

新特能源股份有限公司

Xinte Energy Co., Ltd.

(A joint stock company incorporated in the People's Republic of China with limited liability)

Stock code : 1799

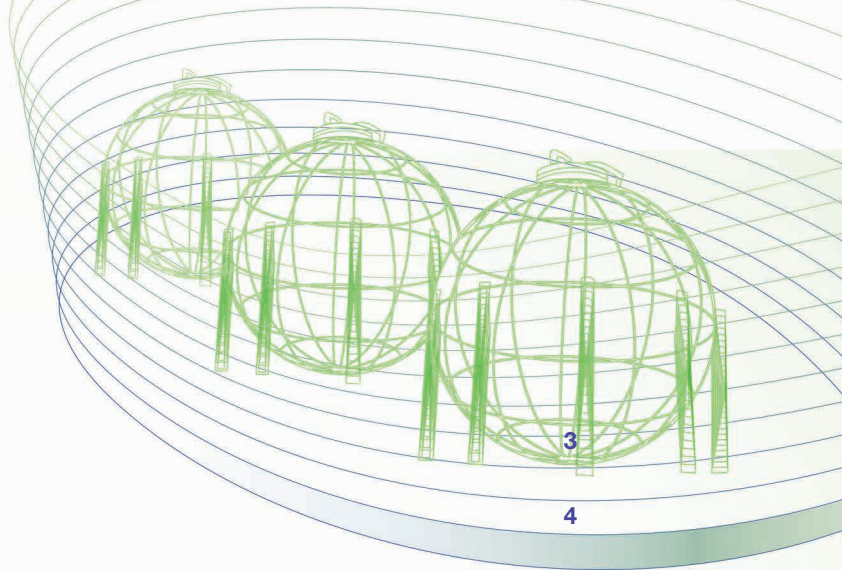
2024

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



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I. About this Report

1. Basis of Preparation of the Report

This report is prepared in accordance with the Environmental, Social and Governance Reporting Code (the “**ESG Reporting Code**”) in Appendix C2 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) (the “**Listing Rules**”) for disclosing the management measures and performance related to the Company’s Environmental, Social and Governance (“**ESG**”).

2. Time Scope

This report is an annual report covering the period from 1 January 2024 to 31 December 2024 (“**2024**” or the “**Reporting Period**”).

3. Coverage of the Report

The entities covered by this report include Xinte Energy Co., Ltd. (“**Xinte Energy**”, “**we**” or the “**Company**”) and its subsidiaries (with the meaning given to that term under the Listing Rules) (collectively, the “**Group**”), and is consistent with the scope covered by the Company’s annual report.

4. Release Cycle

This report is Xinte Energy’s ninth environmental, social and governance report, which is released annually.

5. Basis of Preparation

This report is prepared in accordance with the principles of materiality, quantitative, balance and consistency under the ESG Reporting Code of the Stock Exchange to ensure relevance, completeness, clarity and comparability of the report. The Company has determined the disclosure content and scope through identification of material ESG issues and communication with various stakeholders.

6. Information Description

The data used in this report comes from the Group’s official documents and reports, internal statistical data and public data. The currencies in this report are presented in RMB, unless otherwise specified. This report has been reviewed and approved by the Company’s board of directors (the “**Board**”). All directors guarantee that the contents of the report are free from any false records or misleading statements.

7. Access to the Report

This report is published in both Chinese and English versions. If there is any inconsistency in the content, the Chinese version shall prevail. Please visit the website of Xinte Energy at www.xintenergy.com or the website of the Stock Exchange at www.hkexnews.hk for review.



II. About our Group

The Group is a leading polysilicon producer and developer and operator of wind and photovoltaic (“**PV**”) resources in the industry. It is committed to implementing the national “dual carbon” strategy, promoting the global low-carbon transformation, and providing green and intelligent clean energy system solutions to the world. The Company was established in 2008 and listed on the Stock Exchange in 2015 (stock code: 1799.HK). The Group has always been adhering to the philosophy of “green, recycling, synergy, symbiosis, and win-win” in development, with the mission of “contributing green energy and creating a better life”, and the vision of “building a modern silicon-based new energy industry system with international competitiveness and becoming a global green, intelligent energy supplier”, we will continue to promote the development of new energy industry and the transformation of energy structure towards green and low-carbon, injecting inexhaustible power into the implementation of the national “dual carbon” strategy.

In the field of polysilicon, the Group achieved an output of 198,800 tons of high-purity polysilicon and achieved sales of 199,200 tons of polysilicon in 2024, ranking among the top polysilicon production enterprises in the world. In the field of the development, construction and operation of wind and PV power plants, the Group is committed to providing solutions for the projects spanning their whole lifecycle, from development, design and construction to operation and maintenance, with focus placed on the research, development and manufacturing of electrical equipment such as inverters, energy storage, Static VAR generators (the “**SVG**”), energy routers and flexible DC converter valves. As of the end of the Reporting Period, the Group had an approximately 3.5GW of operated power plants projects which have achieved grid-connected power generation. During the Reporting Period, the completed total installed capacity of PV and wind power construction projects of the Group which had been recognized as revenue amounted to approximately 3GW, and inverter products won more than 30 bids of large central enterprises and state-owned enterprises, ranking among the top in terms of bidding rate and bidding capacity.

For details on the operation of the Group, please refer to 2024 annual report of the Company.

III. ESG Governance

1. ESG Management System

As the highest responsible body for ESG-related matters of the Company, the Board assumes full responsibility for the formulation, implementation and reporting of the Company's ESG strategy. The Board is responsible for identifying, evaluating and managing issues and potential risks closely related to ESG, approving the issuance of relevant reports, closely monitoring various ESG factors that may affect the operations of the Group and the stakeholders, and is committed to deeply exploring the sustainable development strategy of "Innovation, Coordination, Greenness, Openness and Sharing", so as to ensure that the Group's practices in respect of ESG are in line with the international standards and best practices, and to promote the healthy, green and sustainable development of the Group.

In order to ensure that the ESG-related matters are integrated into its corporate governance and decision-making process, the Company has established an ESG Committee, which is composed of the members of senior management and people in charge of the relevant functions of the Company. The ESG Committee is responsible for drafting and formulating the documents related to sustainable development, coordinating various functional departments and subsidiaries to carry out specific work, and providing professional support. Members of the ESG Committee are responsible for certain ESG issues in their respective business areas to ensure the Group's compliance with laws and regulations and continuous optimization and improvement in various areas, including but not limited to key areas such as corporate governance, environmental protection, social responsibility, scientific and technological innovation, employee care, product and service quality, supply chain management and climate-related risks and opportunities.

III. ESG Governance

2. Stakeholder Communication and Response

The Company always attaches importance to communication with stakeholders, continuously deepens communication and interaction with internal and external stakeholders, and obtains and responds to the concerns and expectations of stakeholders through various channels such as publishing ESG reports, accepting interviews and surveys, participating in various meetings and forums, and conducting diversified cooperation and exchanges, so as to continuously optimize and improve ESG management work, and achieve mutual benefits and win-win outcomes. In 2024, in respect of the core concerns or expectations of stakeholders such as shareholders, customers, employees, suppliers, communities, government and regulatory agencies, news media, industry associations, the Company has made active responses as follows:

Stakeholders	Focus or Expectation	Response
Shareholders and investors	Corporate governance Sustainable profitability Standardize corporate governance Information disclosure Risk control	Make compliance information disclosures Convene the general meeting of shareholders Organize investor exchanges and on-site inspections Optimize internal control risk management
Clients	Fulfill the contract with integrity High quality product Innovative research and development Excellent service	Strictly implement the contract Provide high quality products and services Carry out scientific and technological innovation projects and in-depth cooperation with scientific research institutions Participate in industry networking events Conduct customer visits Improve customer complaint handling process

III. ESG Governance

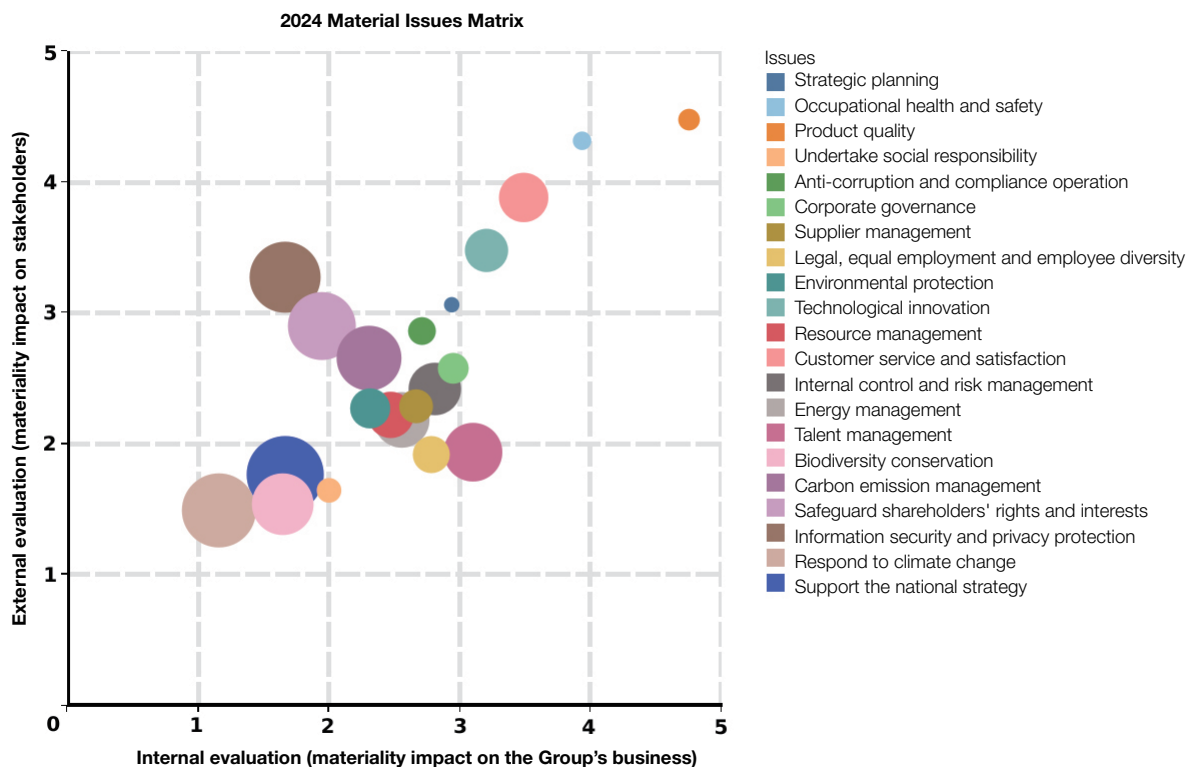
Stakeholders	Focus or Expectation	Response
Employees	Protect legitimate rights and interests Salary and welfare guarantee Health and safety protection Build a development platform	Equal employment practices Provide competitive salary Pay salaries and benefits in full and on time Provide a healthy and safe working environment Improve talent development channels
Suppliers	Sunshine procurement Fulfill the contract with integrity Win-win	Establish a supplier management system Fair and impartial selection of suppliers Perform the contract in accordance with the law Carry out cooperation on innovative projects
Communities	Protect local environment Support community development Charity	Carry out energy conservation and emission reduction Protect the environment Support the development of community public utilities Participate in community welfare activities
Government and Regulatory Agencies	Obey the law Pay taxes according to law Environmental protection Promote local economic development	Establish internal control and anti-corruption mechanisms Pay taxes according to law Cooperate with supervision and inspection Provide jobs
News media, industry associations	Information disclosure Mutual development	Organize surveys, visits and exchange meetings Accept interviews Carry out cooperation in frontier areas of industry development

III. ESG Governance

3. Identification and Assessment of Material Issues

Accurate identification of material issues plays a crucial role in managing potential risks, exploring emerging opportunities, consolidating harmonious relationships with stakeholders, formulating forward-looking strategic plans and ensuring governance compliance. Based on fully considering the results of stakeholder communications, combined with multiple dimensions such as industry characteristics, the actual situation and development vision of the Company, the key concerns of internal and external stakeholders, in-depth policy research, and advanced practices in the industry, we carefully screened out 21 issues with far-reaching substantial impact.

In order to further verify and refine the importance of these issues, the Company collected a wide range of valuable opinions from various stakeholders on the importance of material issues by distributing online questionnaires to them, and finally successfully collected 2,946 valid questionnaires. Based on the insights and analyses of these valuable information, the importance matrix of the Group's material issues in 2024 is as follows:



IV. ESG Practice

1. Corporate Governance

1. Corporate Governance

In strict accordance with the Company Law of the People’s Republic of China, the Listing Rules and other related laws, regulations and normative documents as well as the articles of association of Xinte Energy Co., Ltd. (the “**Articles of Association**”), the Company has set up a system for organization of modern enterprise and an operating mechanism with clear separation of powers which is able to maintain balance among the general meeting, the Board, the board of supervisors and the management. The Company’s general meeting of shareholders, the Board, the board of supervisors and the management operate according to clear decision-making authority and standardized processes to ensure clear duties and responsibilities, each fulfilling their responsibilities and effectively safeguarding the rights and interests of the Company and stakeholders.

In 2024, the Company’s governance structure, operation and organizational structure were as follows:

Governance body	Scope of authority	Achievements for 2024
Shareholders’ meeting	The shareholders’ meeting is the Company’s highest authority, and the Company effectively abides by the relevant provisions of the Articles of Association, the Rules of Procedure for the Shareholders’ Meeting and other relevant provisions, and legally convenes and holds the shareholders’ meeting to ensure the exercise of shareholders’ rights.	Convened five shareholders’ meetings and considered 18 proposals, including the 2023 annual report, the 2023 report of the Board, the 2023 report of the board of supervisors, proposed appointment of the directors of the fifth session of the Board, proposed appointment of the non-employee representative supervisors of the fifth session of the board of supervisors and proposed amendments to the Articles of Association.



1. Corporate Governance

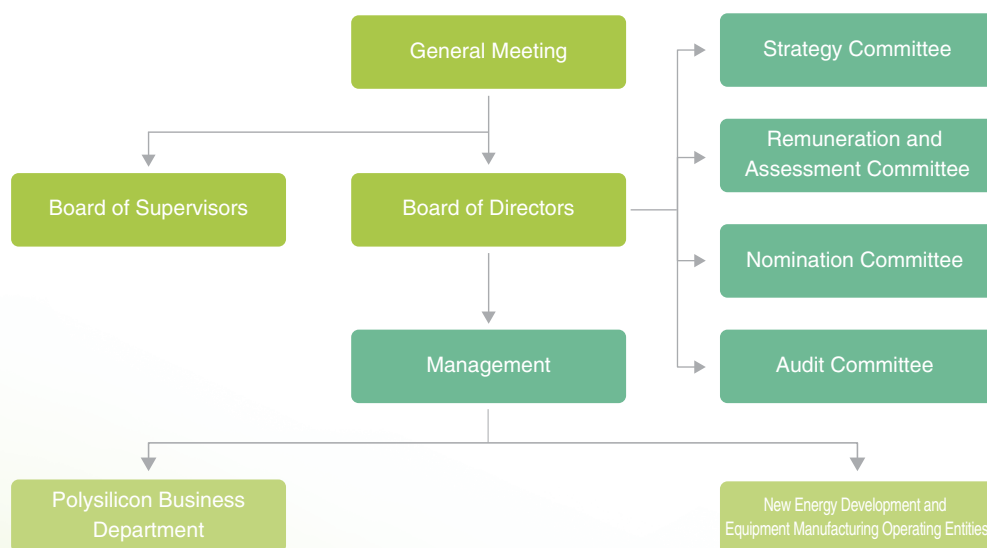
Governance body	Scope of authority	Achievements for 2024
Board of directors	<p>As of the end of the Reporting Period, the Company's board of directors consists of 9 directors, including 4 executive directors, 2 non-executive directors and 3 independent non-executive directors, including 1 female director, accounting for 11.11% of the total board members.</p> <p>The Board is responsible for convening the shareholders' meeting, implementing the resolutions of the shareholders' meeting, and reviewing the Company's external investments, connected transactions and other matters within the scope authorized by the shareholders' meeting. The Board is responsible for evaluating the responsibilities and work performance assigned to senior management to ensure the effective operation of the Company and safeguard the rights and interests of shareholders.</p>	<p>Convened 17 Board meetings and reviewed 62 proposals, including annual report, semi-annual report, quarterly report and other regular reports, recommendation of candidates for directors of the fifth board of directors of the Company, election of the chairman of the fifth session of the Board, appointment of senior management of the Company, proposed amendments to the Articles of Association, capital increase and acquisition of equity from related parties, and investment in the construction of new energy power stations.</p>

1. Corporate Governance

Governance body	Scope of authority	Achievements for 2024
Special committee of the board of directors	<p>The Company's special committees of the Board include the Audit Committee, the Nomination Committee, the Strategy Committee and the Remuneration and Assessment Committee. Among the Audit Committee, the Remuneration and Assessment Committee and the Nomination Committee, the number of independent non-executive directors exceeds one-half and serves as the chairman. Each special committee plays its professional role in accordance with the rules of procedure to ensure the Company's standardized operations.</p>	<p>Convened 14 specialized committee meetings, including 8 audit committee meetings, 4 nomination committee meeting, 1 remuneration and assessment committee meeting and 1 strategy committee meeting, and reviewed 28 proposals.</p>
Board of supervisors	<p>The Company's board of supervisors consists of 5 supervisors, including 2 employee supervisors.</p> <p>The board of supervisors is the Company's supervisory body, which lawfully inspects the financial status of the Company, supervises internal control, risk control, information disclosure, major issues, and the performance of the Board and senior management personnel.</p>	<p>Convened 9 meetings of board of supervisors and reviewed 19 proposals, including annual report, semi-annual report, quarterly report and other regular reports, recommendation of non-employee representative supervisors for the fifth session of the board of supervisors of the Company, election of the chairman of the fifth session of the board of supervisors of the Company, and connected transaction matters.</p>

1. Corporate Governance

Governance body	Scope of authority	Achievements for 2024
Senior management	<p>As of the end of the Reporting Period, the Company has 5 senior managers, including 2 female senior managers, accounting for 40% of the total senior management staffs.</p> <p>Senior managers are responsible for the Company's production and operation management, implementing the Board's resolutions, the Company's development strategy, annual operating plans, investment plans and financial budget plans, etc.</p>	Fully implemented the decisions of the Company's board of directors, formulated reasonable production plans, deployed new profit contributing units, strengthened product research and development, and expanded the business scale of research and development and manufacturing of electrical equipment. The Group achieved an operating revenue of RMB21.213 billion in 2024.



For more information on the corporate governance of the Group, please refer to the Corporate Governance Report section of the Company's 2024 Annual Report.

1. Corporate Governance

2. Risk Compliance Management and Internal Control

Risk management and compliance operations are key pillars for the sustainable development of enterprises. The Group is committed to establishing and continuously optimizing its risk compliance management system, and ensuring that internal control and risk compliance management cover all business processes, so as to enhance the effectiveness of internal control, and achieve effective supervision and governance of the Company's operations and development.

The Group attaches great importance to internal control management, strictly abides by the Corporate Internal Control Assessment Guidelines, the Corporate Internal Control Audit Guidelines and other guidelines and principles, and continuously improves the Company's relevant systems and mechanisms. During the Reporting Period, guided by the principles of "scientific and reasonable, process compliant, prudent and disciplined", and starting from the dimensions of "system construction, standardized implementation, quality improvement and efficiency enhancement" for its key businesses, the Group continuously strengthened the functions and responsibilities of the three lines of defense, namely "business source prevention and control, risk control and compliance management, and independent audit supervision", and enhanced the standardization of the internal control system, with a view to realizing comprehensive risk management. In 2024, the Group conducted a comprehensive revision of the internal audit, supervision and legal compliance related systems to ensure that the risk control work can be accurately implemented and potential problems can be detected in a timely manner, so as to build a solid defense for the sound operation of the enterprise and to effectively prevent various types of risks. In 2024, the Company had no major deficiencies on internal control in the financial reports; no major deficiency on internal control in the non-financial reports was found. The Company continued to maintain the effectiveness of its internal control system to ensure stable corporate operations.



1. Corporate Governance



3. Anti-corruption Behavior Promotion

Establishing an honest and clean corporate culture and upholding fair and just business values are the foundation of the steady development of enterprises. The Group adheres to business ethics, follows the principle of fair competition, strictly abides by relevant laws and regulations such as the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China, and the Interim Provisions on the Prohibition of Commercial Bribery, attaches great importance to the construction of integrity culture, thoroughly implements the responsibility system for the construction of integrity, formulates and enforces the Company's internal rules and regulations, and revises and improves the same in a regular manner.

In terms of employee integrity standards, all employees of the Group have signed the "Employee Compliance Commitment Letter", which incorporates employees' integrity into performance appraisal and promotion evaluation indicators; organizes integrity warning education and publicity activities through the combination of "online + offline", and further strengthens the ideological awareness and action consciousness of all employees in compliance with the rules and regulations, and integrity and self-discipline by means of learning, watching, searching and discussion to keep vigilant, take preventive measures and guard against corruption at all times, and firmly build the ideological defense line of employees against corruption. In 2024, the Group organized integrity promotion activities such as visits to integrity education bases and fun answer contest on integrity system, with a total of 4,519 participants. The scope of integrity training covered directors, supervisors, senior management and employees in key positions, actively creating an integrity education atmosphere of "all employees acting incorruptly, promoting integrity multifariously, and advocating integrity comprehensively", striving to improve employees' awareness of integrity and self-discipline.

In terms of the integrity and self-discipline management of stakeholders, the Group has solidified "compliance clauses" in various contract templates and signed a separate "Business Partner Compliance Commitment Letter" covering the content of integrity cooperation, encouraging business partners to be clean and self-disciplined. In 2024, the Group normalized integrity supervision through organizing business partners to hold forums on integrity, sending "A Letter to Xinte Energy's Partners" and "Supplier Integrity Initiative Letter" to publicize integrity warning, conducting follow-up visits to business partners on integrity cooperation, and enquiring whether there was any corrupt behavior in the cooperation process, so as to create a fair, just and win-win business environment.

1. Corporate Governance

The Group encourages all employees and other insiders to report violations of integrity and self-discipline regulations, sets up a reporting mailbox, and publishes information on integrity supervision and reporting channels on the internal network, public places, project sites and other places, and writes terms related to integrity complaints and reporting in contracts, bidding documents and other documents, facilitating stakeholders to reflect and report actual or suspected corruption.

The Group maintains a zero-tolerance attitude towards all types of corruption and strictly investigates and punishes violations of relevant regulations to deter violations of laws and disciplines. In 2024, the Group did not engage in any major illegal or irregular activities, such as bribery, extortion, fraud and money laundering, nor did it have any pending or concluded corruption litigation cases.



2. R&D Innovation

Innovation is the core competitive advantage and inexhaustible driving source for the long-term sustainable development of enterprises. The Group adheres to the operating policy of “innovation-led”, deepens the building of scientific research and innovation mechanism and system, carries out various scientific research projects oriented to solving technical and quality bottlenecks and cost reduction problems of each product line, promotes in-depth cooperation with scientific research institutes, and continuously improves the transformation and industrialization of scientific and technological achievements, striving to improve quality and increase efficiency to promote innovation and development, and drive the enhancement of scientific and technological innovation capability.



1. Innovation System and Platform Construction

The Group continues to strengthen the strategy for organizational management system of research and development and innovation and cultivation of talent echelon, formulates and effectively implements internal rules and regulations of the Company. In 2024, the Group comprehensively revised its technological innovation management system to satisfy the enterprise's rapid response to market technology needs in terms of incentive mechanism, resource allocation and achievements transformation process. Through continuous investment in research and development expenses, the Group improved the performance evaluation mechanism for innovation incentives, deepened the cooperation with target universities and scientific research institutes, fully stimulated the innovation vitality of scientific and technological talents and accelerated the transformation and application of research and development results, and continued to push forward the in-depth reform of the scientific and technological innovation mechanism and the overall enhancement of scientific and technological innovation capability.

In 2024, the Group continued to improve the organizational structure of scientific research, coordinated the resources of all parties, optimized and reorganized several internal departments of the innovation system into research institutes, and established a top-level innovation and research and development support platform of the Company; continued to build a platform for scientific and technological innovation, and carried out joint technological research and talent team cultivation with famous domestic universities to solve the technological problems of fluctuating quality of polysilicon and high content of impurities, providing technical support for the development of new technologies; concentrated internal and external industry advantages of scientific research resources, and accelerated the basic theory research, new material development and application, core process technology and other bottleneck breakthroughs by focusing on industry bottleneck technology, industrial frontier technology and polysilicon process enhancement technology, striving to enhance the competitiveness of products in the market.

2. R&D Innovation

Employees are the important subjects of enterprise innovation and development. In order to further stimulate the potential of front-line employees to innovate and create profits, the Group has formed a working mechanism and operation model with full participation and multi-level linkage, giving full play the important role of talents in technological research and innovation, business innovation and research and development, etc., thereby forming the agglomeration effect of outstanding talents. As of the end of 2024, the Group had a total of 10 innovation studios for model workers and craftsmen.

2. Product Technology and Business Innovation

In 2024, centering around the national “dual carbon” and “construction of a new energy system” and other strategies, and focusing on key technologies for national and industrial development, industrial common key basic technologies and strategic frontier technologies, the Group continued to explore the new energy field, actively expanded its business scope, strengthened basic research on product technology innovation, and promoted key core technology research, accelerated research and development of “high-end, intelligent and green” technologies to improve the performance of new energy products.

In terms of polysilicon production, during the Reporting Period, focusing on bottleneck issues such as production stability control, energy conservation, cost reduction and consumption reduction, and improvement in product quality, the Group carried out a number of technology innovation and core technology research work in key links such as cold hydrogenation, distillation and purification, reduction and tail gas treatment, products sorting, around such aspects as the growth mode of polysilicon, the optimization of distillation and purification process, the enhancement of cold hydrogenation conversion rate and slurry process efficiency, material and tail gas recycling and utilization, and online monitoring of equipment operation, effectively reducing the production cost, improving product quality, and further increasing the proportion of electrical products above secondary level.



2. R&D Innovation

In terms of the development, construction and operation of wind power and PV resources, the Group closely followed the national policy guidance to actively explore new business models, and continued to increase investment in technology and product innovation around new materials, new technologies, new scenarios and digitalization, and provided better products and technical solutions for new energy projects. In terms of product technology innovation, the flexible multi-level direct current (“**DC**”) link converter developed by the Group jointly has overcome medium-voltage DC grid connection technology and will be applied to medium-voltage DC, PV DC aggregation and offshore wind power transmission, which can significantly increase the new energy generation capacity and conversion efficiency. The development of alternative products for power modules and valve sections has solved the supply problem of key components. As recognized by the China Machinery Industrial Association, the performance of these new products has reached the industry leading level; the research on improvement of the adaptability of string inverters to the power grid has successfully passed the verification on the adaptability to weak power grid and fault ride-through capability in high permeability environment in some regions, as thus the product performance and adaptability to the power grid have been continuously improved. In terms of engineering technology innovation, the Group completed the research and release of 15 innovative solutions focusing on application scenarios such as industrial and commercial energy storage and zero-carbon parks, completed the launch and promotion of energy storage planning and design simulation platform and intelligent management system, and realized the automatic generation of industrial and commercial energy storage planning and design reports, online management of energy consumption and energy storage planning. In terms of exploring new business models, the Group promoted digital transformation, completed the first demonstration platform for hydrogen-electric coupling, realized the functions of the intelligent energy management platform such as convenient access and supervision outside of China, and promoted the digital transformation of power station operations and completed the first pilot ‘unattended’ power station.

In 2024, a number of projects and topics independently developed or jointly developed by the Group won awards, reflecting the recognition on the Group’s scientific and technological innovation achievements by the government and relevant professional institutions:

- the Key Technologies and Industrialization of Digital and Intelligent Testing and Control of Large-capacity Battery Storage System* (《大容量電池儲能系統數智化測試與控制關鍵技術及產業化》) project in which it participated won the second prize of the National Science and Technology Progress Award;

2. R&D Innovation

- the developed Research on Key Technologies of PV Inverters Adapted to Weak Grid Environment and Series Products* (《適應弱網環境的光伏逆變器關鍵技術研究及系列產品》) won the second prize of Science and Technology Award of China Electrotechnical Society;
- The project of Life Cycle Intelligent Management of New Energy Power Stations Driven by Data Elements* (《數據要素驅動新能源電站全生命周期智能管理》) won the third prize in the “Digital Element X” competition of the National Digital Development Bureau;
- The project of Key Technology for Data Quality Enhancement of New Energy Power Station Intelligent Operation and Maintenance Platform* (《新能源電站智能運維平台數據質量提升關鍵技術》) won the first prize in the “Digital Element X” competition of the Xinjiang Autonomous Region Digital Development Bureau;
- the Research, Development and Application of Full Connectivity Innovative Technology of the Fifth Generation Mobile Communication for Silicon-based Manufacturing Industry* (《面向硅基製造業第五代移動通信技術全連接創新技術研發與應用》) project in which it participated won the first prize of Xinjiang Autonomous Region Science and Technology Award;
- the developed TB-eCloud PV intelligent operation and maintenance platform was approved as the 2024 intelligent PV pilot demonstration project of the Ministry of Industry and Information Technology of China;
- the project of Industrial Internet + Big Data Silicon-based New Material Manufacturing Pilot Demonstration* (《工業互聯網+大數據硅基新材料製造試點示範》) was honoured to be listed on the 2024 Industrial Internet Outstanding Cases List announced by the Department of Industry and Information Technology of Xinjiang Autonomous Region;
- The project of Green and Low-Carbon Innovative Solution of Fifth Generation Mobile Communication Technology + Industrial Internet Enabling the Production of High-purity Silicon-based Materials* (《第五代移動通信技術+工業互聯網賦能高純硅基材料生產的綠色低碳創新解決方案》) was selected as one of the shortlisted cases of excellent practices of green and low-carbon development of enterprises in 2024 announced by the China Enterprise Confederation.



2. R&D Innovation



3. Intellectual Property Protection

Intellectual property protection is crucial for enterprises to maintain innovation capabilities and competitiveness. The Group strictly abides by the “Patent Law of the People’s Republic of China”, “Trademark Law of the People’s Republic of China”, “Enterprise Intellectual Property Management Standards” and other relevant laws, regulations and standards, and has formulated and implemented a series of internal regulatory documents. The Group is committed to achieving high-quality creation, high-efficiency application, strong protection and high-level management of intellectual property rights, and has set up a special internal patent committee responsible for handling intellectual property-related matters and has built a complete set of intellectual property business processes to comprehensively promote the strategic layout and deepen the management of intellectual property rights, providing solid support and guarantee for the Group’s sustained high-quality development.

The Group strictly complies with the laws and regulations and makes every effort to defend its own intellectual property rights such as patent rights, technical secrets, trademark rights, trade secrets and copyrights against any infringement, while adhering to the principle of respect and endeavoring to avoid infringing on the intellectual property rights of others. During the Reporting Period, the Group’s project of Construction and Empirical Research on High-value Patent Cultivation System for Strategic Emerging Industries in the Autonomous Region (《自治區戰略性新興產業高價值專利培育體系構建及實證研究》) was evaluated as a high-value patent enhancement soft subject research project by the Xinjiang Autonomous Region Market Supervision and Administration Bureau; the Company obtained the ISO56005-based Innovation and Intellectual Property Management Competence (《創新與知識產權管理能力》) certificate (Level 3) from Zhongzhi (Beijing) Certification Co., Ltd. as the first enterprise in Xinjiang Autonomous Region and the fifth enterprise in China, which signifies that the Group’s innovation and intellectual property management has reached a new level.

In 2024, the Group was granted 126 new patents, including 52 invention patents; obtained 44 software copyrights; and participated in the preparation of 15 standards, including 5 national standards. As of the end of 2024, the Group had a total of 880 domestic authorized patents and 7 international patents, and participated in the preparation of 172 published standards, of which 6 were international standards, 58 were national standards, and 49 were industry standards.

3. Products and Services

1. Improving Product Quality

Product quality is the cornerstone of earning customers' trust and excellent reputation for an enterprise. The Group always adheres to the business philosophy of "first-class quality", strictly follows the Product Quality Law of the People's Republic of China (《中華人民共和國產品質量法》) and relevant laws and regulations as well as industry standards, builds and continuously improves the quality management system, optimizes the quality management rules and regulations, strengthens the whole chain of quality management, and integrates the concept of digital quality management into the whole business chain of product design, material selection and control, manufacturing, warehousing and logistics, and customer service, and actively carries out quality education activities to continuously promote the steady improvement of product quality.

(1) Quality system construction

The Group has formulated and implemented several product quality management systems, and has established a comprehensive quality management mechanism for raw material inspection process and the entire production process of products. Various production process indicators have been strictly implemented, quality-related meetings have been regularly organized and held, and special initiatives for quality problem lists and control measures have been launched to effectively promote the resolution of key quality problems. During the Reporting Period, major subsidiaries of the Group passed the ISO 9001 quality management system certification, with their focus on promoting the construction of quality information systems such as industrial internet infrastructure, data resource management system, and the integration of artificial intelligence technology with the production of silicon-based new materials, so as to continuously improve the quality of products.

In 2024, the Group organised and conducted quality enhancement activities such as quality conferences, quality improvement projects, selecting the best candidates via open competition mechanism, quality month activities and quality improvement research, with a total of 18,265 participants. The Group's subsidiaries were successfully selected in the list of 2024 Quality Benchmarking Enterprises in Xi'an City, and with the advantages of technological innovation strength, excellent product performance and others, they were selected in the list of Tier-1 PV inverter manufacturers for two consecutive quarters by BloombergNEF, a globally renowned research institution. In addition, they were honoured with "Annual Top 10 Energy Storage PCS Brands" and "Annual Top 10 System Integration Brands" in the energy storage industry brand list, and "Annual Top 10 PV Inverter Brands" in the PV industry brand list at the ninth annual industry conference organised by IN-EN.com and the National Energy Research Institute.



3. Products and Services

(2) Quality process control

The Group enhances product quality consistency management by digitalisation, and focuses on quality control at the source of design and procurement, as well as back-end operation and maintenance safeguards. Through quality process control, the Group strictly controls all aspects of the production process, corrects quality problems in a timely manner, and reduces costs and guarantees product quality.

In terms of improving the quality of polysilicon products, the Group adhered to the customer application end quality evaluation as the guideline, actively responded to customers' demands, and strengthened the closed loop of rectification and the implementation of measures. In 2024, the Group organised dedicated personnel to promote the quality improvement measures and verified the effects at the customers' offices, and carried out the control and optimisation of the production process flow and control standards around raw materials, intermediates and finished products, and continuously conducted quality research on process, equipment, clean plant and other aspects affecting product quality to enhance the stability of product quality. The Group reduced the content of surface metal elements through equipment modification, process adjustment and other measures, and carried out comprehensive optimisation and improvement of the production process of compact materials to effectively enhance the quality stability of silicon rods, optimise the quality management standards and effectively save costs; the Group explored the combination of artificial intelligence and the production process, and made use of inspection robots and unmanned aerial vehicles to collect images, so as realise on-site information interaction, ensure production stability and improve product quality; the Group realised "one-stop" product traceability through the multi-code integration system, which linked quality data with finished product information through full-process monitoring in production workshops to meet the demand for product quality tracing, realising product quality with "forward traceability, reverse traceability, and controllable risks"; the Group further advanced the development of industrial internet by launching a digitalized quality morning meeting board, which can quickly integrate and analyse quality weekly report and other data, and realize multi-dimensional comparison, thus reducing manual reports, improving data quality, and solving the pain points of quality data.

3. Products and Services

In terms of improving the quality of wind power and PV power plant construction and operation, the Group comprehensively established a R&D quality control system based on the IPD (Integrated Product Development) process, and formulated a project quality planning programme in terms of quality objectives, quality assurance measures, material and supplier control, and review of historical quality issues, etc., and promoted 100% coverage of project quality planning. In 2024, the Intelligent Energy Solution for Photovoltaic Power Plants (《光伏电站智慧能源解决方案》) of the Group was honoured with the terawatt-level Diamond Award at the SNEC 17th (2024) International Photovoltaic Power Generation and Smart Energy (Shanghai) Conference and Exhibition; the New Generation Grid-based String Energy Storage System Solution (《新一代构网型组串式储能系统解决方案》) was awarded the Excellence Award for Energy Storage Technology at the SNEC 17th (2024) International Photovoltaic Power Generation and Smart Energy (Shanghai) Conference and Exhibition; and in the 2023 Benchmarking Results of Photovoltaic Power Generation Operation Indicators in the Power Industry (《2023年度电力行业光伏发电运行指标对标结果》) announced by China Electricity Council Science and Technology Service Center Co., Ltd, four PV power plants operated by the Group were selected as AAAAA-grade power plants, two PV power plants and three wind power plants were selected as AAAA-grade power plants, and three PV power plants and three wind power plants were selected as AAA-grade power plants.

In terms of improving the quality of electrical equipment, the Group promoted the welding research project of IGBT (Insulated Gate Bipolar Transistor), a core component of power electronic products, to continuously enhance the product yield rate through the improvement of the design structure, optimisation of process parameters, introduction of robotic welding, introduction of analysis of equipment failure modes and consequences, etc.; the Group also advanced the structuring of the quality data of the Manufacturing Operations Management (“**MOM**”) system, and completed the data structure of key parameters for the first inspection, routing inspection and finished product inspection of the strings, centralised inverters, SVG products, which laid a data foundation for efficient data analysis, rapid identification of anomalies, and improvement of product quality consistency. In 2024, the Group’s distributed inverter products were awarded the European standard IEC/EN62109–1, IEC/EN62109–2 and the German VDE4105 certificates for distributed inverters by TÜV Rheinland in Germany, indicating that the product quality has reached international standards.

The Group strengthens the establishment of quality control standards for ex-factory products, and standardizes the scope of product testing. The Group has CNAS (China National Accreditation Service for Conformity Assessment) and CMA (China Metrology Certification) qualified laboratories, which conduct quality testing in accordance with industry standards and customer needs, strictly implement quality inspection and disposal of non-conforming products, and prohibit products that have not passed testing and verification from leaving the factory, ensuring 100% inspection of products before shipment, and guaranteeing the quality of shipped products. In 2024, the Group completed the re-examination and expansion of CNAS laboratory accreditation. After review by the expert group, it was unanimously confirmed that the laboratories met the requirements of the CMA qualification certification standards.



3. Products and Services

In 2024, the overall test pass rate of the Group's products remained stable. There were no major quality defects in construction projects.



2. Optimizing Service Experience

High-quality service is the key to improving customer experience. The Group attaches great importance to customer service quality, formulates and implements internal customer service management measures around the core principle of “customer satisfaction”, improves complaint feedback and handling process, so as to ensure customer information security, increase service levels, and provide customers with better and more satisfactory services.

(1) Increasing customer satisfaction

The basis for increasing customer satisfaction is full and effective communication with customers. The Group adheres to the service concept of “customer-centered”, and actively maintains smooth two-way communication with customers, forming a complete customer relationship management system before, during and after the event. During the Reporting Period, the Group gained an in-depth understanding of customer needs, continuously improved its products and services in accordance with customer needs. The Group conducted a comprehensive customer satisfaction survey every quarter to understand customer satisfaction from aspects such as product quality, pre-sales and after-sales service quality, logistics and transportation, and brand, and formulated corresponding improvement measures for the surveys on a regular basis through customers' feedback to enhance the stability of product quality, optimise the delivery process, and strengthen the technical support and service capability.

In terms of customer relationship building and maintenance, the Group proactively invited customers to attend the meetings and communicate at the Company, increased the frequency of technical exchanges and solution promotion, and launched targeted customer technical exchanges and multi-dimensional surveys and targeted improvements to enhance customer satisfaction with the Company's management, brand, products, and services in the areas of business cooperation, technical exchanges, product promotion and product delivery services; the Group actively communicated with customers to establish customer-oriented after-sales teams and offices and provide timely feedback on customer needs and market changes; the Group continued to optimise the customer relationship management module, developed and expanded the after-sales service quality module and accessed the business intelligence system to consolidate customer demands and enhance the efficiency of customer complaint response, realising the digital online management of customer feedback and providing customers with personalised services.

3. Products and Services

In terms of customer problem solving and protection, the Group has established a complete complaint and feedback mechanism, which clarifies such aspects as responsible departments, complaint information collection, complaint problem analysis, complaint handling and reply, complaint improvement and verification, and properly addresses customers' requirements for product quality and service guarantee. In 2024, the Group received a total of three customer complaints regarding insufficient storage of spare parts for inverter operation and failure of string inverters in harsh environments, etc. The Group promptly rectified by means of increasing the spare parts reserve and providing protective facilities to prevent the recurrence of the same or similar situations. In response to issues such as polysilicon product quality and service, the Group focuses on continuous communication with customers, collects the application effects of the products from customers, conducts internal full-process production process analysis and continuous improvement, and internal quality research, lean management, digital technology application, and packaging improvement, real-time monitoring of transportation processes and other measures are taken to ensure customer service quality.

In 2024, the Group received 64 letters of appreciation from customers, the overall customer satisfaction index increased, and there were no recalls of sold or shipped products for safety and health reasons.

(2) Ensuring information security

The Group strictly abides by the Cybersecurity Law of the People's Republic of China (《中華人民共和國網絡安全法》), the Data Security Law of the People's Republic of China (《中華人民共和國數據安全法》), the Personal Information Protection Law of the People's Republic of China (《中華人民共和國個人信息保護法》) and other relevant laws and regulations, and has established an internal confidentiality system to strictly manage customer data, aiming to ensure the security of customers' business and personal information. In terms of information storage management, for information systems, documents, contracts, technical data, design drawings, etc. involving business secrets, the Group implements access permission management, with dedicated personnel responsible for managing customer confidential data. The storage and access of confidential data requires approval procedures, and specify punishment methods for employees who leak customer confidentiality, so as to maximize the prevention of customer data from leakage. In terms of information network security, the Group conducts regular backups of commonly used information systems, and uses a file encryption system to achieve 100% encryption of all types of files to increase data security; the Group separates the office network from the visitor network to achieve unified security management of office terminals and enhance the security management and monitoring capabilities of the network and terminals; for departments with access to customer information, all records of document operations are retained to the system server, in a bid to achieve 100% traceability of document modifications, uploads, and duplications and effectively protect the privacy of customer information.

In 2024, the Group had no violation incidents or lawsuits caused by the leakage of customer information.



4. Supply Chain Management

Building a healthy, stable and sustainable supply chain system is the foundation for high-quality development of enterprises. The Group adheres to good moral principles and business practices, creates an open, transparent, fair and win-win cooperation environment, helps improve production and operational efficiency, thus achieving a win-win situation with supplier partners while protecting the enterprise's own interests. In order to guide and promote the sustainable development of suppliers, the Group continues to promote the healthy and green development of the supply chain by strengthening communication and cooperation with suppliers in corporate social responsibility management and low-carbon transformation.



1. Supply Chain System

The Group continues to improve its supply chain system based on the principles of “compliance bottom line, controllable risks, and efficiency priority”. Through the formulation and continuous improvement of internal systems and documents, the Group pays attention to the entire process of end-to-end delivery of products which is managed from raw material procurement cycle, production cycle to sales and transportation cycle, so as to optimize the systematic and informatized construction of supplier management, and standardize the supplier's access review, evaluation, supervision and assessment process.

In terms of supplier selection, the Group follows the established procurement procedures and policies to implement a management mechanism of mutual separation, restriction and supervision, and selects suppliers in an open, fair and impartial manner. During the access stage, the Group conducts due diligence on suppliers, reviews supplier credit, production licenses, product testing reports, quality certification systems, environmental management systems, occupational health and safety management systems, supply capabilities, price levels, performance and other supporting materials, so as to prevent procurement risks through such rigorous supplier qualification review.

4. Supply Chain Management

In terms of supplier management, the Group has established a Credit Evaluation File (《信用評價檔案》) of suppliers to conduct daily dynamic evaluations and annual comprehensive assessments of suppliers. Procurement, quality inspection, finance and other relevant business departments conduct internal reviews on suppliers from multiple perspectives such as quality, supply speed, response speed, and service level, to form a Supplier Internal Evaluation Report (《供應商內部評價報告》). The suppliers regularly self-examine their basic situation, personnel status, quality management, production safety and system construction to form a Supplier External Evaluation Report (《供應商外部評價報告》). Then, the evaluation results are summarized to form a comprehensive supplier evaluation and record, and finally the Qualified Suppliers Directory (《合格供應商名錄》) is compiled to classify and manage suppliers, strategically cooperating or terminating procurement to ensure the stability and safety of the supply chain. In 2024, the Group upgraded its supply chain management system. Considering such factors as the attributes of materials and usage frequency comprehensively, the Group reclassified and graded inventory codes, accurately matched the material categories of suppliers, invited relevant departments to evaluate and score suppliers in terms of quality and qualification, and selected high-quality suppliers, in a bid to promote the standardisation and informatisation of procurement, enhance the accuracy and timeliness of procurement and supply, and provide better service and protection for the Group's production.

In terms of building a digital and intelligent supply chain, the Group continues to upgrade its supply chain management (the “**SCM**”) platform, standardises the tendering and procurement process, and connects the supply, order and information flows, thus realising the online tracking of the entire process of tendering, contracting, ordering, receipt of goods, invoicing and settlement, etc. By providing efficient, convenient and value-added digital procurement experiences and services, the Group has achieved an online closed loop for the entire business process and all aspects, enhanced the centralized sharing and management efficiency of resources between enterprises and suppliers, and realized the full lifecycle management of suppliers from entry to exit. In 2024, the Group completed the warehouse management system (the “**WMS**”) transformation project, which enabled the WMS to realise an integrated structure with the sales management platform, laboratory information management system and logo analysis platform at the application level, significantly improving the comprehensive efficiency of operations such as shipping plan formulation, warehousing, outbound, inventory query, statistical analysis, inventory count and inventory transfer.

4. Supply Chain Management

As of the end of 2024, the Group had a total of 1,940 registered qualified suppliers, and their distribution by region is as follows:

Region	Province	Number of suppliers
East China	Shanghai, Jiangsu, Anhui, Jiangxi, Shandong, Fujian, Zhejiang	609
Northwest China	Xinjiang, Gansu, Ningxia, Qinghai, Shaanxi	569
North China	Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia	274
Southwest China	Tibet, Yunnan, Sichuan, Guizhou, Chongqing	126
Central China	Henan, Hunan, Hubei	149
Northeast China	Heilongjiang, Jilin, Liaoning	79
South China	Guangdong, Guangxi, Hainan	134
Total		1,940

2. Responsible Procurement

The Group fully integrates the concept of responsible procurement into the entire supply chain management process, focuses on guiding suppliers to strengthen social responsibility management and low-carbon transformation together with the Group, and continues to promote the healthy and green development of the supply chain.

In terms of supplier access management, the Group has formulated and implemented several internal systems, requiring registered suppliers to provide three system certifications (quality management system certification, environmental management system certification and occupational health and safety management) information, and whether it has passed the certifications will be included as a key bonus item in later management. The Group signs a safety and environmental protection agreement with the registered suppliers, clearly requiring the suppliers to perform safe production, occupational health, environmental protection and emission reduction and other social responsibilities.

4. Supply Chain Management

In terms of improving supplier capabilities, the Group sets relevant evaluation indicators for suppliers' environmental, occupational health and safety management levels during daily and annual evaluations of suppliers. Through continuous monitoring, following-up and supervision of rectifications, the Group comprehensively evaluates suppliers' fulfillment of social responsibilities and improve their performance in enhancing social responsibilities. For suppliers who present problems and cause serious adverse effects, we will take measures such as terminating transactions and making rectifications within a time limit according to the severity; for general quality problems of suppliers, we will empower suppliers for improvement through online and offline methods. We assist suppliers mainly in improving their ability to use quality management tools to analyze problems, and meet the Group's procurement needs.

In terms of mutual benefits and win-win with suppliers, the Group strictly fulfils its contracts, pays the contractual payments on time, protects the legitimate rights and interests of suppliers, and establishes friendly and long-term cooperative relationships with high-quality suppliers. The Group communicates, interacts and shares information with suppliers through supplier conferences, high-level personnel visits, industry benchmarking and other channels, and jointly explores cooperation models, improvement plans for production and operations, and the development direction of the industry and market. In 2024, the Group carried out 25 in-depth exchanges with suppliers to strengthen mutual technical cooperation; jointly organised supply chain cooperation and development conferences with suppliers to face risks and embrace market opportunities together with them, and build a more efficient, safe and stable supply chain system.

In terms of green supply, the Group has included ESG indicators in the scoring system when evaluating the performance of suppliers: in the environmental protection dimension, the Group focuses on whether the suppliers have taken effective measures to reduce pollution emissions during the production process, whether they have adopted environmentally-friendly materials and energy-saving technologies and whether they have a sound environmental management system; in the social responsibility dimension, the Group focuses on whether the suppliers have complied with the labour laws and regulations to protect the rights and interests of their employees, and whether they have actively participated in community building and social welfare activities; in the supply chain management dimension, the Group focuses on whether the suppliers have sound traceability management and have adopted advanced supply chain management systems for information tracking and risk management. For those suppliers who do not meet evaluation standards, we will promptly issue rectification notices and provide guidance and suggestions, and conduct on-site review and evaluation within the specified time. Through a series of ESG evaluations, suppliers will be motivated to continuously improve their own sustainable development capability, and jointly build a green, harmonious, and sustainable ecosystem of the supply chain.



5. Environmental Protection

As an industry-leading manufacturer of high-efficiency PV materials and a green and smart energy service provider, the Group has always borne in mind the mission of “providing green energy and creating a better life”. It responds to global policies of addressing climate change and the national call of “carbon neutrality” strategies, and gives play to the role of the new energy industry in optimizing energy structure and building ecological civilization. While deeply exploring the fields of clean energy, energy conservation and environmental protection, we strengthen the construction of our own environmental management system, and strive to achieve green development.

The Group strictly abides by the Environmental Protection Law of the People’s Republic of China (《中華人民共和國環境保護法》), the Cleaner Production Promotion Law of the People’s Republic of China (《中華人民共和國清潔生產促進法》), the Law on the Prevention and Control of Water Pollution of the People’s Republic of China (《中華人民共和國水污染防治法》), the Law on the Prevention and Control of Air Pollution of the People’s Republic of China (《中華人民共和國大氣污染防治法》), the Law of the People’s Republic of China on Prevention and Control of Solid Pollutants (《中華人民共和國固體廢物污染環境防治法》) and other environmental protection laws and regulations of the PRC and the locations where the Group operates. It actively studies environmental protection-related policies, formulates, implements and optimizes internal institutional documents of the Company, and has formed a systematic, complete and highly operable environmental management system to continuously improve the Group’s environmental management.

In 2024, the Group continued to carry out work in energy saving and consumption reduction, repairing and recycling of old and waste materials as well as green technology research and development. The Group’s subsidiaries were honoured with the “ESG Zero-Carbon Leadership Award” and the “ESG Green Supply Chain Award” in the 2023 Energy Annual Conference and the ESG Conference for Global Energy Enterprises organised by Energy Magazine, which propelled the Group to take a further step towards the achievement of the goals of green, low-carbon and sustainable development. As at the end of 2024, the Company and its two subsidiaries have passed the three management system evaluations of Green Factory, Green Supply Chain and Green Enterprise, and the Company and its major subsidiaries have completed the ISO14001 environmental management system certification qualification. They fully fulfilled their tax responsibilities related to environmental protection during the year, and there occurred no incident of major penalties or notifications due to violations of environmental laws and regulations.

5. Environmental Protection

1. Efficient Utilization of Resources

The Group strictly abides by the Energy Conservation Law of the People's Republic of China (《中華人民共和國節約能源法》) and other regulations, and formulates and implements the internal institutional documents of the Company. It actively promotes the implementation of key projects such as energy and water conservation, improves resource utilization efficiency through technological innovation and process improvement, and facilitates the construction of a resource-saving enterprise.

The Group mainly uses electricity, coal, water as well as wood, paper and plastic packaging materials and other resources in the production and operation. In order to strengthen environmental protection and reduce resource loss, the Group actively studies energy-saving measures, regularly supervises and inspects energy-saving work such as energy usage and implementation of energy consumption quota per unit product, for the purpose of continuous optimisation and improvement, and promoting green production and operations of the enterprise.

(1) Coal and power resources

Coal and electricity are the main resources consumed in the production and operation process of the Group. Coal is mainly used to generate electricity in the Company's self-owned power plants for the production of polysilicon. In 2024, the self-owned thermal power plants of the Group conscientiously implemented the Notice on Carrying out the Renovation and Upgrading of National Coal-fired Power Units (《關於展開全國煤電機組改造升級的通知》) issued by the NDRC and the NEA, and carried out energy-saving renovation on the turbines, which resulted in a decrease in the standard coal used for power supply by 7.0g/(kW·h), thus further saving the consumption of coal.

In terms of production electricity, the Group practices the green development philosophy by accurately regulating the circulating water parameters through the control system, replacing with more energy-efficient equipment, carrying out energy monitoring and management of major production lines and important energy-consuming sections, and using a digital management platform, which has resulted in a daily saving of more than 30,000 kW·h of electricity and an effective reduction of energy consumption in the production process.

In terms of electricity consumption in office and daily life, by dividing the grid responsibilities in public areas, the Group implements the requirements for energy-saving use of lighting and public appliances in public places, and advocates employees to establish an environmental-friendly awareness of energy conservation to reduce electricity consumption in office and daily life.



5. Environmental Protection

(2) Water resources

The Group strictly abides by the Water Pollution Prevention and Control Law of the People's Republic of China 《中華人民共和國水污染防治法》 and other relevant water resources laws and regulations, strengthens water resources management, establishes and improves a water-saving management system, and implements water resource management measures such as water conservation and water recycling. The Group's water resources are mainly used in the process of waste gas treatment and cleaning, chlor-alkali salt pool, desalted water replenishment in the production of polysilicon, the construction in power station construction and operation, and daily greening, office and domestic water of the plant area.

In terms of polysilicon production water, the Group continues to strengthen the utilization of recycled water and reduce new water consumption on the basis of ensuring the supply of water resources required for production operations. The Group sets up an automatic monitoring system in the polysilicon production plant area to realize real-time monitoring and control of water consumption, optimizes the flow of circulating water pump into the water, and adjusts the temperature difference of circulating water in each production devices to reduce water consumption. In 2024, the Group successfully completed the quartz sand replacement project for the recycled water multimediate system, which increased the wastewater recycling capacity in the polysilicon production by 50% and reduced the volume of external drainage water by 15%, realising the effective recycling and reuse of water resources.

In terms of water consumption for the construction and operation of new energy power stations, the Group incorporates energy conservation, environmental protection, safety, intelligence and other factors into the planning and design process, and strictly controls the construction quality to improve the management level of new power stations in aspects such as low-carbon environmental protection, soil and water conservation, and occupational health and safety. The Group set up machinery, equipment, and vehicle flushing and recycling water devices at the construction sites of power station projects in deserts, mountains and other water-scarce areas, and established rainwater collection systems at the construction sites of power station projects in areas with abundant rainfall to improve the utilization rate of water resources.

In terms of daily office and domestic water use, the Group formulated and implemented a special water conservation plan and effectively improved water resource utilization through specific measures such as sewage reuse, improving the utilization rate of water-saving appliances and reasonable implementation of greening and water-saving irrigation, achieving the goal of a year-on-year decrease in per capita domestic water consumption.

5. Environmental Protection

(3) Other resources

In terms of packaging materials, with respect to wooden, paper and plastic materials for product packaging, the Group advocates reducing the production and use of packaging materials during operations, and gradually increases the use of recyclable packaging. Taking into account loading and unloading conditions, transportation methods, transportation distance and other factors, the Group continuously optimizes product packaging and shipping methods to reduce packaging damage and improve packaging recovery rates. In 2024, the Group reduced the usage of wooden and paper materials by replacing wooden materials and cartons with reusable integrated packaging boxes, unifying packaging weights, optimizing pallet structures and packaging bags, achieving low-carbon and environmental protection while ensuring the proper delivery of products.

In terms of production, the Group has completed a number of technical improvement measures for the efficient use of resources in three aspects, namely the innovation of inspection methods, optimisation of auxiliary materials and upgrading of equipment: the comprehensive implementation of paperless inspection to replace the traditional inspection methods has reduced the number of paper inspection records of the equipment by 95%, which has significantly lowered the rate of error in the manual records and reduced the paper resources; the completion of the modification of the microswitch of the reduction furnace and the technological modification of the shielding pump and the formation of the management standard for the internal shielding pump have further improved the overall reliability and stability of equipment, reducing the frequency of replacement and the maintenance cost, and reducing the risk of environmental pollution.

In terms of office and daily life, the Group enhances the efficiency of resource utilisation by promoting the digitalisation and greening of office processes and implementing energy-saving publicity: the Group implements the functions of online contract signing and e-ticketing for operations, making the entire process paperless, thereby saving paper resources and enhancing operational efficiency, and implementing the concept of “green office”; the Group also conducts energy-saving inspections in office areas, and carries out special spot checks on the implementation of energy-saving requirements in respect of the use of electricity, water, printing, air-conditioner settings, and urges employees to take energy-saving and low-carbon actions.

5. Environmental Protection

(4) Usage amounts and density of main energy and resource

During the Reporting Period, the main energy and resource usage of the Group was as follows:

Index	Type	2024		2023	
		Consumption	Density ⁽¹⁾ (per tonne)	Consumption	Density ⁽²⁾ (per tonne)
Water resources	Consumption in Production (ten thousand m ³)	695.48	0.0035	995.91	0.0052
	Consumption in Office (ten thousand m ³)	76.29	0.0004	88.10	0.0005
Electric energy	Consumption in Production (ten thousand kWh)	1,175,618.97	5.9136	1,482,765.29	7.7509
	Consumption in Office (ten thousand kWh)	1,969.08	0.0099	1,731.18	0.0090
Fuel and others	Diesel (tonne)	135.74	0.0007	95.79	0.0005
	Coal (tonne)	2,341,741.37	11.7795	2,543,359.00	13.2949
Packaging materials	Wooden materials (tonne)	4,402.95	0.0221	5,132.80	0.0268
	Paper materials (tonne)	3,142.16	0.0158	4,366.60	0.0228
	Plastic materials (tonne)	7,120.88	0.0358	1,183.54	0.0062

(1) Density is calculated based on the Group's output of 198,800 tonnes of polysilicon in 2024.

(2) Density is calculated based on the Group's output of 191,300 tonnes of polysilicon in 2023.

5. Environmental Protection

2. Reducing Pollution Emissions

As an industry-leading demonstration enterprise with full coverage of green manufacturing systems such as green design, green products, green factories, and green supply chains, the Group adheres to green and clean development and strictly complies with the Law on Energy Conservation and Emission Reduction of the People's Republic of China (《中華人民共和國節能減排法》) and other relevant laws and regulations, constantly improves the environmental management system and updates environmental protection technology to reduce pollution emissions, optimizes the waste recycling system, and actively balances the relationship between economic benefits and environmental protection benefits through circular economy practices, so as to establish a civilized and environmentally-friendly corporate image. The Group regularly entrusts qualified third-party testing agencies to test waste gas and wastewater emissions, as well as noise, soil, groundwater, etc. The test results are all in compliance with relevant emission limit requirements, ensuring that pollution emission management measures are implemented and emission reduction targets are achieved according to regulations.

(1) Greenhouse gas emissions

The Group strictly abides by the national and local exhaust emission standards, and has established an air pollution control leading group centered on the general manager and relevant business leaders to organize, formulate and implement the Group's special air pollution control plan. In 2024, the Group newly formulated and implemented an internal system with more detailed management requirements on carbon emissions. In view of the exhaust gases such as dust, sulfur dioxide and nitrogen oxides generated during the power generation of the Group's self-owned power plants and the production of polysilicon, the Group monitored the exhaust gas emissions in real time through scientifically configured exhaust gas treatment facilities and monitoring systems to ensure that the emissions and concentration meet standards.

At the same time, the Group is committed to creating a new industrial development model of "producing green products with green electricity", continuing to increase investment and construction of green power such as wind power and PVs, expanding the construction and operation scale of the Group's new energy power stations, and continuously improving the contribution of green and clean energy. During the Reporting Period, the Group accelerated the construction of large new energy base projects of over 5GW in Bazhou and Zhundong region in Xinjiang. After the completion of the 3GW new energy project in Zhundong, part of the green power produced by the project can be used for the polysilicon production of the Group through market-based trading, giving full play to the advantages of the new energy circular economy industry chain. In 2024, the installed capacity of PV and wind power projects recognized by the Group was approximately 3GW. As of the end of 2024, the scale of the wind energy and PV power station operation projects that the Group has completed exceeded 3.5GW. Compared with coal-fired power plants of the same scale, the annual power generation of the self-owned power plants can reduce nitrogen oxide emissions by approximately 944.28 tonnes/year, sulfur dioxide emissions by approximately 589.29 tonnes/year, dust emissions by approximately 120.70 tonnes/year, and carbon dioxide emissions by approximately 5,850,300 tonnes/year.

5. Environmental Protection

The Group's greenhouse gas emission accounting system strictly follows the international standard ISO 14064-1:2018 Greenhouse Gas Declaration and Quantification Standard in constructing the general framework, and carries out boundary demarcation and category determination for the emission source identification system in accordance with the greenhouse gas accounting system (GHG Protocol). The data of fossil fuel and fugitive emission factors preferentially adopt the values recommended by the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, and the emission factors corresponding to electricity consumption adopt the latest data released by the Ministry of Ecology and Environment. The emission sources in Scope 1 are mainly the coal consumption of the self-owned power plants in the process of polysilicon production; the emission sources in Scope 2 are mainly the grid purchased electricity consumed in the process of polysilicon production and the manufacture of electrical equipment; and the main emission sources in Scope 3 are the emissions implied by the main raw materials, such as polysilicon upstream industrial silicon and silicon powder, as well as the emissions generated in the upstream and downstream transportation process. The Group's self-owned power plants have been included in the national carbon emissions trading system. Each year, the Group conducts a carbon emissions self-inspection and measures the surplus and shortfall of quotas. Meanwhile, the Group dynamically tracks the price trend of the national carbon emissions trading market (CEA), based on which it makes reasonable forecasts of performance costs and formulates scientific performance guidance plans to effectively manage its internal carbon assets.

In 2024, the Scope 2 greenhouse gas emissions of the Group based on regions were as follows:

Region	Index	Emissions in 2024 (Tonnes of carbon dioxide equivalent)
Northwest China	GHG (Scope 2)	2,573,234.11
North China	GHG (Scope 2)	2,025,980.43
Total		4,599,214.54

5. Environmental Protection

(2) Wastewater treatment

The Group strictly abides by national and local wastewater emission standards. The Group established a complete sewage treatment system for wastewater such as COD (Chemical Oxygen Demand) and ammonia nitrogen generated in the Group's production process of polysilicon to ensure that the emissions and concentration of wastewater meet the standards. At the same time, the Group achieved the safe discharge and comprehensive utilization of water resources by recycling cooling water, updating centrifuge equipment and improving the recovery rate of wastewater.

In 2024, the Group achieved a new target of 40.22 cubic metres/tonne of water extraction per unit of product and 99.12% of water reuse rate by adopting the technologies of silicon-containing wastewater collection and treatment, replacement of rotary drums by dryers, and graded recycling of wastewater. It was selected in the list of key water consumption enterprises and parks with leading water efficiency in 2024 as announced by the Ministry of Industry and Information Technology. The Group's domestic wastewater treatment stations received and treated a total of 443,653m³ of domestic sewage, and reused 421,986m³ after treatment. The annual domestic sewage recovery rate was 95.12%, representing an increase of 9.54 percentage points as compared with the previous year.

(3) Waste management

The Group strictly abides by the laws and regulations and waste emission standards, such as the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes (《中華人民共和國固體廢物污染環境防治法》) and the Measures for the Prevention and Control of Environmental Pollution by Waste Hazardous Chemicals (《廢棄危險化學品污染環境防治辦法》). With regard to the hazardous waste (such as waste oil, waste denitration catalyst, waste acid barrels, waste sulfuric acid and waste oil barrels, etc.) and non-hazardous waste (such as fly ash, furnace slag, hydrolyzate and desulfurization gypsum, etc.) generated in the production and manufacturing process, through the formulation and implementation of internal management systems, the Group clarifies the responsibilities of hazardous waste management, and standardizes the disposal requirements of hazardous waste in the collection, storage, disposal, management and other aspects, carries out identification of emission sources and optimization of production processes, and scientifically manages waste based on the principles of reduction, resource utilization, and harmlessness.

In 2024, the Group enhanced the waste management efficiency mainly through technological renovation, introduced dryer technology in the workshops, renovated the treatment of synthetic slag and calcium carbide slag, and increased the recycling rate to 95% upon completion of the renovation, with the recycling rate of waste slag increasing by 11 percentage points as compared to the same period of the previous year, which effectively reduced the generation of waste while enhancing the utilisation rate of the resources, and had a positive impact on the environmental protection.

5. Environmental Protection

(4) Noise prevention

The Group strictly abides by the Emission Standard for Industrial Enterprises Noise at Boundary (《工業企業廠界環境噪音排放標準》) (GB12348–2008), pays close attention to the operating noise of boilers, steam turbines, ball mills, compressors and other equipment, and the noise during construction, regularly monitors the noise and main noise sources at factory boundaries, factory areas and living areas, and takes the noise prevention and control measures listed in the table below, effectively strengthening noise management. During the Reporting Period, the measurement results of all noise measurement cycles of the Group were in compliance with relevant national standards.

Management sector	Prevention
Noise source	Purchase machinery and equipment with advanced technology and low noise
Noise propagation	Install soundproof doors, windows and mufflers, etc.
Noise Reception	Reduce the impact of noise on the surrounding environment through reasonable layout, make full use of the sound insulation effect of buildings on site and use green belts to reduce noise; provide employees who may be affected by noise pollution with standard earmuffs and other labor protection supplies

5. Environmental Protection

(5) Discharge amounts and density of main wastes

During the Reporting Period, the main waste emissions of the Group were as follows:

Index	Specific type	Production sector	2024		2023	
			Emissions (tonne)	Density ⁽¹⁾ (per tonne)	Emissions (tonne)	Density ⁽²⁾ (per tonne)
Exhaust gas	Dust	Self-owned power plants	34.74	0.0002	37.47	0.0002
	Sulfur dioxide	Self-owned power plants	217.37	0.0011	310.47	0.0016
	Nitrogen oxides	Self-owned power plants	553.88	0.0028	706.58	0.0037
	Carbon dioxide (Scope 1)	Self-owned power plants	4,822,141.13	24.2564	4,454,305.21	23.2840
	Carbon dioxide (Scope 2)	Purchased electricity	4,599,214.54	23.1350	6,105,056.64	31.9130
	Carbon dioxide (Scope 3)	Upstream and downstream of the industrial chain	3,561,621.73	17.9157	/	/
Wastewater	COD	Polysilicon production	34.54	0.0002	67.76	0.0004
	Ammonia nitrogen	Polysilicon production	9.11	0.0000	9.75	0.0001
Hazardous waste	Waste oil	Equipment lubrication	192.80	0.0010	280.00	0.0015
	Waste denitration catalyst	Self-owned power plants	294.16	0.0015	210.25	0.0011
	Waste acid barrel	Equipment lubrication	9.27	0.0000	8.14	0.0000
	Waste sulfuric acid	Polysilicon production	1,050.47	0.0053	1,344.04	0.0070
	Waste oil barrel	Polysilicon production	6.10	0.0000	25.56	0.0001
	Waste activated carbon	Polysilicon production	353.42	0.0018	/	/
	Waste adsorbent	Polysilicon production	59.92	0.0003	/	/
	Waste paint drums	Polysilicon production	68.29	0.0003	/	/
	Laboratory waste	Polysilicon production	3.11	0.0000	/	/
	Waste packaging	Polysilicon production	6.70	0.0000	/	/
	Lead batteries	Polysilicon production	54.59	0.0003	/	/
Non-hazardous waste	Fly ash	Self-owned power plants	243,330.90	1.2240	215,997.50	1.1291
	Furnace slag	Self-owned power plants	175,215.30	0.8814	204,939.85	1.0713
	Hydrolyzate	Polysilicon production	112,054.95	0.5637	218,227.44	1.1407
	Desulfurization gypsum	Self-owned power plants	61,405.84	0.3089	68,568.58	0.3584

(1) Density is calculated based on the Group's output of 198,800 tonnes of polysilicon in 2024.

(2) Density is calculated based on the Group's output of 191,300 tonnes of polysilicon in 2023.



5. Environmental Protection



3. Protecting Natural Ecology

Natural ecosystem contains rich biological resources and biodiversity and is an important source of human innovation and development. In the protection of biodiversity and practices, the Group fully implements the ecological philosophy of respecting nature, conforming to nature and protecting nature, constantly creating new situations for the protection of biodiversity, striving to form a green production and life style, thus contributing to the global ecological maintenance.

The Group's PV projects are located in deserts and Gobi. PV power stations can adjust the thermal balance in deserts and Gobi areas by converting solar radiation, reducing the frequency of sandstorms and sandflows. Meanwhile, as the PV panel is set up higher than desert vegetation and sand-fixing barriers, it has a better effect of wind and sand protection than native vegetation and sand-fixing barriers. In addition, the PV panel also has the function of collecting water, which can use the wastewater from cleaning PV panels and collected rainwater to promote the growth of vegetation in the PV field, increase vegetation coverage, and improve the ecological environment of deserts and Gobi. In the construction of wind power projects, the Group fully considers the migration factors of birds and ensures that the site selection of proposed wind farm fully refers to the schematic diagram of China's migratory bird migration routes to avoid the wind farm having a major impact on the migration of migratory birds. In project construction and later maintenance arrangements, priority will be given to existing roads and railways to avoid crossing ecologically sensitive areas. After construction is completed, ecological restoration measures, such as vegetation restoration and soil remediation, will be implemented to promote the recovery of biodiversity.

The Group strives to build a garden-style industrial park and continues to improve the ecological environment of the park, while planting some berry seedlings to maintain and improve the living environment of the organisms in the community. Focusing on the overall policy of "evergreen all year round, flower viewing in spring, foliage viewing in summer, and fruit viewing in autumn", in 2024, the Group completed 361,000m² of green maintenance, 56,000m² of wasteland weed clearing, 1,690m² of lawn paving, and planted 16,500 shrubs and 52 trees, taking solid steps towards creating a green industrial ecological environment with "blue sky and white clouds, birds singing and fragrance of flowers". Due to the continuous improvement of the ecological environment, wild animals such as shrews, squirrels, mistle thrushes and ring-necked pheasants appear in the factory area all year round, achieving harmonious coexistence between humans and animals and plants, and contributing to the protection of biodiversity and sustainable development of the ecosystem.

5. Environmental Protection

4. Combating Climate Change

The risk of climate change has become a key issue that cannot be ignored in the world and will have a profound impact on global economic and social development. In the process of combating climate change, promoting green development, the Group resolutely responds to the country's "double carbon" goals, regularly prepares greenhouse gas emission inventories and accounts for the total emissions from each business segment to comprehensively understand and grasp its own emission status; actively explores the implementation plans for "carbon peaking" in each industry, emission reduction paths and special planning for energy-saving renovation, and progressively sets up greenhouse gas emission reduction targets, carbon reduction measures and safeguard plans in accordance with different business sectors; intensifies the development of new energy resources to provide more green electricity to the society; launches environmental protection renovation and green operation while vigorously promoting the research and development and innovation of green and low-carbon products, so as to provide more energy-saving, environmentally friendly and green products to meet the market demand; builds new energy power stations to support high-load energy projects, strengthens the management of carbon footprints in the supply chain, and increases the proportion of green power consumption in energy consumption, so as to enhance the competitiveness of our products and promote the green and low-carbon development of industrial chain.

The Group regards the identification of climate change risk as a core part of corporate management. It has comprehensively assessed and identified the risks and opportunities brought by climate change, and developed specific response strategies for risks, striving to reduce potential risks, actively seeking paths for low-carbon transformation, so that continuously enhanced its strength in combating climate change. The ESG Committee under the board of the Group is responsible for overseeing climate-related risks and opportunities, and conducts an annual review of climate-related risks and opportunities identified by each functional department, and the Group has not yet incorporated climate-related considerations into its remuneration policy.

5. Environmental Protection

(1) Climate change risk

The Group's climate change risk and response measures for the locations of its operating sites (including but not limited to offices, factories and new energy power station projects) have not changed as compared to the previous year, details of which are as follows:

Risk category	Risk subcategory	Risk name	Risk description	Mitigation and adaptation measures
Physical	Acute risk	Floods (including storms, rising rainfall, river overflows)	<ul style="list-style-type: none"> Heavy rain and floods will cause serious damage to the infrastructure and related equipment at the operating site. If power supply is interrupted, requiring immediate evacuation of personnel, which will result in the suspension of operational activities, significant loss of assets and reduction in revenue. Heavy rain and floods have adverse effects on logistics and supply chains. It may affect the normal delivery of products to customers, damage product quality, or cause inventory backlog, thereby increasing operating costs and reducing revenue; it may affect the normal delivery of raw materials, causing serious deficiencies and shortages, increase procurement costs and reduce profitability of the enterprise. 	<ul style="list-style-type: none"> Develop detailed emergency plans for different physical risks; To ensure the stability and diversity of the supply chain, at least two partners for each type of raw and auxiliary material suppliers shall be maintained, and implement a multi-region and multi-supplier supply strategy for major raw materials; Actively respond to the challenges of global climate change and set clear greenhouse gas emission reduction targets; Adopt effective energy-saving and emission reduction measures to reduce the impact of its own operations on the environment;
		Strong wind/ cyclone/ typhoon	<ul style="list-style-type: none"> Due to the complexity and uncertainty of its forecast, typhoons can cause damage to wind turbine equipment, PV power generation equipment, operational infrastructure or transmission lines, resulting in continuous interruption of operating activities and heavy losses of assets. Under extreme weather conditions, employees are usually unable to work outdoors, and it may affect commuting, which will bring risks to the safety and health of employees and affect project construction, thus delaying project progress and adversely affecting operational efficiency, thereby increasing the operating costs of the enterprise. 	<ul style="list-style-type: none"> In response to heavy rains and floods, the drainage system should be improved to ensure that there is no accumulation of water in the operation site, surrounding embankments should be reinforced to increase flood control capabilities, and flood control materials should be stocked to prepare for emergency management; In response to typhoon weather, it is necessary to reinforce buildings, structures and equipment to reduce wind damage, and at the same time, power cut and production shutdowns are made in advance before the typhoon comes to ensure safety;

5. Environmental Protection

Risk category	Risk subcategory	Risk name	Risk description	Mitigation and adaptation measures
	Chronic risk	Extremely hot	<ul style="list-style-type: none"> High temperature may cause equipment failure and employee heatstroke, thereby reducing production efficiency. In addition, high temperatures may affect the performance of raw materials and thus affect product quality. Extremely hot weather may also increase the risk of fires and other safety accidents, posing a threat to production safety. 	<ul style="list-style-type: none"> In response to extremely hot weather, working hours should be adjusted to avoid high-temperature operations, provide cooling facilities, improve the working environment and distribute heatstroke prevention supplies to enhance protection.
		Extremely cold	<ul style="list-style-type: none"> Extremely cold weather often triggers heavy snow and road closures, and the transportation of raw materials is often delayed, leading to disruptions in the supply chain. 	<ul style="list-style-type: none"> In response to extremely cold weather, the insulation of factory buildings should be strengthened to ensure indoor warmth, equipment should be insulated to maintain normal operation, and ice and snow should be removed in a timely manner to prevent safety accidents.
		Temperature rise	<ul style="list-style-type: none"> The significant rise of temperature will have a non-negligible impact on production equipment, refrigeration systems, human resources and products, etc. 	<ul style="list-style-type: none"> Before the construction of new energy power station project, use the long-term statistical data of the local meteorological department of the project, introduce methods such as mathematical statistics and probability theory, simulate and calculate extreme climate data, optimize the project design plan, and enhance the adaptability of the power station under different extreme climate conditions, allowing it to adapt to the harsh weather conditions at the project site. During the project construction and operation process, use computing software to simulate the evolution rule of atmosphere in the future to predict the characteristics of meteorological disasters at the project site, assess meteorological disaster risks, provide early warning of meteorological disasters, and improve response capabilities.

5. Environmental Protection

Risk category	Risk subcategory	Risk name	Risk description	Mitigation and adaptation measures
Transformation risk	Policies, laws and regulations	Requirements and regulation of existing products and services	<ul style="list-style-type: none"> As national and local policies have increasingly stringent requirements and supervision on the environmental performance of products and factories, it is expected that relevant policies will be further tightened in the future, which may cause enterprises to face the challenge of increased costs during operations. 	<ul style="list-style-type: none"> Strictly abide by relevant national and local regulations and standards; Set clear greenhouse gas emission reduction targets and gradually achieve carbon neutrality; Make regular public disclosure of greenhouse gas emission data; Actively promote the research, development and innovation of green and low-carbon products; Adopt effective energy-saving and emission-reduction measures and strive to reduce greenhouse gas emissions in the entire business chain.
		Increasing pricing on greenhouse gas emissions	<ul style="list-style-type: none"> Governments of various countries continue to be committed to fulfilling their emission reduction commitments under the framework of the Paris Agreement. Against this background, China has officially launched a national carbon emissions trading market. As more industries and companies are gradually included in this trading system, the cost of carbon emissions exceeding quotas is expected to continue to rise. 	
		Strengthening emissions reporting obligations	<ul style="list-style-type: none"> As carbon emission management and carbon trading mechanisms continue to be improved and implemented, national and local levels have increasingly stringent requirements for the Group's emission reporting. 	
	Technical risk	Front-end costs of transitioning to low-carbon emissions technologies	<ul style="list-style-type: none"> In order to meet the government's requirements for emission reduction and consumer demand for environmental friendly products, the Group needs to actively control product carbon emissions and may need to increase research and development of new technologies and update production equipment, which may increase costs in the short term. 	
		Uncertainty about investing in new technologies and achievements	<ul style="list-style-type: none"> The "14th Five-Year Plan" emphasizes green transformation. The government strictly controls carbon emissions and promotes the Group to shift to low-carbon technologies and invest in energy conservation and emission reduction. However, the timing and results of technology development and application are uncertain, which may affect the return on technology investment. 	

5. Environmental Protection

Risk category	Risk subcategory	Risk name	Risk description	Mitigation and adaptation measures
	Market risk	Changes in customer behavior	<ul style="list-style-type: none"> In recent years, customers have paid more attention to the greenhouse gas emissions of products. The carbon footprint level of products may affect its market competitiveness and profitability. In order to meet customer demand for low-carbon services and green products and accelerate the transition to carbon neutrality, enterprises may increase R&D and operating (such as purchasing green energy) expenses. 	
		Uncertain market signals	<ul style="list-style-type: none"> The emergence of substitute products and the uncertainty in the dependence between upstream and downstream partners and consumers may have unforeseen impacts on the Group's business development. 	
	Reputation risk	Changes of customer preferences	<ul style="list-style-type: none"> If the Group fails to meet customer expectations in areas of sustainable development such as product quality, energy conservation and consumption reduction, and fails to become a benchmark in the industry, existing customers may choose to establish cooperative relationships with other companies, resulting in the loss of customers. 	
		Stakeholders increasingly concerned about negative feedback	<ul style="list-style-type: none"> If the Group's performance in environmental performance and information disclosure is insufficient, investors and customers may tend to choose other companies, which will have an adverse impact on the Group's revenue. As customers and investors pay increasing attention to environmental performance, if the Group fails to comply with relevant regulatory requirements, it may face the risk of customer loss and investment withdrawal. 	

5. Environmental Protection

(2) Climate opportunity

The results of the Group's opportunity identification for the locations where its operating sites (including but not limited to offices, factories and new energy power station projects) have not changed compared with the previous year. The specific situation is as follows:

Opportunity type	Opportunity subcategories	Opportunity name	Opportunity description	Response measures
Transformation opportunity	Policies, Laws and Regulations	Construction of new energy system	<ul style="list-style-type: none"> The new power system is an important component of the new energy system and a key carrier to achieve the "double carbon" goals. China will actively build a new power system with a gradually increasing proportion of new energy and promote the large-scale optimal allocation of clean power resources. As the proportion of renewable energy continues to increase, it may bring opportunities to the development of the Group's business. 	<ul style="list-style-type: none"> Polysilicon is a key raw material for PV power generation. We strive to produce high-quality, low-cost polysilicon products and promote the innovation and promotion of PV power generation technology; Increase the construction and operation scale of new energy power stations, increase the power generation capacity of power stations through management and technological innovation, reduce power generation costs, and increase the proportion of new energy power generation; Strengthen the development of agricultural-PV complementary, fishery-PV complementary, industrial and commercial and household PV projects, establish a green and low-carbon economy brand image, and increase brand awareness.
	Market opportunity	Renewable energy consumption	<ul style="list-style-type: none"> Relevant national ministries and commissions have made it clear that new renewable energy and raw material energy consumption will not be included in the total energy consumption control. The Group is a renewable energy raw material supplier and a power plant developer and operator. The above regulations can promote society to increase the use of renewable energy and are conducive to the development of the Group's business. 	
	Reputation Opportunities	Changes of customer preferences	<ul style="list-style-type: none"> As awareness of low-carbon development increases, the public may change their lifestyles, and accept the "PV +" development mode to increase the proportion of new energy in their daily lives, which may be beneficial to the Group's development of new business formats and increase its market share and competitiveness. 	

5. Environmental Protection

In 2024, the Group did not encounter climate change and related matters that have a material adverse impact on corporate operations. Apart from implementing technological renovations of polysilicon production equipment and intensifying the development of new energy power stations to actively respond to energy conservation, emission reduction and improve quality and efficiency, the Group did not have capital expenditures, financing or investments for climate-related risks and opportunities. Due to the fact that the impact of climate-related risks and opportunities on the Group's finance involves a large amount of data collection and complex analysis work, and the long-term impact of climate risks is highly uncertain, it is difficult for the Group to accurately quantify the specific impact of climate risks on finance in the short term. Currently, the Group is still establishing and improving the relevant data collection and analysis system, to ensure that the impact of climate risks on current and expected finances can be accurately evaluated and disclosed in the future.

6. Employee Care

The Group always upholds the idea of people-oriented, respects and safeguards the legitimate rights and interests of employees, implements the corporate culture and concept of “development for employees and relies on employees, and sharing development achievements with employees” by taking practical actions. The Company always gives top priority to realization, maintenance and development of the maximum interests of employees, strives to improve the “happiness index” of employees, gives our employees a richer, more secure and sustainable sense of gain, happiness and security.

1. Profile of Employees

As of the end of 2024, there were 8,077 employees in the Group. The details of composition and number of employees are as follows:

Classification indicators	Category	Number of individuals (person)	Proportion (%)
By gender	Male employee	6,550	81.09
	Female employee	1,527	18.91
By age	Under 30	3,664	45.36
	Between 30 and 49	4,296	53.19
	Above 50	117	1.45
By functional role	Production personnel	4,197	51.96
	Science and technology R&D personnel	1,512	18.72
	Management personnel	1,431	17.72
	Sales personnel	743	9.20
	Financial personnel	117	1.45
	Others	77	0.95
By geographical region	Northwest China	6,739	83.43
	North China	1,338	16.57
By education level	Doctor	40	0.50
	Postgraduate	969	12.00
	Undergraduate	4,269	52.85
	Others	2,799	34.65

6. Employee Care

In 2024, a total of 1,276 employees resigned from the Group and the staff turnover rate was 15.80%. The specific statistics are as follows:

Classification indicators	Category	Number of employees lost (person)	Proportion (%)
By gender	Male employee	1,063	83.31
	Female employee	213	16.69
By age	Under 30	755	59.17
	Between 30 and 49	500	39.18
	Above 50	21	1.65
By geographical region	Northwest China	956	74.92
	North China	320	25.08

2. Staff Recruitment and Compensation

(1) Equal and regulated employment

The Group strictly abides by national labor laws and regulations such as the Labor Law of the People's Republic of China (《中華人民共和國勞動法》), the Labor Contract Law of the People's Republic of China (《中華人民共和國勞動合同法》), the Social Insurance Law of the People's Republic of China (《中華人民共和國社會保險法》), and the Law of the People's Republic of China on the Protection of Rights and Interests of Women (《中華人民共和國婦女權益保護法》). The Group has formulated and implemented internal regulatory systems. Based on the principles of equality, voluntariness and consensus through negotiation, the Group signs labor contracts with all employees, clarifying the contract period, working hours, work location, job type, rest and vacation, salary and benefits, etc., to ensure that employees are employed in compliance with laws and regulations.



6. Employee Care

During the recruitment process, the Group strictly verifies the identity information of applicants and conducts regular identity checks after joining and during the employment period to prevent the use of child labor. During the production and operation process, the Group respects the basic human rights of employees, prohibits restricting the free activities of employees, and ensures that employees work voluntarily. The Group treats all types of employees of different races, skin, nationalities, genders, ages, religious beliefs, political views, sexual orientations and people with disabilities fairly and justly in all aspects such as recruitment, hiring, promotion, transfer, salary adjustment, etc., truly respects and safeguards the personal dignity, equal opportunities and career development rights of employees in the workplace, and provides a safe and healthy working environment for employees to achieve a balance between work and life. The Group prohibits any form of behavior that insults personal dignity, such as corporal punishment, intimidation, harassment, abuse, etc., as well as any discrimination against employees, to ensure that the personal freedom and interests of employees are not infringed upon. At the same time, the Group promotes and implements relevant regulations through regular internal training, continuously improves employees' awareness of legal rights protection, and fundamentally eliminates illegal employment such as child labor, forced and discriminatory labor.

During the Reporting Period, the Group continued to introduce professionals of various types through social recruitment, campus recruitment and other methods, which injects vitality into the workforce. In 2024, the Company did not experience any major violations or lawsuits related to the employment of child labor or forced labor, nor was it subject to complaints or penalties from regulatory authorities.

(2) Remuneration guarantee

As the new energy industry gradually enters the era of fierce competition of “high quality and low cost”, the profit margins of all aspects of the industry have been greatly reduced. In order to reduce employee turnover and maintain the stability and continuity of the organization, in light of changes in the internal and external environments, and through comparing with the remuneration levels of leading enterprises in the industry, the Group scientifically constructs a salary mechanism oriented by value creation and performance incentives to stimulate employees' enthusiasm and initiative, and improves organizational performance while guaranteeing employees' salary levels.

6. Employee Care

The remuneration of the functional management personnel of the Group is paid in the form of “basic remuneration + performance-based remuneration + seniority remuneration + allowance + welfare + bonus”, and the remuneration is inclined towards the business modules that support the strategic development of the enterprise. The remuneration of production personnel is implemented on a piece-rate basis and is paid in the form of “position remuneration + piece-rate remuneration + seniority remuneration + allowance + welfare + bonus”, combining the income of employees with the growth of per capita labor productivity, to stimulate the creativity of front-line employees and achieve “more work, more pay”. The remuneration of sales personnel is paid in the form of “position remuneration + performance commission + seniority remuneration + allowance + welfare”, combining the income of employees with the growth of performance indicators to further stimulate the enthusiasm of sales personnel.

The Group continuously implements the development concepts of “Development by and for the Employees and Results Shared with the Employees” and “one who creates shares, and the more one creates, the more he shares”, and establishes an incentive and traction mechanism that fully connects individual performance with organizational performance, forming a “Four-directional” value system that is oriented towards business strategy, value creation and sharing, market integration and employee satisfaction. The Group adheres to the principle of being “career-oriented, choosing the right candidate for the right role, and having a compatible workforce” to carry out the 360 assessment activities for managers at all levels of the Company. Based on the assessment results of the management personnel ability model and the performance evaluation results, a nine-square grid is formed to guide the appointment and removal of management personnel and performance-based compensation. It fully integrates the assessment process with organizational performance goals to increase management efficiency, and achieve a win-win situation for organizational goals and employee compensation.

The Group provides employees with pension insurance, medical insurance, unemployment insurance, work-related injury insurance, maternity insurance, housing provident fund, etc., and purchases accidental injury insurance for employees to provide all-round protection. The Group has established a medium-, and long-term incentive mechanism to continuously stimulate the enthusiasm and creativity of outstanding employees, enhance their sense of identity and belonging. By attracting and retaining talents, it improves the core competitiveness of the enterprise, promotes the common growth of the enterprise and employees, and achieves a long-term win-win results.

In 2024, the Group paid its employees on time and there were no cases of delayed payment or non-payment of wages.



6. Employee Care



3. Staff Development and Training

(1) Career development

The Group attaches importance to the cultivation and development of talents, provides employees with broad career development space, helps employees realize self-worth in their careers, and promotes the mutual growth of employees and the enterprise. The Group adheres to the concept of organically integrating employees' professional capacity with the enterprise development needs. With in-depth analysis of the subjective and objective determinants of employees' career development, the Group scientifically formulates and implements career development systems and designs a "dual-track" career development channel that coexists "horizontally" and "vertically" for employees through a sound management talent supply chain and the H-shaped dual-channel training model. Employees can achieve horizontal job rotation, transfer or secondment across departments and businesses through internal competition, and choose the business field that suits them based on their own work practices. They can also achieve promotion and development in dual channels of management or professional technology along the vertical route by continuously leveraging their management or professional expertise in their own field. In the recruitment, promotion and appointment of personnel, the Company adheres to the principle of "horse racing" instead of distinguishing with subjective evaluation, emphasizing appointment of personnel on their merits, having both ability and moral integrity, and being professional. Through open selection, competitive recruitment, and open review, the Group is endeavouring to select outstanding personnel to suitable positions.

As of the end of the Reporting Period, the career development channels for the employees of the Group included seven major sequences, namely management, technology, marketing, engineering, production, function and logistics, as well as 31 sub-sequences, forming a diversified career development channel.

6. Employee Care

(2) Growth and improvement

The Group focuses on consolidating the foundation of the business talent team and cultivating urgently needed and scarce talents, takes optimizing the talent structure as the main line, enhances the ability of business talents to serve the development of advanced manufacturing, smooths the career development channels for business talents, and outputs knowledge-based, business-oriented and innovative talent teams, providing a solid talent guarantee for the high-quality development and upgrading transformation of the enterprise. The Group has been providing employees with a long-term educational platform for academic advancement, constantly improving the training system, continuously strengthening the construction of the employee talent team, insisting on taking labor and business ability competitions as an important means to promote high-quality development. The Group focuses on improving key majors and business abilities, extensively and deeply carries out various competitions, provides a stage for employees to learn, exchange, and grow, constantly stimulates employees' innovation and creativity, to provide a solid guarantee of a high-quality talent team for the development of new productive forces. In 2024, the achievements of the Group in employee training and empowerment were as follows:

- The Group successfully held the second “Craftsman Cup” Employee Business Competence Sports Meeting, setting up six major competition categories including electrician, fitter, instrument, measurement and testing, forklift and fire protection (professional/non-professional groups), fully demonstrating the exquisite capabilities of our employees and providing diversified pathways for employees.
- The Group established a regular personnel re-training and rotation mechanism of “daily study, weekly examination, and monthly evaluation”, and fully launched the “Personal Standardization Special Activity”. It organized front-line production employees to improve their personal capabilities around the job knowledge of the eight dimensions such as device safety, process foundation, equipment, production operation and emergency response, which are the basic requirements of their positions, laying the foundation for employees' promotion.

6. Employee Care

- Through internal selection and external reservation, the Group had 277 internal lecturers and 40 lecturers from external professional institutions, and offered 7,011 online employee empowerment courses throughout the year, covering knowledge required by career sequences such as engineering, process technology, safety, marketing, finance, law, investment and human resources, so as to facilitate self-improvement of employees at any time.

In 2024, the Group's employee training has covered all employees. The details are as follows:

Average training hours (hours/person)					
All employees	By gender		By position		
	Male	Female	High level	Middle level	General staff
99.44	101.00	94.52	46.98	73.45	103.32

6. Employee Care



4. Employee Care

(1) Employee communication

The Group insists on creating an equal, open and transparent working atmosphere, focusing on communication and exchanges among employees and giving positive feedback to employees' needs, so as to ensure that employees have the right to know, participate in and supervise the corporate operations and management, thereby motivating employees to devote more enthusiasm to their work and life. It also continued to improve the construction of the "inclusive + special" rights protection service system for employees, and organized and carried out popular projects focusing on the most concerned issues of employees, covering a series of projects such as the construction of harmonious labor relations, the care of experts and talents, the training of talents, the construction of green medical channels, the education of employees' children, and the condolences of their families, so as to continuously improve the sense of acquisition, happiness and security of employees, improving the quality of life of employees. In 2024, the Group listened to employees' demands through labor union committees, open columns, work communication meetings, questionnaire surveys and other channels, and continued to improve the working and living environment, so as to enhance employees' cohesion and sense of belonging:

- The Group's subsidiaries, together with Beisen (北森) assessment experts, conducted an extensive survey on corporate recognition for all employees in the form of an online anonymous questionnaire. The questions involved more than 20 sub-dimensions, including organizational empowerment, work environment, leadership effectiveness, compensation performance, praise and recognition, and career development. A total of 2,554 employees participated, and employee recognition increased by 6.5% over the previous year.
- Each grassroots trade union organizes a satisfaction survey every month, the content includes but is not limited to restaurant satisfaction, dormitory satisfaction, management responsibility, etc., to understand the demands of employees and solve the actual difficulties faced by employees. In 2024, employee satisfaction has increased compared with the previous year.



6. Employee Care

- An online employee feedback platform “Speak on Code” has been upgraded, which allows all employees to scan QR codes to provide feedback on various difficulties and demands, democratic livelihood suggestions, management advice and suggestions, etc. A dedicated person is appointed to respond to and handle issues, so as to fully realize a highly efficient employee communication mode of bottom-up feedback and top-down response.
- The Group regularly organizes general manager office meetings to respond to and resolve issues raised by employees, with solving difficult problems as the core implementation, and the results are made public.
- The Group organizes staff seminars between the management and representatives of new and old employees in the workshop production line to communicate face-to-face and heart-to-heart, understand the work, study and life of front-line employees in detail, listen to their demands, support employees in work, help employees in life, solve employees’ practical difficulties and improve employees’ sense of happiness.

(2) Employee benefits

The Group continues to improve its benefit mechanism, and cares for and responds to the different needs of its employees, providing them with various kinds of benefits covering economic subsidies, health, housing and travel, etc. In 2024, the Group distributed benefits for traditional Chinese holidays such as the Spring Festival and Dragon Boat Festival, as well as Xinjiang-specific holidays such as Eid al-Fitr and Eid al-Adha to employees, to a total of more than 50,000 people with a total amount of more than RMB20 million. In 2024, the employee benefits of the Group mainly included:

- In addition to normal salary payment and payment of five insurances and one fund, employees are also provided with multiple living subsidies such as corporate annuities, commercial insurance, catering subsidies, transportation subsidies, communication subsidies and high temperature allowances. For newly introduced high-end talents, tuition subsidies and settlement subsidies of varying amounts are provided based on their educational background and qualifications.

6. Employee Care

- The Group carried out consolation activities such as International Women's Day, Army Day, visiting needy employees, sick employees, pregnant employees, mutual aid fund consolation, etc., distributed consolation items, reflecting the warmth of the corporate family and further enhancing the cohesion of the Group and the team spirit of employees.
- The Group held a weight loss challenge, kite competition, billiard competition, fun basketball game, employee fun sports meeting, parent-child fun sports meeting, table tennis competition, chorus competition and other healthy cultural and sports activities, encouraging all employees to actively participate in various cultural and sports activities after work to enrich their personal lives, form a positive and healthy lifestyle, and continuously enhance employees' sense of team belonging and cohesion.
- The Group organizes annual health check-ups for all employees to achieve the goal of "early treatment for illnesses and proactive prevention for the healthy", safeguarding employees' physical and mental well-being. We continue to promote the "Priceless Care, Vaccine Protection" cervical cancer vaccination campaign, marking the fourth formation of a "vaccination team" to administer cervical cancer vaccines to female employees at the workplace. Additionally, the Group invited medical experts to conduct the "Free Clinic for Health, Heartwarming Service" initiative, enabling employees to receive consultations from top hospital specialists directly at the Company.
- The Group provided free hotel-style employee dormitories. In 2024, the living conditions in the dormitories have been comprehensively renovated and upgraded, through measures such as replacing the insulation exterior walls, redecorating the interior, upgrading the furniture and household items, and achieving full air-conditioning coverage, so that employees can live in peace, comfort and warmth.
- The Group provided employee shuttle buses and caring official vehicles, and equipped each park with new energy vehicle charging stations to encourage employees to travel in a low-carbon manner.

6. Employee Care

5. Occupational Health

(1) Health management

The Group cares about the health of its employees, actively practices the “people-oriented” corporate culture, implements the “prevention first, prevention and treatment combined” occupational disease prevention and treatment policy, and focuses on improving the working environment, strengthening the occupational health of employees, and preventing and treating occupational diseases, so as to effectively protect the occupational health of employees. The Group strictly abides by laws and regulations such as the Law of the People’s Republic of China on the Prevention and Control of Occupational Diseases (《中華人民共和國職業病防治法》), and has formulated and implemented relevant occupational health management systems. It regularly invites third-party professional organizations to monitor occupational disease hazard factors, comprehensively identify occupational disease hazard factors, investigate and rectify potential risks of occupational disease hazards, so as to fully carry out hazard warning instructions, real-time monitoring and allocation of protective facilities and labor protection supplies. The Group coordinates the notification of occupational hazards to employees, the operation of occupational health skills and related training, occupational health check-ups and other work. It also continues to carry out technical and process modifications based on occupational disease hazards to reduce hazard sources, so as to fully protect employees’ occupational health and safety.

The Group has diligently implemented the Occupational Disease Prevention Law, enhancing employees’ awareness of occupational health protection, continuously improving workplace and living conditions, and strengthening occupational health promotion and education. In accordance with the Classification Catalogue of Occupational Hazard Factors (《職業病危害因素分類目錄》) issued by the National Health Commission of China and the Group’s own equipment and environmental conditions, it regularly identifies occupational hazard factors, updates the occupational hazard notification, and conducts daily and annual monitoring based on the updated occupational hazard factors and the annual occupational hazard monitoring plan. In 2024, the Group conducted occupational health examinations on more than 2,000 employees who were exposed to occupational hazards such as dust, noise, and chemical factors based on the types of occupational hazards in the workplace of employees, the list of exposed personnel, and regular testing of occupational hazards in the workplace. The examinations included more than 10 items such as blood routine, urine routine, electrocardiogram, chest X-ray, audiometry, and abdominal color ultrasound, ensuring a 100% examination rate for exposed personnel and promoting the healthy development of the enterprise and employees. During the Reporting Period, the Group did not have any incidents of serious damage to the health of its employees due to exposure to occupational hazards.

6. Employee Care

(2) Cultural promotion

The Group has always adhered to the principle of “life first, safety foremost”, giving top priority to the life safety and health of employees and the public, continuously promoting the construction of safety culture, consistently strengthening safety and occupational health education, and improving production safety and occupational health management and control, striving to eliminate fatal liability accidents, major disaster accidents, systematic safety accidents, multi-person risk-related accidents, occupational hazard accidents and incidents with significant social impact.

- The Group extensively carried out safety culture theoretical training, safety culture practical training, safety culture corridors, workshop safety culture training, safety symposiums, accident case warning education and other activities to popularize safety-related knowledge, organized safety knowledge competitions to test training results and enhance employees' safety awareness.
- The Group carefully organized safety experience and fun quiz activities, including safety messages, drunk driving simulation, helmet anti-smashing, high-rise falls, electric shock simulation, line fire, pot-tossing, ring-tossing and other various safety experiences, fully mobilized the enthusiasm of all employees to learn safety knowledge, organized safety production month activities and safety knowledge competitions, with a total of more than 6,500 participants. It organized an occupational disease prevention week publicity event, carried out occupational disease prevention publicity through banners, new media, etc., to enhance occupational disease prevention awareness and held occupational disease prevention knowledge competitions to consolidate the publicity results, creating an atmosphere of full participation and further enhancing employees' occupational disease prevention awareness and protection capabilities.

During the period from 2022 to 2024, the Group had no work-related fatalities, no major safety production accidents, and the number of lost workdays due to major work-related injuries was nil, and there were no penalties imposed on the Group for violation of laws and regulations relating to occupational health and safety.

7. Safety Production

The Group adheres to the objective-oriented principle, takes safety production as the primary responsibility, pays close attention to the establishment of dual prevention mechanism, promotes the grid responsibility full-coverage, whole-process and full-flow management and major hazard source guarantee responsibility system, resolutely establishes the awareness of safety red line and bottom-line thinking, and takes safety culture as the guide to implement the safety production policy of “safety first, prevention first, comprehensive management”.

1. Safety Control

The Group has always complied with laws and regulations related to safe production such as the Production Safety Law of the People’s Republic of China (《中華人民共和國安全生產法》), the Regulations on Production Safety Licenses (《安全生產許可證條例》), the Regulations on the Safety Management of Hazardous Chemicals (《危險化學品安全管理條例》). In terms of safety tool management, special operation management, fire and explosion prevention management, safety accident management, hazardous chemicals management, accident emergency plans, key devices and critical sites management, the Group has formulated and implemented the Company’s internal safety management systems, constantly improving the construction of safety system. The Group has established a production safety management committee and sub-committees for equipment, production, engineering, intelligent manufacturing, process technology, human resources and training to fully implement the safety management responsibilities of each business segment and ensure the effective implementation of the principle that “those in charge of industries, business, and production and operations must be responsible for safety”. Moreover, by signing the Safety Target Responsibility Letter (《安全目標責任書》) and other methods, the Group clarified safety management responsibilities to promote the organic integration of hierarchical safety risk management and control and hidden danger investigation and governance, strengthen safety production responsibilities, and enhance the awareness of production safety among all employees.

In 2024, the Group strengthened the safety team mechanism and system construction by increasing investment in safety management, improving the safety performance incentive mechanism, optimizing the staffing of the safety, health and environmental protection team. It also improved the dual prevention mechanism of risk classification and color classification control and hidden danger investigation and treatment, strictly enforced on-site safety production management, and carried out safety management work focusing on the improvement of intrinsic safety of processes and equipment, identification and verification of major hazard sources, management of dangerous special operations, and integrated control of related parties, so as to timely warn and eliminate potential accidents from the source and effectively improve the ability to prevent and control accidents. In terms of polysilicon

7. Safety Production

production safety, the Group added 5 new systems and revised and upgraded the original 47 systems in accordance with safety management needs, standardized management of safety production, and closely linked safety with employees; in view of the complex business of numerous engineering subcontractors in power station construction projects, 7 standardized manuals and plans were compiled and issued, and the standardization of engineering construction safety work was continuously improved to effectively guide the safe construction of project sites.

The Group conducted emergency response drills on a regular basis, organising a total of 635 drills throughout the year covering scenarios such as earthquakes, fires and hazardous chemical leaks, with over 50,000 participants. The Group also carried out emergency response capability enhancement training, practical assessments and competency tests for various disaster and accident scenarios to strengthen employees' emergency management capabilities. The Group fully launched the "Year of Fire Safety Management Enhancement and Rectification" campaign to achieve institutionalised, standardised, mass-based, normalised and combat-ready fire safety management, establishing a regularised training and drill mechanism through on-the-job training and hands-on exercises to achieve the goal of "equipping all personnel with emergency response knowledge and the ability to handle incidents effectively".

2. Digitalization of Production

The Group deepened its applications around the theme of "enabling data to create value" by harnessing new quality productive forces to foster new development advantages and advancing the digitalisation, intelligentisation and informatization of safety production. In 2024, the Group focused on three aspects of issue identification, control optimisation and alarm rationalisation to enhance capabilities in rapid perception, real-time monitoring, proactive early warning, dynamic optimisation, intelligent decision-making, coordinated response, system evaluation and holistic collaboration, thereby promoting the digitalisation of safety management, intelligentisation of operational control, precision of risk alerts, systematisation of risk control, unmanned hazardous operations, integration of environmental monitoring, less-manned on-site inspections, and remote operation and maintenance assistance, comprehensively elevating the predictability and controllability of safety production management.

- The Group has introduced artificial intelligence technologies by integrating hazard source monitoring, hidden risk identification and accident prevention functions, and simultaneously developed an intelligent robotic inspection system which leverages drone and robot-based image capture to reduce manual operation risks, thereby establishing an efficient online early-warning system that enables full-process automated risk identification and intelligent response, with an abnormal behavior detection success rate exceeding 95% and a more than 50% improvement in safety management efficiency;



7. Safety Production

- The Group has built an integrated industrial Internet platform for safety production control, integrating an equipment database and digital deliverables, developing a mobile APP to achieve real-time equipment status monitoring and closed-loop alarm management, optimizing the advanced process control (APC) interface to enhance parameter adjustment flexibility, and constructing an equipment health management system covering 18 business categories and 121 functional points, thereby fully leveraging APC's key role in stabilizing production and enabling refined operations;
- The Group has implemented an intelligent inspection system and a digital electronic work permit system, enabling data sharing across multiple systems to support collaborative processing of inspection records, equipment status, and other information, thereby achieving digitized and efficient inspection management, enhancing inspection efficiency and the closed-loop resolution rate of potential issues, and realizing synergistic information processing through multi-system data sharing;
- The Group launched a smart fire protection system, integrating the original fire control platform through digital transformation, building an automatic alarm network covering the entire plant, achieving “early detection and early warning” of fires, and pushing alarm information through mobile APP, reducing manual round-trip confirmation links and improving emergency response efficiency;
- The project of “High-Efficiency, High-Quality Intelligent Operation and Optimization Control of Reduction Furnaces for High-Purity Silicon-Based New Materials” was selected for the 2024 list of exemplary applications of advanced computing empowering new quality productive forces, as released by the Ministry of Industry and Information Technology.

8. Social Feedback

The Group actively responds to national calls by committing to year-round social welfare activities, aiming to give back to society, care for vulnerable groups, and promote sustainable development, taking social sustainability as its responsibility and focusing on environmental protection, community service, and educational support as entry points, while advancing toward its corporate mission of “enabling new energy and materials to usher in a new life and illuminate a new future”. In 2024, the Group proactively engaged in environmental protection and community service, shouldering its social responsibilities and contributing Xinte Energy’s efforts to these causes.

- The Group organized volunteers to participate in environmental sanitation activities, enhancing employees’ awareness of environmental protection through litter collection and environmental sanitation and cleaning. Additionally, we arranged volunteer tree-planting initiatives to fully implement the ecological philosophy of respecting, adapting to, and protecting nature.
- In collaboration with primary and secondary schools, the “Photovoltaics Light Up Campuses, Knowledge Inspires the Future” science outreach program was held, using vivid examples of collaborative innovation to spark scientific enthusiasm among students and encourage more to engage in scientific exploration.
- The Group launched the “Supporting Environmental Protection: Books for Vegetables” campaign, where employees donated books in exchange for vegetables. This not only extends the knowledge lifecycle of idle books but also supports farmers while allowing employees to enjoy fresh produce, achieving a circular utilization of resources.
- The Group organized volunteers to visit nursing homes and orphanages, participating in community elderly care and orphan support activities, such as chatting, walking, and reading with the elderly, while also arranging charitable field-picking events and distributing harvested vegetables to underprivileged individuals, lonely seniors, and nursing homes. The Group reached out to primary and secondary schools and communities in need, organizing donations and purchasing love gift packages such as books, stationery, daily necessities, and food items to allow special groups in need to feel the warmth and support of society.
- The Group launched a volunteer initiative on safe electricity usage, conducting outreach in communities to educate residents on essential knowledge of safe electricity practices and enhance their safety awareness.
- The Group collaborated with communities to carry out a telecommunications fraud prevention campaign, disseminating anti-fraud knowledge to heighten residents’ awareness against telecom scams.



V. Prospects in 2025

In 2025, the Group will continue to pursue its vision of “building a modern silicon-based new energy industry system with international competitiveness and becoming an outstanding green smart energy service provider in the world”, adhering to its development strategy of “product leadership, innovative transformation, digital empowerment, efficiency-driven growth, and international expansion”, while taking firmer steps to implement ESG principles, enhance its ESG management system, continuously strengthen technological innovation capabilities, improve product and service quality, reduce energy consumption and pollutant emissions, foster a diverse and inclusive workplace, seize the once-in-a-century strategic opportunity presented by the “dual carbon” goals, actively participate in the battles to protect blue skies, clear waters, and clean soil, and advance with unwavering confidence, relentless vigor, steadfast resilience, and grounded efforts to fulfill its commitment to “delighting customers, reassuring employees, and earning shareholders’ trust”, striving to become a green energy demonstration enterprise that is leading in the industry, trusted by our shareholders, proud from our employees, and welcomed by the community.

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Disclosure Item		Page
Mandatory Disclosure Requirements		
Governance Structure	A statement from the board containing the following elements: (i) a disclosure of the board's oversight of ESG issues; (ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses); and (iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	5-8
Reporting Principles	A description of, or an explanation on, the application of the following Reporting Principles in the preparation of the ESG report: Materiality: The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement. Quantitative: Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed. Consistency: The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	3
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	3

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Disclosure Item		Page
“Comply or explain” Provisions		
Subject Area A. Environmental		
Aspect A1: Emissions		
General Disclosure	<p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p> <p>Note: Air emissions include NO_x, SO_x, and other pollutants regulated under national laws and regulations.</p> <p>Hazardous wastes are those defined by national regulations.</p>	35-38
KPI A1.1	The types of emissions and respective emissions data.	39
KPI A1.2	[Deleted on 1 January 2025]	
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	39
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	39
KPI A1.5	Description of emissions target(s) set and steps taken to achieve them.	35
KPI 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.	37

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Disclosure Item		Page
Aspect A2: Use of Resources		
General Disclosure	<p>Policies on the efficient use of resources, including energy, water and other raw materials.</p> <p>Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.</p>	31-34
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	34
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	34
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	31
KPI 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.	32
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	34
Aspect A3: The Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	40
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	40
Aspect A4: Climate Change		
General Disclosure	[Deleted on 1 January 2025]	
KPI A4.1	[Deleted on 1 January 2025]	

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Disclosure Item		Page
Subject Area B. Social		
Employment and Labour Practices		
Aspect B1: Employment		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	48-57
KPI B1.1	Total workforce by gender, employment type (for example, full-or part-time), age group and geographical region.	48
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	49
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	58-59
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	58
KPI B2.2	Lost days due to work injury.	59
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	58

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Disclosure Item		Page
Aspect B3: Development and Training		
General Disclosure	<p>Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.</p> <p>Note: Training refers to vocational training. It may include internal and external courses paid by the employer.</p>	52-54
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	54
KPI B3.2	The average training hours completed per employee by gender and employee category.	54
Aspect B4: Labour Standards		
General Disclosure	<p>Information on:</p> <ul style="list-style-type: none"> (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. 	49-50
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	49-50
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	49-50
Operating Practices		
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	26-29
KPI B5.1	Number of suppliers by geographical region.	28
KPI 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.	26-27
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	26-27
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	28-29

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Disclosure Item		Page
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	21-25
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	25
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	25
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	20
KPI B6.4	Description of quality assurance process and recall procedures.	22-23
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	25
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	13-15
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	15
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	14-15
KPI B7.3	Description of anti-corruption training provided to directors and staff.	14

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Disclosure Item		Page
Community		
Aspect B8: Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	63
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	63
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	63
Climate-related Disclosures		
Disclosure Obligation		
<p>16. (1) Subject to paragraph 17, an issuer must report on the climate-related disclosures set out in this part in the ESG report on a “comply or explain” basis. An issuer who has yet to disclose information required under any of the provisions must provide considered reasons for non-disclosure.</p> <p>(2) Where an issuer has yet to disclose information required under any of the provisions set out in this part, regardless of whether such issuer has (a) opted to “explain” why it has not made a particular disclosure under the “comply or explain” regime or (b) chosen to apply an applicable relief available pursuant to the note to the relevant provision (whether it is required to report on a mandatory or “comply or explain” basis), such issuer is encouraged to provide information on the work plan, progress and timetable for making the required disclosure.</p>		
<p>17. (1) An issuer must disclose its Scope 1 greenhouse gas emissions and Scope 2 greenhouse gas emissions pursuant to paragraphs 28(a), 28(b) and 29 on a mandatory basis.</p> <p>(2) An issuer that is a constituent of the Hang Seng Composite LargeCap Index (HSCLI) must report on the provisions set out in this part on a mandatory basis in respect of financial years commencing on or after 1 January 2026.</p> <p>Note: This paragraph 17(2) applies to an issuer that is a HSCLI constituent throughout the year immediately prior to the reporting year. Once an issuer becomes subject to mandatory disclosure of Part D of this Code, it must continue to be subject to mandatory disclosure of Part D of this Code even if it subsequently ceases to be a HSCLI constituent.</p> <p>(3) An issuer is encouraged, but not required, to disclose industry-based metrics pursuant to paragraph 36.</p>		

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Disclosure Item	Page
Definitions and Guidance	
<p>18. (1) In this part, unless otherwise specified, terms in bold and italics shall have the meaning ascribed to them in Appendix A of the IFRS S2 Climate-related Disclosures.</p> <p>(2) When preparing disclosures pursuant to the provisions of this part, issuers should refer to (i) the application guidance set out in Appendix B of the IFRS S2 Climate-related Disclosures; and (ii) implementation guidance issued by the HKEX on its website, as amended from time to time.</p>	
(I) Governance	
<p>19. An issuer shall disclose information about:</p> <p>(a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. Specifically, the issuer shall identify that body(s) or individual(s) and disclose information about:</p> <p>Note: The responsibilities of such body(s) or individual(s) should be reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s).</p> <p>(i) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities;</p> <p>(ii) how and how often the body(s) or individual(s) is informed about climate-related risks and opportunities;</p> <p>(iii) how the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the issuer's strategy, its decisions on major transactions, and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities;</p> <p>(iv) how the body(s) or individual(s) oversees the setting of, and monitors progress towards, targets related to climate-related risks and opportunities (see paragraphs 37 to 40), including whether and how related performance metrics are included in remuneration policies (see paragraph 35); and</p>	41

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Disclosure Item	Page
<p>(b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about:</p> <p>(i) whether the role is delegated to a specific management-level position or management-level committee and how oversight is exercised over that position or committee; and</p> <p>(ii) whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.</p>	41
(II) Strategy	
<i>Climate-related risks and opportunities</i>	
<p>20. An issuer shall disclose information to enable an understanding of climate-related risks and opportunities that could reasonably be expected to affect the issuer's cash flows, its access to finance or cost of capital over the short, medium or long term. Specifically, the issuer shall:</p> <p>(a) describe climate-related risks and opportunities that could reasonably be expected to affect the issuer's cash flows, its access to finance or cost of capital over the short, medium or long term;</p> <p>(b) explain, for each climate-related risk the issuer has identified, whether the issuer considers the risk to be a climate-related physical risk or climate-related transition risk;</p> <p>(c) specify, for each climate-related risk and opportunity the issuer has identified, over which time horizons — short, medium or long term — the effects of each climate-related risk and opportunity could reasonably be expected to occur; and</p> <p>(d) explain how the issuer defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the issuer for strategic decision-making.</p>	47
<i>Business model and value chain</i>	
<p>21. An issuer shall disclose information that enables an understanding of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain. Specifically, the issuer shall disclose:</p> <p>(a) a description of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain; and</p> <p>(b) a description of where in the issuer's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).</p>	42-46

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Strategy and decision-making	
<p>22. An issuer shall disclose information that enables an understanding of the effects of climate-related risks and opportunities on its strategy and decision-making. Specifically, the issuer shall disclose:</p> <p>(a) information about how the issuer has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the issuer plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. Specifically, the issuer shall disclose information about:</p> <p>(i) current and anticipated changes to the issuer's business model, including its resource allocation, to address climate-related risks and opportunities;</p> <p>(ii) current and anticipated adaptation and mitigation efforts (whether direct or indirect);</p> <p>(iii) any climate-related transition plan the issuer has (including information about key assumptions used in developing its transition plan, and dependencies on which the issuer's transition plan relies), or an appropriate negative statement where the issuer does not have a climate-related transition plan;</p> <p>(iv) how the issuer plans to achieve any climate-related targets (including any greenhouse gas emissions targets (if any)), described in accordance with paragraphs 37 to 40; and</p> <p>(b) information about how the issuer is resourcing, and plans to resource, the activities disclosed in accordance with paragraph 22(a).</p>	42-46
<p>23. An issuer shall disclose information about the progress of plans disclosed in previous reporting periods in accordance with paragraph 22(a).</p>	42
Financial position, financial performance and cash flows	
Current financial effect	
<p>24. An issuer shall disclose qualitative and quantitative information about:</p> <p>(a) how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period; and</p> <p>(b) the climate-related risks and opportunities identified in paragraph 24(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements.</p>	47

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Anticipated financial effect	
<p>25. The issuer shall provide qualitative and quantitative disclosures about:</p> <ul style="list-style-type: none"> (a) how the issuer expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration: <ul style="list-style-type: none"> (i) its investment and disposal plans; and (ii) its planned sources of funding to implement its strategy; and (b) how the issuer expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities. <p>Notes:</p> <ol style="list-style-type: none"> 1. In providing quantitative information about current or anticipated financial effects, an issuer may disclose a single amount or a range. 2. In preparing disclosures about the anticipated financial effects of a climate-related risk or opportunity, an issuer shall: <ul style="list-style-type: none"> (a) use all reasonable and supportable information that is available to the issuer at the reporting date without undue cost or effort; and (b) use an approach that is commensurate with the skills, capabilities and resources that are available to the issuer for preparing those disclosures. 3. An issuer need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity if the issuer determines that: <ul style="list-style-type: none"> (a) those effects are not separately identifiable; or (b) the level of measurement uncertainty involved in estimating those effects is so high that the resulting quantitative information would not be useful. 4. In addition, an issuer need not provide quantitative information about the anticipated financial effects of a climate-related risk or opportunity if the issuer does not have the skills, capabilities or resources to provide that quantitative information. 5. If an issuer determines that it need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity applying the criteria set out in note 3 or 4 above, the issuer shall: <ul style="list-style-type: none"> (a) explain why it has not provided quantitative information; (b) provide qualitative information about those financial effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that climate-related risk or opportunity; and (c) provide quantitative information about the combined financial effects of that climate-related risk or opportunity with other climate-related risks or opportunities and other factors unless the issuer determines that quantitative information about the combined financial effects would not be useful. 	47

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Climate resilience	
<p>26. An issuer shall disclose information that enables an understanding of the resilience of the issuer's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the issuer's identified climate-related risks and opportunities. An issuer shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with an issuer's circumstances. In providing quantitative information, the issuer may disclose a single amount or a range. Specifically, the issuer shall disclose:</p> <ul style="list-style-type: none"> (a) the issuer's assessment of its climate resilience as at the reporting date, which shall enable an understanding of: <ul style="list-style-type: none"> (i) the implications, if any, of the issuer's assessment for its strategy and business model, including how the issuer would need to respond to the effects identified in the climate-related scenario analysis; (ii) the significant areas of uncertainty considered in the issuer's assessment of its climate resilience; and (iii) the issuer's capacity to adjust, or adapt its strategy and business model to climate change over the short, medium or long term; (b) how and when the climate-related scenario analysis was carried out, including: <ul style="list-style-type: none"> (i) information about the inputs used, including: <ul style="list-style-type: none"> (1) which climate-related scenarios the issuer used for the analysis and the sources of such scenarios; (2) whether the analysis included a diverse range of climate-related scenarios; 	42-46

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<p>(3) whether the climate-related scenarios used for the analysis are associated with climate-related transition risks or climate-related physical risks;</p> <p>(4) whether the issuer used, among its scenarios, a climate-related scenario aligned with the latest international agreement on climate change;</p> <p>(5) why the issuer decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties;</p> <p>(6) time horizons the issuer used in the analysis; and</p> <p>(7) what scope of operations the issuer used in the analysis (for example, the operation, locations and business units used in the analysis);</p> <p>(ii) the key assumptions the issuer made in the analysis; and</p> <p>(iii) the reporting period in which the climate-related scenario analysis was carried out.</p> <p>Note: An issuer shall determine an approach to climate-related scenario analysis that enables it to consider all reasonable and supportable information that is available to the issuer at the reporting date without undue cost or effort. The determination of the approach shall be informed by the assessments of the issuer's exposure to climate-related risks and opportunities and its available skills, capabilities and resources.</p>	42-46

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(III) Risk Management	
<p>27. An issuer shall disclose information about:</p> <ul style="list-style-type: none"> (a) the processes and related policies it uses to identify, assess, prioritise and monitor climate-related risks, including information about: <ul style="list-style-type: none"> (i) the inputs and parameters the issuer uses (for example, information about data sources and the scope of operations covered in the processes); (ii) whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related risks; (iii) how the issuer assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the issuer considers qualitative factors, quantitative thresholds or other criteria); (iv) whether and how the issuer prioritises climate-related risks relative to other types of risks; (v) how the issuer monitors climate-related risks; and (vi) whether and how the issuer has changed the processes it uses compared with the previous reporting period; (b) the processes the issuer uses to identify, assess, prioritise and monitor climate-related opportunities (including information about whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related opportunities); and (c) the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the issuer's overall risk management process. 	42-46

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(IV) Metrics and Targets	
Greenhouse gas emissions	
28. An issuer shall disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tons of CO ₂ equivalent, classified as: <ul style="list-style-type: none"> (a) Scope 1 greenhouse gas emissions; (b) Scope 2 greenhouse gas emissions; and (c) Scope 3 greenhouse gas emissions. 	39
29. An issuer shall: <ul style="list-style-type: none"> (a) measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional authority or another exchange on which the issuer is listed to use a different method for measuring greenhouse gas emissions; (b) disclose the approach it uses to measure its greenhouse gas emissions including: <ul style="list-style-type: none"> (i) the measurement approach, inputs and assumptions the issuer uses to measure its greenhouse gas emissions; (ii) the reason why the issuer has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and (iii) any changes the issuer made to the measurement approach, inputs and assumptions during the reporting period and the reasons for those changes; 	35-36

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<p>(c) for Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 28(b), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to enable an understanding of the issuer's Scope 2 greenhouse gas emissions; and</p> <p>(d) for Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 28(c), disclose the categories included within the issuer's measure of Scope 3 greenhouse gas emissions, in accordance with the Scope 3 categories described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011).</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. An issuer is required to use all reasonable and supportable information that is available to it at the reporting date without undue cost or effort when the issuer selects the measurement approach, inputs and assumptions it uses in measuring Scope 3 greenhouse gas emissions. 2. An issuer is permitted to measure its greenhouse gas emissions in accordance with paragraph 28 using information for reporting periods that are different from its own reporting period if that information is obtained from entities in its value chain with reporting periods that are different from the issuer's reporting period, on the condition that: <ol style="list-style-type: none"> (a) the issuer uses the most recent data available from those entities in its value chain without undue cost or effort to measure and disclose its greenhouse gas emissions; (b) the length of the reporting periods is the same; and (c) the issuer discloses the effects of significant events and changes in circumstances (relevant to its greenhouse gas emissions) that occur between the reporting dates of the entities in its value chain and the date of the issuer's ESG report. 3. Where an issuer's activities include asset management, commercial banking or insurance, the issuer is encouraged to disclose additional information about the issuer's Category 15 greenhouse gas emissions or those associated with its investments (financed emissions). 	35-36
Climate-related transition risks	
30. An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related transition risks.	47
Climate-related physical risks	
31. An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related physical risks.	47
Climate-related opportunities	
<p>32. An issuer shall disclose the amount and percentage of assets or business activities aligned with climate-related opportunities.</p> <p>Note: In preparing disclosures to meet the requirements in paragraphs 30 to 32, an issuer shall use all reasonable and supportable information that is available to the issuer at the reporting date without undue cost or effort.</p>	47

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Capital deployment	
33. An issuer shall disclose the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities.	47
Internal carbon prices	
34. An issuer shall disclose: <ul style="list-style-type: none"> (a) an explanation of whether and how the issuer is applying a carbon price in decision-making (for example, investment decisions, transfer pricing, and scenario analysis); and (b) the price of each metric tonne of greenhouse gas emissions the issuer uses to assess the costs of its greenhouse gas emissions; or an appropriate negative statement that the issuer does not apply a carbon price in decision-making.	36
Remuneration	
35. An issuer shall disclose whether and how climate-related considerations are factored into remuneration policy, or an appropriate negative statement. This may form part of the disclosure under paragraph 19(a)(iv).	41
Industry-based metrics	
36. An issuer is encouraged to disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterise participation in an industry. In determining the industry-based metrics that the issuer discloses, an issuer is encouraged to refer to and consider the applicability of the industry-based metrics associated with disclosure topics described in the IFRS S2 Industry-based Guidance on implementing Climate-related Disclosures and other industry-based disclosure requirements prescribed under other international ESG reporting frameworks.	36

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<i>Climate-related targets</i>	
<p>37. An issuer shall disclose (a) the qualitative and quantitative climate-related targets the issuer has set to monitor progress towards achieving its strategic goals; and (b) any targets the issuer is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the issuer shall disclose:</p> <ul style="list-style-type: none"> (a) the metric used to set the target; (b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives); (c) the part of the issuer to which the target applies (for example, whether the target applies to the issuer in its entirety or only a part of the issuer, such as a specific business unit or geographic region); (d) the period over which the target applies; (e) the base period from which progress is measured; (f) milestones or interim targets (if any); (g) if the target is quantitative, whether the target is an absolute target or an intensity target; and (h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target. <p>38. An issuer shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including:</p> <ul style="list-style-type: none"> (a) whether the target and the methodology for setting the target has been validated by a third party; (b) the issuer's processes for reviewing the target; (c) the metrics used to monitor progress towards reaching the target; and (d) any revisions to the target and an explanation for those revisions. <p>39. An issuer shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the issuer's performance.</p>	36

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<p>40. For each greenhouse gas emissions target disclosed in accordance with paragraphs 37 to 39, an issuer shall disclose:</p> <ul style="list-style-type: none"> (a) which greenhouse gases are covered by the target; (b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target; (c) whether the target is a gross greenhouse gas emissions target or a net greenhouse gas emissions target. If the issuer discloses a net greenhouse gas emissions target, the issuer is also required to separately disclose its associated gross greenhouse gas emissions target; (d) whether the target was derived using a sectoral decarbonisation approach; and (e) the issuer's planned use of carbon credits to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target. In explaining its planned use of carbon credits, the issuer shall disclose: <ul style="list-style-type: none"> (i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits; (ii) which third-party scheme(s) will verify or certify the carbon credits; (iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and (iv) any other factors necessary to enable an understanding of the credibility and integrity of the carbon credits the issuer plans to use (for example, assumptions regarding the permanence of the carbon offset). 	35-36
<i>Applicability of cross-industry metrics and industry-based metrics</i>	
<p>In preparing disclosures to meet the requirements in paragraphs 21 to 26 and 37 to 38, an issuer shall refer to and consider the applicability of (i) cross-industry metrics (see paragraphs 28 to 35) and (ii) industry-based metrics (see paragraph 36).</p>	



新特能源股份有限公司

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