confidentiality agreements with all of our customers, promising to keep all forms of non-public information confidential during the agreement period. Meanwhile, we strengthen the protection of the Group’s internet connection and system. With technical control methods such as data encryption and decryption, and data leakage prevention, we make the most endeavor to fully monitor and protect our system from external attacks. We also train our employees on data security and information safety, to raise their awareness of data security.

Comply with the *Advertising Law of the People's Republic of China* and the *Anti-unfair Competition Law of the People's Republic of China*, among other laws and regulations, we stringently manage information outlets including paper media, television, the internet, and streaming media to ensure the legitimacy, authenticity, and accuracy of our publicity.

Key performances:

During the Reporting Period, the Group has

NO

Litigation related to customer privacy



4

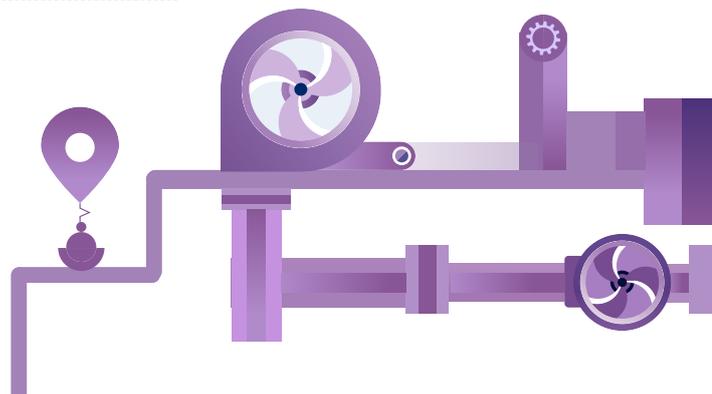
Value Across the Chain: Build a Sustainable Supply Chain

Jointly Build a Quality Supply Chain	74
Sustainable Procurement	77

Material issues in
this chapter

- Responsible Supplier Management
- Business Continuity Plan

UNSDGs in
this chapter



Jointly Build a Quality Supply Chain

China High Speed Transmission is devoted to building a safe, reliable, and sustainable supply chain system, adhering to the Group’s philosophy of managing quality, safety, environment, and business ethics when it comes to the supply chain, and leading and urging suppliers to fulfill their responsibilities for sustainable development.

Supplier Sourcing and Admittance

The sourcing and admittance of suppliers must be done strictly in accordance with the Group’s regulations, including the *Instruction on Supplier Discovery and Management*, the *Questionnaire for Supplier Information*, the *International Procurement Management Procedure*, the *Supplier-Related Risk Register*, and the *Register of Passed and Approved Suppliers*. These documents cover eleven items including strategic, organizational, process, technology, change, delivery, cost, personnel, EHS, financial, and legal risks, double checking and reviewing the potential risks of would-be suppliers, and vetoing the issues in violation of the regulations.

Before admitting new suppliers into our partnerships, the Group will check and assess their management of the working environment, safety, product quality, and labor rights. We incorporate the authentication system including ISO 9001:2015, ISO/TS 16949, QS 9000, VDA6.1, and AEO into the *Questionnaire of Supplier Information* as our assessment indicators. Where qualifications are equal, we choose the suppliers with identification from these management systems. Also, we require all qualified suppliers to sign the *Commitment Letter of Supplier Compliance*, the *Supply Chain Safety and Environmental Management Contract*, the *Environmental and Safety Notification Commitment*, and the *Declaration of Non-Applicable Hazardous Materials*, to ensure that all of our suppliers understand and follow our ESG management requirements.

Key performances:

During the Reporting Period, the Group checked the qualifications of

23
new applicant suppliers

giving admissions to

18
qualified suppliers
that accounted for
78.3%



ESG-Related Issues Subject to Veto in the Evaluation of Suppliers’ Qualifications

Environmental factors

- Absent of documentation or certification to prove that the Company abides by local environmental regulations

Social factors

- Absent of information confidentiality procedure
- Not signing the quality guarantee agreement
- No warranty period

Governance factors

- Companies in the poor credit list released by the government
- Companies employing children

Supplier Examination and Review

According to the *Instruction on Supplier Performance Evaluation and Management Requirements*, the Group sets forth the annual audit plans for suppliers, placing high priorities on ESG performances, including their working environment, production safety, environmental measures, and employment. In addition, our monthly and annual checking and review are carried out through on-site inspections, collective examinations, designed control activities, and tests. Also, we set up a mechanism to choose suppliers, offering mutually beneficial business terms to highly-qualified suppliers as an incentive for them to better their ESG management.

The Group asks suppliers that fail the Group's annual systemic examinations or annual reviews to make overhaul improvements and decides whether we will continue the cooperation and purchase agreement based on their rectification status. If there are grave quality issues, safety or environmental hazards, or bribery, or if any suppliers are blacklisted by authorities due to a poor record of unsafe production and operation, we will terminate our partnerships with these suppliers.

Requirements for Supply Chain Safety and Environmental Management



-  Suppliers must obey applicable laws and regulations and ensure clean production
-  Suppliers must obey laws, regulations, and other rules in their goods delivery process, including not overloading, breaking the speed limit, and ensure that their noise and exhaust emissions meet the relevant standards and avoid oil leakage and fire accidents
-  Safeguard personnel safety by forbidding drivers and other non-operators from unloading and carrying goods
-  Strengthen the regular maintenance and repair of motor vehicles, make sure that transporting vehicles are in good condition and pass the annual exhaust gas inspection
-  Ban honking within the factory areas
-  Have in place measures to prevent dust from permeating
-  Equipment and safety protection products from suppliers must meet the safety and environmental technology standards
-  During the transportation process of suppliers, especially dangerous goods, they must abide by national regulations. The subcontractor of dangerous goods transportation must be equipped with emergency responses and measures

| Supply Chain Stability and Resilience

The Group builds a platform to work with suppliers and enhance information exchanges and joint innovation with suppliers by visiting our suppliers, holding supplier conventions, and attending large exhibitions and technology exchange meetings. Together with suppliers, we are committed to minimizing the energy consumption during manufacturing and the environmental impact during the full life cycle of our products by lowering the costs and boosting efficiency, cutting down manufacturing procedures, and changing materials. In this way, we raise our core competitiveness in our sectors and maximize the value of the supply chain.

Also, when faced with the risk of "broken supply chains", the Group manages through the annual supplier risk evaluations, renews our focus on suppliers' delivery ability, including their delivery distance, safe stock, emergency preparedness for equipment damage, and response-ability for natural disasters, and sets up a scientific risk threshold and risk management measures. In this way, the Group builds a resilient supply chain to safeguard our customers' rights.

Sustainable Procurement

⚙️ Commitment to Transparent Procurement

Committed to transparent procurement, the Group has built a full-fledged system for procurement compliance management. For one thing, we keep enhancing our employees' compliance awareness, requiring them to sign up the *Commitment Letter of Employee Compliance*. With the position rotation system, we prohibit business bribery, graft, and other unfair business practices to ensure procurement compliance. For another, we make our tender process public, set reasonable procurement prices, and sign up the *Integrity Codes* with our suppliers to ensure that all of the qualified suppliers abide by high-standard business ethics. Also, we set up the *Anti-Fraud Reporting Management Procedure*, embracing all supervision and reporting from stakeholders on any violations against laws and regulations in any procurement stages.

⚙️ Sustainable Procurement Commitment

The Group promises to "avoid using metals (including tin, tantalum, tungsten, and gold) from companies in conflict from the Democratic Republic of the Congo" and requires our suppliers to keep away from purchasing from conflicted mining companies.

Key performances:

During the Reporting Period,

100%

of the Group's new suppliers signed the *Integrity Codes*.



5

Talent-Driven: Grow in a Multi-Cultural Environment

Protect Employees' Rights	79
Talent Recruitment and Employee Care	82
Employee Training and Career Development	88
Safeguard Employees' Health and Safety	92

Material issues in this chapter

- Labor Rights
- Occupational Health and Safety
- Employee Training
- Employee Promotion
- Employee Engagement and Diversity

UNSDGs in this chapter



Protect Employees' Rights

| Ethical Labor Standards

⚙️ Human Rights Protection

Respecting the rights and interests of employees is the essential premise of enterprise management. In compliance with the relevant provisions of the *Labor Law of the People's Republic of China*, the *Law of the People's Republic of China on the Protection of Women's Rights and Interests*, and *Provisions on Prohibition of Child Labor*, and respects the internationally recognized principles of human rights protection, the Group explicitly prohibits in the *Employee Handbook* the acquisition of labor through illegal ways such as human trafficking during all processes of recruitment, hiring, and probation, the use of prison labor and child labor, and any form of enslaving and forcing employees in the Group operations. During the Reporting Period, not a single illegal case such as child labor or forced labor happened within the Group. All of our full-time employees had signed contracts and the recruitment of our part-time employees abided by China's laws and regulations.

Key performance:

During the Reporting Period,

100%

of full-time employees signed labor contracts



⚙️ Employment Equity

The Group strictly complies with the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*. We do not tolerate any form of discrimination and harassment and has issued the *Statement on Protecting Employees from Discrimination, Harassment, and Freedom of Association*, guaranteeing that all employees must not be discriminated against due to their nationality, race, skin color, age, gender, sexual orientation, disability or not, marital status, pregnancy or not, religious belief, political affiliation, association membership, providing equal employment opportunities and implementing equal pay for equal work abiding by distribution according to work. All employees will be required to sign a confirmation letter when joining us to ensure that they have an adequate command of the anti-discrimination and anti-harassment principles specified in the *Employee Handbook*.

⚙️ Working Hour Management

The Group completely respects employees' right to rest and take leave and supports them in balancing their work and life as much as possible. We, strictly adhering to and in compliance with the *Labor Law of the People's Republic of China*, provide our employees with statutory holidays such as marriage leave, bereavement leave, maternity and lactation leave, nursing leave, prenatal care leave, and parental leave. Besides, we do not advocate overtime work and carry out the examination and approval system of overtime work to promote efficient working manner and reduce the possibility of overtime work.

Benefits Security

The Group guarantees that all employees can enjoy social security plans in line with national regulations, and purchases commercial medical insurance for all employees.

Whistle-blowing Procedures

The Group has set up the *Employee Whistle-blowing Procedures* to render various channels for reporting and complaining such as e-mail and mailboxes to employees, and to ensure that their complaints and opinions can be received by the managers and the chairman of the trade union directly, making every endeavor to protect all employees' legitimate rights and interests, including human rights.



E-mail address for
whistle-blowing:
NGC_TSJB@ngctransmission.com

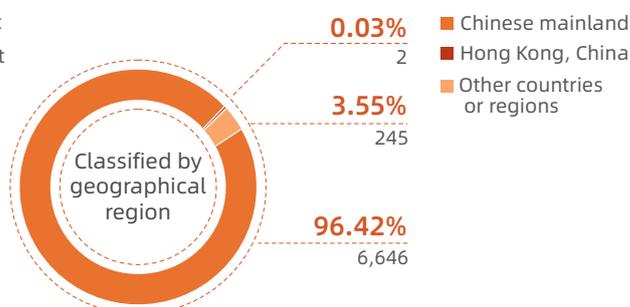
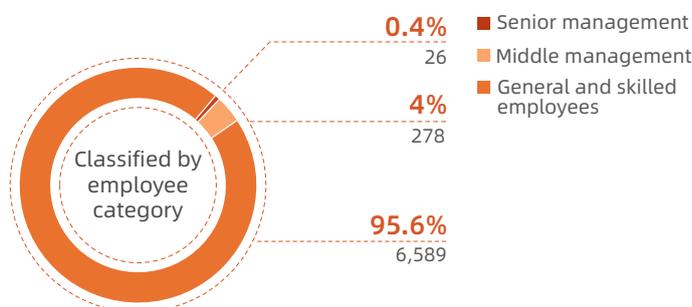
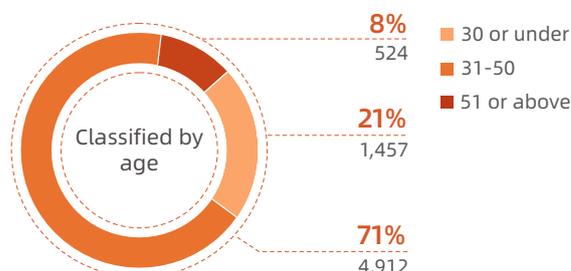
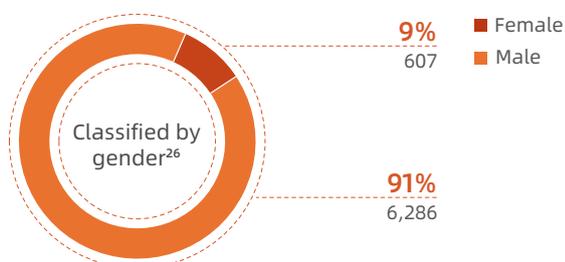
Mailbox positions for
whistle-blowing:
Prominent positions
in each plant of the
Group

Staff Size and Composition

Employment in 2022

Total number of employees²⁵
6,893

Full-time **6,893**
Part-time **0**



Remark:

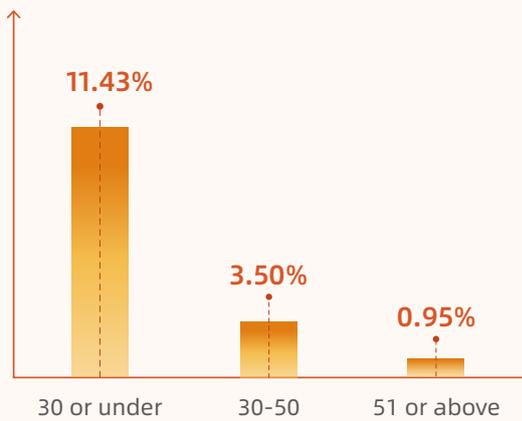
25. The 2022 number of employees covers over 99.5% of the Group's full-time employees in the Chinese mainland, i.e. 6,893. The statistics are based on the social indicators described in the *How to Prepare an ESG Report*.

26. The difference in the ratio of male to female is mainly attributed to the industry where the Group operates and thus does not deviate from the Group's principle of equal employment (including recruitment, promotion, and training).

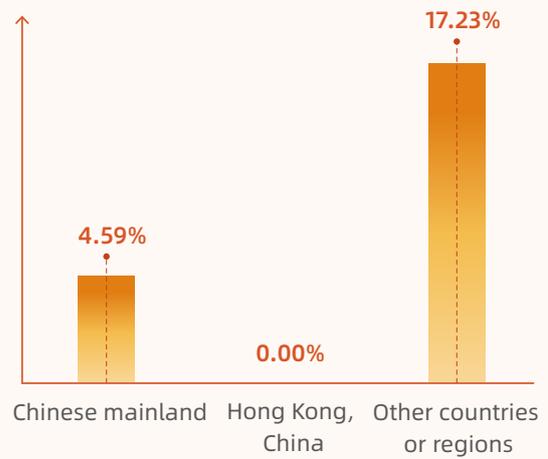
Employee Turnover²⁷

Total employee turnover rate
5.11%

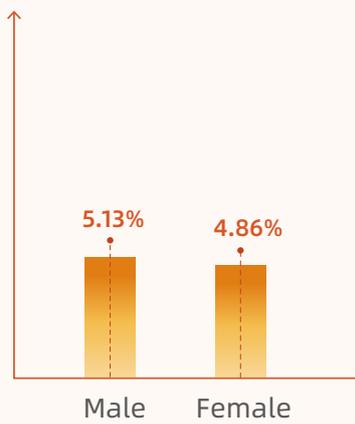
• Classified by age



• Classified by region



• Classified by gender



Remark:

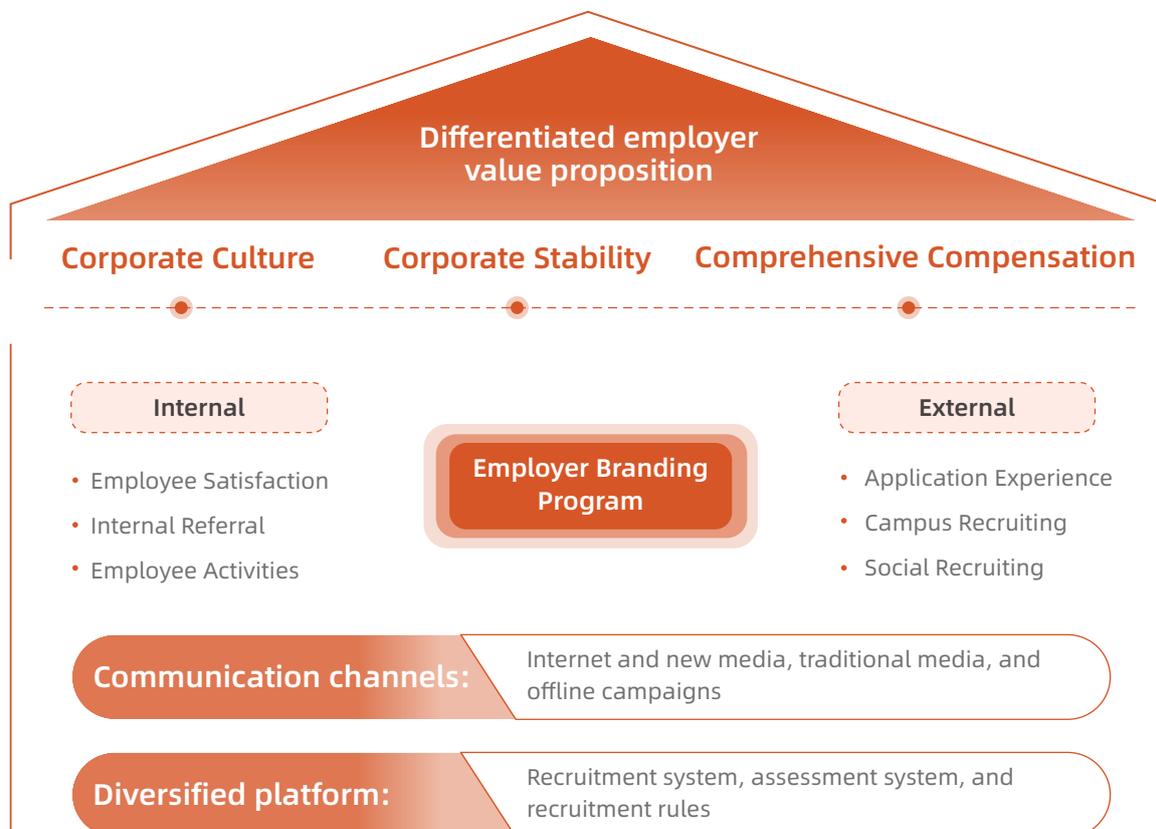
27. The formula for employee turnover rate is: $\text{Employee turnover rate} = \frac{\text{total number of employees who left during the Reporting Period}}{\text{total number of employees who left during the Reporting Period} + \text{total number of employees at the end of the Reporting Period}}$. As the Group expanded the employee-related data in 2022, it reinstated the data for 2021 in the Report.

Talent Recruitment and Employee Care

Employer Brand Building

The Group is committed to creating an outstanding image to facilitate the attraction, motivation, and retention of targeted talents. We have established an employer brand-building team in charge of the branding system and operations, emphasizing employee's experience internally and corporate reputation externally. Through employer branding activities together with the “online plus offline” promotion model, we publicize the Group’s brands in multiple channels and enhance the competitiveness of talent attraction.

Regarding school recruitment, the Group sets up a regional responsibility system for colleges and universities, and organizes school-enterprise cooperation activities such as NGC Open Day, graduation design guidance, NGC classes on campus, and the “NGC Cup” Mechanical Design Innovation Competition to assist college students in perceiving our corporate culture and technical strength. In 2022, our employer branding and human resources management were recognized by government departments and leading HR service providers in China, winning the Harmonious Labor Relations Award of Jiangsu Province, the “Extraordinary Employer of the Year” by Liepin, and the “Outstanding HR Management Award” by 51Job.



Employer brands management system



Cases: Focus on talent value realization, receiving the “Extraordinary Employer of the Year”

In 2022, the Group was awarded “Extraordinary Employer of the Year” in Jiangsu province by Liepin, a career development platform for talents in China. Based on the open application and institutional research to obtain data, the award invites public voting and expert rating to comprehensively select the innovators and practitioners facilitating the healthy construction of China’s workplace. By virtue of the full-fledged talent management system including employee benefits, employee development and value realization, and employee engagement and satisfaction, the Group continues to enhance the sense of security, fairness, growth, recognition, and pleasure at work and stands out among the candidates.



Diversified Recruitment Channels

The Group has constituted reasonable and sound talent recruitment and management system to clarify the recruitment principles and processes, and has built diversified recruitment channels and proactively enroll more talents through campus recruitment and job fairs to raise the efficiency of talent absorption. In addition, we established a human resource sharing center to quickly and timely receive the clear talent requirements of all departments, creating a clear profile for the employee we want. In the meantime, we encourage employees to recommend proper talents through the Group’s recruitment website and internal OA system, and reward the recommenders for internal referral quotas. In 2022, the Group first adopted live-streaming recruitment and participated in the Jiangsu Private Enterprise Cloud Recruitment Conference, solving problems in offline job fairs constrained by the pandemic and shortening the recruitment cycle as much as possible.



The site of Jiangsu Private Enterprise Cloud Recruitment Conference in 2022



| Inclusive Culture Creation

A diverse and inclusive work environment is conducive to attracting and pooling talents. The Group respects individual differences of employees and attaches great significance to the protection and care of female employees' rights and interests. We pay monthly health fees for female employees, provide regular women-only medical examinations, and set up nursing rooms in available plants to support their work-life balance. In addition, the Group actively responds to the national employment policies and regulations for people with a disability and prohibits discrimination against disability to safeguard their rights of equal employment and career choice and render them suitable positions and vocational training.

| Development Dividend Sharing

A fair emolument system guarantees the maintenance and enhancement of employee's enthusiasm. The Group regularly cooperates with a third-party compensation design and consulting firm. Based on industry salary big data and social development indicators, the Group analyzes the reasonableness of the existing emolument system and establishes an emolument incentive and benefits system with internal fairness and external competitiveness.

The Group creates a performance-oriented emolument system based on monthly, quarterly, and annual performance evaluation, determines evaluation indicators after full communication between supervisors and employees, and ensures fairness through "employee self-assessment, supervisor feedback, mutual communication, and performance feedback." Besides, employees who have objections to the performance evaluation results can report through the emails and mailboxes publicized in the *Employee Handbook* to guarantee timely feedback on their concerns and requests regarding performance evaluation and emoluments.

In line with the six requirements of the quality model (public interests before private interests, honesty and integrity, embracing changes, teamwork, customer orientation, and taking responsibility), the Group holds annual activities to motivate employees including the selection of outstanding individuals and teams, the evaluation of innovative technology projects, the awarding of technology patents, the selection of excellent CIP suggestions and the awarding of long-term service. The awards of outstanding individuals and teams contain the "Outstanding Contribution Award" and "Technical Innovation Award," providing material and spiritual rewards to employees and teams with excellent performance and development potential in terms of product improvement, quality management, marketing, management innovation, technical innovation and other contributions to recognize the efforts of employees and share the profits with them.

Key performances:

In 2022, the Group selected

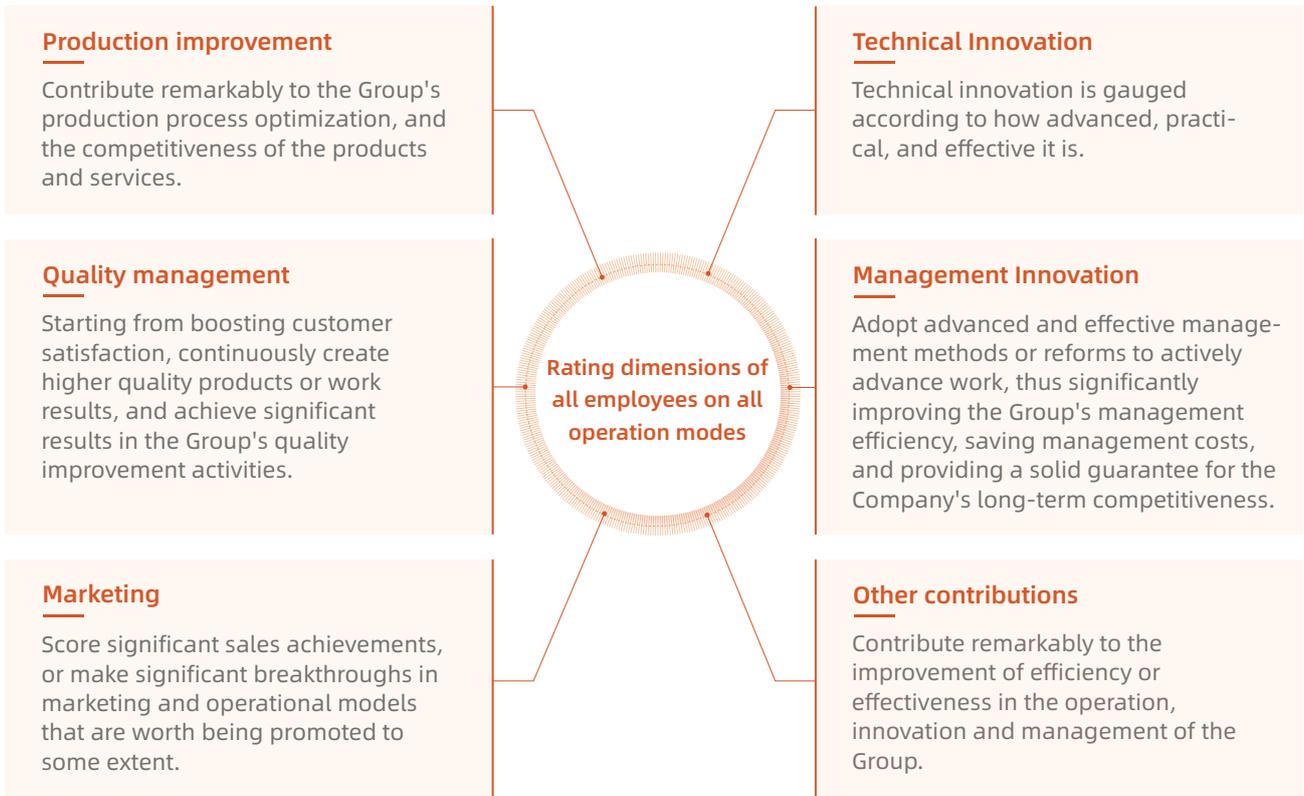
39
outstanding teams

38
excellent individuals

11
technical innovation teams

5
technical innovation individuals





Long-term Service Prize event





Case: Awarded employees' endeavors by setting up the Long-term Service Prize

Since 2021, the Group has established the “Long-term Service Prize” to commend employees making long-term contributions, which applies to all employees including labor dispatching employees. In January 2022, the Group first launched the selection and award ceremony of the Long-term Service Prize. The participants and some award winners also include retired employees who had advanced bravely with the Company, in gratitude for their long-term contributions.



Long-term Service Prize ceremony

Well-being Promotion and Responses to Concerns

Employee Satisfaction Management

The Group conducts employee engagement and satisfaction questionnaires annually, where employees can anonymously express their opinions and suggestions on work experience, communication effectiveness, and career development, among others. The specified departments in the Group will summarize the common opinions in response to the survey results and formulate and implement improvement measures to ensure that the employee satisfaction and engagement of the Group maintain a high level in the industry.

In 2022, the Group issued a total of

6,710
questionnaires

5,302
valid questionnaires

79%
survey participation

Plans and Progress on Employee Satisfaction Improvement in 2022

Plans	Measures
Improve the quality and hygiene of canteen meals	<ul style="list-style-type: none"> • Create QR codes on the tables for feedback. • Employees can scan them to make real-name feedback and receive emails or phone calls to solve their complaints in a short time.
Optimize professional skills training system	<ul style="list-style-type: none"> • Sort out the training needs of employees and departments. • Issue monthly training plan notices by specified departments. • Add general and professional training courses on safety, office software, English, forklifts, etc.
Enrich employee benefits and activities	<ul style="list-style-type: none"> • Create the Long-term Service Prize for all employee. • Promote the construction of nursing rooms • Added staff dormitories, inter-company shuttle buses, and shuttle bus stops.
Optimize management process to avoid wasting energy and time	<ul style="list-style-type: none"> • Adopt contract locks of electronic signature platforms to simplify the document signing process. • Enable electronic financial reimbursement process.

Care and Benefits for Employees

The Group adheres to the people-oriented principle to provide multiple care and benefits covering the physical and mental health and livelihood protection of all employees and pursues being informed of employees' requirements through satisfaction surveys and the OA system to respond to their reasonable requests and expectations on time.

The Group presents holiday gifts to all employees according to traditional Chinese festivals, such as gift packs for Spring Festival, Dragon Boat Festival, and Mid-Autumn Festival. We regularly organize activities such as birthday parties, parent-child activities, tea parties, sports meetings, and support employees to organize amateur interest groups to enhance their cohesion and work-life balance.

In 2022, the COVID-19 epidemic was still repeated. In addition to the implementation of various epidemic prevention and control measures, the Group has made advance preparations for the procurement and stockpiling of epidemic prevention materials and issuing workshop-specific masks, COVID-19 testing reagents, and epidemic prevention kits to protect the health of our employees. In addition, the Group prepared "care parcels" for all truck drivers and other logistics personnel who entered and left the plants and provided them with assistance in special times as much as possible.



Outdoor activities



Staff dragon boat competition



2022 Mid-Autumn gathering for the newly recruited university graduates

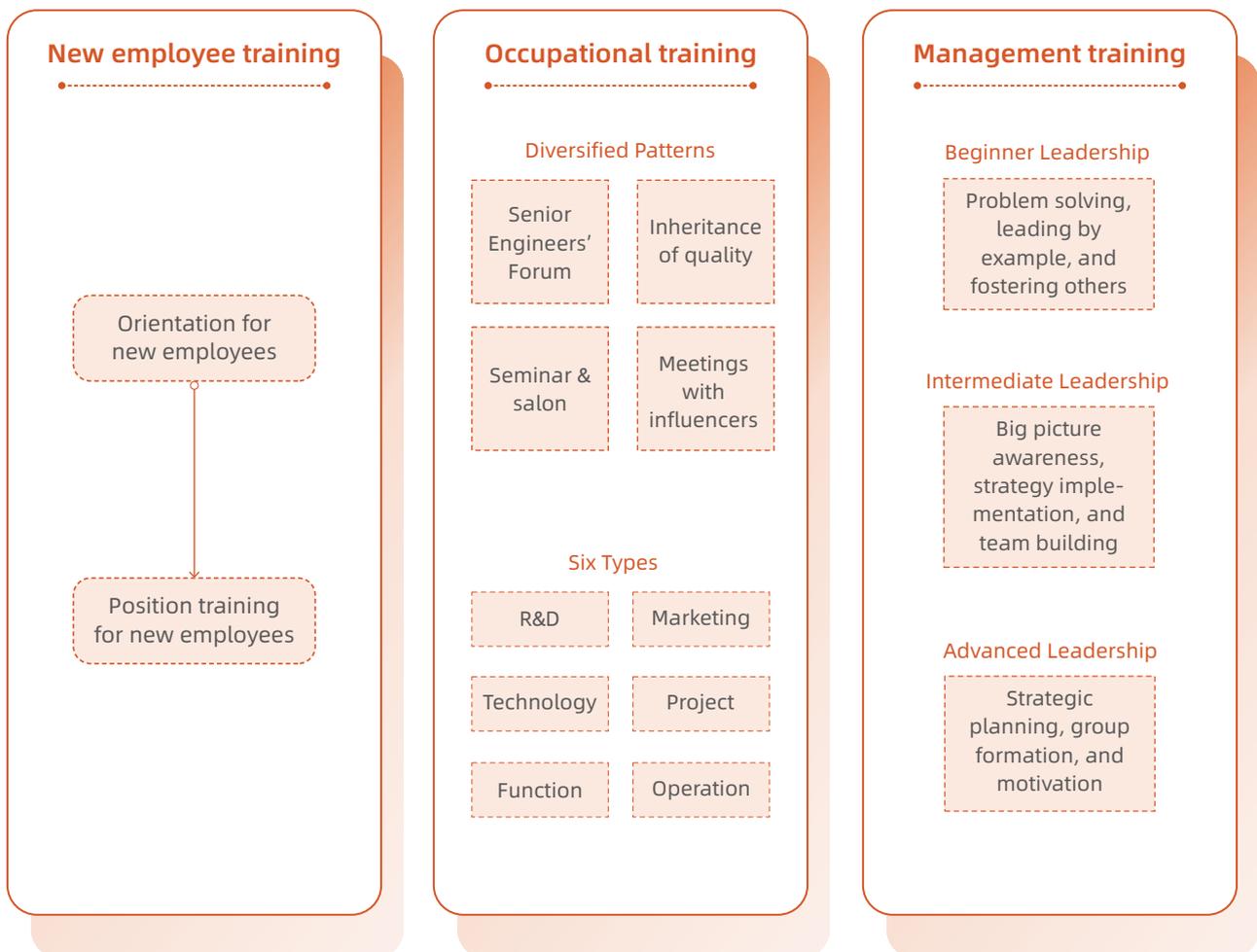


Flower arrangement activity on Women's Day

Employee Training and Career Development

Training System Improvement

Upholding the corporate spirit of “Climb up the summit step by step, Strive for perfection bit by bit,” the Group emphasizes the fostering of talented people with the “dual-path” training system for professional knowledge and employee management. We organize multi-faceted all-encompassing training for new employees, professionals, and managers, keep improving the matching courses and enlarging the pool of lecturers, and access employees at all levels to training resources necessary for the better skills and higher career ladder levels. In addition, we treat part-time workers equally, as we offer them undifferentiated training resources and set up a training system in line with full-time employees.



The training system of the career development

Orientation for New Employees

The Group values fostering new employees, and setting a training plan targeted at different stages, including probationary training, orientation, business training, position rotation, examination, and thesis oral defense. We appoint mentors to new employees and implement the position rotation scheme to help new employees grasp their job responsibilities, better adapt to the corporate culture, and fit in their team. To continue the improvement of our new employee orientation system, we have launched an offline course evaluation system, understand employees' suggestions and feedback for the mentorship, ways, contents, and organization of training, and improve the training accordingly.



2022 On-boarding event for college graduates



Orientation for new employees

Occupational Training

The Group offers diversified training patterns. Apart from common training courses, we organize exchange events such as senior engineers' forum, inheritance of quality, seminar & salon, and meetings with influencers in the industry on a regular basis for our employee. For these events, we invite senior executives or employees in command of specific expertise to share their innovative thoughts, working methods, and professional experience. In this way, we are building a professional lecturer within the Group and an atmosphere of knowledge sharing and learning.



Cases: Organized and built the internal training camp for lecturers to build a learning-oriented organization

For a technology company, it is of paramount significance to accumulate and pass down working ability and experience. In 2022, the Group organized an internal training camp for lecturers, aiming to incorporate more employees into the teaching team and rally up the comprehensive ability to teach and develop courses. During this year, the Group selected 71 lecturers at the corporate level and 186 lecturers at the department level through examination.



Seminar & salon



The internal training camp for lecturers

Leadership Training

The Group keeps improving its leadership-building system. Rooted in the requirements for the competence and qualifications for leadership at different tiers, we adopt diversified training methods and differentiated training content. Accordingly, we set different strategies for junior level, middle, and senior management as the “Modification Plan,” “Shaping Plan,” and “Deformation Plan”.



Competence and qualification requirements for the management

Diversified Training Patterns

Also, we opened the “NGC Academy” e-learning platform, where we customize our learning map for employees, keep their study files, and focus on their specific demand for gaining more knowledge, to help them dig deeper into the expertise necessary for their work. This e-learning platform also supports community discussions, questionnaires, and joint course-making by all employees. It promptly draws suggestions and demands from employees on the training courses and encourages employees to take the initiative to design micro courses, transforming itself as a micro course ecosystem within the Group.



NGC Academy and learning map

Employee Training in 2022²⁸

Total number of trainees	The percentage of trainees (%) ²⁹	Total training hours (Hour)	Average training hours completed per employee (Hour/person)
6,855	99%	152,101	22.20

Divided by categories		Unit	Number
The percentage of employees trained by employee category	Senior management	%	100
	Middle management	%	97
	General and skilled employees	%	100
Average training hours completed per employee by employee category	Senior management	Hour	20.5
	Middle management	Hour	27.2
	General and skilled employees	Hour	22.0
The percentage of employees trained by gender	Male employees	%	100
	Female employees	%	98
Average training hours completed per employee by gender	Male employees	Hour	22.7
	Female employees	Hour	16.6

Clarify Promotion Paths

With the *NGC Group Qualification Management System*, the Group sets up for employees a clear, transparent, and fair promotion mechanism and process in support of employees' self-fulfillment. The "expertise-based path" is open for employees in all businesses, making sure that every employee's growth and contributions can demonstrate themselves through the job-level system. During the Reporting Period, the Group fostered 42 managers at the grass-roots level and 100 employees got promoted. This mechanism guarantees the talent pool large enough for the Group's sustainable development.

Based on the *Management System of the Qualifications of Technical and Project Engineers for Getting Promotion Through the Expertise-Based Path* and the *NGC Group Qualification Management System*, the Group encourages the engineering team to enhance their technical knowledge and skills and get vocational and qualification certificates. Also, the Group rewards employees who get the engineering corporate titles with prizes vary with the levels of their titles, which facilitated the building of a team of talented technicians. By the end of 2022, the Group had declared 6 senior titles, 105 vice-senior titles, 589 intermediate titles, and 841 assistant titles for our employees.

Remark:

28. The listed training includes the occupational training the Group provided for our employees during the Reporting Period, both online and offline. As the Group expanded the employee-related data in 2022, it reinstated the data for 2021 in the Report.

29. Some employees at the management level, due to their special positions, did not engage in occupational training during the Reporting Period.

Safeguard Employees' Health and Safety

Occupational Health and Safety Management System

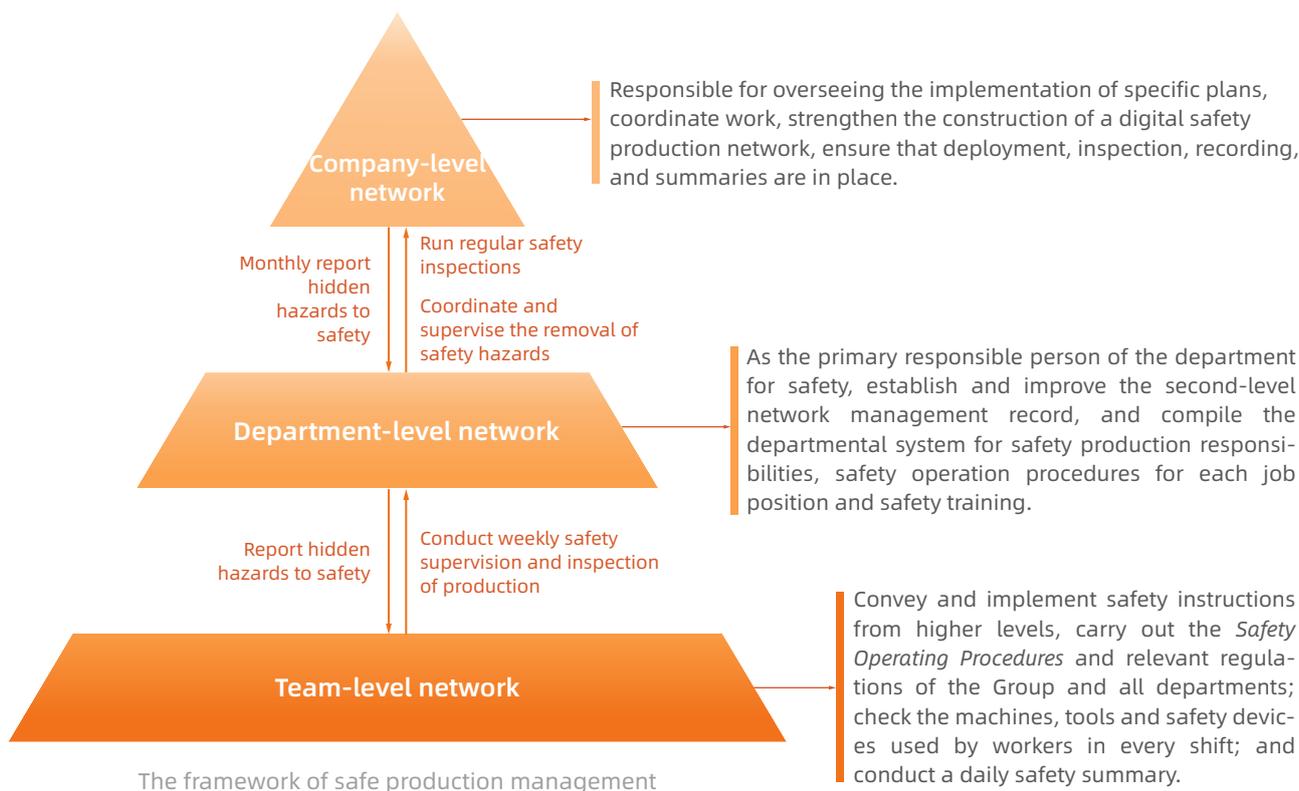
The Group strictly abides by and complies with national and regional laws and regulations on occupational health and safety management including the *Law of the People's Republic of China on Work Safety* and the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases (Revised in 2018)*. We keep improving our system and framework of occupational health and safety management to minimize risks to production safety. In 2021, we obtained the ISO 45001: 2018 Occupational Health and Safety Management System Certification. We have since then carried out what is required in the system on a regular basis and implemented closed-loop rectification of items in contradiction with the system to ensure the steady operation of the system.

In addition, the Group has formulated the *Environmental and Occupational Health and Safety Management Handbook*, *Safety Production Responsibility System of All Employees*, *Responsibility System of All Departments as EHS Entities*, *Responsibility System for Local Departments*, and *Safety and Environmental Management System for Stakeholders*. These regulations not only guarantee the effectiveness of the system but also lay out the detailed safety responsibilities of employees at different levels and stakeholders of the Group.

The Group clarifies the safety management responsibilities of employees at all levels, production procedures, and stakeholders, and requires our employees to sign up for the *Environment and Occupational Health and Safety Responsibility Document*. Each year, we assess our employees regarding the safety production responsibility system to keep improving our standardized management of safe production by virtue of stringent management mechanisms.

In 2022, the Group played a role in writing the *Interpretation and Application of the Law on Safe Production and the Matching Regulations led by the Emergency Management Administration of Nanjing*, sharing our experience and achievements in safe production and helping all sectors manage their safe production in a standardized and targeted way.





⚙ Occupational Health and Safety Target Setting

Pursuant to the *2025 Development Plan for Environment and Occupational Health and Safety*, the Group sets up indicators for the annual health and safety targets and then breaks these targets down into measurable ones for different departments. Each quarter, the Group reviews how much these sub-targets are fulfilled, which is correlated with the performance appraisal of the departments. In addition, the Group has formulated the *Award, Punishment, and Appraisal System of Environment and Occupational Health and Safety* applicable to all employees. Each year, we select excellent groups and individuals, honoring them in public and awarding them with prizes. The Group inflicts punishment on the departments that fail to fulfill the annual health and safety objectives or where major safety incidents happen. In 2022, all departments reached their annual objectives, without being disciplined or punished. In the past three years, the Group has no any work-related fatalities.

Setting and Progress of Indicators for Occupational and Safety Targets for 2022

Targets	Progress Review
All employees passed the Occupational Health Assessment	99.9% of employees passed the Occupational Health Assessment in 2022. One employee failed the assessment and has been transferred from the post.

Zero major incidents (fire, explosion, incidents leading to severe injuries, and infectious diseases)	No major incidents happened in 2022
Rate of troubleshooting safety hazards and implementing the annual examination plan: 100%	The rate of troubleshooting safety hazards and implementing the annual examination plan in 2022 reached 100%
Rate of safety hazards removed \geq 98%	The rate of removed safety hazards in 2022 reached 100%
100% review and approval of dangerous work (working at high altitudes, with fire, or in a confined space)	100% of dangerous work (working at high altitudes, with fire, or in a confined space) was reviewed and approved in 2022

Management measures of occupational health and safety

Prevention and control of occupational diseases

The Group sets up a management system of occupational health, regularly searches for hazards to employees' health, arranges physical examination for the employees, and builds their occupational health documents. In accordance with the *Standard for the Equipment of Labor Protection Supplies*, we provide personal protective equipment for the employees, run regular checking and maintenance, and urge employees to use them in the right way. We equip our employees with a variety of labor protection equipment such as noise, dust, poison and high temperature protection.

Maintenance of facilities and equipment

The Group has formulated regulations on the safe use of manufacturing facilities and equipment, formed an equipment maintenance ledger, set up plans for repair and acted accordingly, to ensure the safe operation of these equipment and facilities.

Work safety management

With the *Management System of the Permission of Dangerous Work*, the Group strictly follows the review procedure for dangerous work including working at high altitudes, with fire, or in a confined space. Also, we check the qualifications of the employees and stakeholders and monitor the working process. All of the Group's workers in special operations are licensed.

Fire safety management

The Group runs regular full checks on fire safety to eliminate the hazards. We have put the *Emergency Plan for Fire* in place, while better prepare the employees for fire extinguishing, evacuation, and self-help, and brace the managers for better organization, coordination, and instruction in a fire by launching fire emergency drills and fire safety training.

Safety management of stakeholders

The Group has established the *Safety and Environment Management System of Stakeholders*. Before stakeholders enter the workplace, they must sign the safety agreement, take safety and environmental protection Training show their safety qualifications, and take the lessons on accident warnings. They must understand and follow the *Group's EHS Evaluation System* which requires all stakeholders to fulfill their responsibilities for safe production.

Safety Risk Management

Based on the *EHS Hazards Troubleshooting Work Plan, the Management Regulation on Safety Check, and the Management Regulation on the Troubleshooting and Removal of Accident Hazards*, the Group organizes hazard troubleshooting work including comprehensive, special, holiday, and regular examinations, records the discovered hazards for further tracking and closed-loop removal.

Emergency Management

The Group keeps improving its emergency plans for safe production, builds an internal emergency rescue team equipped with needed supplies. We have compiled with emergency response measures for the workplace of people holding key positions and special preparation plans for accidents of high likelihood. We regularly run emergency drills for chemical leakage, heat treatment, working in a confined space, falling from a high place, electricity shock, and heat stroke.

Building a Safety Culture

The Group sets up a management system for safety culture, compiles a safety guidebook, organizes "Safety Production Month" activities every year and provides various safety and environmental protection trainings in our training platform. By hosting tests for employees on must-knows, we urge them at all position levels to gain more knowledge about safety management and raise their awareness. Also, we continue to enhance the safety education and training of employees of our stakeholders. The Group's main responsible person and safety administrators have got the license for safety training.

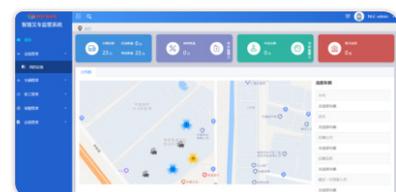
Communication, Engagement, and Negotiation

With the *Control Procedure of Communication, Engagement, and Negotiation*, the Group encourages all employees to be part of the development, planning, implementation, performance evaluation, and improvement of the occupational health and safety management framework. On one hand, we listen to our employees' voices about health and safety at morning team meetings, regular meetings of safe production, and safety training. On the other hand, we assess and analyze safety loopholes and take prompt measures by keeping an eye on how fast the supplies in the emergency cases are consumed. In addition, the Company's Safety Committee communicates and negotiates to solve the Company's safety and environmental hazards and the needs of various departments that are difficult to rectify.



Case: Limit the speed of forklift operation with a smart system, empowering safety management

Forklifts often operate in a complicated environment, and more likely, in an environment with people. Therefore, overspeed forklifts are prone to accidents. In 2022, the Group added speed detecting sensors to forklifts via its smart forklift monitoring system. In this way, the Group can monitor the speed of forklifts and help the operators get into safe working habits.



Smart Forklift Management System



Case: Real-time gas alarm for fire prevention



The Group installed inflammable gas alarm devices in key areas for production and protection to detect the concentration of inflammable gases and aerosols. These devices could raise the alarm before the concentration of leaked inflammable gases reaches the lower explosive limit, preventing fire and explosion induced by the leakage of inflammable gases.



Case: Purchased automated external defibrillators in aid of heart attack rescue

In 2022, the Group purchased automated external defibrillators (AED) for the employees. To ensure the employees can get rescued within three minutes after the accident, we bought 27 AEDs, which strengthened the Group's ability to rescue and emergency response and safeguarded employees' health.



Automated external defibrillators (AED)



Safety training



Part of safety courses on the e-learning platform

Key performances:

In 2022, the Group held

30
emergency drills

organized safety training

609
times

created

284
online safety training courses
that attracted

65,831 viewing

detected

705
problems and hazards

100%
safety hazards removed

Management of Occupational Health and Safety

Indicators	Unit	2022	2021
Work-related fatalities	Person	0	0
Lost days due to work injury	Day	597	1,291
The proportion of employees who have taken the physical examination	%	100	100

6

Devoted to Public Welfare: Return Kindness to Society with Concrete Actions

Practice Public Welfare

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- Public welfare

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Practice Public Welfare

The Group upholds the corporate mission of “Geared for a Better Future,” focuses on the actual plight of the nearby communities and people in need, and actively fulfills our social responsibilities and obligations. In 2022, we focused on youth development and biodiversity conservation to carry out public welfare projects to requite society.

Key performance:

In 2022, the Group's expenditure in donations was

RMB **10,164,000**



Case: “Shell Breaking Action” education fund project

The Group focuses on rural education and supports educational equity. In 2021, together with education authorities and Amity Foundation, we inspected schools around Nanjing for underprivileged students and set up a three-year project to make donations for high school students from humble family backgrounds with good academic performance and moral conduct to complete their studies and reduce their financial pressure.

From 2021 to 2022, the Group has donated a total of

RMB **99,000**

to the “Shell Breaking Action” project.



Remarks from stakeholders

After receiving education, I aspire to be a doctor to heal the wounded and rescue the dying, lending a helping hand to other people. Thus, I am very grateful for the financial support from NGC Group, without which I might not finish my schooling. With the help from NGC, I will work harder, strive to fulfill my dream, and return the kindness to the society.

—A beneficiary student

China High Speed Transmission sponsors high school students to complete their studies





Case: The parent-child charity campaign on exploring underwater world

In August 2022, to raise the awareness of our employees and their children about marine environmental protection, the Group, in collaboration with the Amity Foundation, invited autistic children to participate in the parent-child charity campaign on exploring the underwater world with our employees and their children to popularize knowledge of marine biodiversity, and to express our care for autistic children. In this activity, we adopted a dolphin on behalf of the Group and funded the oceanarium to ensure the dolphin's well-being.



The site of parent-child charity campaign on exploring underwater world

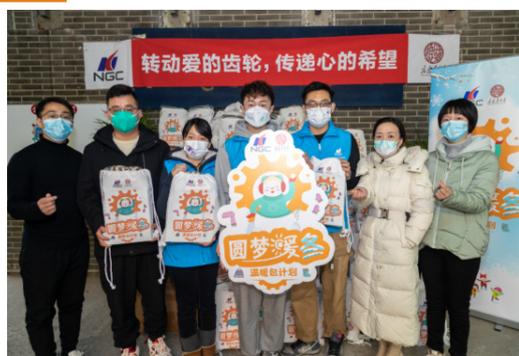


Dolphin Adoption Certificate



Case: "Warm Winter" care package program

In December 2022, in response to the learning and living needs of children in need, the Group joined hands with the Amity Foundation to carry out the "Warm Winter" care package program and donated with the total value of RMB 50,000, which included children's epidemic prevention materials, warm materials, school supplies, and books.



"Warm Winter" care package program

KPIs of the HKEX ESG Reporting Guide

Environmental KPIs				
KPIs	Unit	2022	2021	
Emission of nitrous oxides (NOX)	Kg	546.59	1,269.21	
Emission of sulphur oxides (SOX)	Kg	68.19	12.24	
Emission of particulate matter	Kg	20.34	23.57	
Emission intensity of GHG	Tons of carbon dioxide equivalent/RMB 10,000	0.12	0.16	
GHG emissions intensity (Scope 1)	Tons of carbon dioxide equivalent/RMB 10,000	0.0009	0.0011	
GHG emissions intensity (Scope 2)	Tons of carbon dioxide equivalent/RMB 10,000	0.12	0.16	
Total emission of GHG	Tons of carbon dioxide equivalent	179,828.81	223,689.74	
GHG emissions (Scope 1)	Tons of carbon dioxide equivalent	1,421.68	1,484.36	
GHG emissions (Scope 2)	Tons of carbon dioxide equivalent	178,407.13	222,230.73	
Intensity of total wastes	Kg/RMB 10,000	5.35	6.15	
Total wastes	Ton	8,195.98	8,598.58	
Intensity of hazardous wastes	Kg/RMB 10,000	0.84	1.15	
Total hazardous wastes	Ton	1,287.79	1,613.48	
Waste of paint residue	Ton	174.64	203.21	
Waste of lead acid battery	Ton	20.05	64.47	
Waste oil	Ton	153.91	142.31	

KPIs	Unit	2022	2021
Contaminants	Ton	329.43	359.30
Washable waste containers	Ton	75.96	132.40
Waste chemical containers (including waste paint buckets)	Ton	92.07	105.79
Waste cleaner	Ton	23.46	20.63
Waste activated carbon	Ton	78.13	117.92
Waste quenching oil	Ton	20.53	82.42
Dross (including sludge)	Ton	199.40	170.43
Waste salt	Ton	-	2.88
Waste rust preventive oil	Ton	1.02	8.16
Oily waste	Ton	119.19	203.57
Intensity of non-hazardous wastes	Kg/RMB 10,000	4.51	5.00
Total non-hazardous wastes	Ton	6,908.19	6,985.10
Non-hazardous wastes recycled (grinding metal chips)	Ton	878.36	796.14
Non-hazardous wastes recycled (wood)	Ton	6,029.83	6,188.96
Intensity of energy consumption	MWh/RMB 10,000	0.23	0.25
Total energy consumption	MWh	349,675.68	354,865.75
Direct energy consumption	MWh	36,845.35	38,972.75
Indirect energy consumption	MWh	312,830.33	315,893.00
Renewable energy (solar photovoltaic energy)	MWh	30,294.74	32,294.00
Natural gas	MWh	2,573.39	1,390.71
LPG	MWh	3,190.55	4,324.91
Diesel	MWh	292.72	508.19
Gasoline	MWh	493.95	454.94
Purchased electricity	MWh	312,830.33	315,893.00

KPIs	Unit	2022	2021
Intensity of water consumption	m ³ /RMB 10,000	0.43	0.50
Total water consumption	m ³	657,324.00	699,110.00
Total wastewater discharge	m ³	211,319.00	230,054.00
Intensity of packaging material used	Kg/RMB 10,000	6.15	6.70
Total packaging material used	Ton	9,424.10	9,304.87
Steel	Ton	3,941.80	1,796.37
Plastics	Ton	209.30	185.50
Wood	Ton	5,273.00	7,323.00

Social KPIs

KPIs	Unit	2022	2021
Employee composition			
Total employees	Person	6,893	6,115
Classified by gender			
Female	Person	607	609
Male	Person	6,286	5,506
Classified by age			
≤30	Person	1,457	1,118
31 - 50	Person	4,912	4,494
≥51	Person	524	503
Classified by employment type			
Full-time	Person	6,893	6,115
Part-time	Person	0	0
Classified by employee category			
Senior management	Person	26	25
Middle management	Person	278	264

KPIs	Unit	2022	2021
General and skilled employees	Person	6,589	5,826
Classified by geographical region			
Chinese mainland	Person	6,646	5,913
Hong Kong, China	Person	2	2
Other countries or regions	Person	245	200
Employee turnover rate			
Total Employee turnover rate	%	5.11	5.15
Employee turnover rate by gender–Female	%	4.86	3.79
Employee turnover rate by gender–Male	%	5.13	5.30
Employee turnover rate by age–≤ 30	%	11.43	10.92
Employee turnover rate by age–31 - 50	%	3.50	4.04
Employee turnover rate by age–≥ 51	%	0.95	1.18
Employee turnover rate by region– Chinese mainland	%	4.59	4.81
Employee turnover rate by region–Hong Kong, China	%	0.00	0.00
Employee turnover rate by region–Others	%	17.23	14.16
Health and safety management			
Number of deaths related to work–Total number	Person	0	0
Number of deaths related to work–Female employees	Person	0	0
Number of deaths related to work–Male employees	Person	0	0
Working days lost due to injury related to work –Total number	Day	597	1,291
Working days lost due to injury related to work–Female employees	Day	0	0
Working days lost due to injury related to work–Male employees	Day	597	1,291

KPIs	Unit	2022	2021
Number of injuries due to work–Total number	Item	27	30
Number of injuries due to work–Female employees	Item	0	0
Number of injuries due to work–Male employees	Item	27	30
Employees training			
Total trainees	Person	6,855	6,057
Number of trainees–Female employees	Person	592	574
Number of trainees–Male employees	Person	6,263	5,483
Number of trainees–Senior management	Person	26	25
Number of trainees–Middle management	Person	269	257
Number of trainees–General and skilled employees	Person	6,560	5,775
Total training hours	Hour	152,101	104,102
Total training hours–Female employees	Hour	9,847	8,684
Total training hours–Male employees	Hour	142,254	95,418
Total training hours–Senior management	Hour	533	511
Total training hours–Middle management	Hour	7,324	6,934
Total training hours–General and skilled employees	Hour	144,244	96,657
Average training hours	Hour/person	22.20	17.20
Total number of courses	Course	3,410	2,252
Composition of suppliers			
Total number of suppliers	Number	670	631
Total number of suppliers–Chinese mainland	Number	650	614
Total number of suppliers–Hong Kong, China	Number	0	1
Total number of suppliers–Other countries or regions	Hour	20	16

KPIs	Unit	2022	2021
Product responsibility			
The number of products receiving complaints	Number	0	0
The number of products which must be recalled due to safety and health reasons among the total sold or delivered products	Piece	0	0
The number of products receiving complaints–Related to the health and safety of products	Number	0	0
The number of products receiving complaints–Related to customer privacy	Number	0	0
Business ethics			
Number of lawsuits concluded in association with the Group or the bribery of its employees	Number	0	0
Public welfare			
Person-time of participating in the volunteer activities	Person	77	82
Person-time of participating in the volunteer activities–the employees of the Group	Person	65	22
Person-time of participating in the volunteer activities–employees outside the Group	Person	12	60
Total hours of participating in the volunteer activities	Hour	2,700	84
Expenditure in donations	RMB	10,164,000	80,000

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	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P4, P36, P101
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P50, P101~102
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	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P74~77
B6: Product Responsibility	General Disclosure	Information on: a) the policies; and b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	P52~72
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P106
	B6.2	Number of products and services related complaints received and how they are dealt with.	P71, P106
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	P59
	B6.4	Description of quality assurance process and recall procedures.	P62~70
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	P72
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.	P13~15

Aspect	Indicator No.	Indicator Content	Page
	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.	P13, P106
	B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P13~15
	B7.3	Description of anti-corruption training provided to directors and staff.	P15
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.	P99~100
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P99~100
	B8.2	Resources contributed (e.g. money or time) to the focus area.	P99, P106

Feedback from Readers

Thank you for reading the 2022 Environmental, Social and Governance Report of China High Speed Transmission Equipment Group Co., Ltd.. In order to provide you and other stakeholders with more valuable information and to facilitate China High Speed Transmission Equipment Group Co., Ltd. to improve its ESG management capabilities and standards, we sincerely welcome your comments and suggestions on the report and feedback to us through the following channel for further communication



Email: esg@chste.com

1. Which types of stakeholders are you?

- | | | |
|--|--|--|
| <input type="checkbox"/> Government and regulatory bodies | <input type="checkbox"/> Shareholders and investors | <input type="checkbox"/> Customers |
| <input type="checkbox"/> Employees and the trade union | <input type="checkbox"/> Suppliers/Partners | <input type="checkbox"/> The general public and the neighborhood |
| <input type="checkbox"/> Media and Non-Governmental Organisations (NGOs) | <input type="checkbox"/> Trade Associations / Business Organisations | <input type="checkbox"/> Other |

2. Do you consider that this report fully reflects the environmental, social and governance performance of China High Speed Transmission Equipment Group Co., Ltd. ?

- Yes Fair No

3. Do you think this report has fully responded to the expectations and demands of stakeholders of China High Speed Transmission Equipment Group Co., Ltd.?

- Yes Fair No

4. Do you think the quantitative information disclosed in this report is objective, true and effective?

- Yes Fair No

5. Do you consider the presentation of this report to be clear and easy to understand?

- Yes Fair No

6. Do you think the layout of this report helps you understand the relevant information?

- Yes Fair No

7. What other comments and suggestions do you have on the ESG management and the ESG Report of China High Speed Transmission Equipment Group Co., Ltd.?