

2023

Environmental, Social and  
Governance Report

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## About This Report

This report is a true reflection of Shandong Hi-Speed New Energy Group Limited's active fulfillment of its environmental, social and governance responsibilities and its attainment of comprehensive, coordinated and sustainable development. Forward-looking descriptions such as business plans and development strategies involved in this report do not constitute the Company's actual commitments to investors. Investors are advised to pay attention to the risks.

### TIME FRAME

The time frame for the content of this report is from 1 January 2023 to 31 December 2023, and some parts of this report exceed the above-mentioned time frame.

### REPORTING SCOPE

This report focuses on the Group's environmental, social and governance ("ESG") strategies, governance, actions, targets and performance relating to the investment, development, construction, management, operation and maintenance of its photovoltaic power business, wind power business and clean heat supply business in the People's Republic of China ("China" or "the PRC"). Unless otherwise specified, the businesses covered by the policies, systems, representations and key performance indicator data in this report are consistent with the scope of the Group's financial report.

### DESCRIPTION OF REFERENCES

For easy reference and reading, Shandong Hi-Speed New Energy Group Limited is also referred to as "SHNE", "the Company", "we", and, together with its subsidiaries, the "Group" in this report.

### DATA SOURCES AND STATEMENTS

All data is derived from the official documents, statistics and financial reports of the Company, as well as the environmental, social and governance data that has been collected, summarized and reviewed by the Company. This report is published in two languages: Chinese and English. The Chinese version shall always prevail in case of any discrepancy between the English version and Chinese version. If the business and financial data in the ESG report are different from those in the annual report, please refer to the annual report for accurate information.

### REPORTING BASIS

This report was prepared in accordance with the Environmental, Social and Governance Reporting Guide (the "Guide"), which is contained in Appendix C2 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Stock Exchange"). The Group prepares the report in accordance with the Materiality, Quantitative, Balance and Consistency principles specified in the above-mentioned Guide. The details are as follows:

- **Materiality principle:** In accordance with the relevant principles and requirements of the Stock Exchange's Guide as well as the key concerns of the capital market on the Company's sustainable development, SHNE communicated with various stakeholders through different means and conducted peer-to-peer benchmarking analysis on the issues disclosed in the comparable companies' reports to identify and select material ESG issues related to SHNE. The details are in the "Stakeholder communication" chapter. The materiality of different material issues has been reviewed and confirmed by the board (the "Board") of directors (the "Directors") of the Company and the management.
- **Quantitative principle:** SHNE has established a standardized management tool for ESG indicators to collect quantitative key disclosure indicators of the whole "environmental" subject area and part of the "social" subject area included in the ESG Reporting Guide, and has summarized them during the year to prepare this report for external disclosure eventually. The ESG quantitative data is detailed in the sections of this report.
- **Balance principle:** This report aims to present a balanced account of SHNE efforts in various aspects of ESG, covering areas such as environmental impact, employee relations, product responsibility, and community engagement.
- **Consistency principle:** This report made no major adjustments to the disclosure scope of the ESG reports in previous years, used consistent statistical methods, and further refined some of the disclosure categories in the ESG Reporting Guide. Year-on-year comparison of ESG data is detailed in the sections of this report.

### ACCESS TO THE REPORT

This report is published electronically. The electronic report is available for viewing and downloading on the website of the Group ([www.shneg.com.hk](http://www.shneg.com.hk)) and the website of the Stock Exchange's HKEXnews ([www.hkexnews.hk](http://www.hkexnews.hk)).

## Chairman's Statement

The year 2023 marks the beginning of the full implementation of the guiding principles set forth in the 20th National Congress of the Communist Party of China. Following three years of COVID-19 prevention and control efforts, the economy has begun its journey of recovery and growth. Both domestically and internationally, the new energy industry faces a landscape riddled with challenges and opportunities. In alignment with the global push to combat climate change and advance green and low-carbon development, the new energy sector bears the critical responsibility of achieving sustainable development goals. At SHNE, we have always taken "focusing on clean and low-carbon, accelerating energy transformation, and creating an industrial ecosystem" as our own responsibility and duty. This commitment underscores our dedication to contribute to the creation of a beautiful and sustainable China.

### We have carried on the past and forged a new path.

Reflecting on our ESG management journey, SHNE has meticulously integrated domestic and international ESG development trends with our current circumstances to continuously refine our ESG governance framework. In July 2023, we established a Sustainability Committee under the Board of Directors, undertaking related initiatives in a prudent manner. Simultaneously, SHNE has formulated the "6+3+4" ESG management enhancement roadmap, effectively bolstering the Company's capacity for sustainable development. We have proactively addressed stakeholders' concerns, submitting the S&P's CSA questionnaire in a timely manner. Our latest score has reached the global average in the utilities industry, further solidifying our leading position in the sustainable development of the new energy sector.

### We have embraced a path towards a low-carbon future driven by innovation.

SHNE has been actively contributing to the nation's carbon peaking and carbon neutrality strategy, embodying the ethos of "lucid waters and lush mountains are invaluable assets" in our green development philosophy. Leveraging our expertise in the new energy sector, SHNE has played a pivotal role in supporting the society, the nation, and the global community in combating climate change. In terms of business expansion, the Company has adopted "photovoltaic plus" green practices. It has created a Solution to Integrated Smart Energy for Green Highways exemplified by the Gushan Service Area project, which has set a model of green upgrading for highway infrastructure. In terms of responding to climate change, the Company has been promoting the formulation of climate strategies and emission reduction roadmaps, while also exploring a transformation of our business model geared towards addressing climate change. In the realm of ecological and environmental protection, SHNE has been planning to conduct biodiversity assessments for projects and initiating pilots for natural capital accounting at photovoltaic sand control stations. Our objective is to consistently enhance biodiversity conservation strategies across the entire project lifecycle, fortifying the Company's commitment to becoming a nature-friendly enterprise.

### We have made joint efforts to deliver a diversified development.

SHNE has actively embraced its social responsibilities, adhering to its founding mission, and collaborating with employees, customers, partners, and stakeholders across various sectors to foster a more prosperous society. The company has built a characteristic and branded talent training system, fostering a workplace culture that is diverse, equitable, and inclusive. Additionally, we have established a unique and transparent ESG system that exceeds regulatory requirements, facilitating the mutual growth of all stakeholders. With technology and ethics as our guiding principles, we have intensified our community investments centered around wind and solar power projects, contributing to rural revitalization and spreading warmth within our communities.

As a leading enterprise in the clean energy industry, SHNE will capitalize on the promising industry, maximizing our resource advantages to propel sustainable societal development forward.

## Statement From the Board

SHNE places high importance on Environmental, Social, and Governance, and has been pushing forward its ESG governance mechanisms. The Company remains committed to bolstering its ESG governance framework and increasing supervision and engagement from both the Board of Directors and management on ESG issues. These endeavors are geared towards fostering the seamless integration of the Company with society and the environment, thereby generating long-term and sustainable corporate value.

The Board of Directors, as the highest decision-making body for the Company's sustainable development issues, is responsible for making decisions on significant matters such as sustainable development goals, strategies, planning, and the governance framework for sustainable development. It is to ensure the integration of ESG principles with the Company's strategies. The Board of Directors has established a Sustainability Committee (the "Sustainability Committee") tasked with reviewing the Company's sustainable development goals, strategies, planning, management systems and sustainability reports. It also evaluates the outcomes of sustainable risk and opportunity assessments, along with the corresponding strategies and management approaches. Furthermore, the Management Committee (the "Management Committee") and the Operation Committee (the "Operation Committee") of the Company are responsible for reviewing significant issues related to sustainable development goals, strategies and planning, and sustainable development management systems. The ESG management office of the Company (the "ESG Management Office") is responsible for coordinating annual sustainable development works, including constructing sustainable development management methods, leading the formulation of the Company's sustainable development strategies, goals, and planning, making annual work plans for sustainable development, and conducting the identification and assessment of sustainable development risks and opportunities. At the executive level, the Company has established focal group of various departments at the HQ and subsidiaries, comprising employees from various departments. These liaisons are tasked with coordinating internal and external resources to execute routine ESG initiatives and provide information reporting. The ESG Task Force of the Company (the "ESG Task Force") is responsible for implementing special projects in accordance with the Company's sustainable development strategies, goals, and short-term to medium-term plans. It also supports the implementation of special tasks related to material issues and develops annual work plans for material issues.

SHNE focuses on assessing ESG risks that could potentially bring significant impacts on the Company. Through comprehensive ESG risk assessments, we evaluate the importance of pertinent ESG issues and delineate focal points for our annual ESG initiatives. In 2023, aligning with both domestic and international ESG development trends and our own ESG status, SHNE devised an ESG management enhancement roadmap aimed at effectively bolstering our ESG management practices. Simultaneously, the Company has conducted the identification, assessment, and response to climate change risks and opportunities, in accordance with the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD). (For detailed information on climate risk and opportunity management, please refer to *Climate Change Response*.)

SHNE has established key ESG performance targets covering energy usage, water efficiency, and other crucial aspects based on the Company's current situation and the requirements from regulatory agencies. We are meticulously developing supplementary ESG targets. The Board of Directors, the Sustainability Committee, and the Company's management will conduct regular supervision and assessments of the advancement of the significant ESG objectives to guarantee their attainment as envisaged.

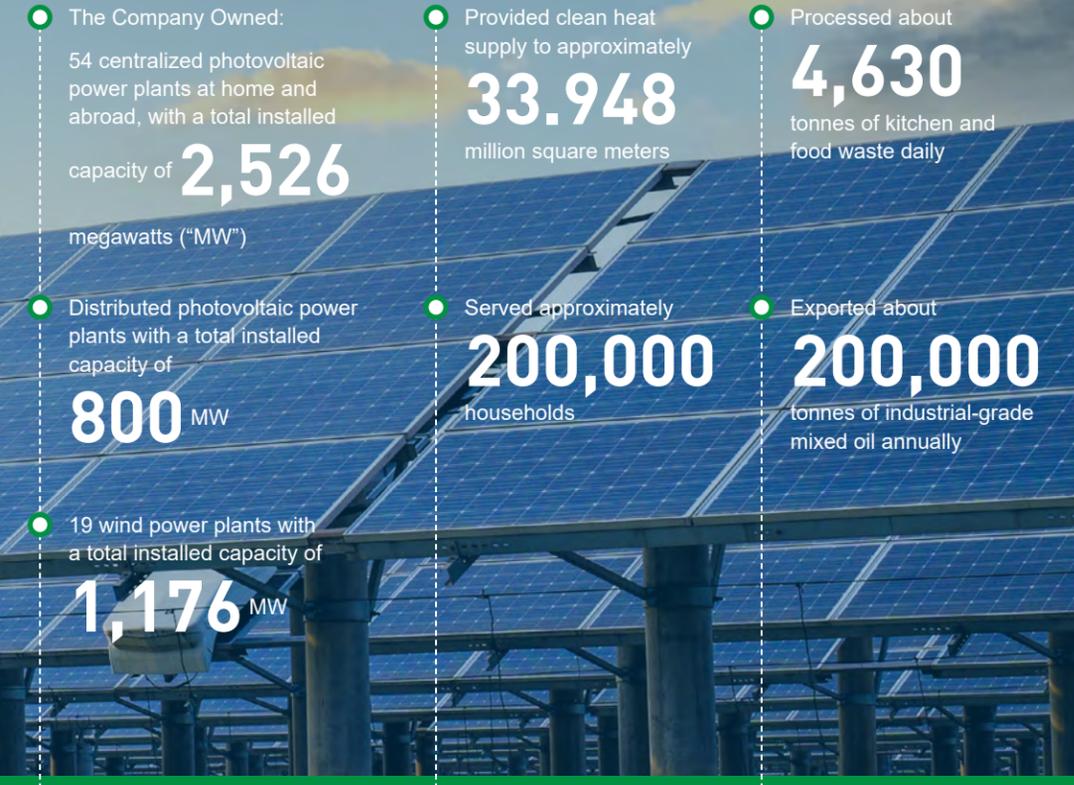
This report discloses in detail the progress and effectiveness of SHNE's ESG work in 2023. It was reviewed and approved by the Board of Directors on March, 26, 2024. The Board of Directors and all the directors guarantee that there are no false representations, misleading statements, or material omissions from this report, and accept joint and several responsibilities for the truthfulness, accuracy and completeness of its contents.

# About Us

## About the Group

Shandong Hi-Speed New Energy Group Limited, a state-owned enterprise listed on the Main Board of the Stock Exchange (01250.HK), was jointly established by Shandong Hi-Speed Holdings Group under the State-owned Assets Supervision and Administration Commission ("SASAC") of the Shandong Provincial People's Government, Beijing Enterprises Water Group under the SASAC of the People's Government of Beijing Municipality, and CITIC Private Equity Funds.

SHNE maximizes the resource advantages derived from its two major shareholders, Shandong Hi-Speed Holdings Group Limited ("SDHG") (00412.HK) and Beijing Enterprises Water Group Limited (00371.HK), alongside a management team equipped with extensive expertise. We actively align ourselves with national policies, seizing opportunities in the clean energy sector, and steadily advancing our photovoltaic power business, wind power business and clean heat supply business. Concurrently, we are venturing into other domains of clean energy, including energy storage, power distribution, and hydrogen production, with the aim of establishing ourselves as a leading, distinctive, and competitive power within the industry. The Group has successfully conducted clean energy projects in over 20 provinces and cities nationwide. We are exploring opportunities in the international market.



Embracing the core responsibilities of technological innovation, environmental protection and benefiting mankind, the Company spearheads the design, construction, operation, and management of exemplary clean energy projects. As of 31 December 2023, the Company had 54 centralized photovoltaic power plants at home and abroad, with a total installed capacity of 2,526 megawatts ("MW"); distributed photovoltaic power plants with a total installed capacity of 800 MW; 19 wind power plants with a total installed capacity of 1,176 MW; and has provided clean heat supply to approximately 33.948 million square meters, serving approximately 200,000 households. We are committed to serve as a catalyst for sustainable businesses and as a beacon of innovation within the Shandong Hi-Speed Group Co. Ltd. (the "Shandong Hi-Speed Group ")'s new energy portfolio.

Shandong High-Speed Renewable Energy Group Limited (SHREG) (000803.SZ) focuses on investments and operations related to organic waste disposal and resource utilization. The Company has established a platform for the processing and export of regenerated oil. It processes about 4,630 tonnes of kitchen and food waste daily, and exports about 200,000 tonnes of industrial-grade mixed oil annually.

SHNE's largest shareholder, SDHG, is an important overseas investment, financing and industrial holding platform of Shandong Hi-Speed Group. Guided by the philosophy of "Prudently Compliant, Steady Development", it provides comprehensive support to SHNE by prioritizing strategic emerging sectors such as new energy, new technology, and healthcare while capitalizing on investment prospects. Aligning with the nation's carbon peaking and carbon neutrality strategy, Shandong Hi-Speed Group vigorously expands its presence in green and environmental protection industries such as new energy.

Going forward, SHNE will remain committed to the core principle of consistently generating value for both the society and our stakeholders. Our objective is to attract visionary individuals, unite our strengths, and foster collective growth alongside with our employees and partners through collaboration and knowledge sharing. Together, we will spearhead the transformation of the energy landscape, prioritizing green, low-carbon, and sustainable development initiatives. Our goal is to make each day brighter, contribute to the creation of a "beautiful China," and drive global energy transition.



## Annual Highlighted Performance

### IR



January 10, 2024  
Comein's Third Annual Best IR Team List – "Best IR Team in Hong Kong Stock Market"  
Shenzhen Comein Finance Technology CO



### ESG



January 11, 2024  
The 7th China Outstanding IR Awards – "Best ESG Newcomer"  
RoadShow China



November 17, 2023  
ISSB Sustainable Disclosure Standards Pioneer Partner  
International Sustainability Standards Board (ISSB)



October 31, 2023  
Capital Asia Magazine 2023 Environmental, Social, and Corporate Governance (ESG) Grand Prize  
Capital Asia Magazine



June 1, 2023  
Golden Bee Corporate Social Responsibility China List - Title of "ESG Competitiveness · Sustainable Development"  
Golden Bee China



December 15, 2023  
Hong Kong International Annual ESG List - Best ESG Pioneer Award  
Hong Kong Ta Kung Wen Wei Media Group, the Listed Companies Association of Beijing, the Hong Kong Chinese Enterprises Association

### General



December 6, 2023  
The 8th Zhitong Finance Annual Listed Company Selection - Best Energy and Resources Company  
Zhitong Finance



December 11, 2023  
Liepin.com 2023 North China Social Responsibility Employer Enterprise Award  
Liepin.com

### General



December 15, 2023  
The 13th China Securities Golden Bauhinia Awards - Most Valuable Listed Company for Investment  
Hong Kong Ta Kung Wen Wei Media Group, Hong Kong Chinese Enterprises Association, Chinese Financial Association of Hong Kong, Chinese Securities Association of Hong Kong, the Hong Kong Chartered Governance Institute



December 21, 2023  
Gelonghui 2023 Jinghe Award - Annual Growth Value Award  
Gelonghui

### Business



China Electricity Council (August 1, 2023)  
Bei qingfeng Wind Power Plant was recognized as 2022 National Grade AAAAA Enterprise of Production and Operation Indicators Benchmarking against Wind Power Plants



www.bjx.com.cn, guangfu.bjx.com.cn (September 1, 2023)  
The 12th "Polaris Cup" 2023 Annual Impactful Photovoltaic Development Investor/EPC Award



Xianghetu Wind Power Plant in Aixa League, Inner Mongolia was recognised as 2022 National Grade AAAAA Enterprise of Production and Operation Indicators Benchmarking against Wind Power Plants.



The 12th "Polaris Cup" 2023 Annual Impactful Featured Photovoltaic Application Project Case Enterprise



September 16, 2023  
Outstanding Exhibitor at the 2023 Zaozhuang International Lithium Battery Industry Exhibition  
Shandong Trade Promotion Association, Energy Administration of Shandong Province, Zaozhuang Municipality People's Government



### Case



November 16, 2023  
Outstanding ESG Comprehensive Practice Cases of Listed Companies in 2023  
China Association for Public Companies



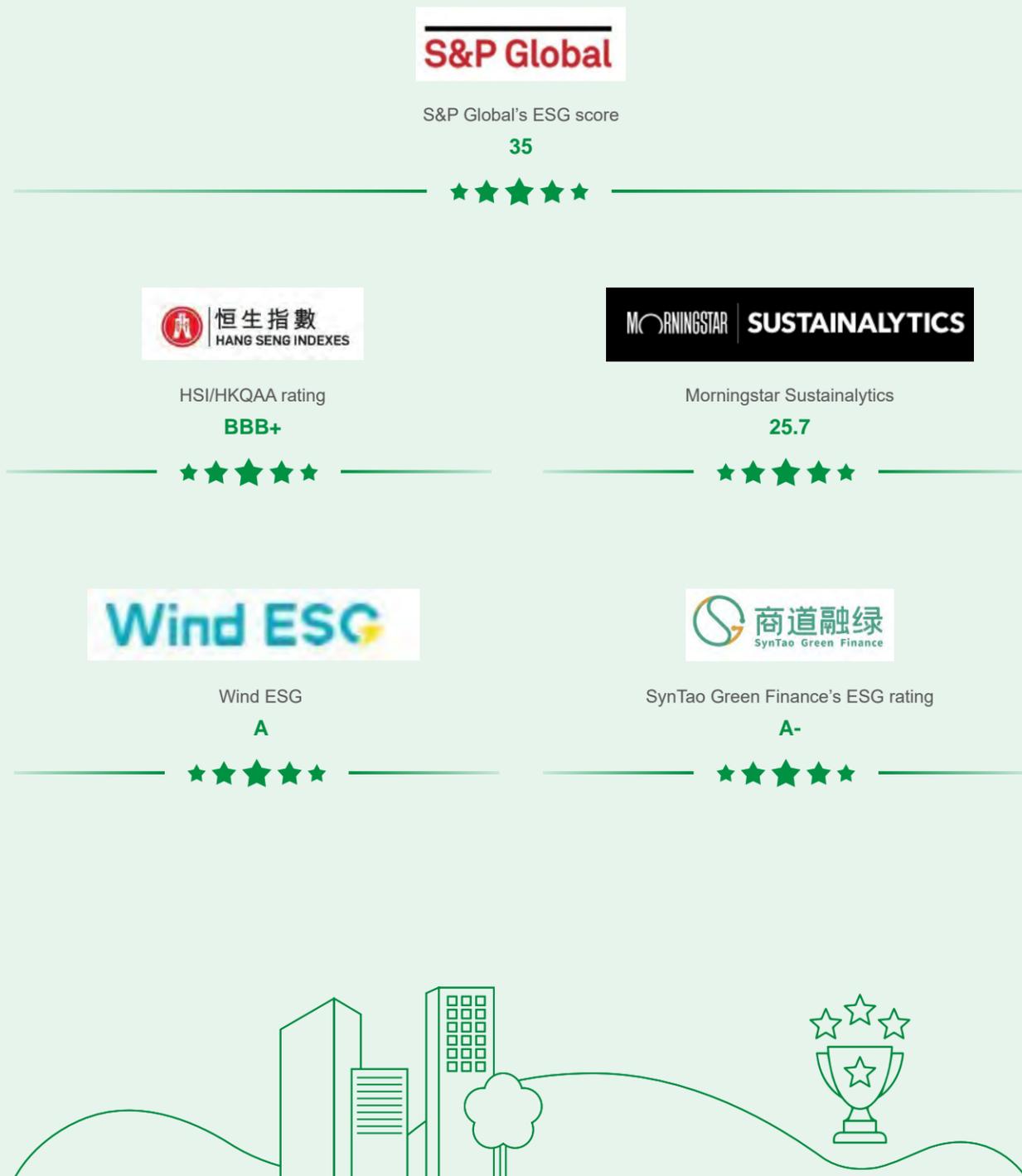
November 30, 2023  
2023 Green Design International Nomination Award  
World Green Design Organization



December 22, 2023  
Selected in the 2023 ESG White Paper, awarded the "ESG Practice Case - Innovative Green Infrastructure Upgrade Exemplar"  
www.huanqiu.com,

## ESG Rating

In 2023, SHNE demonstrated remarkable performance in ESG management and clean energy investments, garnering frequent praise from international rating agencies and capital market. This ongoing recognition has strengthened our international competitiveness.



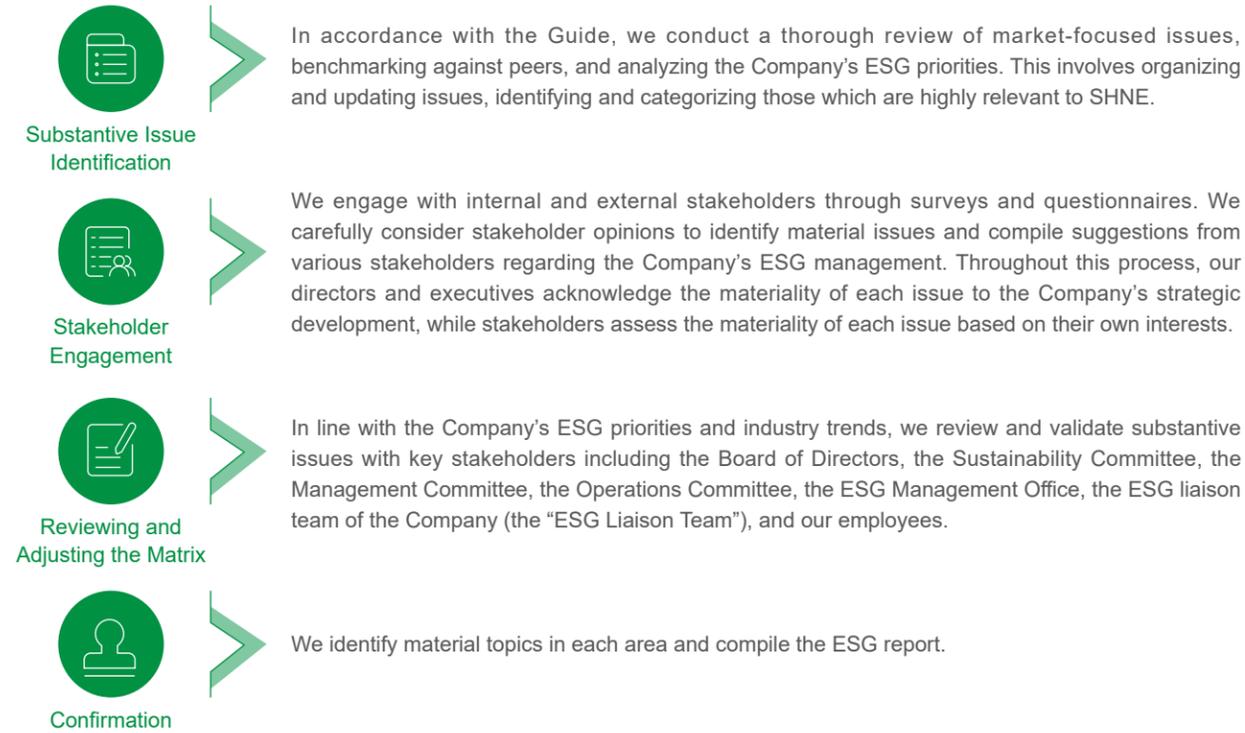
## Stakeholders' Communication

SHNE pays close attention to and actively seeks feedback and opinions from stakeholders, broadening communication channels to facilitate meaningful dialogue. The Company provides targeted feedback in response to stakeholders' expectations.

### Stakeholder's interaction and communication

Stakeholder	Topics of Concern	Communication Channels
 Employees	<ul style="list-style-type: none"> <li>Green Industrial Opportunities</li> <li>Talent Development</li> <li>Health and Safety</li> <li>Labor Rights and Welfare</li> </ul>	<ul style="list-style-type: none"> <li>Employee Interviews and Suggestion Box</li> <li>Employee Meetings</li> <li>Internal Training</li> <li>ESG Publicity and Special Training</li> </ul>
 Stakeholders/Investors	<ul style="list-style-type: none"> <li>Green Industrial Opportunities</li> <li>Responding to Climate Change</li> <li>Green Financial Opportunities</li> <li>ESG Governance</li> <li>Risk Management</li> <li>Business Ethics</li> <li>Stakeholder's Communication</li> </ul>	<ul style="list-style-type: none"> <li>Shareholder Meetings/Investor Meetings</li> <li>Announcements/Press Releases</li> <li>Corporate Website/Emails</li> <li>Salons, Roadshows, Reverse Roadshows</li> <li>On-site Project Visits</li> </ul>
 Governments/Regulatory Bodies	<ul style="list-style-type: none"> <li>Green Industrial Opportunities</li> <li>Waste Treatment</li> <li>Environmental Management and Resource Utilization</li> <li>Ensuring Product and Service Quality</li> <li>Labor Rights and Welfare</li> </ul>	<ul style="list-style-type: none"> <li>Project Inspection and Acceptance</li> <li>Information Disclosure</li> <li>Forums and Seminars</li> </ul>
 Suppliers	<ul style="list-style-type: none"> <li>Environmental Management and Resource Utilization</li> <li>Ensuring Product and Service Quality</li> <li>Supply Chain ESG Management</li> </ul>	<ul style="list-style-type: none"> <li>Supplier Daily Management</li> <li>Supplier Inspection</li> </ul>
 Customers and Consumers	<ul style="list-style-type: none"> <li>Maintaining Customer Relationships</li> <li>Waste Treatment</li> <li>Ensuring Product and Service Quality</li> <li>Health and Safety</li> <li>Labor Rights and Welfare</li> <li>Business Ethics</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Website</li> <li>Market Research</li> <li>WeChat Official Account/Social Media</li> <li>Consumer Hotline and Complaints Phone</li> <li>Questionnaires</li> <li>Customer Visits</li> </ul>
 ESG Rating Agencies	<ul style="list-style-type: none"> <li>Environmental Management and Resource Utilization</li> <li>Health and Safety</li> <li>ESG Governance</li> <li>Risk Management</li> <li>Stakeholder Communication</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Reports</li> <li>Corporate Website</li> <li>Media News</li> <li>Salons, Forums, and Workshops</li> </ul>
 Industry Associations	<ul style="list-style-type: none"> <li>Environmental Management and Resource Utilization</li> <li>Waste Treatment</li> <li>Biodiversity Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Communications</li> <li>Corporate Visit</li> </ul>
 Neighbourhood Communities	<ul style="list-style-type: none"> <li>Waste Treatment</li> <li>Community Relations</li> <li>Biodiversity Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Assemblies of Villager Representatives</li> <li>Face-to-face Communication</li> </ul>

To gain a deeper understanding of our stakeholders and the market dynamics for identifying substantive issues relevant to SHNE, we refer to the Guide. By aligning this with the Company's development strategy and key priorities, we conduct an in-depth analysis of ESG issues pertinent to the capital market and perform a materiality analysis. This analysis serves as the cornerstone for our ESG initiatives and provides a framework for report compilation. The process of identifying material issues is outlined as follows:



We will discuss the content of each topic separately in this report. The results of the 2023 materiality topic analysis are shown in the chart below.

2023 SHNE's materiality topic matrix



Through stakeholder analysis, we have identified the following five highly material topics, which align with the six topics confirmed by SHNE for 2023. Therefore, the Company will intensify its focus on the following topics. Detailed analysis is provided in the table below:

SHNE's Topics of Highest Materiality



In 2023, the Group's Shandong High-Speed Renewable Energy Group Limited actively responded to the concerns of various stakeholders by formally joining the United Nations Global Compact (UNGC). We pledge to integrate the Global Compact and its principles into our business strategy, culture, and daily operations. Additionally, we are committed to participate in collaborative projects that advance the United Nations Sustainable Development Goals (SDGs). We will embed the principles of environmental sustainability, social responsibility, and responsible governance into our corporate development strategy and business practices, thereby contributing to the creation of a zero-carbon world powered by new energy.

# 01

## Strengthen Risk Control and Compliance

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SHNE always regards a sound governance system as the cornerstone for the Company's sustainable development. We remain committed to enhance our ESG governance and management system, continually refining our risk management practices, upholding business ethics, safeguarding data security and privacy, strengthening intellectual property management, and promoting the sustainable development of our company.

- ESG Governance Structure
- Risk Prevention and Control Strengthening
- Business Ethics and Responsibilities Perseverance
- Information Security and Privacy Protection

# ESG Governance Structure

As a leading enterprise in the clean energy sector in China, the Company attaches great importance to environmental, social and governance management. We integrate the concept of sustainable development into our daily operations and management, continuously enhancing ESG management and performance to facilitate high-quality development.

In 2023, we made strides in improving our ESG management system, optimizing processes, and bolstering the effectiveness of our ESG management initiatives. In July 2023, the Company established the Sustainability Committee under the Board of Directors. This governance structure places the Board of Directors at the core, with the Sustainability Committee serving as the supervisory body, and the Management Committee, Operation Committee, the Operation Committee, and the ESG Management Office as the management bodies responsible development efforts. Additionally, focal group of various departments at the HQ and subsidiaries and the ESG Task Force serve as the executive organization, carrying out the work related to sustainable development.

## ESG Governance Structure



## ESG Governance Structure

### Board

- The highest agency responsible for sustainable development matters.
- Responsible for decision-making on major issues such as sustainable development goals, strategies and plans, and sustainable development governance systems.

### Sustainability Committee

- Reviews the Company's sustainable development objectives, strategies, plans, management systems, sustainable development reports, etc.
- Reviews the results of the identification and assessment of sustainable risks and opportunities, response strategies and management approaches, etc.

### Management Committee, Operation Committee

- Responsible for reviewing major issues such as sustainable development goals, strategies, plans and sustainable development management systems.

### ESG Management Office

- Formulates the Company's sustainable development management approaches, and promote and implement relevant management systems.
- Takes the lead in organizing the formulation of the Company's sustainable development strategies, objectives, medium-term and long-term sustainable development plans; coordinate and supervise the implementation of related works.
- Formulates the Company's annual work plan for sustainable development; take the lead in organizing the setting of management targets; monitor and track the progress of the targets and major initiatives.
- Takes the lead in organizing the identification and assessment of the Company's sustainability risks and opportunities, figuring out countermeasures, etc.

### ESG Working Group

- Includes two units, namely, focal group of various departments at the HQ and subsidiaries, and the ESG Task Force, which are responsible for the concrete implementation of the ESG work.

### Focal Group of Various Departments at the HQ and Subsidiaries

- Composed of interface staff from various departments to coordinate internal and external resources to carry out regular ESG work, and to cooperate in the completion of information submissions.

### ESG Task Force

- Consists of personnel responsible for special tasks in relevant departments to support the implementation of special tasks on major issues in accordance with the Company's sustainable development strategies, objectives, and short-term and medium-term plans; formulates annual work plans for major issues, supports the setting of objectives and targets for major issues, and reviews and promptly reports the progress of target completion.

The Company always regards the concept of sustainable development as the core of board management. We have established a robust board diversity framework and implemented the *Board Diversity Policy*. When selecting Board members, we consider factors such as gender, age, nationality, ethnicity, cultural and educational backgrounds, professional experience, skills, knowledge, and tenure of service. We regularly review the implementation of board diversity to promote balanced and sustainable development within the Company. As of the reporting period, the Board of SHNE comprises 12 members, including 4 independent directors and 8 executive directors. In 2023, there was one female executive director on the Board of Directors, demonstrating our commitment to diversity and inclusion. Moving forward, we will continue to prioritize diversity in the composition of the Board of Directors.

In 2023, SHNE formulated the *Management Measures for Sustainable Development*, delineating the responsibilities of ESG management across all levels of the Company. These measures encompass meeting protocols, reporting and rating procedures for the capital market, as well as internal monitoring and assessment mechanisms. This initiative aims to enhance the Company's management capabilities in sustainable development and facilitate the institutionalization of streamlined management processes for sustainable development matters.

# Risk Prevention and Control Strengthening

SHNE continues to improve the construction of the risk management system, employing comprehensive and effective risk and internal control measures to improve the level of risk management across the organization. Our objective is to ensure that risks are measurable, controllable, and manageable, thereby safeguarding the Company's sound operation.

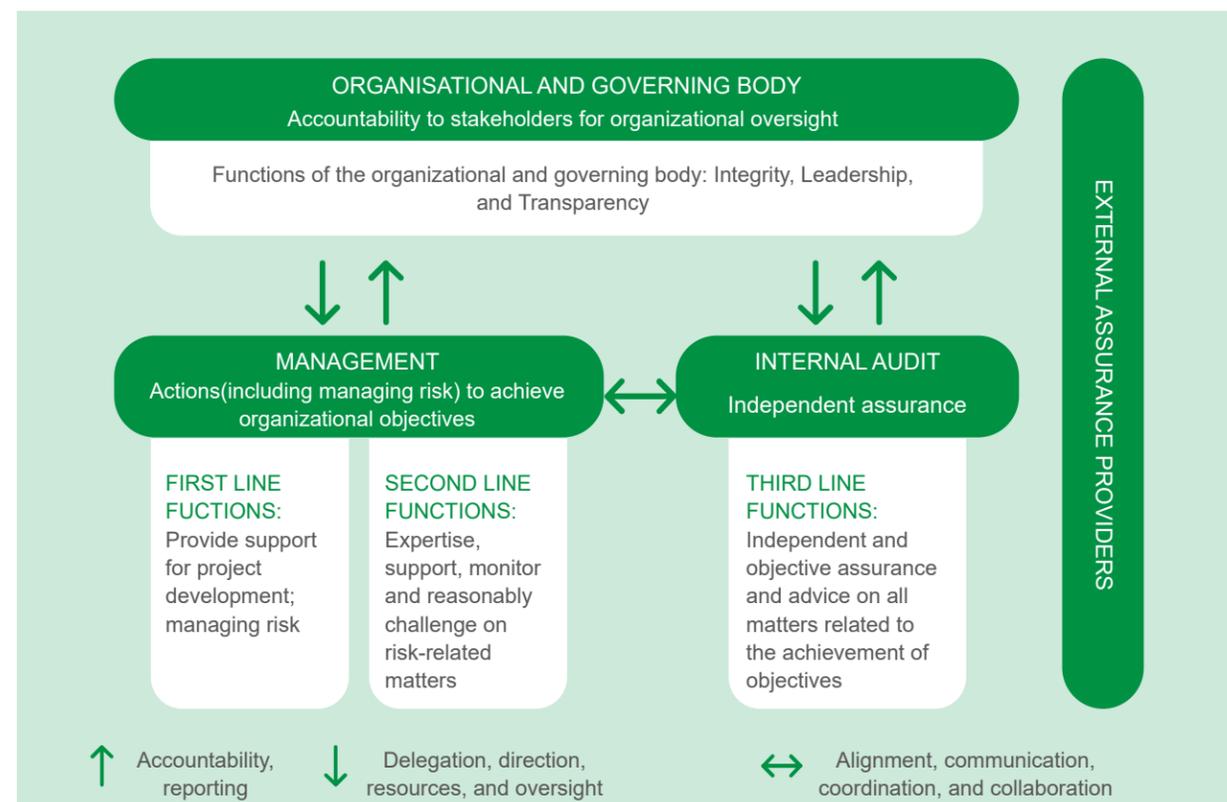
## Risk Management Organization Structure

To ensure effective risk management across all aspects of the Company, we have established a structured risk management organization with clearly defined responsibilities. This includes the formation of a Risk Management Committee (the "Risk Management Committee") under the Management Committee, with the executive president serving as the director, the risk director as the deputy director, and executives responsible for each business line as members. The Risk Management Committee is responsible for leading the construction of the Company's comprehensive risk management system, formulating the Company's risk management policies and systems, comprehensively supervising, controlling and scheduling the business risks in daily operations, and proposing measures to improve the Company's comprehensive risk management.

## Risk Management Framework

The Company has established a risk management structure based on the "Three-Line" Model," which delineates risk prevention and control procedures including risk identification, risk assessment, risk analysis, and risk response. This framework fosters collaboration between the risk management department (the "Risk Management Department") and other business departments to carry out risk management work.

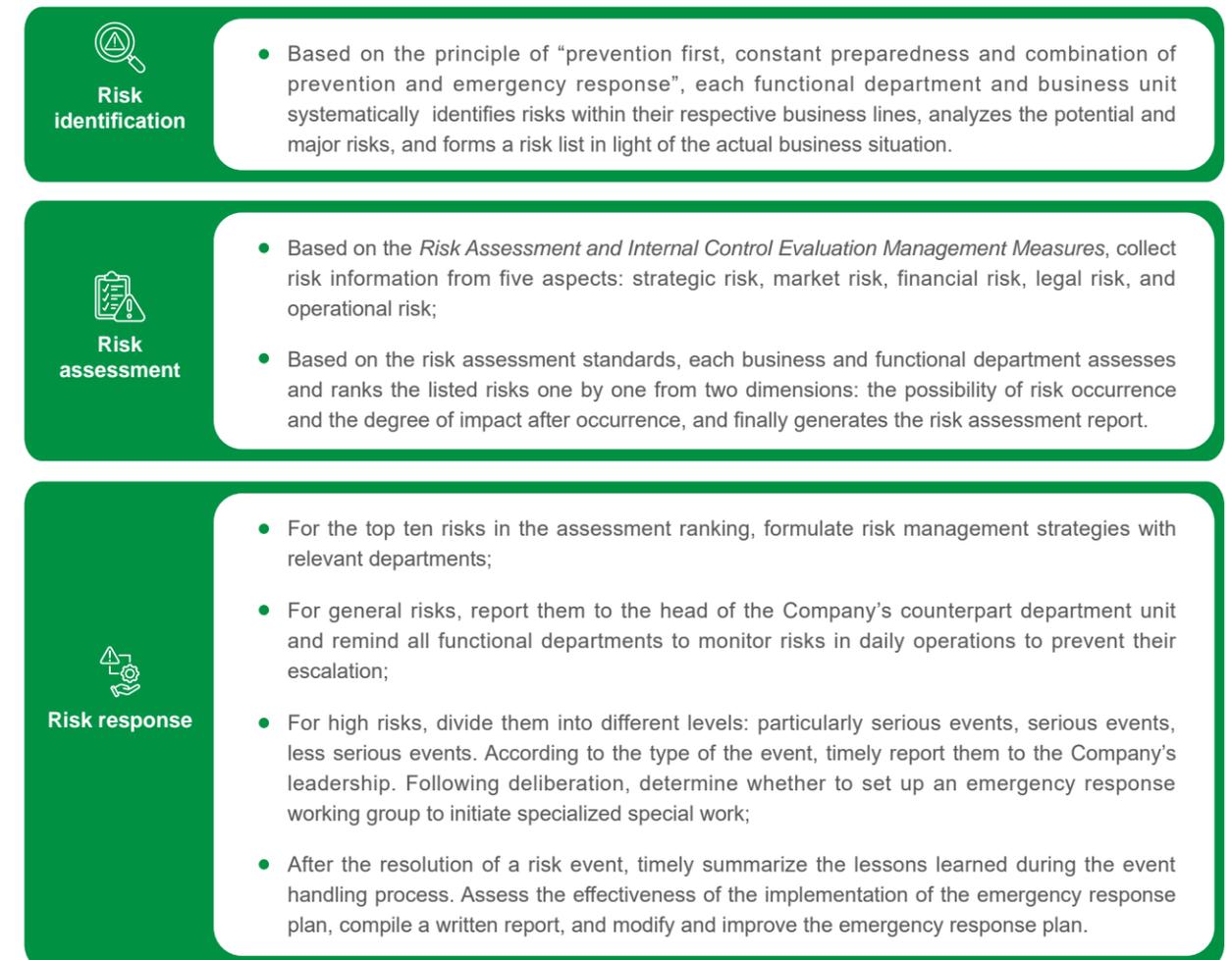
### Risk management framework of SHNE



## Risk Management Process

In 2023, SHNE revised its risk management system, implementing a comprehensive risk management process spanning three key areas: risk identification, risk assessment and risk response. Additionally, we integrated risk management into all facets of the Company's operations and management, serving as a safeguard for our healthy and sustainable development. Moreover, we incorporated ESG risks such as product quality, health and safety, information security, and climate change into the overall risk management process. We formulated risk response strategies to enhance our ability to effectively address ESG risks.

### Risk management process



## Risk Management Measures

In 2023, SHNE carried out a series of risk management works, focusing on inventory risk resolution, investment risk management, optimization of investment measurement models, and enhancements to internal foundational management practices. These efforts contributed to the accumulation of our risk management experience, the improvement of our risk management capabilities, and facilitated stable operations for the Company.

### Risk management measures

#### Inventory risk resolution



- Identified risks in the company's daily operations comprehensively and established a list of mitigating risks;
- Established a Leading Group for Inventory Risk Resolution under the Management Committee, led by the executive president. This group is exclusively tasked with coordinating, organizing, researching, and guiding efforts to centrally resolve risks in the company's daily operations.

#### Investment risk management



- Strengthened risk management and control at various stages of investment projects, including pre-approval, project approval, and Investment Committee decisions. Revised and issued internal systems such as the *Administrative Measures for Decision-Making on Investment Projects* and the *Rules of Procedure of the Investment Decision-Making Committee*, and gradually built a full life cycle risk management;
- Promoted the standardization and scientificisation of key business management aspects such as project investment evaluation, risk tracking and control, and risk time bonding process;
- Optimized staffing and established a dedicated coordination team to enhance the efficiency of project evaluation at all stages;
- Bolstered on-site exploration and due diligence at the forefront of business operations, advancing the risk gate process, and ensuring diligent execution.

#### Optimizing the model to help implement cost reduction and efficiency enhancement



- Identified project risks and refined the investment calculation model by incorporating factors such as upstream market prices, market conditions, internal operating costs, electricity prices, and energy storage investments to reduce costs and enhance project benefits.

#### Strengthening internal management and improving basic management work



- Enhanced the management of investment documentation by establishing a comprehensive tracking system for the entire investment project process, and providing regular updated on progress in project implementation;
- Continuously updated the contents of comprehensive risk assessment reports and established a post-investment tracking and management mechanism to ensure standardized assessment management;
- Strengthened the team's professional ability training and learning, and continuously cultivated versatile talents.

Following the *Basic Standard for Enterprise Internal Control*, the *Guidelines for the Evaluation of Enterprise Internal Control*, and the *Risk Assessment and Internal Control Evaluation Management Measures*, the Company conducted a series of internal audit tasks during the reporting period. These tasks focused on evaluating SHNE's risk and internal control management across five elements: internal environment, risk assessment, control activities, information and communication, and internal supervision. Specific audit tasks included assessing the economic benefits of operating projects, managing construction in progress, and project management. Through these audits, the Company evaluated the appropriateness and effectiveness of its risk and internal control management practices, thereby deepening its understanding and implementation of risk management and control measures.



## Risk Management Training

The Company places significant emphasis on cultivating a risk management culture and consistently conducts risk management training initiatives. We organize research and study sessions focusing on specific risk-related issues and facilitate internal sharing of risk experiences to foster communication between various business departments and the Risk Management Department. These efforts are aimed at enhancing overall risk management awareness across the organization. At the same time, we arrange project site visits for employees in the risk management department to provide them with a deeper understanding of the entire project development and construction process. This hands-on approach serves to enhance the effectiveness of risk management practices within the Company.

### Case: Holding legal compliance risks training

In 2023, the Company carried out training related to legal compliance risks, such as "Interpretation of New Energy Land Use Compliance Policies" and "Sharing of Common Legal Issues during the Operation Period of Distributed Projects". By initiating a total of 14 online and offline training sessions, the Company has strengthened the knowledge of the personnel directly related to the business about the possible legal risks of centralized photovoltaic (PV), distributed PV, wind power projects, etc., and further consolidated the employees' awareness of legal compliance.

# Business Ethics and Responsibilities Perseverance

The Company remains committed to establishing a robust business ethics governance system, rigorously enforcing measures against corruption and bribery, and enhancing oversight of ethical business conduct. We place a strong emphasis on encouraging whistle-blowing and reporting of ethics violations, while actively fostering a culture of integrity within the organization.

## Business Ethics Governance System

In strict compliance with relevant laws and regulations, such as the Civil Code of the People's Republic of China, the Company Law of the People's Republic of China, the Law of the People's Republic of China Against Unfair Competition, the Anti-money Laundering Law of the People's Republic of China, and the Rules for Discipline Inspection and Supervision Organs to Handle Reports and Complaints, the Company formulated the Code of Business Behavior and Ethics and released it to the public in 2023 (the "Code"). The Code outlines the fundamental requirements and behavioral norms for all employees, covering areas such as anti-corruption, anti-bribery, political and charitable donations, anti-discrimination and anti-harassment, confidentiality of information, avoidance of conflict of interest, and environment, health, and safety. The Code strictly prohibits any form of embezzlement, corruption, commercial bribery, monopoly, money laundering, insider trading, and other improper behaviors. In 2023, no violations of the Code or confirmed legal cases of corruption and bribery against the Company or its employees.

To ensure that our employees, understand and comply with the laws and regulations on business ethics, we have signed the *Commitment to Integrity* with all employees. This commitment mandates strict adherence to national laws and regulations governing business ethics, as well as compliance with the Company's internal policies and regulations. By signing this commitment, our employees pledge to uphold integrity in all their actions and decisions.

In terms of business ethics supervision and audit, the Company strictly enforces systems such as the Internal Audit System, the Regulations on Supervision of Audit Handling and Punishment, the Supervision and Management Regulations, and the Sue Case Management System and the Contract Management System. We have established an independent supervision and audit work section to enhance the legal compliance of contract management, incremental projects, projects under construction and connected transactions, preventing the occurrence of embezzlement and corruption.

## Business Ethics Training

In terms of the construction and promotion of a culture of integrity and compliance, the Company actively carries out diversified business ethics training activities. These include issuing integrity reminders before major festivals, sharing exemplary cases, distributing integrity literature, and providing both online and offline training sessions. These activities aim to continuously enhance employees' awareness of integrity and business ethics and create a clean and positive working atmosphere. In 2023, the Company organized three integrity training sessions for employees, with one session tailored for mid-level and high-level executives and comprehensive anti-graft and anti-corruption training for 100 % of employees, which lasted for 25 hours.

 **3** integrity training sessions for employees

 **1** session tailored for mid-level

 **25** hours

 **100 %** of employees



### Integrity Warning Education Cases:

- Analyzed illegal cases of "transfer of benefits based on power and money transactions" in the fight against commercial bribery;
- Analyzed illegal cases of "anti-money laundering";
- Analyzed illegal cases of "misappropriation of funds".



### Case: Holding integrity warning education activities

In November 2023, the Company held an integrity warning education activity. During the activity, we invited cadres and employees to watch the special TV series "Zero Tolerance" of the Central Commission for Discipline Inspection and the State Construction Committee. The special series demonstrated the cases of many Chinese cadres suspected of corruption as a warning and strengthened the compliance awareness of cadres and employees.



Integrity Warning Education Activity



### Case: Holding integrity education activities under the theme of "reading integrity books and observing integrity"

In 2023, the Company organized an integrity education activity with the theme of "reading integrity books and observing integrity" at the grassroots power stations. During the activity, we presented the anti-corruption book "The Heart of the People" to the power stations and conveyed the awareness of integrity and self-discipline to the employees.



Integrity Education Activity under the Theme of "Reading Integrity Books and Observing Integrity"

## Whistleblowing Management

In order to strengthen the internal and external business ethics monitoring and whistleblowing management, the Company, in accordance with relevant laws and regulations, formulated the *Whistleblowing System*, standardized the scope of whistleblowing, whistleblowing methods and procedures, and clarified the investigation and handling process of complaints and whistleblowings, in order to ensure that complaints and whistleblowings can be dealt with in a timely and effective manner, protecting the basic rights and interests of whistleblowers.

We encourage stakeholders such as employees, suppliers and shareholders to monitor and whistleblow any misconduct that violates business ethics. We open up diversified whistleblowing channels, such as telephone, e-mail, and letter, to receive whistleblowings on business ethics, anti-corruption, and other internal wrongdoings. Upon receipt of a whistleblowing, we will promptly accept it and conduct an investigation, and after confirming the facts of the violation, we will seriously deal with the case and the person involved.

In order to safeguard the legitimate rights and interests of whistleblowers, we have formulated whistleblower protection policies, outline whistleblower protection measures, protecting whistleblowers from any form of retaliation.

### Business Ethics Whistleblowing Channels of SHNE



Phone No. for whistleblowing:  
+86-18911450119, +86-13700084623



Email for whistleblowing:  
jcsjb@shne.net.cn



Address for whistleblowing:  
Audit and Supervision Department, Shandong Hi-Speed New Energy Group, 28 Ping'anli West Street, Xicheng District, Beijing



## Information Security and Privacy Protection

The Company places paramount importance on information security and privacy protection. We have established a robust management mechanism to ensure the security of information and privacy, continually refining our process management for security operations to safeguard both Company and user data. Additionally, we prioritize the protection of intellectual property rights, actively defending the Company's legitimate interests while respecting the intellectual property achievements of others.

### Information Security

The Company strictly abides by the *CyberSecurity Law of the People's Republic of China*, the *Data Security Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China* and other relevant laws and regulations. We consistently enhance our internal management system for information security and develop various information security management measures to further standardize our information security management requirements.

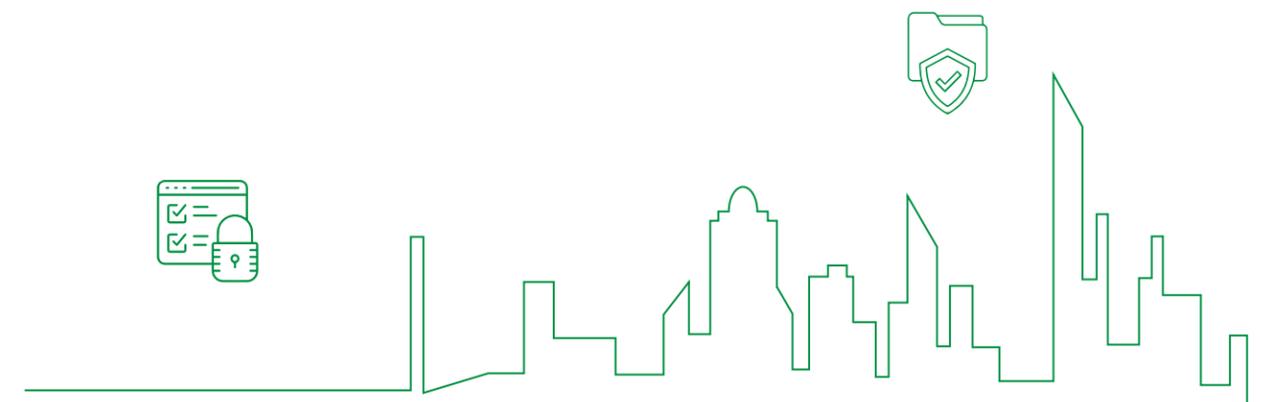
#### Information security management measures

##### Strengthening cybersecurity protection management

- Strengthened daily monitoring of cybersecurity, and took timely access control and other effective protective measures against significant threats to networks, data, and information systems;
- Strengthened the backup procedures for critical data to ensure the secure operation of the Company's important information systems;
- Regularly carried out security vulnerability checking of key parts such as information systems, website platforms, power generation management systems, etc., and completed vulnerability rectification in a timely manner to eliminate all kinds of cybersecurity risks.

##### Strengthening the protection norms of infrastructure equipment cybersecurity

- Standardized the use of office computers, production platforms, operation monitors and other network-related infrastructure equipment;
- Coordinated the management of systematic security protection requirements for critical information infrastructures, important data, cybersecurity reviews and power monitoring systems;
- Strictly implemented the provisions of the industry's baseline for classified protection of cybersecurity.



The Company has developed data security incident response procedures, detailing the reporting process for each stage of emergency response to ensure swift and effective action in the event of cybersecurity incidents. In case of an unexpected cybersecurity incident, all functional departments and business units are required to report it hierarchically and activate the corresponding emergency plan based on the severity of the incident. On-site personnel are expected to collaborate with relevant departments in executing emergency response tasks, employing effective measures to mitigate the adverse impacts of cybersecurity incidents and ensuring the seamless and secure operation of the Company's internal systems. Each project company is mandated to conduct at least one annual emergency drill for network and information security incidents, alongside regional collaborative drills aimed at promptly preventing, controlling, and minimizing the adverse effects of various cybersecurity emergencies. In 2023, the Company carried out a total of 94 emergency drills at the operational level for cybersecurity accidents.

The Company actively carries out internal inspections of cybersecurity, and conducts dynamic and real-time on-site inspections of projects on a quarterly basis. Additionally, it commissions third-party technical upgrades to the cybersecurity system to ensure its effectiveness.

To enhance employees' knowledge and awareness of information security, the Company offers diverse information security training courses. In 2023, a total of 117 information security training sessions at the operational level were conducted, with 636 employees participating, accumulating a total training time of 117 hours.

Information security training courses for the staff



Privacy Protection

The Company strictly abides by laws and regulations such as the *Personal Information Protection Law of the People's Republic of China* and the *Law of the People's Republic of China on Protection of Consumer Rights and Interests*, prioritizing the security and privacy protection of customer data and information. We have implemented multiple management measures to safeguard customers' privacy and prevent any leakage of personal information.

Our *Code of Business Conduct and Ethics* explicitly outlines provisions related to information confidentiality. We place significant emphasis on preserving the confidentiality of customer, employee, and business partner information, committing to continually enhance control over data collection, storage, usage, sharing, transfer, transmission, public disclosure, deletion, and other relevant aspects. Moreover, we pledge to strictly adhere to the principles of legality, legitimacy, necessity, and good faith when collecting, processing, and utilizing the information of customers, employees, and business partners. Furthermore, we consistently refine our whistleblowing system and establish accessible channels to encourage employees, customers, and other relevant individuals to report any instances of privacy breaches to the Company.

We have implemented several initiatives to safeguard user privacy. Upon signing employment contracts, employees are explicitly prohibited from disclosing information and violating privacy, with clear provisions stipulating financial and legal liabilities for any breaches. Additionally, all employees are required to sign a privacy protection commitment upon joining the Company, ensuring maximum privacy security. Notably, in 2023, the Company did not experience any incidents of privacy leakage.

Intellectual Property Rights Protection

The Company abides by relevant laws and regulations, including the *Patent Law of the People's Republic of China*, the *Implementation Rules of the Patent Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China*, the *Implementation Regulations of the Trademark Law of the People's Republic of China*, and the *Anti-Unfair Competition Law of the People's Republic of China*, to strengthen the management of intellectual property rights, including patents and copyrights. We proactively implement internal controls to ensure the maintenance of our brand image, including the registration and renewal of patents and trademarks and the opposition of identical trademarks, and obtain the necessary authorisation before using third party intellectual property to avoid infringing the rights of others. Notably, during the reporting period, the Company remained free from any violations of intellectual property rights.



Certificate of Utility Model Patent

# 02

## Unleash the World's Potential, Green Prosperity Worldwide

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SHNE follows the trend of the times and embraces responsibility. We adhere to the philosophy that "lucid waters and lush mountains are invaluable assets," actively driving the energy revolution and advancing the development of clean energy.

- Green Finance Dynamics Exploration
- Clean Energy Generation Sustainability
- Professional Health and Safety Strengthening

## Green Finance Dynamics Exploration

In the golden era of sustainable development, SHNE capitalizes on the significant opportunity presented by green finance and actively participates in green financial activities. We prioritize investment research, focusing particularly on sectors promoting green and sustainable development. This strategic focus aims to drive substantial growth in our investment research endeavors. In 2022, Shandong Hi-Speed Group, through Shandong Hi-Speed Holdings Group Limited, acquired a 43.45% equity stake in SHNE, marking a strategic entry into the clean energy market and becoming SHNE's largest shareholder. We successfully raised HKD 4.7 billion in additional equity, bolstering our liquidity and enhancing overall operations. In 2023, SHNE continued to advance its financing initiatives, implementing the "Renewable Energy Subsidy Confirmation Loan" program to ensure the stable operation of multiple confirmation loan transactions. We effectively addressed overdue subsidy issues and expanded collaboration channels with various financial institutions, fostering the development of "self-sustaining" projects.

We are committed to furthering the development of digital finance within the clean power generation sector. Leveraging our underlying assets and industrial characteristics, the majority of our credit loans are categorized as green loans by banks. Capitalizing on green credit incentives offered by select banks, we have expedited the strategic layout of clean power generation projects — from financing and construction to operation. This has not only enhanced the asset value of green energy but also facilitated the global transition to low-carbon energy. In 2023, we established a "three-year HKD 1 billion green syndicated loan" with Standard Chartered Bank as the lead bank, with the participation of prominent domestic and international banks.

Over this year, we have been actively preparing for the issuance of new energy Real Estate Investment Trusts (REITs). Infrastructure REITs play an active role in reducing leverage, mitigating and addressing hidden debt risks, enhancing reinvestment capabilities, improving infrastructure operational efficiency, and fostering a virtuous investment cycle. Moreover, Infrastructure REITs contribute to the establishment of a new development paradigm for comprehensive intelligent energy, particularly as the nation's energy landscape undergoes profound transformation. At the same time, as a key livelihood project, the thermal industry has exhibited robust performance in terms of cash flow and long-term operability. The market has shown keen interest in the market performance of REIT products developed for the thermal industry, particularly those offered through public offerings.

On December 1, 2023, SHNE successfully secured a strategic investment of RMB 5 billion from Ping An Asset Management Co., Ltd. (hereinafter referred to as "PAAMC"), a subsidiary of Ping An Group. On January 3, 2024, RMB 5 billion was successfully disbursed. This investment, directed by PAAMC, targets the Company's domestic sub-platform, Tianjin Fuhuan Enterprise Management Consulting Co., Ltd. PAAMC strategic investment further optimizes our asset structure and solidifies its position as a key investor. This initiative received strong support from shareholders of Shandong Hi-Speed Group and Shandong Hi-Speed Holdings Group Limited. The process—from planning to execution—was completed in just five months, setting a new record for the swiftest implementation of a similar venture and showcasing the speed of the Company. This collaboration also marks the beginning of a new phase of cooperation with insurance asset management institutions, providing robust financial backing for the Company's long-term growth trajectory.

## Clean Energy Generation Sustainability

As one of the leading industrial groups in China's clean energy field, SHNE aligns with the carbon peaking and carbon neutrality strategy, advocating for the harmonious development of humanity, society, and nature through the green industry. Our commitment to clean energy aims to forge a brighter future for mankind.

### Generation Quality Assurance

SHNE prioritizes energy supply and maintains strict control over project construction levels. We remain steadfast in our commitment to responsibilities, continuously striving to enhance power generation quality.

To bolster supervision during project construction, SHNE has formulated the *Construction Safety Album* and the *Standardization Manual for the Quality Process in Photovoltaic Engineering*. Additionally, we have compiled feedback materials based on experience. These initiatives aim to standardize construction processes and elevate project construction quality. In addition, we have intensified control over operational processes. Considering on-site operation and maintenance dynamics, we have formulated 12 operational and maintenance systems, including the *Management Provisions for Equipment Overhaul*, the *Management Provisions for Equipment Defects*, the *Management Provisions for Site Operation*, the *Management Provisions for Traffic Safety*, etc. These efforts are geared towards refining our management systems. In 2023, the Company obtained ISO 9001 certification for quality management system, with a coverage of 100%.



Quality Management System Certification

To enhance the professional and technical proficiency of our operation and maintenance ("O&M") staff, SHNE conducts regular professional training sessions and "Quality Month" activities for employees. In 2023, we organized two training events, emphasizing the management of the external marketing system, emergency response capabilities, and specialized training for customer return visits management. These training initiatives are integral to our commitment to continually enhance the professionalism of our O&M team and establish a robust foundation for our long-term development.

### Case: SHNE departments' "Quality Month" activities

September 2023 marks the 46th "Quality Month" in China. SHNE carried out various activities around the theme of "Strengthening Quality Management and Promoting Quality Improvement" to further enhance the quality awareness of the staff and promote the continuous innovation and development of quality work. The Group headquarters invited external experts to carry out comprehensive training on quality management, and organized internal lecturers and professionals from working units to exchange information on quality management. In addition, the Group headquarters also organized various departments to participate in the Total Quality Management Knowledge Contest, which was attended by more than 260 people from more than 10 departments of the Company, to promote employees' understanding of Total Quality Management.



Training Site of "Quality Month" Activities

## Clean Power Generation Business

The Company focuses on clean power generation business, dedicating efforts to delivering efficient and environmentally friendly power solutions aimed at achieving sustainable energy supply and reducing carbon emissions. In 2023, SHNE continued to advance photovoltaic (PV) power generation, wind power generation, and other clean energy projects, totaling 4.5 GW. We maintained ownership of 54 centralized photovoltaic power plants of 2.53 GW, 19 wind power plants of 1.18 GW, and over 200 distributed photovoltaic power plants with an installed capacity of about 800 MW. In 2023, the Company's grid-connected electricity generation from photovoltaic and wind power projects reached approximately 6.2342 million MWh. We have cumulatively saved over 1.9 million tonnes of standard coal and reduced carbon dioxide emissions by over 4.9 million tonnes<sup>1</sup>.

Table: Clean power generation in 2023

Power type	Total power generation	Distributed photovoltaic power plants	Centralized photovoltaic power plants	Wind power plants
Total power generation	10,000MWh	79.29	293.03	251.10
Purchased power	10,000MWh	0.69	3.46	0.48
Power connected into the grid	10,000MWh	68.40	276.67	248.12



SHNE continued to advance photovoltaic (PV) power generation, wind power generation, and other clean energy projects, totaling

**4.5** GW



We maintained ownership of 54 centralized photovoltaic power plants of

**2.53** GW



19 wind power plants of

**1.18** GW



over 200 distributed photovoltaic power plants of

**800** MW



the Company's grid-connected electricity generation from photovoltaic and wind power projects reached approximately

**6.2342** million MWh



has cumulatively saved over **1.9** million tonnes of standard coal



reduced carbon dioxide emissions by over

**4.9** million tonnes

### Case: Honglu Steel Structure's Green Factory Project

Honglu Steel Green Factory Project is located in Woyang County, Bozhou City, Anhui Province. It features a 35.5 MW distributed photovoltaic system installed on the roof of Honglu Building Materials Co., Ltd. Adopting a "Self-generation for Self-consumption, Surplus Power into the Grid" model, it is projected to generate approximately 40 million kWh of electricity annually, resulting in a reduction of approximately 35,000 tonnes of carbon emissions per year. This initiative not only promotes electricity safety but also yields significant investment benefits, saving Honglu Steel Structure approximately RMB 9.77 million annually. On May 23, 2023, the first phase project of 17.3 MW has already achieved grid-connected electricity generation. By analyzing the operational characteristics of Honglu Steel Structure, the project has been meticulously designed to determine the appropriate scale of distributed photovoltaic installation and power generation planning. Furthermore, it allows for the integration of future energy storage facilities to enhance the proportion of photovoltaic self-consumption, thereby aiding the factory in reducing energy consumption. This comprehensive energy solution contributes to the establishment of green factories. The addition of energy storage facilities can also "lower the peak and raise the valley" in response to grid electricity prices, further lowering the overall cost of electricity consumption.



Honglu Steel Structure's Green Factory Project

### Case: Wuhu Kuangyun 1.2 MW Distributed Project

Wuhu Kuangyun 1.2 MW distributed project is located in Jiujiang District, Wuhu City, Anhui Province. The project utilizes the roof of Wuhu Kuangyun Industrial Park Management Co., Ltd. with about 12,000 square meters in area, to build a 1.2 MW rooftop distributed photovoltaic power plant, based on a "Self-generation for Self-consumption, Surplus Power into the Grid" pattern.

The total power generation of this project is about 28.4 million kWh during a 25-year operation period, saving a total of 7,668 tonnes of standard coal. According to the emission standards of thermal power plants for waste gas and waste residue, the power plant can reduce 1.4 tonnes/year of soot, 5.9 tonnes/year of sulfur dioxide, 797 tonnes/year of carbon dioxide, 1.2 tonnes/year of nitrogen oxides, and 100 tonnes/year of ash residue, save a large amount of water resources, and avoid noise pollution.



Wuhu Kuangyun 1.2 MW distributed project

<sup>1</sup> In 2023, the calculation method for saving standard coal and reducing carbon dioxide emissions for updated photovoltaic and wind power grid-connected electricity generation projects is as follows: Total saved standard coal = Electricity generation \* 320 grams of standard coal; Total carbon dioxide emissions reduction = 2.46 \* Total saved standard coal volume.

## Technological innovation

SHNE emphasizes technological innovation, considering product and technology innovation as the cornerstone of its development. In 2023, we remained committed to enhancing our technological innovation efforts by delving into areas such as zero-carbon smart parks, virtual power plants, and power prediction systems for photovoltaic power plants. These endeavors aim to drive innovation and development while ensuring stable operations.



### Zero-carbon smart park

Systematically integrate the concept of smart photovoltaic and carbon neutrality in the planning, construction, management and operation of the park, rely on the smart energy carbon management and control system, use precise auditing for planning carbon neutral goal setting and practice path, comprehensively monitor the carbon generation and reduction process with ubiquitous perception, and integrate carbon-neutralization measures such as clean power generation, energy conservation, emission reduction, carbon sequestration and carbon sink with digital means, realize low-carbon industrial development, energy green transformation, facility agglomeration and sharing, and resource circular utilization with an intelligent management platform, realize the self-balancing of carbon emission and absorption in the park, and create a new type of industrial park with deep integration of ecology and life.



### Virtual power plant (VPP)

Create a "virtual power plant" operation management platform by using the Internet of Things technology and big data platform framework, assist infrastructure to participate in power spot market transactions through virtual power plant, realize the aggregation and coordinated control of distributed photovoltaics, energy storage, micro-grids, controllable loads and other facilities, participate in power market and grid operation as a "special power plant", accept grid dispatching instructions, participate in demand side response, and provide grid auxiliary services, and realize functions such as "source-grid-load-storage" power balance and optimized coordinated operation.



### Developing power prediction system for photovoltaic power plants

As the data source of power forecasting, the power forecasting system of photovoltaic power plant mainly includes the real-time weather collection subsystem and the power forecasting calculation subsystem. The real-time weather collection subsystem realizes the real-time collection of on-site irradiance value, wind speed, wind direction, temperature, humidity, air pressure and other meteorological elements for the photovoltaic power plant and transmits the real-time collected data to the power forecasting calculation subsystem. SHNE's operating power plants use the power forecasting system of photovoltaic power plants to accurately predict the power generation according to the characteristics of climate and environment, so as to formulate reasonable power generation plans and improve the efficiency of photovoltaic power generation.

## Exploration of the "PV+" model

The Company continues to develop the green industry, adopting a diversified development strategy with "PV+" at its core. We are actively exploring new development models such as "PV + Agriculture," "PV + Fishery," "PV + Environmental Protection," and more. Our objective is to establish a comprehensive foundation for growth across all dimensions.

### Photovoltaic + Agriculture

We combine photovoltaic technology and agricultural practices, we have launched the "PV +Agriculture" model, delivering a win-win result for green energy and agricultural production, and injecting new vitality into sustainable development.

#### Case: Huapen Photovoltaic Power Plant's Photovoltaic + Agriculture Project

Huapen Photovoltaic Power Plant is located in the east of Huapen Village, Dacun Town, Nangong City, Xingtai City, Hebei Province, with an installed capacity of 80 MW. The project combines photovoltaic power generation with agricultural cultivation, exploring the "photovoltaic +agriculture" development mode. A total of 104 vegetable greenhouses are involved in the project, with products including Chinese herbs, peanuts, sweet potatoes, vegetables and other low crops. Through the "Photovoltaic +Agriculture" mode, it helps the local government enhance the comprehensive utilization efficiency of land, realizing the win-win result of photovoltaic power generation and agricultural production, and creating a good model for local income increase.



Huapen Photovoltaic Power Plant

### Photovoltaic + Fishery

We integrate photovoltaic technology with aquaculture and launched the "Photovoltaic + Fishery" model to realize the harmonious coexistence between clean energy and aquaculture.

#### Case: Baoying Guangyanghu Photovoltaic Power Plant's Photovoltaic + Fishery Project

Baoying Guangyanghu photovoltaic power plant is a typical "Photovoltaic + Fishery" Project, located in the southeast of Xiaojia Village, Guangyanghu Town, Baoying County, Yangzhou City, Jiangsu Province. With clean energy generated on the water and aquatic products harvested underwater, the project realizes the diversified use of the land value. The project can provide 150 million kWh of clean power annually. Also, the annual value of various types of fish, shrimp, crab and other aquatic products is about RMB 2.5 million, effectively enhancing the income of local farmers.



Baoying Guangyanghu Photovoltaic Power Plant

### Photovoltaic + Transportation

We combine photovoltaic technology with transportation to promote the deep integration of cleanliness, energy saving, recycling and intelligence through the “Photovoltaic + Transportation” model.

#### Case: SHNE’s Integrated Smart Energy Project in Jinan (Gushan) Service Area of the Beijing–Taipei Expressway

SHNE’s integrated smart energy project in Jinan (Gushan) Service Area of the Beijing–Taipei Expressway is located in Changqing District, Jinan City, Shandong Province. The project was officially started on November 15, 2022, and on January 12, 2023, it was connected to the grid.

The project takes distributed energy as the main energy source. It adopts the “intelligent photovoltaic + transportation” technological innovation mode, using the roof, the slope, the hotel corridor and the parking area to realize the “light - storage - charging - switching – controlling” utilization of the photovoltaic power in the service area as well as the “electricity - hydrogen - water - heat - waste – forest” optimization. The project is located in the Jingtai Expressway of Changqing District, Jinan City, covering an area of about 260 mu (about 42.83 acres), with an annual power generation of about 2 million kWh, an equivalent reduction of carbon dioxide emissions of about 1,769 tonnes, and a carbon emission reduction rate of about 67%. It promotes the deep integration of cleanliness, energy saving, recycling and intelligence, and sets up a typical case of green upgrading of expressway infrastructure construction.



The Integrated smart energy project in Jinan (Gushan) Service Area of the Beijing–Taipei Expressway

### Photovoltaic + Water Resources

We combine photovoltaic technology with water resources. Through the “photovoltaic + water” model, we promote the widespread application of clean energy and water resources, realize the green and low-carbon transformation, and contribute to environmental protection and sustainable development.

#### Case: Second Wastewater Treatment Plant Green Water Project

The distributed photovoltaic power generation project of the second wastewater treatment plant of BEWG (Lankao County) is a strategic cooperation project on environmental protection and energy integration with the Group’s second largest shareholder, BEWG. The project utilizes the space above the biological pool of the wastewater plant, and erects photovoltaic racks and solar panels on the top of the pool, the sidewalls of the pool, the open space of the water plant, the roof of working facilities, the carport and other areas. The project has an installed capacity of 1.28MW, which has been connected to the grid on December 10, 2023. It can provide the water plant with about 1.38 million kWh of clean power per year, accounting for about 40% of the annual power consumption of the water plant.

The project helps Lankao Wastewater Treatment Plant to reduce coal combustion by 2,722 tonnes and carbon dioxide emission by 6,785 tonnes per year. At the same time, photovoltaic panels can block the direct sunlight, reduce the temperature of the sewage pool surface, and reduce the production of floating weeds. They can also effectively reduce the odor emitted, improve the environment, and achieve the organic combination of the environmental protection and energy generation.



The Second Wastewater Treatment Plant Green Water Project

### Photovoltaic + Big Data

We combine big data technology with the photovoltaic industry. Through the “photovoltaic + big data” model, we realize accurate monitoring and management, improve the efficiency of energy utilization, and provide strong support for the development of intelligent energy.

Employing advanced big data technology, the Company harnesses cloud computing to render distributed photovoltaic data “visible, manageable, measurable, controllable, and usable”, thereby achieving a high level of informatization for the distributed photovoltaic O&M management platform. Our objective is to capture real-time data from each power plant in a more intuitive and dynamic manner, facilitating intelligent and comprehensive management. This includes real-time monitoring, fault diagnosis, alarm and early warning systems for equipment operation, work management, and meteorological environment analysis.

Furthermore, we integrate green energy with big data computing, create an efficient, intelligent, and environmentally friendly computing center, and inject new momentum into the industry’s sustainable development.

#### Case: Partnering with VNET to Develop the Ulanqab Green Computing Project

On March 15, 2024, SHNE partnered with VNET and the Ulanqab Government to sign a framework agreement on big data and new energy, jointly promoting the integration and development of new energy and big data industries. This agreement aims to leverage SHNE’s technological advantages and explore the extensive application of new energy in collaboration with VNET, assisting Ulanqab in achieving energy structural transformation and sustainable development. This collaboration not only enhances the energy efficiency of the “Cloud Valley” industry’s data centers but also promotes the widespread use of new energy technologies, making positive contributions to regional economic development and environmental protection.

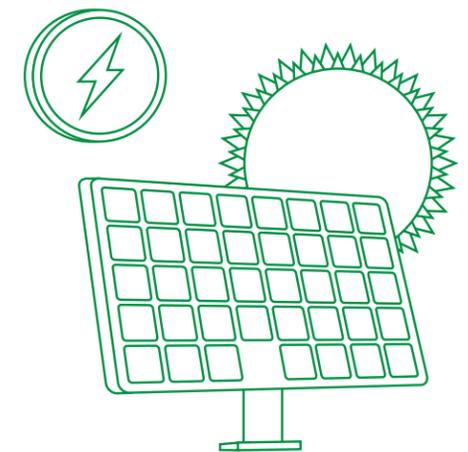
### Photovoltaic + Microgrid

By combining photovoltaic and microgrid technologies, we have launched the “Photovoltaic + Microgrid” model, realizing the self-governance and mutual supplement of distributed energy resources and providing a reliable solution to energy supply in remote areas and off-grid scenarios.

By leveraging Internet technology, microgrid hierarchical control technology, and supply and demand side prediction models based on big data analysis, we have developed a cloud OS system for multi-energy complementary smart microgrid systems. This system facilitates cloud interaction services, enabling full digital management of personnel, equipment, and records. It also allows for remote real-time monitoring of system conditions and data visualization, as well as real-time evaluation of energy efficiency for core equipment (smart photovoltaic modules, energy storage batteries, etc.). Furthermore, we have established a health diagnostic system for multi-energy complementary smart microgrid equipment based on mechanism models and field experience. This system enables coordinated control and management of energy optimization and scheduling across multi-microgrid clusters.



“Photovoltaic + Big Data” model



“Photovoltaic + Microgrid” model

# Professional Health and Safety Strengthening

SHNE establishes the concept of safety development and improves the level of safety management. The Company abides by the *Work Safety Law of the People's Republic of China*, the *Special Equipment Safety Law of the People's Republic of China* and other laws and regulations. We have formulated systems such as the *Regulations on the Classification Control of Risks*, the *Regulations on Hidden Hazard Investigation and Governance* and the *Regulations on Major Hazard Source Management*. In 2023, the Company formulated and publicly released the *Statement on Occupational Health and Safety*, constructing a comprehensive network-like management system, to create an excellent work safety environment. As of 2023, the Company has obtained ISO 45001 certification, with a coverage rate of 100%.



Occupational Health and Safety Management System Certification

The Company has established a work safety structure overseen by the Safety Management Committee, operating under the Management Committee's purview. Each department head (or platform company) serves as a direct leader within this structure. Moreover, SHNE has instituted an occupational health and safety target accountability system that extends to all employees. This system ensures that all staff members take on responsibilities to maintain safe working conditions, foster a positive health and safety culture, and mitigate operational risks.

## Professional health and safety

Indicator	Unit	Number
LTIFR <sup>2</sup>	%	0
Equipment accidents with direct economic loss of over RMB 2 million	/	0
Fire, traffic and electrical accidents	/	0
Public safety incidents	/	0
Administration department penalty	/	0
Safety education training	Person	4,310

## SHNE risk identification and hazard management process

**Revision of risk management measures**

- We have enhanced the operability of safety risk control measures through the revision and improvement of measures across five key aspects: technical measures, management measures, education and training measures, individual protection measures, and emergency response measures.

**Guidelines for identifying major safety hazards**

- We have issued the *List of Criteria for Identification of Major Safety Hazards in Work Safety*, covering 20 criteria in seven areas, including basic safety management, engineering construction, equipment and facilities, etc.

**Hierarchical control and management on hazard identification and safety risks**

- In 2023, we formulated the *2023 Safety Risk Evaluation Work Program*. In accordance with the program, we organized each business unit to identify 1,352 hazardous sources, culminating in the compilation of a list containing 705 hazardous sources.

**Database of potential safety hazards**

- We have systematically identified potential hazards across various aspects, including safety management, engineering construction management, as well as equipment and facilities, and compiled the *SHNE's Database of Potential Safety Hazards* covering a total of 180 types of safety hazards including safety management, safety management in engineering and construction, equipment and facilities, and hazardous work management.

**Continuous investigation and management of hidden dangers**

- Through Safety Committee members' inspections and mutual inspections, the Company continues to carry out hidden danger investigations. In 2023, the Company organized 31 inspections covering a total of 40 projects in O&M. A total of 265 on-site safety hazards and management issues were identified, and all have been urged to be corrected.

To enhance employees' awareness of work safety and crisis response capabilities, the Company has conducted work safety training and emergency drills. Throughout the year, the Group organized 13 employee training sessions, mandating each employee to complete 12 credit hours of study annually. A total of 4,310 participants took part in the online examination, representing a 100% coverage rate. In addition, the Company organized safety education for 240 new employees to help them cultivate safety awareness. In 2023, the Company conducted a total of 1,282 emergency drills covering scenarios such as mountain fires, fire accidents, electrocution, traffic accidents, heatwaves, floods, and other emergencies.

## Staff training courses

 Safety training in the resumption of work and production	 Specialized knowledge training in environmental management	 Specialized training in fire prevention
 Specialized training in engineering excellence	 Training on dangerous work and hazardous operations	 Traffic and kitchen safety training
 Training in the use of special equipment	 Training in heatstroke prevention	 Training in flood safety for power plants
 Quality management training	 Training in work safety risks and preventive measures for new industries	 119 Fire Safety Training
 122 Traffic Safety Training		

A total of **4,310** participants took part in the online examination

representing a **100%** coverage rate

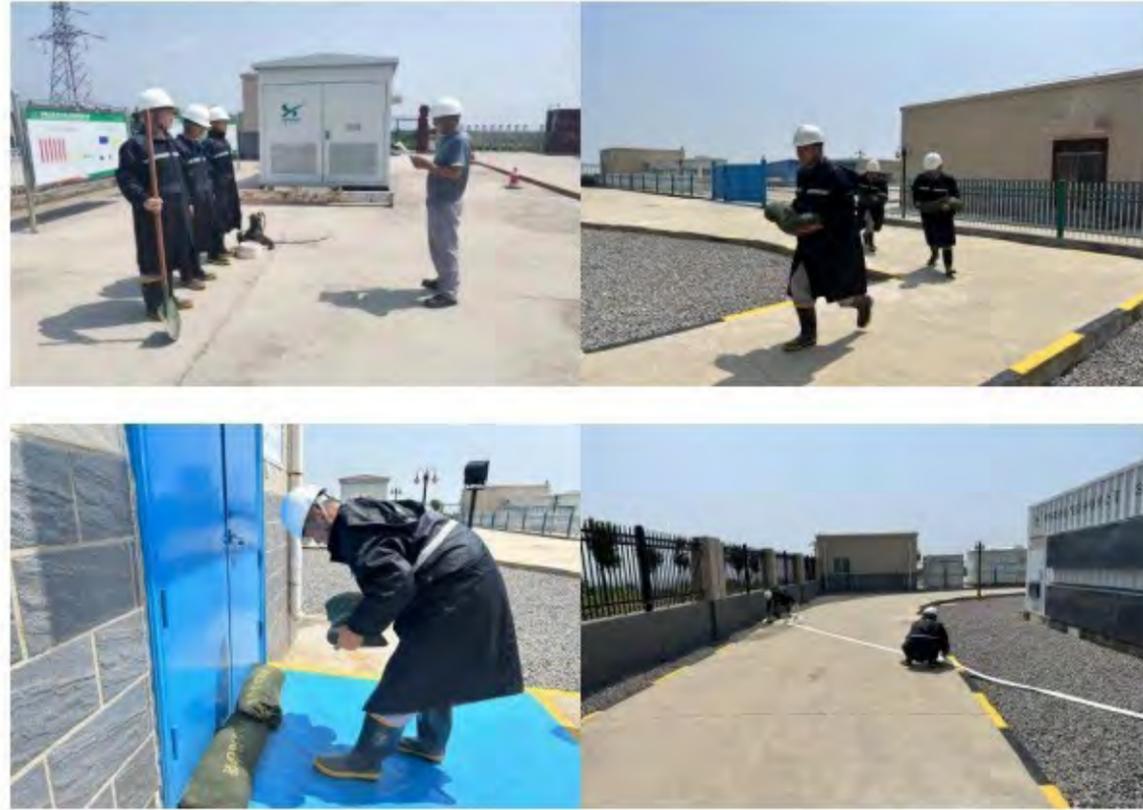
the Company organized safety education for **240** new employees

the Company conducted a total of **1,282** emergency drills

<sup>2</sup> lost time injuries/total working hours during reporting x 1'000'000

**Case: Flood Emergency Drill of Beiyang Photovoltaic Power Plant in Qixian Henan Province**

In 2023, Beiyang Photovoltaic Power Plant in Qixian, Henan Province organized a "safety month" flood prevention emergency drill, in which all employees actively participated and carried out the drill in strict accordance with the drill plan. Through this drill, front-line employees can better prevent floods so as to minimize the loss caused by extreme weather.



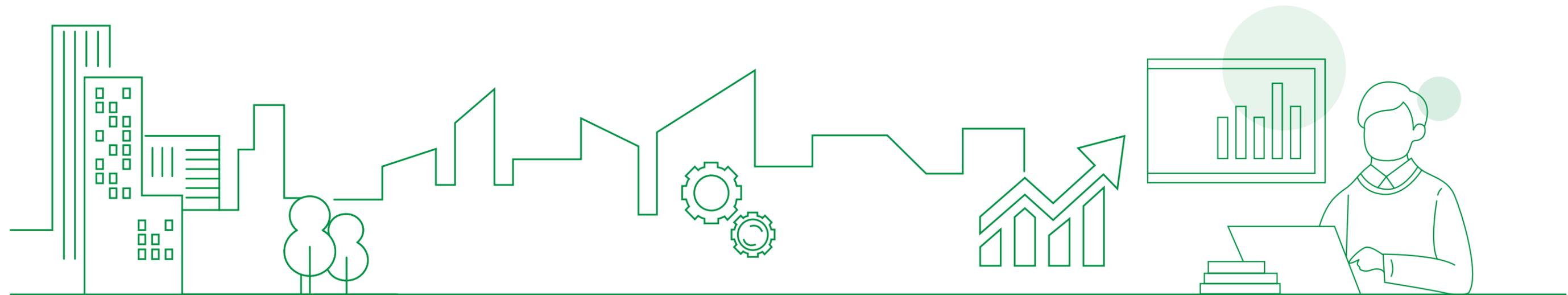
Flood Emergency Drill Site of Beiyang Photovoltaic Power Plant in Qixian Henan Province

**Case: Changxia Photovoltaic Power Plant Flood Emergency Drill**

In July 2023, Changxia Power Plant organized an emergency drill for flood prevention and control. Despite the hot weather, employees carried out the drill in accordance with the program, effectively enhancing their capability for responding to floods.



Changxia Photovoltaic Power Plant Flood Emergency Drill



# 03

## Low-carbon, Environmental Protection and Green Development

SHNE takes proactive measures to combat climate change by researching the development and utilization of clean and low-carbon energy while enhancing resource utilization efficiency. Simultaneously, we promote green and low-carbon operations, bolster environmental management, and enhance waste management systems. Furthermore, we actively engage in biodiversity conservation efforts to support sustainable development.

- Climate Change Response
- Biodiversity Conservation
- Efficient Utilization of Resources
- Green and Low-carbon Business Operations

# Climate Change Response

Climate change presents a significant challenge to human society. As a responsible enterprise, SHNE prioritizes sustainable development and actively pursues the path of green development. We are committed to addressing climate change across four dimensions: climate governance, climate strategy, climate risks and opportunities, and climate change response. We are dedicated to contributing to the national goal of achieving "Carbon Peak and Carbon Neutrality" through our efforts.

## Governance

SHNE actively implements the concept of green development by incorporating climate change response into the Company's business development and operational strategy. With reference to the framework and recommendations of the IFRS S2 Sustainability Disclosure Standard — Climate-related Disclosures issued by TCFD and ISSB, the Company advances its efforts in climate-related management. We have established a climate change management framework with the Board of Directors serving as the top leadership, overseeing the management of climate risks.

### Management framework of climate change



## Strategy

To standardize the identification of climate-related risks and opportunities and ensure proactive and timely responses to climate change, SHNE has integrated climate change considerations into the Company's strategy. We have explored pathways to reduce greenhouse gas emissions and implemented green practices.

### Paths to reduce Greenhouse Gas (GHG) emissions

#### Conducting GHG investigation

- Clarify GHG accounting boundaries, identify source types, and prioritize Scope 1 and Scope 2 GHG investigation;
- Explore and incorporate Scope 3 into the Company's GHG investigation.

#### Setting a dual-carbon target

- Study and specify the base year, target year and timeline, identify and evaluate potential GHG emission reduction measures, and planning overall GHG emission reduction targets and phased targets.

#### Advocating low-carbon operations

- Promote energy conservation and emission reduction, and continue to promote energy-saving renovation;
- Explore the feasibility of constructing demonstration projects for zero-carbon renewable energy power plants.

#### Building a green supply chain

- Examine the feasibility of including "low-carbon factors" in procurement requirements.

#### Improving climate-related risk management

- Prepare an *Inventory of Climate-Related Risks and Opportunities and Their Impacts*;
- Consider introducing scenario analysis tools to identify and assess the climate-related risks and opportunities facing the Company under different scenarios.

#### Constructing a GHG data management tool

- Promote the digitization, informatization and visualization of GHG emission data for filling in, submitting, auditing and summarizing;
- Research and build an information platform for GHG data management, and optimize GHG emission data management.

#### Disclosure of climate-related information

- Responding to the needs of the capital markets and coordinating the disclosure of climate-related information;
- Consider preparing the *Climate Strategy Report* and *Climate Progress Report*.

## Risk management

SHNE integrates climate change risks into the Company's comprehensive risk management system. We actively identify and regularly update climate-related risks and opportunities, and develop and gradually implement relevant initiatives.

### Transition risks of climate change



**Policy and legal risks**

**Risk description**

- Policy documents such as the *Opinions on Improving the Institutional Mechanisms and Policy Measures for Green and Low-Carbon Transformation of Energy* have changed the original layout of the energy industry;
- The government's tightening of land use policies has increased the impact on project;
- Local governments generally require industries to have local establishment or make local contributions and have higher requirements on the establishment size and quality of the industry.

**Response measures**

- Actively explore new models of low-carbon management and prepare for policy and legal risks;
- Strictly comply with national policies, pay attention to the trend of policy changes in a timely manner, carry out the key layout of development, implement "one policy for one site", and proactively arrange development strategies and plans in accordance with policy changes.



**Technology risks**

**Risk description**

- Photovoltaic technology has the characteristics of frequent updates and speedy calculations. If the investment in new technologies is not increased, the market competitiveness will decrease;
- The accelerated pace of low-carbon transformation within enterprises in the new energy industry has increased the pressure on the Group's green development.

**Response measures**

- Continuous R&D to improve PV technology and establish effective monitoring and maintenance mechanisms;
- Improve the application of energy efficient and environmentally friendly technologies and processes to reduce the Company's carbon emissions.



**Market risks**

**Risk description**

- Due to the encouragement of national policy, many central state-owned enterprises have joined the new energy industry, leading to more intense market competition;
- The new energy market suffers from inconsistent institutional rules, poor resource flows, local protection and regional barriers, which affect the functioning of the market and the realization of economies of scale;
- The price of photovoltaic products is easily affected by the price of raw materials. Once the prices of photovoltaic components, silicon material and land rent rise, the yield of photovoltaic projects will fall.

**Response measures**

- Project development mode is in line with the market. Look for differentiation strategies to actively respond to fierce market competition;
- Flexibility in adjusting cost structures to improve productivity and reduce costs;
- Cooperate with other new energy companies in the vicinity, promote multi-energy complementarity and create scale effects of local green energy;
- Establish the concept of operational development and categorize management for different projects. For projects that are difficult for the Company to pass, after ensuring the feasibility of the project, operational development can be considered to expand the Company's revenue channels.



**Reputational risks**

**Risk description**

- As a new energy enterprise, if the low-carbon transformation is not carried out in place and there are no substantial responding initiatives for risks, it will lead to the Company being generally questioned by customers, investors and the public, which will affect the image of the Company.

**Response measures**

- Combined with the Company's current situation and strategic requirements, rationally formulate development and emission reduction targets and methods to achieve them according to the emission reduction planning;
- Proactively adapt to changes in the new energy market amidst rapid changes and development, realizing robust and rapid growth for the Company.

### Physical risks of climate change



**Acute risks (Typhoon)**

**Risk description**

- Cause damage to equipment and facilities, interrupt power supply, and threaten the lives of employees and customers;
- Breach of contract due to business interruptions and other issues will incur legal liabilities such as compensation.

**Response measures**

- Set up an early warning mechanism for extreme weather;
- Conduct a disaster prevention and mitigation investigation;
- Develop emergency management systems and emergency response plans for flood prevention and typhoon prevention;
- Conduct regular emergency drills for extreme weather;
- Improve climate risk emergency management and establish a rapid and effective emergency response mechanism for rescue and relief.



**Acute risks (Extreme precipitation and flooding)**

**Risk description**

- Cause damage to equipment and facilities, interrupt power supply, and threaten the lives of employees and customers;
- Breach of contract due to business interruptions and other issues will incur legal liabilities such as compensation.

**Response measures**

- Set up an early warning mechanism for extreme weather;
- Conduct a disaster prevention and mitigation investigation;
- Develop emergency management systems and emergency response plans for flood prevention and typhoon prevention;
- Conduct regular emergency drills for extreme weather;
- Improve climate risk emergency management and establish a rapid and effective emergency response mechanism for rescue and relief.



**Acute risks (Extremely hot weather)**

**Risk description**

- Affect the health and safety of employees, result in damage to equipment and facilities, increasing the temperature control costs and the maintenance costs of gas supply facilities in project sites.

**Response measures**

- Formulate emergency rescue and warning plans for high temperature weather;
- Conduct high temperature emergency drills to improve the level of employee health and safety protection.



**Acute risks**  
(Extremely cold weather)

**Risk description**

- Affect the health and safety of employees, result in damage to equipment and facilities, increasing the temperature control costs and the maintenance costs of gas supply facilities in project sites.

**Response measures**

- Formulate an emergency response plan for cold and frost weather to ensure that effective measures are taken to prevent, control and mitigate the disaster impact caused by freezing and snowstorms on the safety of personnel, resources and property on site in case of sudden extreme cold weather, so as to ensure the order of production and operation;
- Carry out temperature monitoring and analysis in advance and allocate resources correctly; timely track and give feedback on changes in supply and demand to ensure stable power supply.



**Chronic risks**  
(Rising sea level)

**Risk description**

- Cause damage to existing equipment and facilities in operation;
- Inland relocation of coastal cities will affect the existing markets.

**Response measures**

- Closely monitor the sea level rise;
- Enhance efforts in relevant risk prevention and emergency research.



**Chronic risks**  
(Global warming)

**Risk description**

- Increase the risk of heat wave, drought, and fire;
- Increase the maintenance cost of gas supply facilities.

**Response measures**

- Accelerate the introduction of relevant climate risk prevention and emergency plans;
- Formulate emergency rescue plan for heatstroke;
- Actively explore the research and development and application of new technologies for renewable energy.

**Climate change opportunities**



**Low-carbon technology innovation**

Low-carbon transformation has become a major trend in the future development of many energy companies, and China is poised to vigorously develop sustainable fields such as photovoltaic and hydrogen energy. In recent years, the Company has strategically positioned itself in the low-carbon technology sector, including photovoltaic, wind power, and hydro-power. As a result, we now possess a competitive edge in applying innovative and cutting-edge technologies.



**Green rights and interests market**

China's carbon emission trading market, green electricity market and green certification market are experiencing rapid growth, with the market scale expanding. The introduction of relevant policies poses challenges such as rising carbon emission costs and compliance risks for high energy-consuming and high-emission enterprises. In response, the Company is planning to establish an internal carbon pricing mechanism and exploring the feasibility of a pilot demonstration program for internal carbon pricing. At the same time, the Company intends to leverage renewable energy sources such as photovoltaic, wind power, and hydro-power to develop green rights and interests projects. By participating in green electricity and green certification market, we aim to generate incremental revenue.



**Low-carbon development of the industry chain**

Policies such as the double-control of energy consumption and carbon emissions, along with guidelines aimed at accelerating the establishment of a green, low-carbon, and recycling economic system, are driving forces behind the transformation of the energy industry chain towards low-carbonization. As a result, we anticipate more opportunities emerging in areas such as energy-saving renovation, construction of low-carbon energy facilities, and the development of energy and carbon monitoring platforms. Together with our customers, we aim to build a green and low-carbon industry chain.

**Indicators and Targets**

The Company actively responds to the national dual-carbon target. For identified climate change risks, we coordinate the development of emission reduction plans and are dedicated to achieving carbon neutrality at the Group's operational level by 2060.

We vigorously advocate for low-carbon operations, actively promote energy conservation and emission reduction, conduct GHG investigation, and implement refined management of energy consumption and carbon emissions. Additionally, we will continue to drive greenhouse gas emission reduction by formulating emission reduction targets and action plans aligned with our pathway plan, taking into account the current emission situation. At present, the Company has taken actions to support the deployment of carbon assets, green certificates, and green power trading. This ensures that we can achieve carbon offset and carbon neutrality by the target year while enhancing the Company's value in the power market.

**Greenhouse gas emissions and energy consumption<sup>3</sup>**

Key performance indicators	Sub-indicators description	Indicator unit	2022	2023
Direct emission	GHG emissions (Scope 1)	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	787,388.43	367,057.53
	Coal	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	680,400.00	276,653.57
	Gasoline	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	546.62	420.96
	Natural gas	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	104,801.00	89,576.22
	LPG	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	638.00	0
	Diesel	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	1,002.52	406.78
Indirect emission	GHG emissions (Scope 2)	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	558,146.81	393,237.37
	Purchased hot water	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	440,175.17	312,373.77
Total GHG emissions and intensity	Electricity	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	117,971.64	80,863.60
	GHG emissions (Scope 1+2)	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)	1,345,535.24	760,294.90
	GHG emissions (Scope 1+2) intensity	Tonne carbon dioxide equivalent (CO <sub>2</sub> e)/Revenue (HKD million)	254.07	153.19

<sup>3</sup>The Scope 1 GHG emissions are calculated according to the Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions from Other Industrial Enterprises regarding the conversion of gasoline, diesel, natural gas, LPG and coal consumption. The Scope 2 GHG emissions include electricity consumption, purchased heat. The emission factors of purchased power refer to the Notice of the Ministry of Ecology and Environment of the People's Republic of China on the Management of Greenhouse Gas Emission Reports of Enterprises in the Power Generation Industry from 2023 to 2025 published on February 7, 2023. Purchased heat is converted according to the Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Enterprises - Power Generation Facilities (Revised 2022).

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# Biodiversity Conservation

The Company actively responds to national calls such as the *China Biodiversity Conservation Strategy and Action Plan (2011-2030)* and the *Opinions on Further Strengthening Biodiversity Conservation*. We uphold the concept of ecological civilization and strive to promote biodiversity conservation. We strictly abide by the *Environmental Protection Law of the People's Republic of China*, the *Regulations on the Administration of Construction Project Environmental Protection* and other laws and regulations. To ensure compliance and effective management, we have formulated internal management norms such as the *Measures for the Management of Ecological Environmental Protection* and the *Measures for the Management of Ecological Environmental Protection in New Energy Company*. Furthermore, we continuously optimize our biodiversity protection strategy throughout project life cycles, strictly safeguarding animal habitats. Through these efforts, we aim to make significant contributions to building a community with a shared future.

## Initiatives to protect the ecosystem throughout project life cycles

### Preparation



- Select project sites without employing nationally protected forests;
- Conduct project feasibility studies and environmental impact assessments;
- Propose reasonable protection programs for possible risks in the atmospheric environment, water environment, acoustic environment and soil environment;
- Propose pollution control measures and soil and water conservation measures.

### Construction



- In the construction of projects, we strictly comply with systems such as the *Regulations for Environmental Protection Work Management* at the Group level, the *Measures for Management of Safe and Civilized Project Construction* at the Engineering Center level, and the *Environment and Water Quality Protection Program* at the project site level;
- Develop emergency response plans for environmental emergencies;
- Regularly carry out emergency plan training and drills;
- Strictly control pollutant emissions;
- Reduce construction noise;
- Minimize ecological impacts by shortening the construction period as much as possible.

### Operation



- Carry out ecological restoration work such as reclamation of the surrounding land, stocking and releasing;
- Strictly implement precautionary measures and requirements for local eco-environmental protection;
- Construct new modes such as agrivoltaics, aquavoltaics, silvovoltaics, etc. to provide a good habitat for plants and animals;
- Focus on biodiversity conservation and carry out publicity activities for environmental and ecological conservation.



### Case: Luduozen 70 MW Aquavoltaic Project in Baoying County

This project adopts a new construction mode of high racking and large spacing to provide a good habitat for fish. By erecting photovoltaic modules in the pond and stocking fish fry in the pond, it improves the comprehensive utilization of land while protecting fish resources.

In addition, the project has prepared a disaster response plan for all possible sources of pollution during construction to reduce soil and water contamination while building the power plant, and to ensure that neighboring water bodies and the environment will not be contaminated in an accident.



Luduozen 70MW Aquavoltaic Project in Baoying County



### Case: The Agrivoltaics Project in Xintai, Shandong Province

The Shandong Xintai Power Station is located in Zhai Town, Xintai City, Tai'an, Shandong Province, originally characterized by coal mining subsidence and limited water resources, resulting in low yields of corn and wheat. To enhance the overall utilization of regional land, the Company actively facilitated the implementation of the agrivoltaic project and the construction of agricultural greenhouses in the area. Upon project completion, efforts were made to introduce water resources, foster the growth of vegetable crops, and enhance the ecological landscape of the coal mining subsidence area. These initiatives have effectively contributed to the improvement of the local ecological environment.



The agrivoltaics project in Xintai, Shandong Province



### Energy-saving Target

In the clean heating sector, the Company establishes energy consumption targets, including coal, gas, and electricity, for each subsidiary. Our aim is to achieve an annual energy saving and consumption reduction target of approximately **2%** compared to the previous year.

## Efficient Utilization of Resources

The Company adheres to the concept of energy saving and consumption reduction, striving to enhance the efficiency of resource utilization and establish a low-carbon operational model. We adhere to a sustainable development path characterized by environmental friendliness. From aspects such as efficient energy utilization, adoption of clean energy, and effective water resource management, we bolster our capacity for energy conservation and consumption reduction. This ensures efficient management and utilization of resources across our operations.

### Efficient Use of Energy

The Company focuses on the efficient use of clean heating energy. We have formulated various systems including the *Regulations on Heat Supply Operation*, the *Regulations on Evaluation of Heat Supply Systems*, the *Regulations on Production Energy Consumption Management* and the *Regulations on Technical Improvement*, to continuously optimize the management of energy efficiency improvement. Meanwhile, we have compiled the *Management Rules for Heat Project Companies Special Award* and set up special awards for production cost savings with respect to clean heat supply saving standards. These incentives aim to encourage staff to save energy and reduce emissions during the operational stage. In 2023, we have issued incentives worth RMB 957,000 in production cost savings.

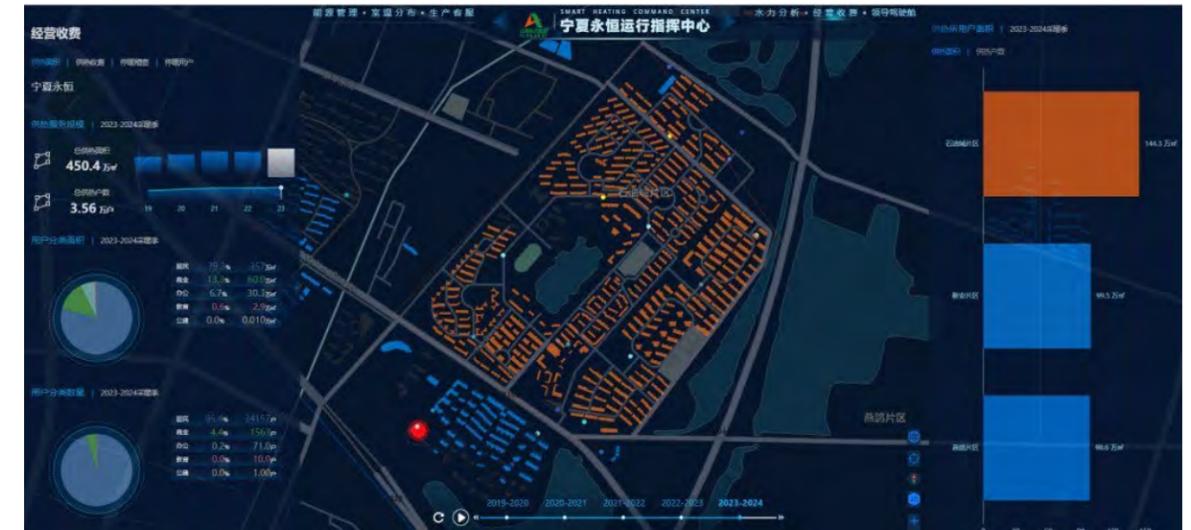


In 2023, the Company actively utilized waste heat from combined heat and power projects, continuously optimized the heat supply information platform, and upgraded heat exchange stations with variable frequency pumps. We also enhanced the recovery of excess heat from boiler flue gas and adjusted the hydraulic balance of the dual network to reduce fossil energy consumption. These efforts are aimed at gradually decreasing the use of fossil energy, increasing the proportion of low-carbon energy, and achieving efficient energy utilization. In addition, in the field of new technology, the Company actively explores monitoring and intelligent analysis technology for energy consumption data. We are also exploring the application of new technology products such as geothermal and water-source heat pumps, as well as thermal storage technologies, to further promote energy saving and consumption reduction.



### Case: Cooperating in building a spatio-temporal big data platform to achieve refined management of energy consumption data

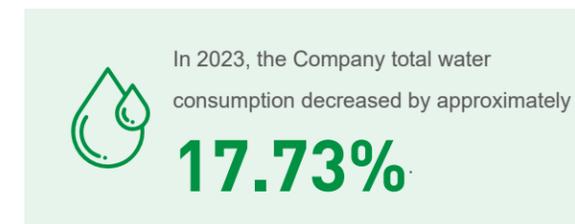
In 2023, we cooperated with Tsinghua University to establish a spatio-temporal big data platform. This platform centrally monitors and intelligently analyzes the production and operation data of our operational projects, enhancing the management of energy consumption data. This marks a significant advancement in the field of clean heating, transitioning from digitalization to intelligence.



The Spatio-temporal Big Data Platform

## Water Resources Management

We comply with the *Water Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law*, the *Regulation on the Administration of the License for Water Drawing and the Levy of Water Resource Fees* and other water resources management regulations and systems. Based on the actual situation of each subsidiary, we have set water consumption targets and conducted assessments to strictly control water resource consumption. In the clean heating sector, water consumption targets have been established for each subsidiary, with a goal of reducing water consumption by 3%-5% annually compared to the previous year. To achieve water conservation goals, we conduct regular inspections and maintenance of the heating network and strengthen inspections on water discharge. Additionally, we implement initiatives such as Water Loss Special Governance Action Competition, water-saving technological upgrades, to comprehensively improve water resource utilization efficiency. During the reporting period, the Company did not have any issue in obtaining suitable water. In 2023, the Company total water consumption decreased by approximately 17.73%.



### Water consumption amount

Water consumption types	unit	2022	2023
Photovoltaic power plants	Tonne	21,948.48	20,901.00
Wind power plants	Tonne	5,739.30	5,661.00
Clean heat supply project	Tonne	1,145,580.00	940,621.58
HQ	Tonne	2,800.00	400.00 <sup>4</sup>
Total amount of water consumption	Tonne	1,176,067.78	967,584.00
Water resources consumption intensity	Tonne/Revenue (HKD million)	222.07	194.96

<sup>4</sup>The change in the leased area of the headquarters office has resulted in a significant decrease in the recorded water usage.

# Green and Low-carbon Business Operations

The Company consistently upholds the "green" concept, advocating for low-carbon operations. We continuously strengthen our environmental management system, establishing and refining waste disposal processes. Our approach to environmental protection is systematic and comprehensive.

## Environmental Management

In accordance with the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on Environmental Impact Assessment*, the *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution Caused by Solid Wastes*, the *Law of the People's Republic of China on Noise Pollution Prevention and Control* as well as other laws and regulations related to environmental management. Additionally, we have formulated internal policies and systems such as the *Regulations on Environmental Protection Management*, the *Measures for Management of Safe and Civilized Project Construction*, the *Green Construction Proposal*, and the *Environmental and Water Quality Protection Proposal*. These measures aim to regulate environmental management across the Company's departments and subordinate operating units during both construction and operation phases, gradually improving our overall environmental management system. In 2023, the Company actively initiated the environmental management system ISO 14001 certification, with a coverage rate of 100%. During the reporting period, no severe environmental pollution incidents and violations were reported.



Environmental Management System Certification

The Company rigorously enforces the environmental management mechanism of "supervision at different levels, with each entity assuming its own responsibilities." We continually enhance the environmental management structure system, incorporating environmental management factors into performance appraisals. These appraisals directly influence salary reviews based on performance. Additionally, in the event of an environmental safety accident, we exercise a one-vote veto.



### Duties of the environmental management system



**Safety and quality department**

- Responsible for the comprehensive supervision and management of environmental protection work within the Group.

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**The Group's units**

- Specify the competent department for environmental protection management, assign units' environmental protection decision-making body and management personnel; responsible for the specific implementation of their own environmental protection work;
- The Company's construction units are responsible for supervising the implementation of environmental protection requirements in the stages of project design, construction, operation preparation, trial production, and completion acceptance; obtain the environmental impact assessment approval before the project construction, and obtain the approval of the government's environmental protection department before the trial operation; responsible for the effective implementation of the "Three Simultaneities" in the construction of environmental protection facilities;
- The Company's operation units establish and improve the environmental protection management system for enterprise operation, ensure the effective operation of environmental protection facilities on the project, and ensure that the emission standards comply with the relevant requirements of laws and regulations.

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**The Group's departments**

- Secretariat of the Board is responsible for the management of energy conservation and environmental protection in the office area of the Group's headquarters, the identification and evaluation of environmental factors, collecting statistics on the list of important environmental factors, and the formulation of relevant management measures;
- According to the Company's sub-authorization system, each development department is responsible for the handling of environmental protection-related procedures for projects on wind power, photovoltaic power and energy storage according to their duties;
- The Engineering Centre is responsible for the supervision and management of the environmental protection of the construction project, and is responsible for the "Three Simultaneities" management of the construction of the environmental protection facilities of the construction project, the environmental protection acceptance of completed projects, and the overall guidance of the environmental management impact assessment;
- The Group's Operations Business Unit is responsible for the supervision of the environmental protection of operation projects;
- Other departments of the Group are responsible for the management of environmental protection within the business scope of their own departments.

The Company has developed a comprehensive environmental management mechanism covering all phases of project development, including preparation, construction, and operation. We have formulated environmental protection initiatives for each phase, analyzing and assessing the extent and scope of environmental impacts, and adopting appropriate countermeasures against environmental risks that may arise. At present, considering that hazardous and non-hazardous waste have limited impact on the Group, we are still setting targets for hazardous and non-hazardous waste management, and we will continue to conduct reviews and audits when appropriate, and will disclose more information in the future as appropriate. We are currently strengthening our waste data management to drive our targets in line with policy requirements and industry developments.

### Project Preparation Stage

During this stage, the Company actively conducts research on the environmental protection plan for the project. We analyze the current environmental quality of the project area and identify ecological elements. We strictly comply with legal standards and relevant requirements of the place of operation, such as the *Law of the People's Republic of China on Environmental Impact Assessment* and the *Regulations on the Administration of Construction Project Environmental Protection*. We have formulated internal management systems such as the *Environmental Factors Identification Table* and the *Important Environmental Factors Identification Table*. We conduct comprehensive environmental assessments of the atmospheric, water, acoustic, and soil environments to compile environmental impact reports. Throughout this stage, we conduct several rounds of site investigation work to ensure a thorough and objective assessment of the project construction's impact on the ecological environment, thereby reducing the risk of environmental and ecological issues involved.

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## Project Construction Stage

The Company actively embraces the concept of green construction to minimize environmental impact. Our projects, spanning photovoltaic power, wind power, energy storage, and heat supply, strictly adhere to national and local laws and regulations. In addition, we have formulated internal systems, like the *Measures for Management of Safe and Civilized Project Construction*, the *Green Construction Proposal*, etc. Additionally, we have implemented targeted environmental protection measures for the main environmental impact factors identified during construction.

### Environmental protection measures during construction

**Prevention and control of atmospheric pollution**

- Implement closed or isolated measures for the construction area;
- For hardening of main roads, construction sites take cover, curing, greening, sprinkling, vehicle washing and other dust control measures;
- The exit of the construction site should be equipped with washing pool and sedimentation tank, and the chassis and wheels of transportation vehicles shall be washed clean before leaving the construction site;
- The use of various types of machinery and vehicles on the construction site must comply with relevant air pollutant emission standards.

**Noise management**

- Strictly implement the national environmental noise emission standards, set up noise monitoring points at the construction site, and conduct dynamic monitoring of the daytime and nighttime acoustic environment;
- Try to use low-noise equipment, for high-noise equipment retrofitted with sound insulation screens, silencers, and other sound insulation devices to reduce the impact of noise on the surrounding environment;
- Reasonably arrange the operating hours of construction machinery, high-noise operation activities are arranged under the time period that does not affect the social life;
- Cut off the way of transmission of construction noise, and take greening sound absorption and sound insulation measures on the construction site.

**Waste water treatment**

- Set up drainage ditches and sedimentation tanks on the construction site, and the discharge of domestic wastewater and production waste water shall be treated according to the relevant waste water discharge standards and discharged after reaching the standard;
- Production wastewater must be discharged after the sedimentation in the sedimentation tank reaches the discharge standard. Some sites sprinkle sediment water for dust suppression on the construction site or take recycling measures.

**Waste disposal**

- Waste disposal follows the principles of "lightweight", "recycling" and "non-hazardous". Segregate waste and dispose of it on time;
- Hazardous waste: Recycle and dispose of hazardous waste such as fan lubricants and failed batteries, and prohibit backfilling. Delineate a special storage area for hazardous waste generated during the construction process, and take anti-seepage measures, and send it to a professional third-party agency for centralized and non-hazardous treatment at last;
- Non-hazardous waste: Contact qualified cooperative units for recycling or reuse of utilizable waste. For unusable waste, sort and move them to designated locations during construction, and transport them to garbage dumps for disposal on a regular basis.

### Main measures of green construction

Saving land

- To use land rationally, temporary roads and partial backfilling are constructed first;
- The remaining earthwork can be carried out according to the construction layout, and the start time of each unit project is staggered. The soil piling point is set in the site area to reduce the occupation of the land by the earthwork.

Saving energy

- Prioritize the use of energy-saving, efficient and environmentally friendly construction equipment and tools recommended by the state and industry;
- Reasonably arrange the process to improve the utilization rate and full load rate of various machinery;
- Implement electricity metering management, strictly control the electricity consumption during the construction stage, and place clear energy-saving signs at power switches;
- Implement electricity metering management, strictly control the electricity consumption during the construction stage, and put up clear energy-saving signs at power switches;
- Establish a management system for construction machinery and equipment, and conduct maintenance work in time to keep machinery and equipment in a state of low consumption and high efficiency.

Saving water resources

- Implement water metering management, strictly control the water consumption in the construction stage, and measure the water consumption of living area and the construction area separately;
- Establish a statistical account of water consumption and water saving, and conduct analysis and comparison to improve the water saving rate;
- Set up waste water recycling facilities on the construction site to recycle the waste water for reuse.

Saving materials

- Select green materials, actively promote new materials and new processes, and promote the rational use of materials to save the consumption of actual construction materials;
- Arrange material collection based on quota at the construction site, statistically analyze the actual and budgeted consumption of construction material, and formulate and implement key point control measures in a targeted manner to increase material saving rate;
- Establish a list of recyclable and reusable materials on the construction site, formulate and implement recycling management methods for recyclable waste.

## Project Operation Stage

The Company has established a complete environmental management system during the operation period. We have established the *Regulations on Environmental Protection Management* to specify environmental protection requirements during operations, ensuring compliance with national and local emission standards for various pollutants such as wastewater, waste gas, and solid waste. Additionally, we conduct regular assessments of environmental protection performance. In the event of an environmental pollution incident, immediate measures are taken for proper handling.

## Emission Management

The Company abides by the *Environmental Protection Law of the People's Republic of China*, the *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution Caused by Solid Wastes*, etc. We strictly manage and supervise the process of waste discharge during operations (for details of the waste management during the construction period, please refer to *Environmental Management*). We actively manage waste discharges and have implemented measures for proper waste disposal, water recycling, and upgrading to improve flue gas emissions standards and the resourcefulness of domestic waste. These efforts aim to reduce total emissions while ensuring compliance and stability of pollutant emissions.

### Clean Power Emission Management

The Company has compiled internal system documents such as the *Work Plan on Focused Management of Safety Risks of Dangerous Chemicals*, the *Regulations on Equipment Maintenance and Disposal* and *Regulations on Management of Dangerous Chemicals* to regulate the disposal of waste in the clean power generation business.

#### Waste disposal measures



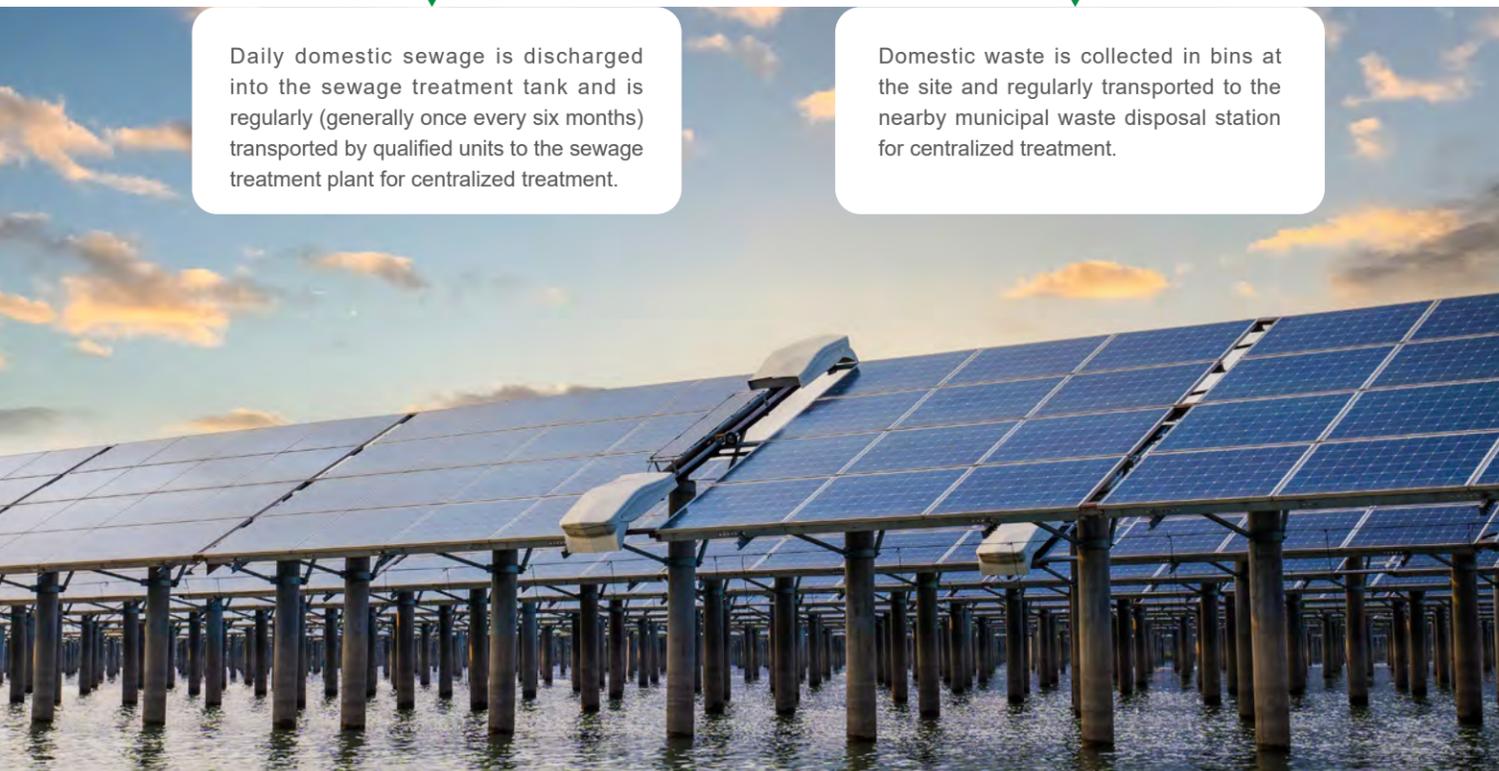
Domestic sewage



Domestic waste

Daily domestic sewage is discharged into the sewage treatment tank and is regularly (generally once every six months) transported by qualified units to the sewage treatment plant for centralized treatment.

Domestic waste is collected in bins at the site and regularly transported to the nearby municipal waste disposal station for centralized treatment.



## Clean Heat Supply Emissions Management

The Company closely monitors the management of relevant emissions and has formulated internal systems such as the *Environmental Protection Facilities Operation Management System*, the *Safety and Environmental Protection Incident Management System* and the *Environmental Protection Management, Supervision, Inspection and Assessment System*, and carries out pollutant emission management in strict accordance with relevant national standards the *Comprehensive Emission Standards for Atmospheric Pollutants*, the *Emission Standard of Atmospheric Pollutants for Boilers* and local standards of the local environmental protection authorities to ensure environmental protection and safe operation.



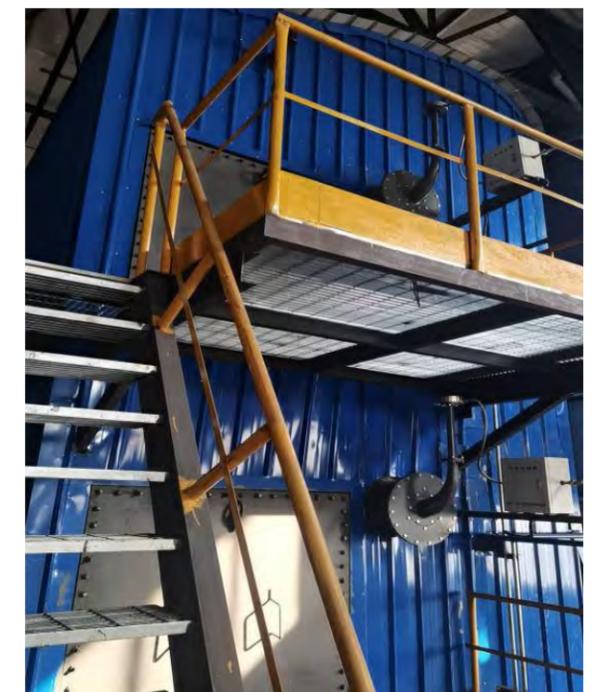
- Modification of the original denitrification system and building new Selective Catalytic Reduction (SCR) off-furnace denitrification systems to significantly reduce emissions;
- Renovation of the dust removal system and building a new wet electrostatic precipitator system to achieve ultra-low emissions of smoke and dust indicators;
- Upgrading of boiler to improve flue gas emissions and optimization of processes to achieve emission levels below national standards;
- Further treatment of furnace sewage to achieve reclaimed water quality for sprinkling and watering to improve utilization;
- Refurbishment of the heat supply in certain projects to refine management and reduce energy consumption.



#### Case: Coal-fired boiler heating project system modification in Cao County

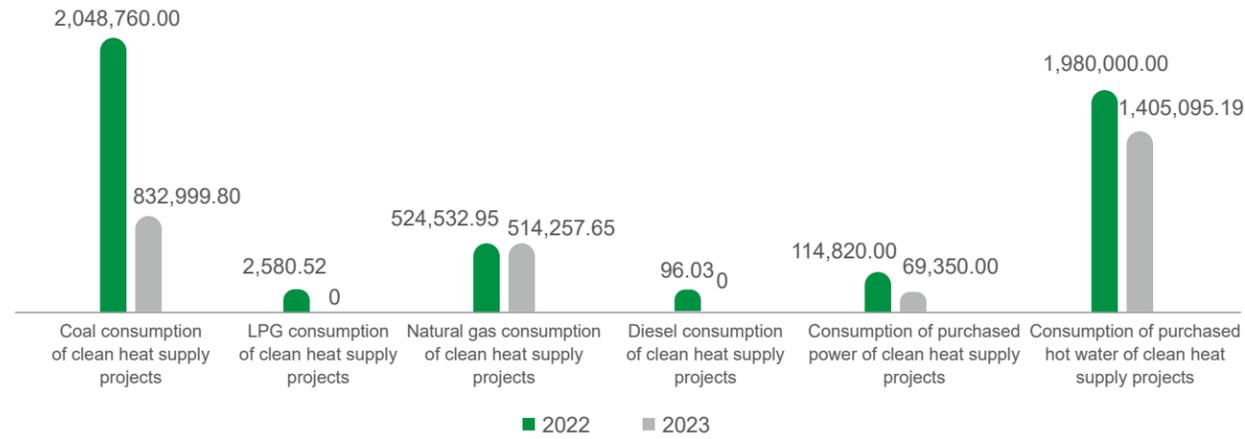
In 2023, workers of the coal-fired boiler heating project in Cao County retrofitted the original in-furnace polymer denitrification system and built a new Selective Catalytic Reduction (“SCR”) out-of-furnace denitrification system to achieve a significant reduction in emission.

In addition, the project replaced the original dust collector system and built a new wet electrostatic precipitator system, and the current smoke and dust emission has been significantly reduced..

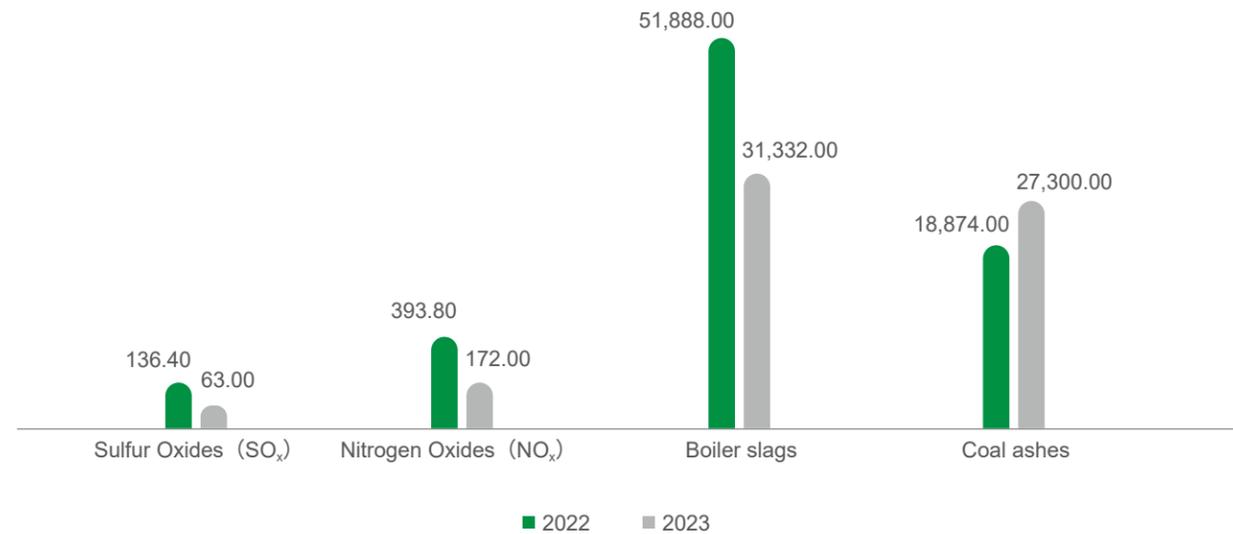


SCR out-of-furnace denitrification system

### Energy consumption of the clean heat supply business (MWh)



### Discharge of atmospheric pollutants and non-hazardous solid waste of clean heat supply business (Tonne)



### Domestic Waste Resource Utilization

SHNE's subsidiary Shandong High-Speed Renewable Energy Group Limited (SHREG) (000803.SZ) focuses on investing and operating projects related to the disposal and resource utilization of organic waste, aiming to build a platform for processing, exporting, and trading recycled oils and fats. SHREG continues to promote the reutilization of domestic waste. With the completion of technical reforms and elimination of defects, as well as full-line debugging, over half of the kitchen projects have commenced production and operation. As a result, the scale of kitchen waste treatment has expanded across all aspects, and the Company's overall capacity utilization for kitchen projects has reached a leading level. Concurrently, the Company has achieved a record-high increment in bio-oil volume, enhancing resource utilization and facilitating pollution reduction, carbon reduction, and green innovation in our operations.

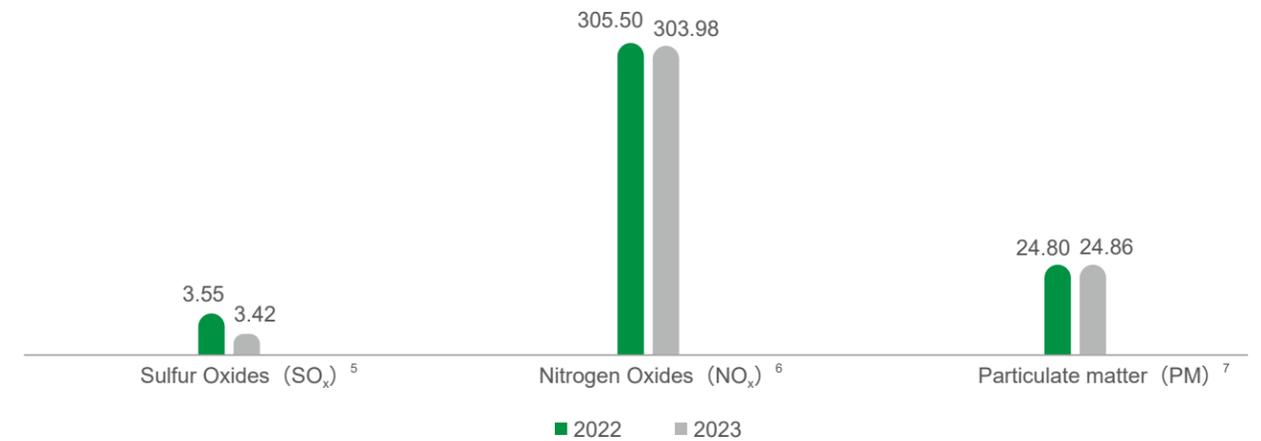
### Case: Research and development of alternative carbon sources and carbon source products

In April 2023, SHREG conducted research and development on alternative carbon source products and carbon source products through technological innovation and improvement. It transformed kitchen waste liquid into standardized carbon source products with higher value and quality. The aim is to reduce dependence on traditional carbon resources, lower costs, and promote sustainable development.

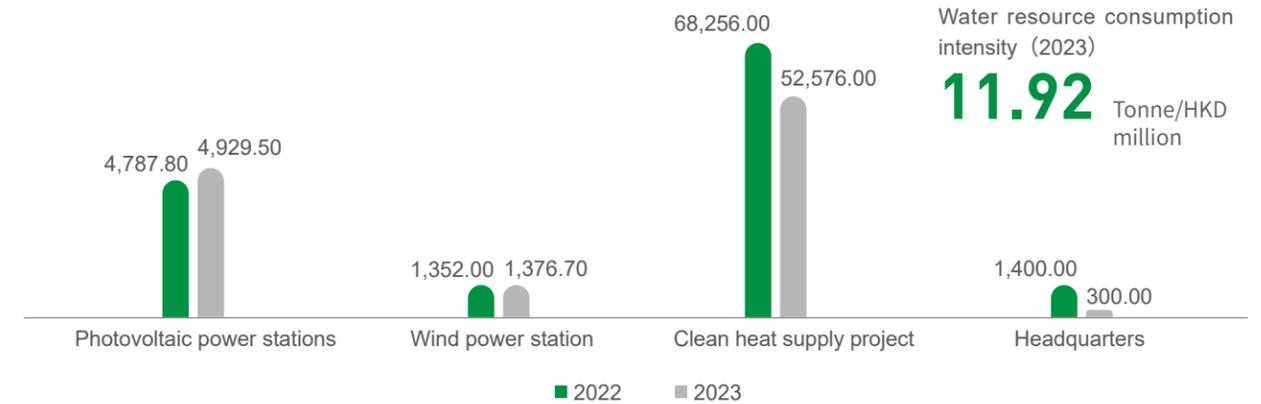
### Case: Anaerobic MBR System development

In April 2023, SHREG initiated a research and development project on anaerobic MBR (Membrane Bioreactor) systems to replace traditional mechanical sludge removal methods and improve biogas slurry separation efficiency. Additionally, a portion of the concentrated sludge is returned to the anaerobic system to increase sludge concentration, thereby enhancing the treatment efficiency of the anaerobic system.

### Vehicle atmospheric pollutant emission (Kilogram)



### Sewage discharge (Tonne)



Water resource consumption intensity (2022)  
**14.31** Tonne/HKD million

Water resource consumption intensity (2023)  
**11.92** Tonne/HKD million

<sup>5</sup> Sulphur oxide emissions from vehicles are calculated twice according to the amount of petrol and diesel consumed by the vehicle.

<sup>6</sup> Nitrogen Oxides emissions from vehicles are calculated twice according to the amount of petrol and diesel consumed by the vehicle.

<sup>7</sup> Particulate matter (PM) emissions from vehicles are calculated twice according to the amount of petrol and diesel consumed by the vehicle.

## Green Office

Adhering to the concept of green environmental protection, the Company has formulated an internal system of *Office Environment, Energy Saving and Safety Management Rules* to standardize the environmental management of the office area. We have implemented a range of energy-saving and water-saving measures, as well as initiatives for office garbage classification and transitioning to a paperless office. These efforts aim to explore the potential of green office areas, minimize resource consumption, and achieve low-carbon operations.



### Energy Conservation Lighting

- Turn off all power in the office area after work, including but not limited to lights, computers, air conditioners, etc;
- All lighting switches in the power station complex have been replaced with infrared switches, which control the lighting in a timely manner according to the light sensitivity, effectively reducing energy wastage and lowering the power consumption of the plant. The renovated power station saves approximately 10 watts of domestic electricity per day.



### Water Saving Measures

- "Turn off the water as you go, and turn off the water when you leave" to avoid "wasting water", effectively conserving water resources.



### Waste Sorting

- Beijing Office Building continues to sort office waste in accordance with Beijing's waste sorting requirements, recycling and carrying out harmless treatment of printer toner cartridges in recent years.



### Paperless Office

- We have implemented a paperless office, reduced the cost of paper documents, promoted the use of electronic documents in meetings and encourage double-sided printing.



## Environmental Awareness Development

To raise staff's awareness of energy conservation and environmental protection, the Company conducts regular environmental protection training sessions and organizes training for all staff at least once a year. The training mainly follows the *Water Law of the People's Republic of China*, the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, and various environmental management systems of the Company. The training covers water conservation, environmental protection laws and regulations, water conservation measures and waste treatment.

### Case: Holding the activity of "promotion month for environmental management"

In March 2023, the Company organized the "Promotion Month for Environmental Management" with the theme of "Standardize Environmental Protection Management and Boost Green Development", and the specific activities included environmental protection publicity, environmental protection knowledge training, environmental protection inspection, and so on.

In the activity, we centered on "environmental management content", "laws and regulations" and "thermal environmental protection seminar" to explain relevant things. Additionally, to make sure the activity went well, we focused on publicizing and implementing the *Environmental Protection Law of the People's Republic of China*, the *Technical Specification for the Setting of Hazardous Waste Identification Signs* (HJ 1276-2022), and the *Hazardous Waste Storage Pollution Control Standards* (GB 18597-2023).

At the same time, we invited a number of employees from various functional departments and business units to share their experience in environmental protection in accordance with the actual situation of their own projects and local environmental control requirements.

In addition, we carried out safety and environmental protection research and inspection work, focusing on the implementation of environmental protection work in each business unit to ensure that environmental protection work is under closed-loop management.



Promotion Month for Environmental Management

# 04

## Care for Employees, Move Forward Hand-in-Hand

SHNE remains committed to a people-oriented development philosophy. We adhere to labor laws and regulations to safeguard the legitimate rights and interests of our employees, ensure their well-being, and offer diverse career advancement opportunities.

- Employment with Diversity and Equality
- Talent Development Focus
- Employees Welfare and Care Implementation



# Employment with Diversity and Equality

The Company adheres to the principle of legally compliant employment, fosters a diverse and inclusive corporate culture, and cultivates a fair, open, harmonious, and inclusive work environment.

## Legal Employment

SHNE employs employees in strict compliance with the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China* and its implementation measures. We have developed internal policies to prevent the employment of child labor, forced labor, and other human rights violations. During the recruitment process, personal data are collected to aid in the selection of suitable candidates. If child labor or forced labor is identified, we will pursue the administrative responsibility of the relevant hiring department and the legal liability for serious cases. We firmly oppose and combat any form of discrimination or harassment based on factors such as race, ethnicity, nationality, religion, place of origin, gender, age, or health status. We ensure that our employees have equitable opportunities for access and advancement, fostering an environment of equality in the workplace. Throughout the past year, there have been no reported incidents of discrimination or harassment, no child or forced labor incidents occurred at the Company.

In our recruitment practices, we adhere to the principle of "employing according to strengths, prioritizing performance, and matching individuals with suitable positions". We establish both internal and external recruitment channels to attract a diverse pool of high-quality talent across various fields, utilizing methods such as internal referrals, online recruitment platforms, and campus recruitment initiatives. In 2023, SHNE was honored with the "Liepin Social Responsibility Employer in North China" award.

Internal
We implement the <i>Internal Talent Recommendation Management System</i> , putting internal recommendations before external recruitment. We provide more promotion opportunities for our staff, so as to stimulate their motivation and sense of belonging.

External
We actively seek out talent who meet the Company's needs through recruitment websites and headhunting services. We conduct comprehensive assessments of candidates, considering their character, abilities, experience, and qualifications, to ensure the quality and effectiveness of our external recruitment efforts.

## Diversity and Inclusiveness

SHNE embraces the employment principles of openness, equality, and inclusiveness, working diligently to foster an organizational atmosphere characterized by unity, compassion, openness, and inclusivity. We strive to cultivate a cultural environment that promotes "diversity, equality, and inclusiveness". In 2023, the Company formulated the *Statement on Diversity, Equality and Inclusiveness* to build a work environment where all employees can gain respect, understanding and support. The statement has been officially released in early 2024.

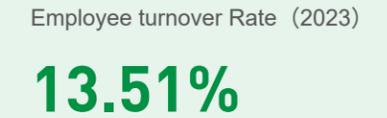
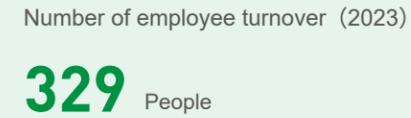
### SHNE's commitment to diversity, equality and inclusiveness

- Diversity**  
We support and implement various measures to embrace the diversity of our employees, encompassing aspects such as nationality, race, ethnicity, religion, political beliefs, cultural background, age, gender, educational background, work experience, family background, and physical condition, among others. Embracing diversity enables our employees to enrich their unique perspectives and skills, driving innovation, flexibility, and a competitive edge for the Company.
- Equality**  
We offer our employees a multi-dimensional workplace characterized by fairness, openness, and justice, without implementing differentiated treatment based on gender, background, age, or any other factors. Simultaneously, we remain committed to ensuring comprehensive equal treatment of employees in recruitment, promotion, remuneration, and other aspects, ensuring that all employees have equitable access to resources and opportunities.
- Inclusiveness**  
We practice democratic management, valuing, respecting, and listening to the voice of every employee. We encourage all employees to contribute to major decisions and the development of our corporate culture. We ensure that employees actively participate in shaping the Company's affairs and activities, fostering mutual growth for individuals and the Company as a whole.

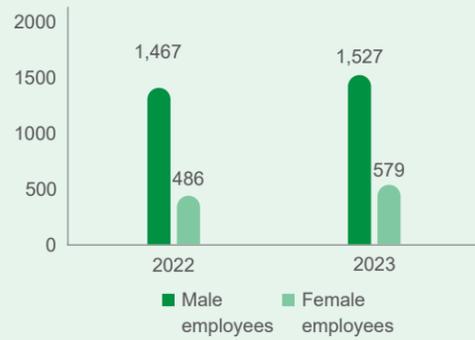
The Company regularly conducts training sessions focused on workplace diversity and inclusiveness, covering topics such as the Company's management system and policies, specialized training on business knowledge, and cultural activities for employees. These efforts are aimed at improving employees' professionalism and understanding of professional ethics while promoting values of diversity and inclusiveness within the organization.



SHNE employment information table



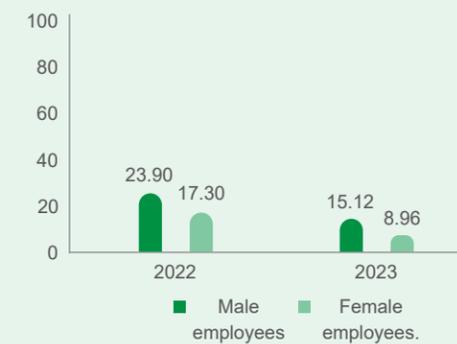
Number of employees by gender (Person)



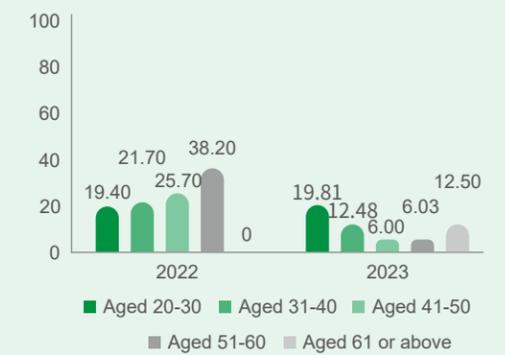
Number of employees by employment type(Person)



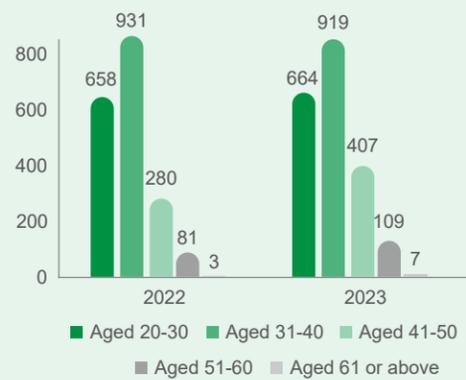
Employee turnover rate by gender (%)



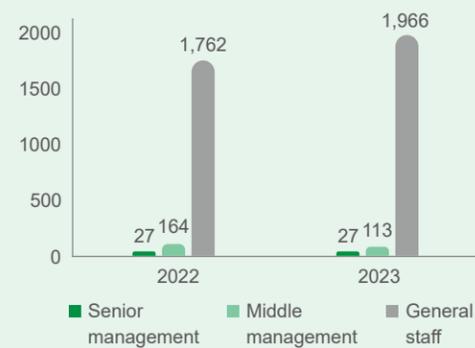
Employee turnover rate by age (%)



Number of employees by age (Person)



Number of employees by position (Person)



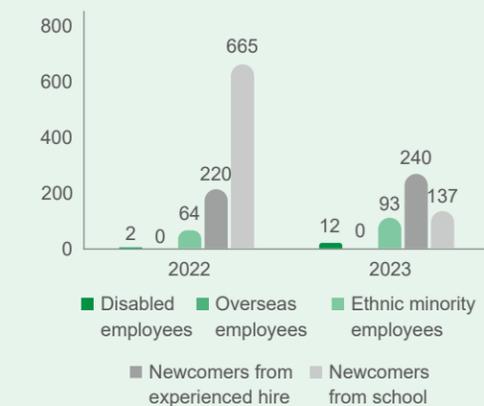
Employee turnover rate by geographical region



Number of employees by geographical region(Person)



Number of employees by special cases(Person)



# Talent Development Focus

SHNE is fully committed to supporting the personal development and long-term growth of its employees. We provide ample training resources to empower employees to enhance their professional skills and vocational qualities, thereby expanding their career development opportunities.

## Staff Training

In 2023, SHNE revised and issued the *Training Management System*, aiming to standardize training management and clarify the importance of training. The Group's training system includes the development program for middle and senior management, high-potential talents and general staff, induction training for new employees, and growth training for management trainees.

We conduct comprehensive training in general office abilities and department-specific knowledge for our company's trainees. Additionally, we have established a "dual-mentor system" and "rotation system" to expose trainees to various professional modules within each department during their initial two years with the company. This approach enables them to rapidly acquire and enhance their professional skills, ultimately developing into the young, high-potential talents the company requires. Furthermore, we have established a comprehensive and diverse training course system, offering different types of training series tailored for senior, middle, and junior management, new employees, recent graduates, and other groups within the company.

### SHNE training management system

Name of training	Target	Training content
Development program for middle and senior management	Senior and middle management	Including high-end courses on strategic operations, leadership, team building and other topics.
Development program for high-potential talents	Managers and senior managers	Including self-management, employee management, team management and other required courses for successor managers to build a talent pool.
Development program for general staff	All staff	Including general courses (e.g., effective communication, time management, stress management, women's physical and mental health, and anti-discrimination) and specialized skill courses.
Induction training for new employees	New employees	Introduction of the Group and corporate culture, information technology training, safety knowledge training, occupational fraud prevention training, reimbursement process training, document printing and archiving training, introduction of the basic process of project development and construction, introduction of employee benefits and attendance, introduction of the Company's organizational structure and the duties of each department, and other basic training sessions.
Growth training for management trainees	Management trainees	Communication meetings, themed course training, quality development activities, visits to real power plants and other activities.

## Employee training performance form

Indicator		Unit	2022	2023
 Percentage of employees trained	Total employees <sup>8</sup>	%	100.00	85.71
	Male employees	%	75.12	78.56
	Female employees	%	24.88	21.44
	Management	%	9.78	6.15
	General staff	%	90.22	93.85
 Average hours of employee training <sup>9</sup>	Total employees	Hour	50.00	17.46
	Male employees	Hour	54.00	22.82
	Female employees	Hour	36.00	5.98
	Management	Hour	60.00	11.65
	General staff	Hour	48.00	17.88
 Number of employee training by training category	Operations at basic level <sup>10</sup>	Session	12	34
	Operations and maintenance	Session	10	29
	Management trainees	Session	/	3
	New employees	Session	6	19

<sup>8</sup> Retroactively, this data is based on attendance in 2022, and the methodology is updated to count by headcount in 2023.

<sup>9</sup> Retroactively, this data is based on attendance in 2022, and the methodology is updated to count by headcount in 2023.

<sup>10</sup> Retroactively, this data does not include operation and maintenance skills training and skilled customer service training in 2022, and this data includes headquarters and Shandong Hi-Speed Heat Power Company's data in 2023.



**Case: The Company organizing the “Star Training Camp” for the Group’s Management Trainees in 2023.**

From August to September 2023, the Company organized a 2.5-day “Start from SHNE, Reach for Dream”— “Star Training Camp” for the Group’s management trainees, which was attended by 19 management trainees from the 20th to 23rd terms. The training included visiting Shanghe Power Plant and conducting business exchanges and learning. External lecturers gave lectures on the theme of “Professional Skill Enhancement for Excellent Employees”. Quality development and group building activities were also rolled out. This camp helped new employees quickly understand the Company’s development and operations, clarify their career development plans, and improve their professional quality and ability.



“Start from SHNE, Reach for Dream”— “Star Training Camp” for the Group’s Management Trainees in 2023.

**Case: SHNE’s ESG Training Program**

On January 12, 2024, SHNE held a 2024 ESG training and communication activity for all departments, which was carried out online and offline simultaneously. More than 60 representatives from all departments participated in this activity. The event provided special training in key ESG topics of the Company, including “Climate Change”, “Biodiversity Conservation”, “Community Relations”, “Talent Development”, “Occupational Health and Safety” and “Business Ethics and ESG Risk Management”. It focused on the future work and excellent practices of our peers in these areas.



SHNE’s ESG Training Program

**Case: Training on New Energy Power Transactions**

On February 23, 2023, the Company held a two-day training on new energy power transactions in Xi’an for the backbone staff in regional and field station transactions. The training was divided into three major parts: theoretical study, case study and system practice. Lecturers explained in detail the transaction rules of medium-term, long-term, and spot transactions. In addition, new energy transmission, green power transactions, and practical operation of the transaction system were included. Participants had in-depth discussions and exchanges with lecturers on the transaction characteristics of each station, which effectively enhanced their professional skills.



Training on New Energy Power Transactions

**Employee Development**

SHNE continues to optimize the employee remuneration system and provide competitive remuneration packages for its employees. The Company has formulated remuneration management systems such as the *Management Measures for Remuneration Adjustment*, the *Remuneration Grade System for Regional Operation and Maintenance Personnel*, the *Management Measures for Employee Performance Assessment*, etc. It has revised the *Remuneration Management System* in 2023 to safeguard the legitimate rights and interests of employees and optimize the Company’s remuneration management capability. In addition, we conduct assessments on individual and organizational performance annually to ensure that employees get access to fair promotion and development.

SHNE employee remuneration system

Executives	Employees
Executives’ remuneration is a structured remuneration with multiple components. It is linked to the <i>Target Responsibility Letter</i> , which includes ESG factors such as safety, quality and work safety.	Combined with the results of FESCO <sup>11</sup> Remuneration Incentive and Optimization Project and the <i>Management System for Employee Career Development</i> , the Company has established five major job sequences covering all positions, including “management, development, technology, operation and professional functions”. Employee remuneration is linked to rank and performance.

As we enhance employees’ remuneration and performance, we adhere to a competency-oriented talent development philosophy. We refine our talent selection, evaluation, and promotion systems, while bolstering the construction of our internal promotion system.

<sup>11</sup> FESCO, Beijing Foreign Enterprise Human Resources Service Co., Ltd, is a professional provider of comprehensive human resources solutions.

# Employees Welfare and Care Implementation

We always believe that employees constitute the solid foundation for the enterprise to achieve high-quality development. The Company formulates and enhances remuneration and welfare policies, establishes communication channels, and enriches caring initiatives, embodying a people-oriented approach to development.

## Employee Communication

SHNE values employees' ideas and opinions and establishes open and efficient communication channels for them. The Company conducts regular internal surveys and evaluations and provides a Feedback Mailbox through the Supervision and Audit Department for suggestions and recommendations to optimize and enhance management initiatives. Additionally, we support freedom of speech, encourage open communication, and adhere to the principles of openness and honesty. Employees can provide feedback on issues through designated mailboxes or face-to-face interviews.

## Welfare and Care

SHNE emphasizes humanistic care and has developed a range of welfare and support systems and measures for employees to enhance their happiness and satisfaction. The Company has established the *Welfare Allowance System*. Headquarters staff members receive not only statutory insurance and housing fund benefits but also various types of commercial insurance, including accident insurance, supplemental medical care, and life insurance. In 2023, we collaborated with staff to develop a commercial insurance program tailored to their actual needs. Since January 2024, the amount of commercial insurance has been raised again.

In terms of holidays, the Company adheres to a people-oriented management approach, ensuring that employees receive adequate care and rest. We comply with the relevant provisions of the *Regulation on Paid Annual Leave for Employees* and have formulated the *Management Measures for Employee Attendance and Paid Vacation*. Operating under a five-day work system in accordance with the law, our working hours are from 9:00 to 17:00. Statutory holidays, paid annual leave, sick leave, marriage leave, bereavement leave, maternity leave, parental leave, etc., are implemented in accordance with national policies. In alignment with relevant national regulations, employees can request bereavement leave upon the death of immediate family members. SHNE has eased restrictions on bereavement leave, allowing employees to apply for such leave upon the death of non-immediate family members. In 2023, the Company revised the *Management System for Employee Attendance and Vacation* according to the *Population and Family Planning in Beijing*. We introduced paid parental leave, stipulating parents who have children are entitled to 5 days of parental leave each year per parent until the child reaches 3 years old. Through diverse vacation policies, the Company effectively enhances employees' happiness and sense of belonging, fosters enthusiasm for work, and injects momentum into the long-term development of the Company.

### Case: The "Daily Afternoon Tea" Welfare Activity

The Company carries out the "Daily Afternoon Tea" welfare activity to relieve the work pressure of employees and create a harmonious atmosphere in the Company.

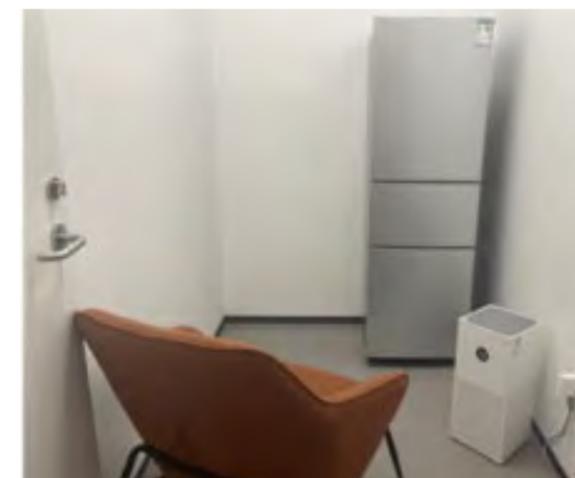


The "Daily Afternoon Tea" Welfare Activity

We recognize the invaluable contribution of female employees to the Company's development. As such, we consistently prioritize and respect female employees, encouraging them to fulfill their potential and realize their self-worth. We actively and effectively implement measures to protect women's rights and interests, supplementing these efforts with additional care initiatives.

#### Establishing mother-and-baby rooms

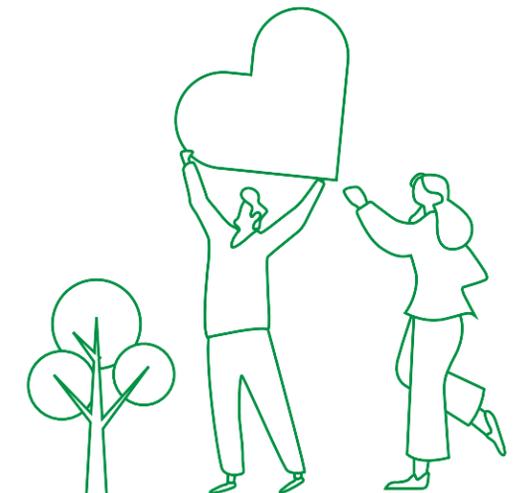
The Company has set up specialized nursing rooms and facilities in the workplace for breastfeeding, providing a private, comfortable and clean breastfeeding environment.



Mother-and-baby rooms in the Company

#### Arranging gynecological examinations in annual physical examinations

The Company has arranged gynecological, breast and other examinations for female employees in annual physical examinations to enhance their awareness of gynecological disease prevention.



# 05

## Co-build the Neighbourhood for a Better Future

By utilizing our business and technological advantages, we remain dedicated to strengthening our relationships with customers, suppliers, industry partners, and society at large. Concurrently, we actively engage in community development, rural revitalization, public welfare, and charitable endeavors, fulfilling our responsibilities and commitments through tangible actions.

- Customer Service Quality Improvement
- Supply Chain Eco-system Positive Growth
- Enhance Industry Development
- Social Benefit Enhancement Focus

## Customer Service Quality Improvement

The Company prioritizes customer satisfaction and is dedicated to delivering high-quality and efficient professional services. We actively listen to customers' feedback, enhance communication channels, and establish a responsive complaint resolution mechanism. Our goal is to provide customers with an improved service experience and enhance their overall satisfaction.

We continue to optimize the customer complaint mechanism, ensuring that the investigation process is objective and authentic. We do a closed-loop monitoring on the processing procedure and timeframe, providing timely feedback on the results of complaint resolution to enhance the customer experience. In 2023, our clean heat supply business received a total of 261 complaints, our complaint response rate reached 100%, with a closure rate of 99.20%, and no complaints related to customer service in the clean power generation business.

To further enhance our service standards, we routinely conduct customer satisfaction surveys to gather feedback and suggestions, refining the content and quality of our follow-up services. In 2023, the results of our clean heat supply business satisfaction survey revealed exceptionally high levels of customer satisfaction. With 51,020 participants in the survey, we achieved an impressive survey result of 99.77%. This underscores our commitment to delivering high-quality service as a fundamental requirement of our business operations. In addition, the result of the satisfaction survey in the field of clean power generation business was excellent, with the content mainly including safety production, operation and maintenance management, service skills, personnel quality, and the management of potential risks and defects.

We always maintain an open and transparent communication approach, establishing effective channels for information exchange with our clients. Through various means such as telephone, email, and face-to-face interactions, we strive to understand all aspects of customer needs and expectations. This enables us to continually optimize our service processes and enhance service quality, providing customers with efficient, high-quality, and professional services. At the same time, we organize regular marketing training activities for our staff, covering topics such as marketing system management and emergency response. These initiatives are aimed at enhancing their professional skills and service awareness, fostering the development of a high-quality service team.

In addition, due to the characteristics of the Company's electricity and heat supply business, its day-to-day operations do not involve the packaging and transportation of products, nor do they involve the recall of sold or transported products for safety or health reasons.



## Supply Chain Eco-system Positive Growth

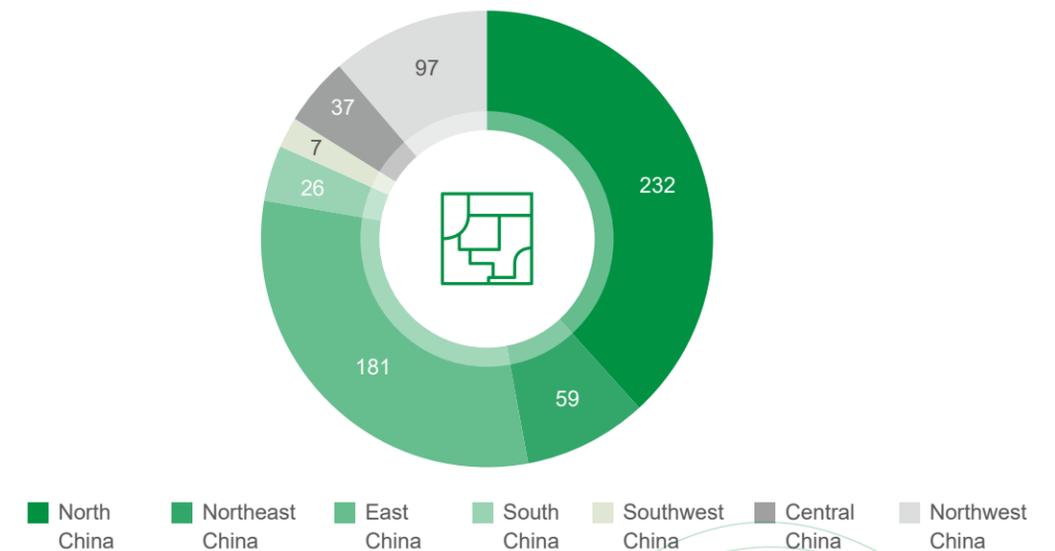
The Company abides by relevant laws and regulations such as the *Bidding Law of the People's Republic of China* and the *Regulation on the Implementation of the Bidding Law of the People's Republic of China*, and is committed to building a sustainable supply chain management system. In accordance with the requirements of national laws and regulations, the Company further formulates the *Rules of Procedure of Bidding Leading Group*, the *Management Measures for Group Bidding and Procurement*, the *Management Measures for Group Non-public Bidding and Procurement (Small-scale Procurement, Professional Procurement) Sub-Authorized Special*, the supplier management system and other bidding and procurement management systems. Additionally, we incorporate certification of suppliers' quality management, environmental management, and occupational health and safety management systems into our business evaluation criteria. We prioritize collaboration with suppliers exhibiting excellent ESG performance. We continuously enhance the ESG management structure of our suppliers. To oversee bidding and purchasing activities across subsidiary units, we have established the Bidding Leadership Group under the Management Committee of the Company. This group is responsible for standardizing, guiding, supervising, and ensuring accountability for bidding and purchasing activities. The Executive President of the Company serves as the head of the Bidding Leadership Group, overseeing the overall management of suppliers.



During the reporting period, the Company had a total of

**639** suppliers of engineering services, equipment and materials, and services, all of which complied with the company's supplier management requirements.

The number of suppliers by geographical region in 2023



## Supply chain management process



The Company emphasizes the communication with and empowerment of suppliers. We actively engage in cooperation and exchanges with suppliers through various channels such as telephone, email, WeChat, on-site communication, letters, and announcements. Additionally, we have established a targeted and stable resource and support platform. In 2023, we participated in industry business exchanges such as the Shanghai Photovoltaic Exhibition and Jinan Energy Storage Exhibition. We also regularly organized technical exchange meetings with suppliers and companies to discuss their main products and programs. Throughout the year, we conducted no less than 12 such meetings.



## Enhance Industry Development

The Company actively maintains close relationships with internal and external institutions, industry organizations, and continues to engage in collaborative exchanges. This effort drives the deepening of cooperation between academia and industry, facilitating sustainable development for both the Company and the industry as a whole.

### Internal Communication

The Company held several internal seminars and exchanged views on ESG management, ensuring the Company's sound development.

#### Case: Organizing ESG-themed Seminars

In 2023, in order to improve ESG management, the Company organized five seminars on the themes of "Address Climate Change", "Biodiversity and Community Relations", "Human Resource Development", "Occupational Health and Safety" and "ESG Indicators and Target Setting". We invited experts from professional organizations and heads of relevant internal departments to participate in the seminars to discuss ESG management improvement issues.



ESG-themed Seminars

#### Case: Holding the First ESG & Listed Company Influence Salon

In 2023, the Company held the first ESG and Listed Company Influence Salon. In this activity, the Company exchanged experience with external experts on the S&P CSA questionnaire rating participation and discussed the key factors of ESG influence on listed companies. The salon strengthens stakeholder communication and provides strong support for the Company's sustainable development in the future.



The First ESG & Listed Company Influence Salon

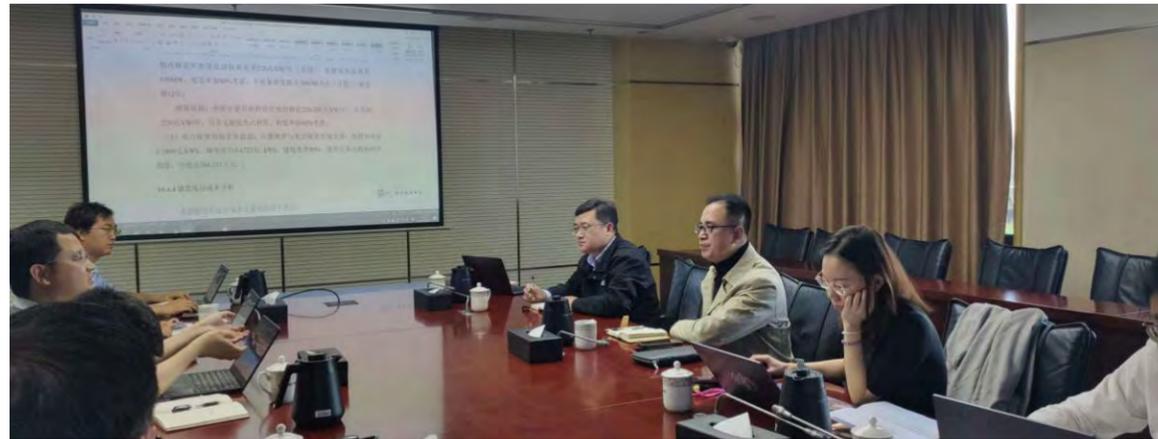
## External Communication

The Company actively engages in numerous external exchange activities with industry organizations and research institutes. These engagements provide opportunities for in-depth discussions on the development of new energy-related technologies and the accumulation of experience related to ESG disclosure and management.

### Case: Seminar on exchange of new energy storage technology applications

In 2023, the Company and Xi'an Thermal Power Research Institute Co.,Ltd. (TPRI) had a seminar on the exchange of new energy storage technology applications. In the seminar, we carried out technical exchanges on the system program of high-temperature molten salt heat storage and graphene composite battery energy storage technology.

In the future, we and Xi'an Thermal Power Research Institute Co.,Ltd. (TPRI) will carry out in-depth cooperation in the fields of wind power, photovoltaic, photothermal, new energy storage, etc., give full play to our respective technical advantages, and make important contributions to the construction of new power stored in light and wind.



Exchange Seminar on New Energy Storage Technology Applications

### Case: Participating in The 18<sup>th</sup> International CSR Forum and The 3<sup>rd</sup> ESG Competitiveness Forum

In June 2023, the Company was invited to participate in the the 18<sup>th</sup> International CSR Forum and The 3<sup>rd</sup> ESG Competitiveness Forum. In this TCFD-themed roundtable forum, we had an in-depth discussion with peers on how enterprises can cope with the risks and opportunities brought by climate change, and put forward its views on how enterprises can improve the level of TCFD.



The 18<sup>th</sup> International CSR Forum and The 3<sup>rd</sup> ESG Competitiveness Forum

### Case: Zaozhuang International Lithium Battery Industry Expo

In September 2023, the Company participated in the 2023 Zaozhuang International Lithium Battery Industry Expo to gain an in-depth understanding of the latest trends in the lithium industry and to promote exchanges and cooperation with lithium enterprises.

At the expo, the Company carried out the activity of "Hundreds of people Support SHNE's Zero Carbon Action" to raise the public's awareness of and concern for the new energy industry. The activity received a warm response.



International Lithium Battery Industry Exhibition

### Case: Participating in the Beijing International Sustainability Conference

In November 2023, the Company was invited to participate in the Beijing International Sustainability Conference hosted by the Beijing Office of the International Financial Reporting Standards Foundation (IFRS), and actively exchanged the latest trends of international sustainability disclosure standards with various sectors.



The Beijing International Sustainability Conference

### Case: Participating in the 2023 ESG & Sustainable Development Summit

In December 2023, the Company was invited to participate in the 2023 ESG & Sustainable Development Summit co-hosted by Huanqiu and State-owned Assets Report Magazine. In the roundtable forum on the theme of "Good Environment, New ESG Ecology", we introduced the highlights of our ESG work, exchanged experience with various sectors on environmental sustainability, and put forward practical suggestions for the realization of the dual-carbon goal from the perspective of new energy enterprises.



The 2023 ESG and Sustainable Development Summit

# Social Benefit Enhancement Focus

While advancing our own development, we actively participate in community co-construction efforts to enhance the well-being of residents. Through initiatives such as rural poverty alleviation, public welfare and disaster relief, and volunteer services, we contribute to improving the quality of life for local communities. In 2023, we invested a total of RMB 14.99 million<sup>12</sup> in social welfare initiatives, underscoring our commitment to corporate social responsibility.

we invested a total of RMB **14.99** million in social welfare initiatives

## Rural Revitalization

The Company actively leverages its resources and conducts supporting activities tailored to the specific circumstances of each operational location. Through initiatives such as weeding PV areas, cleaning modules, and maintaining and repairing sporadic projects, we aim to gradually enhance the income of local villagers. These efforts contribute to poverty alleviation, embodying the principle of "teaching a man to fish."

### Case: Wanyang Photovoltaic Station Supporting Project in Xingtai City, Hebei Province

In 2023, the photovoltaic station in Wanyang, Xingtai City, Hebei Province actively responded to the call of the Company and the local government. It assigned some works like weeding PV area and cleaning modules to local qualified enterprises that can increase villagers' income. The annual expenditure of the power station reached approximately RMB 600,000, contributing to local poverty alleviation.



On-the-site Villagers in Wanyang Photovoltaic Station

### Case: Beiyang Photovoltaic Station Supporting Project in Hebi City, Henan Province

In 2023, the photovoltaic power station assigned some works like weeding PV area, cleaning modules and maintaining roads to local qualified enterprises that can increase villagers' income. Its annual expenditure reached approximately RMB 1,800,000, increasing local people's income and honoring its own responsibilities.



On-the-site Villagers in Beiyang Photovoltaic Station

### Case: Photovoltaic Station Supporting Project in Anhui Province

In 2023, the photovoltaic station in Jinzhai County, Anhui Province actively responded to the call of the Company and the local government. It assigned some works like weeding PV area and tea plant maintenance to local qualified enterprises that can increase villagers' income. The annual expenditure of the power station reached approximately RMB 600,000, contributing to local poverty alleviation and honoring its own responsibilities.



Photovoltaic Power Station in Anhui Province

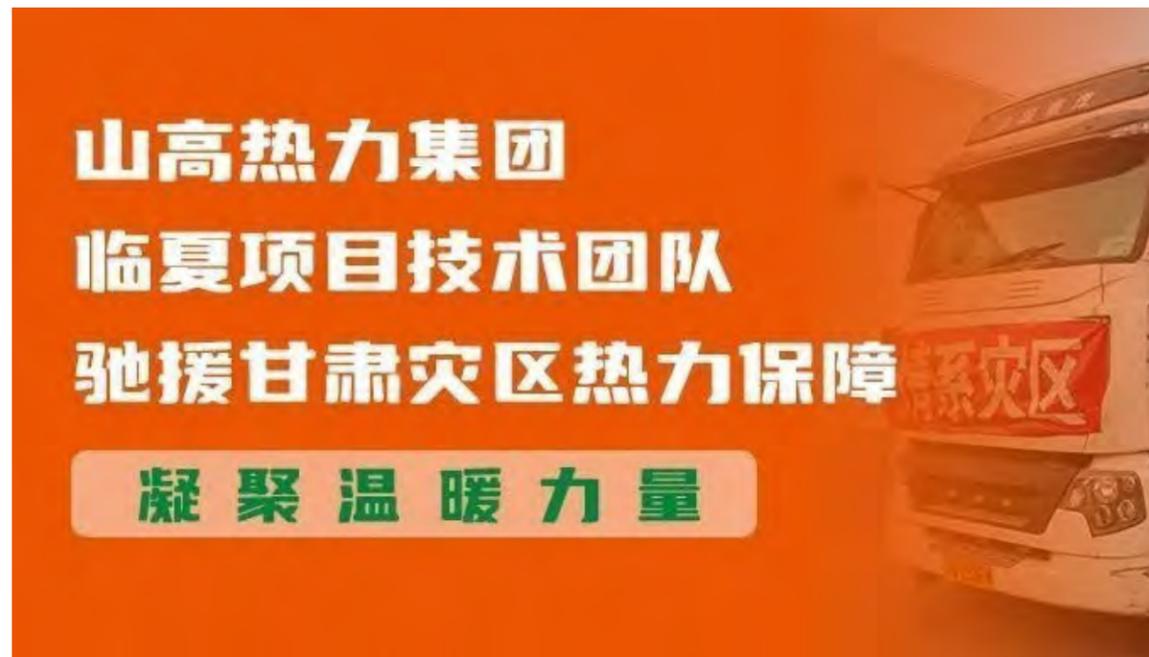
<sup>12</sup> This figure includes public welfare donations of RMB 80,000 and other community investment projects that can be capitalized.

## Public Welfare and Disaster Relief

The Company gives full play to the contributing spirit of “be brave to take responsibility and dare to be the first” and “serve the people and dedicate to the community” as a state-owned enterprise, and actively participates in public welfare and disaster relief undertakings.

### Case: Shandong Hi-Speed Heat Power Company Supplying Heat for Earthquake-Stricken area in Gansu Province

In December 2023, a 6.2 magnitude earthquake struck Baoan, Dongxiang and Sala, Linxia Autonomous Prefecture, Gansu Province, with the lowest temperature at night of that day being around minus 20 °C , and public facilities were damaged to varying degrees. The technical team of the Company's Linxia hosting project (Huachen Heat) immediately responded by donating relief supplies to the affected people and carrying out technical support to local heating companies.



Shandong Hi-Speed Heat Power Company Supplying Heat for Earthquake-Stricken area in Gansu Province

## Voluntary Activities

The Company encourages employees to participate in volunteer work, and practices corporate social responsibility through volunteer work, promotes green development, and contributes to building a harmonious society and a better environment.

### Case: Voluntary Tree Planting in the Mu Us Desert

On April 19, 2023, the Northwest Region of the Company launched a voluntary tree-planting activity with the theme of “Planting Trees to Beautify the Divine Land, Planting Flowers and Grasses to Beautify Mountains and Rivers”, aiming to promote the greening work in the region and enhance the awareness of ecological and environmental protection. More than a hundred volunteers actively participated in the activity and planted more than a hundred pinus sylvestris in the Mu Us Desert. This activity not only demonstrated our positive attitude towards environmental protection, but also conveyed the concept of green development, contributing to the construction of a beautiful China.



Tree-planting Site in the Mu Us Desert



# Appendix I: Performance Indicators

Key operation indicators		Sub-indicator description	Unit	2022	2023
Business situation		Revenues	100 million HKD	52.96	49.63
		Profit for the year	100 million HKD	2.26	3.87
		Centralised photovoltaic power plants	/	53	54
		Total installed capacity of centralised photovoltaic power plants	MW	2,369	2,526
		Wind power plants	/	13	19
		Total installed capacity of wind power plants	MW	588	1,176
		Total installed capacity of distributed photovoltaic stations	MW	750	800
		Clean heat supply	10,000 Square meter	3,959.80	3,394.80
Key governance indicators		Sub-indicators description	Unit	2022	2023
Anti-corruption		Training classes	/	8	9
		Training time	Hour	20	25
		Integrity training for staffs	Session	/ <sup>13</sup>	3
		Integrity training for mid-and high-level leaders	Session	/	1
		The coverage rate of anti-corruption rate for staffs	%	/	100
Privacy security		Cybersecurity incident emergency response drill	Number	/	94
	Information security training	Training time	Session	/	117
		The number of participants	people	/	636
		Training time	Hour	/	117
	Violations	/	0	0	
Intellectual property rights	Patent	Domestic applications	Piece	/	2
		Domestic authorizations	Piece	/	3
		Accumulated Authorizations	Piece	/	33
		Violations	/	0	0
Key environment indicators		Sub-indicators description	Unit	2022	2023
The types of emissions and emissions data	Air emissions	Nitrogen Oxides (NO <sub>x</sub> )	Tonne	394.11	172.30
		Sulfur Oxides (SO <sub>x</sub> )	Tonne	136.40	63.00
		Particulate matter (PM)	Kilogram	24.80	24.86
		Total domestic waste water emissions	Tonne	1,400.00	300.00

<sup>13</sup> All marks "/" in this performance indicator table indicate that 2022 is not disclosed.

Key environment indicators	Sub-indicators description	Unit	2022	2023	
The types of emissions and emissions data	Waste water emissions	Total industrial waste water emissions	Tonne	Clean heat supply waste water: 68,256.00	Clean heat supply waste water: 52,576.00
		Total photovoltaic power plants waste water emissions	Tonne	4,787.80	4,929.50
		Total wind power plants waste water emissions	Tonne:	1,352.00	1,376.70
		Waste water emission intensity	Tonne/HKD million	14.31	11.29
Total GHG emissions and intensity	Total GHG emissions		Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	1,345,535.24	760,294.90
	Total GHG emissions (Scope 1)	Total coal emission	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	680,400.00	276,653.57
		Total vehicle diesel emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	1,002.52	406.78
		Total vehicle gasoline emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	546.62	420.96
		Total natural gas emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	104,801.00	89,576.22
		Total LPG emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	638.00	0
		Total GHG emissions (Scope 1)	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	787,388.43	367,057.53
	Total GHG emissions (Scope 2)	Total purchased hot water emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	440,175.17	312,373.77
		Total purchased electricity emissions	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	117,971.64	80,863.60
		Total GHG emissions (Scope 2)	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)	558,146.81	393,237.37
	Carbon dioxide emission intensity	Tonne carbon dioxide equivalent(CO <sub>2</sub> -e)/ Revenue(HKD million)	254.07	153.19	
Total hazardous waste and intensity <sup>14</sup>	Used lead-acid battery	Kilogram	6.00	4.00	
	Used ink cartridges	Kilogram	106.00	315.00	
	Used light bulbs/tubes	Kilogram	53.00	65.00	
	Total hazardous waste	Kilogram	165.00	204.00	
	Hazardous waste intensity	Kilogram / Revenue(HKD million)	0.03	0.04	

<sup>14</sup> In 2023, the unit of disclosure of data on hazardous waste is adjusted from "piece" to "kilograms", and in 2022, the data are converted and adjusted to this version.

Key environment indicators	Sub-indicators description	Unit	2022	2023	
Total non-hazardous waste and intensity	Boiler slags	Tonne	51,888.00	31,332.00	
	Coal ashes	Tonne	18,874.00	27,300.00	
	General domestic waste	Tonne	226.81 <sup>15</sup>	233.35	
	Total non-hazardous waste	Tonne	70,988.81	58,865.27	
	Non-hazardous waste intensity	Tonne/Revenue (HKD million)	13.40	11.86	
Total direct and indirect energy consumption and intensity	Direct energy	Coal consumption	MWh	2,048,760.00	832,999.80
		LPG consumption	MWh	2,580.52	0
		Natural gas consumption	MWh	524,532.95	514,257.65
		Diesel consumption	MWh	195.42	107.60
		Gasoline consumption	MWh	3,007.29	1,923.01
		Total direct energy consumption	MWh	2,579,076.18	1,349,288.06
		Total direct energy consumption intensity	MWh/Revenue (HKD million)	486.99	271.87
	Indirect energy	Purchased hot water	MWh	Clean heat supply project: 1,980,000.00	Clean heat supply project: 1,405,095.19
		Purchased electricity	MWh	Clean heat supply project: 114,820.00 office: 171.88	Clean heat supply project: 69,350.00 office <sup>16</sup> : 333.90
		Photovoltaic power plants purchased electricity	MWh	42,400.00	41,492.00
		Wind power plants purchased electricity	MWh	6,300.00	4,840.00
		Total indirect energy consumption	MWh	2,143,691.88	1,521,111.09
		Total indirect energy consumption intensity	MWh/Revenue (HKD million)	404.78	306.49
	Consolidated energy consumption		MWh	4,722,768.06	2,870,399.15
	Consolidated energy consumption intensity		MWh/Revenue (HKD million)	891.76	578.36

<sup>15</sup> The methodology for counting the amount of waste paper in general domestic waste was updated in 2023, so the 2022 data has been corrected to reflect this.

<sup>16</sup> The change in the leased area of the headquarters office has resulted in a larger increase in purchased electricity.

Key environment indicators	Sub-indicators description	Unit	2022	2023	
Total water consumption and intensity	Photovoltaic power plants water resources consumption	Tonne	21,948.48	20,901.00	
	Wind power plants water resources consumption	Tonne	5,739.30	5,661.00	
	Office water consumption	Tonne	2,800.00	400.00	
	Clean heat supply project water consumption	Tonne	1,145,580.00	940,621.58	
	Total water resources consumption	Tonne	1,176,067.78	967,583.58	
	Water resources consumption intensity	Tonne/Revenue (HKD million)	222.07	194.96	
	<b>Key society indicators</b>				
Number of employee	Total number of employees		Person	1,953	2,106
	Number of employee by gender	Male employee		Person	1,467
Female employee		Person	486	579	
Number of employee by employment type	Full-time employee		Person	1,937	2,093
	Part-time employee		Person	16	13
Number of employee by age	Aged 20-30		Person	658	664
	Aged 31-40		Person	931	919
	Aged 41-50		Person	280	407
	Aged 51-60		Person	81	109
	Aged 61 or above		Person	3	7
Number of employee by position	High-level managers		Person	27	27
	Middle-level managers		Person	164	113
	General staff		Person	1,762	1,996
Number of Employee by geographical region	North China		Person	901	995
	Northeast China		Person	300	329
	East China		Person	207	255
	South China		Person	33	57
	Southwest China		Person	47	70
	Central China		Person	201	150
	Northwest China		Person	246	233
	Hong Kong, Macau and Taiwan		Person	18	17

Key society indicators	Sub-indicators description	Unit	2022	2023
Number of employee by special cases	Disabled employee	Person	2	12
	Foreign employee	Person	0	0
	Ethnic minority employee	Person	64	93
	Newcomers from experienced hire	Person	220	240
	Newcomers from school	Person	665	137
Number of employee turnover		Person	563	329
Employee turnover rate		%	22.40	13.51
Employee turnover rate by gender	Male employee	%	23.90	15.12
	Female employee	%	17.30	8.96
Employee turnover rate by age	Aged 20-30	%	19.40	19.81
	Aged 31-40	%	21.70	12.48
	Aged 41-50	%	25.70	6.00
	Aged 51-60	%	38.20	6.03
Employee turnover rate by geographical region	Aged 61 or above	%	0	12.50
	North China	%	15.20	16.46
	Northeast China	%	50.50	6.80
	East China	%	17.90	7.94
	South China	%	10.80	5.00
	Southwest China	%	17.50	30.69
	Central China	%	9.50	16.20
	Northwest China	%	5.00	7.91
Hong Kong, Macau and Taiwan	%	10.00	19.05	
Percentage of employees trained	Total employees	%	100.00	85.71
	Male employees	%	75.12	78.56
	Female employees	%	24.88	21.44
	Management	%	9.78	6.15
	General staff	%	90.22	93.85
Average hours of employee training	Total employees	Hour	50.00	17.46
	Male employees	Hour	54.00	22.82
	Female employees	Hour	36.00	5.98
	Management	Hour	60.00	11.65
	General staff	Hour	48.00	17.88

Key society indicators	Sub-indicators description	Unit	2022	2023
Number of employee training by training category	Operations at basic level	Session	12	34
	Operations and maintenance	Session	10	29
	Management trainees	Session	/	3
	New employees	Session	6	19
Total number of suppliers		/	209	639
Number of supplier geographical region	North China	/	63	232
	Northeast China	/	4	59
	East China	/	93	181
	South China	/	8	26
	Southwest China	/	5	7
	Central China	/	25	37
Production safety	Northwest China	/	11	97
	Number of work-related fatalities	Person	0	0
	Working days lost due to work-related injuries	Day	0	0
	LTIFR per million working hours	%	/	0
	Equipment accidents with direct economic loss of over RMB 2 million	/	0	0
	Fire, traffic and electrical accidents	/	0	0
	Public safety incidents	/	0	0
	Administration department penalty	/	0	0
Customer Service <sup>17</sup>	Safety education training	Person	3,856	4,310
	Total number of customer complaints	/	/	261
	Customer complaint response rate	%	/	100.00
	Customer complaint closure rate	%	/	99.20
	Customer satisfaction participants	Person	/	51,020
Community investment fund	Customer satisfaction rate	%	/	99.77
		RMB10,000	1,034.90	1,499.00

<sup>17</sup> The data related to customer service only includes clean heat supply business of SHNE, as no complaints related to customer service in the clean power generation business in 2022 and 2023.

# Appendix II: HKEX ESG Reporting Guide Content Index

ESG Areas and General Disclosures and KPIs (KPI)			Page Number
<b>Environmental</b>			
A1: Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issue relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Note: Air emissions include NO <sub>x</sub> , SO <sub>x</sub> , and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations.	P53
	A1.1	The types of emissions and respective emissions data.	P48, P59-60
	A1.2	Total 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).	P48, P88
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P88
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P89
	A1.5	Description of emissions target(s) set and steps taken to achieve them.	P44-47, P53-60
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	P55
A2: Use of Resources	General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.	P51-52
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	P59, P89
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P52, P89
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them	P51
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P52
	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Not suitable
A3: Environment and Natural Resources	General Disclosure	Policies on minimizing the issuer's significant impacts on the environment and natural resources.	P51-58
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P54-60

ESG Areas and General Disclosures and KPIs (KPI)			Page Number
A4: Climate Change	General Disclosure	Policies on identification and mitigation of significant climate related issues which have impacted, and those which may impact, the issuer.	P43
	A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	P45-47
<b>Social</b>			
B1: Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	P65-66
	B1.1	Total workforce by gender, employment type (for example, full- or parttime), age group and geographical region.	P67
	B1.2	Employee turnover rate by gender, age group and geographical region.	P68
B2: Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	P37-38
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	P92
	B2.2	Lost days due to work injury.	P37
	B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P37-40
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer	P69-72
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	P70
	B3.2	The average training hours completed per employee by gender and employee category.	P70
B4: Labour Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	P65
	B4.1	Description of measures to review employment practices to avoid child and forced labour.	P65
	B4.2	Description of steps taken to eliminate such practices when discovered.	P65
B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain.	P78-79
	B5.1	Number of suppliers by geographical region.	P78
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	P78-79
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P78-79
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P78-79

ESG Areas and General Disclosures and KPIs (KPI)			Page Number
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.	P26
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	P77
	B6.2	Number of products and service related complaints received and how they are dealt with.	P77
	B6.3	Description of practices relating to observing and protecting intellectual property rights	P26
	B6.4	Description of quality assurance process and recall procedures.	Not suitable
	B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P26
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.	P21
	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	P21
	B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored	P23
	B7.3	Description of anti-corruption training provided to directors and staff.	P21-22
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.	P83-86
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P83-86
	B8.2	Resources contributed (e.g. money or time) to the focus area.	P83-86

## Readers' Feedback

Dear readers,

Thank you very much for reading this report. We highly value and look forward to hearing your feedback on this report. Your comments and suggestions are important for us to improve the level of ESG disclosure and promote our ESG management and practice. You can scan the QR code or email your completed questionnaire back to us. Thank you again!

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1. What is your role as a stakeholder?

Employee  Client  Supplier  Supervisor  Other government departments  Media  Others

2. What is your overall evaluation of this report?

Excellent  Good  Normal

3. Is all the information you are concerned about reflected in this report?

Yes  No

4. What are your expectations or suggestions for the 2024 ESG report?

Innovative report theme  Innovative structure  Clear logic  More applications of ESG standards  
 More friendly reader interface  More understandable language  Others (Please specify)

5. Other suggestions or opinions on the Company's 2023 ESG report?



You can scan the QR code on your mobile phone to answer the questions.



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