

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

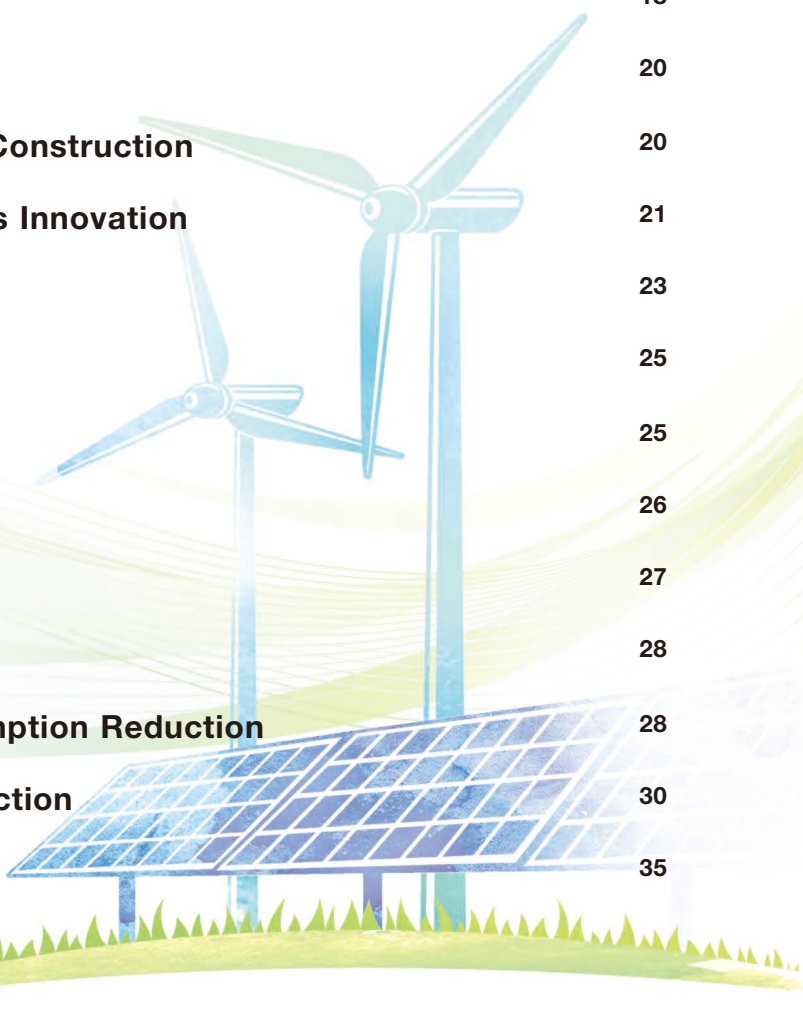
Environmental, Social and Governance Report

2022



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About this Report

This report is the seventh Environmental, Social and Governance Report issued by Xinte Energy Co., Ltd. (“**Xinte Energy**”, or the “**Company**”).

Time Scope of the Report

This report covers the period from 1 January 2022 to 31 December 2022 (the “**Reporting Period**”).

Coverage of the Report

The entities covered by this report include Xinte Energy Co., Ltd. and its subsidiaries (collectively the “**Group**”).

Basis of Preparation of the Report

The contents of this report are prepared in accordance with the Environmental, Social and Governance Reporting Guide (the “**ESG Guide**”) in Appendix 27 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”) issued by The Stock Exchange of Hong Kong Limited (the “**Hong Kong Stock Exchange**”). For the disclosure summary of the respective indicators, please refer to the content index in section X of this report.

Principles of Preparation of the Report

This report is prepared in accordance with the principles of materiality, quantitative, balance and consistency under the ESG Guide of the Hong Kong 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. The financial data in the report come from the Company’s annual report, while other data come from the Company’s official documents and other statistics.

Reporting Commitment to the Report

This report has been considered and approved by the board of directors of the Company (the “**Board of Directors**”), who guarantees that the contents in this report do not contain any false information or misleading statements.

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.xinteenergy.com or the website of the Hong Kong Stock Exchange at www.hkexnews.hk for review.



About Xinte Energy

Xinte Energy is a world-leading polysilicon producer and developer and operator of wind and photovoltaic (“**PV**”) resources. The Company was incorporated in Xinjiang, the People’s Republic of China (the “**PRC**”) with limited liability on 20 February 2008, and converted into a joint stock limited liability company on 16 October 2012, with its H shares listed on the Main Board of the Hong Kong Stock Exchange (stock code: 1799) on 30 December 2015.

The Group has always been adhering to the philosophy of “green, recycling, synergy, symbiosis, and win-win” in development. With insistence on technological innovation, we continue our effort in becoming an outstanding provider of green smart energy services in the world.

The Group is principally engaged in the R&D, manufacturing and sales of high-purity polysilicon, as well as the development, construction and operation of wind and PV power plants. In the field of polysilicon, the Group has three production bases in Xinjiang Ganquanpu, Xinjiang Zhundong and Inner Mongolia Baotou, with a production capacity of 200,000 tons of polysilicon per annum as at the end of 2022. The first phase with 100,000 tons of the 200,000-ton-per-annum high-end electronic-grade polysilicon green low-carbon circular economy construction project in Xinjiang Zhundong (the “**200,000-ton Polysilicon Project in Zhundong**”) is under construction, and is scheduled to commence production in the first half of 2023, which will increase the polysilicon production capacity to 300,000 tons per annum and further enhance the Group’s competitiveness in the field of polysilicon. 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 core new-energy products such as inverters, Static VAR generators (the “**SVG**”), energy routers and flexible DC converter valves. During the Reporting Period, the total installed capacity of PV and wind power projects of the Group which had been recognised as revenue amounted to approximately 2.30GW. As at the end of 2022, the Group had achieved an operating capacity of approximately 2.61GW for its wind power and PV power plants.

During the Reporting Period, the Group achieved a revenue from operations of RMB37,541.11 million, a gross profit of RMB16,815.05 million and net profit attributable to shareholders of the listed company of RMB13,395.47 million, representing an increase of 66.68%, 166.13% and 170.33% respectively, as compared with the same period of the previous year.



System, Communication and Demand



Organizational system for environment, society and management

The Board of Directors is the highest responsible and decision-making body in charge of issues related to Company's environment, society and governance ("**ESG**"), who assumes full responsibility for formulating the Company's ESG strategy as well as monitoring and reporting ESG issues that may affect the Company's operation and the stakeholders, reviewing the Company's sustainability strategy, overseeing the formulation and implementation of its annual ESG objectives, clarifying its standards for ESG management, identifying and handling ESG-related issues and risks, and approving its ESG reports for publication. 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 mainly responsible for drafting and preparing the documents related to sustainable development, communicating relevant work requirements, arranging various functional departments and subsidiaries to carry out and implement specific work, and providing professional support for the implementation of various tasks. Each member of the ESG Committee is responsible for certain ESG issues in his/her own field, and should ensure that the Company is operating in strict compliance with the applicable laws and regulations in all aspects and making continuous improvement thereon, including but not limited to corporate governance, environmental protection, social responsibility, scientific and technological innovation, employee care, product and service quality and supply chain management.

Under the global consensus to achieve the goal of "carbon neutrality", sustainable development has become an important topic of concern to the world. The Group has been striving to keep pace with the times and has undertaken the responsibility and mission bestowed by the industry to better integrate the concept of sustainable development into its daily operation and management. To this end, the Group has made great effort to fully identify the opportunities and challenges faced in the process of achieving sustainable development, and took the initiative to promote the harmonious and sustainable development of human beings, society and the environment with practical actions.

In the process of daily operation and its preparation of ESG reports, the Group has continuously improved the ESG work in accordance with the latest ESG regulatory requirements and advanced ESG management concepts to enhance its ESG management level as well as risk management and control capabilities.



System, Communication and Demand

Communication with and Demand of Stakeholders

The Company always regards corporate social responsibility as an integral and important part of the overall operation of an enterprise. It has established a regular communication mechanism with such major stakeholders as shareholders and investors, government and regulators, employees, customers, suppliers and partners, society and the public, and has also incorporated the demands of various stakeholders into the operation and decision-making process to create greater comprehensive value for all parties.

Expectations of Stakeholders and Responses

Stakeholder	Communication Channel	Expectation and Demand	Communication and Response
Shareholders and investors	General Meeting Corporate website and announcements Investor networking session ESG questionnaire	Return on investment Protection of rights and interests Corporate transparency Risk control	Improve profitability Convene general meetings Routine information disclosure Optimize internal control and risk management
Government and regulators	Supervision and inspection Regular reporting ESG questionnaire	Compliance operation Respond to the call of the state Support local development	Tax payment in full and on time and anti-corruption management Actively implement relevant policies Actively undertake social responsibility
Employees	Staff Representative Meeting Staff training Staff activities Employee satisfaction survey Internal publication Internal communication mechanism ESG questionnaire	Platform for career development Remuneration and benefits Healthy and safe working environment Listen to the voice of employees	Improve the mechanism for career promotion Offer competitive salary and safeguards for welfare Implement health and safety management system Provide the mechanism for equal communication and appeal



System, Communication and Demand

Stakeholder	Communication Channel	Expectation and Demand	Communication and Response
Customers	Customer service center and hotline Customer visits Customer satisfaction survey ESG questionnaire	Product quality Customer service quality Protection of customers' rights and interests	Improve product quality Enhance service level Compliance marketing Conduct the project cooperation of "growing together with customers"
Suppliers and partners	Suppliers' meeting Regular communication Supplier portal ESG questionnaire	Sincere cooperation Experience sharing Win-win cooperation Business ethics and reputation	Establish supplier management system Promote daily communication Cooperate on innovative projects Perform contracts according to laws Conduct supplier evaluation
Society and the public	Corporate website and social media Charity events ESG questionnaire	Support social welfare Protect natural environment Promote social progress	Engage in public welfare Adhere to green development Share development achievements

In 2022, based on the Company's strategy and industry characteristics, the Group identified 24 material issues by interpreting national macro policies and ESG hot topics and analyzing policy documents and standards such as the ESG Guide. In order to understand the concerns of various stakeholders and to respond to their key concerns in the ESG report, the Company conducted targeted communication with stakeholders such as shareholders and investors, employees, government and regulators, suppliers and partners, society and the public through questionnaire surveys. With reference to the expectations and demands of our stakeholders as provided in the questionnaire, the Company has determined the disclosure focus of this report to actively respond to the expectations and demands of our stakeholders.



System, Communication and Demand

Following the communication with various stakeholders, the Company has identified the following material ESG issues related to the Group, which are prioritized as follows:

Issues of Materiality	Ranking
Production safety and occupational health	1
Protection of employee rights and interests	2
Safeguarding shareholders' rights and interests	3
Product quality	4
Emission reduction	5
Corporate governance	6
Compliance with laws and regulations	7
Technological innovation	8
Information security and privacy protection	9
Energy utilization	10
Prevention of child labor and forced labor	11
Anti-corruption behavior promotion	12
Waste management	13
Intellectual property protection	14
Collaborative development with suppliers	15
Strategic planning	16
Customer service and satisfaction	17
Water resource management	18
Equal employment and employee diversity	19
Supplier management	20
Social responsibility	21
Optimizing the supply system	22
Staff training and development	23
Responding to climate change	24

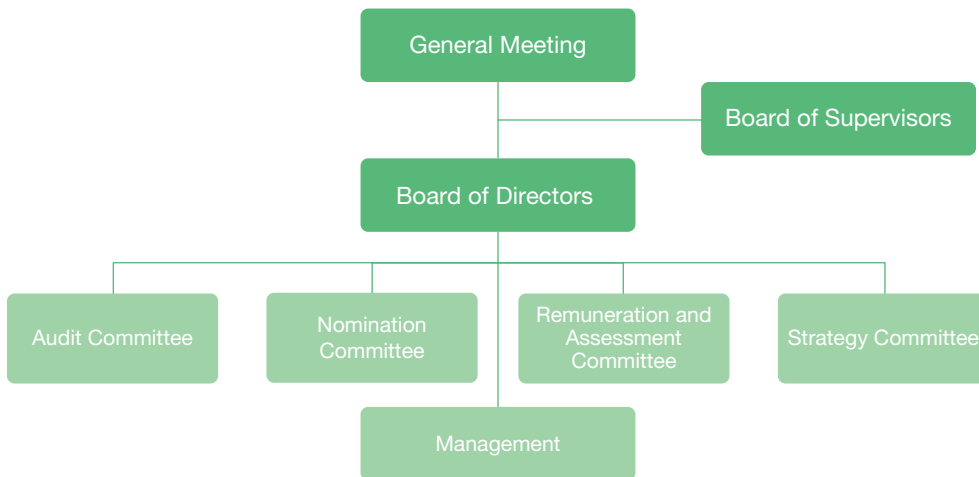
Based on the above material issues, the Company will make disclosure in the following eight sections, i.e. "Corporate Governance", "Products and Services", "R&D Innovation", "Supply Chain Management", "Environmental Protection", "Employee Care", "Occupational Health and Safety Production" and "Social Contribution", with priority given to those issues high on the list so as to better respond to the concerns of our stakeholders. Meanwhile, the Company will determine the key areas of its ESG work for 2023 according to the results of assessment, while continuing to improve our management policies and strengthen system construction to improve performance, and create value with our stakeholders in the fields of economy, society and environment.

Corporate Governance



1. Corporate Governance

An effective corporate governance structure is the core of the modern enterprise system. 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 Group 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 of Directors, the board of supervisors and the management. Under the Board of Directors of the Company, the audit committee, the nomination committee, the remuneration and assessment committee and the strategy committee have been established to develop a sound corporate governance structure with clearly defined authorities and responsibilities, well-performing functions, scientific decision-making, coordinated operation and effective check and balance between the authoritative body, decision makers, supervisors and the management.



For details of the corporate governance of the Company, please refer to the section headed “Corporate Governance Report” in the 2022 Annual Report of the Company.



2. Compliance Management

With stern adherence to its tenets of honesty, trustworthiness and compliant operation, the Company earnestly fulfilled its obligations as a listed company and continuously optimized its compliance management system which involved the construction, daily consultation, review of material issues, training in and inspection of compliance performance, and feedback and suggestions for improvement, so as to continuously promote the improvement of the Company's compliance management. In accordance with the requirements of laws, regulations and the Listing Rules, the Company continuously improved relevant management systems. During the Reporting Period, the Company had 37 new systems, and updated and revised 117 systems. Through engaging a professional consultant agency to carry out a consultation project on the construction of the basic management system and the vertical system compliance review work, the Company has been able to monitor the rationality of system design and effectiveness of system implementation. The Company pays attention to cultivating and enhancing the awareness of standardized operation of all employees, and publicizes and implements relevant regulations on standardized operation in an all-round and multi-angle manner through online training courses and on-site training activities. In 2022, the Group conducted several special trainings on standardized operation, interpretation of laws and regulations, legal and compliant performance of duties by directors, supervisors and senior management, and compliance operations, covering directors, supervisors, management and all employees of the Company, so as to continuously enhance the compliance operation level of the Company.

3. Internal Control and Risk Management

The Company attaches great importance to corporate risk management and control, constantly improves risk management and internal control systems, accepts the supervision and suggestions of the Company's Board of Directors, the audit committee and external professional institutions on internal control and risk management, and requires relevant departments to implement internal control and risk management systems and perform relevant tasks.

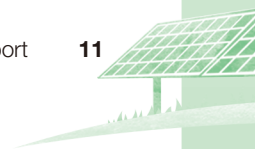
In terms of internal control, the Company conducted internal control in accordance with the provisions of the Basic Standards for Internal Control of Enterprises (《企業內部控制基本規範》) and its supporting guidelines and other internal control regulatory requirements, and taking into account the Company's internal control system and evaluation methods, its own objectives, business scope and operating conditions. The Company's internal control followed the five principles of "comprehensiveness, importance, balance, adaptability and cost-effectiveness", focusing on setting up internal control measures in core business links such as financial reporting, procurement and payment, cost management, major investment,



Corporate Governance

information disclosure, connected transactions and information system management, including incompatible duty separation control, authorization and approval control, accounting system control, property protection control, budget control, operation analysis control and performance evaluation control. The Company regularly conducted self-evaluation of the effectiveness of internal control implementation, prepared self-evaluation reports on internal control to report to the Board of Directors and the audit committee of the Company, and engaged professional auditors for verification. During the Reporting Period, there were no factors affecting the evaluation conclusion of the effectiveness of internal control in the Company.

In terms of risk management, the Company has established a risk-management-oriented internal control system and built “three lines of defense” consisting of business department, supervision department and audit department. The business department identifies and assesses risks in the course of business development, the supervision department provides expertise for and monitors the matters related to risk management, and the audit department investigates loopholes and rectifies defects, and provides objective and independent evaluation opinions and recommendations on risk management, providing strong protection for the Company’s risk management. In 2022, the Company newly formulated the Comprehensive Risk Management Procedures (《全面風險管理程序》) to standardize risk management work, and prepared a risk management manual for core business links such as procurement, production, sales, scientific research and product quality. According to the risk management manual and the Company’s development strategy planning, taking into account the actual business development, the Company identified the risk points, including the ESG risks, that should be focused on during the production and operation process and formed a list of annual risk management priorities around these risk points to carry out relevant risk management work in a targeted manner. At the same time, the Company conducted special training on its own risk control management system and the requirements of regulatory institutions through internal staff teaching and external expert organizations to enhance the risk management awareness of all employees. In 2022, the Company did not have any new major risk events, nor did it have any significant business review omissions.



4. Anti-corruption Behavior Promotion

With strict adherence to its business philosophy of law-based corporate governance and honesty and trustworthiness, the Company doggedly opposed commercial bribery as per the Criminal Law of the People's Republic of China (《中華人民共和國刑法》), the Anti-Unfair Competition Law of the People's Republic of China (《中華人民共和國反不正當競爭法》) and other applicable laws and regulations, and determinedly fought corruption in accordance with its internal policies such as Code of Conduct for Integrity (《廉政行為標準》), Internal Audit Management System (《內部審計管理制度》), Management System of Disciplinary Punishment for Violation of Laws and Regulations (《違紀違規處分管理制度》), and Whistleblowing Reward System (《舉報獎勵制度》).

The Company has set up an independent audit supervisory department to carry out anti-corruption tasks under the guidance of the audit committee of the Board of Directors, regularly update and revise the code of conduct, ethical standards and system documents for anti-corruption, strengthen supervision, inspection and restriction of corrupt practices with a constantly-improving anti-corruption prevention and control mechanism, and create a cultural atmosphere where “everyone can't, don't want to, and dare not be corrupt”, aiming to root out corruption within the Company. During the Reporting Period, the Group held various activities to promote its anti-corruption efforts and enhance the employees' awareness of integrity in discharging their duties:

- continuing to implement its anti-corruption requirements through publicity and training sessions, aiming to foster a corporate culture that values integrity and self-discipline and enhance the anti-corruption awareness of its employees, thus guarantee the sound development of the Group. In 2022, the Group conducted 36 customized training sessions on promoting integrity for each of its business segments, covering the directors of the Company and all employees of the Group, with recorded videos distributed to suppliers for their learning afterwards.
- launching the “Month of Integrity” series of activities, including organizing its employees to watch warning educational films, attending court trials of corruption cases and visiting the corruption warning education base, aiming to carry out integrity education and corruption education to employees at large, and raise their awareness of integrity and self-discipline; organizing the “Online Knowledge Competition on Integrity Culture”, with 74,000 participants in total.
- conducting integrity interviews with more than 5,000 new recruits, recently-promoted officials and people in key positions such as procurement, sales, engineering, quality inspection, finance, human resources and information security, demonstrating its unremitting efforts to build a solid ideological line of defense against corruption.



Corporate Governance

- encouraging all employees and other insiders to report violations of integrity and self-discipline regulations, setting up a whistleblowing mailbox, and publicizing the integrity supervision and whistleblowing channel information in the Group's Whistleblowing Reward System (《舉報獎勵制度》), internal network, public places and project sites, and setting up relevant provisions for integrity complaint and whistleblowing in contracts, tender documents and other texts to facilitate stakeholders to reflect and whistle-blow actual or suspected corrupt practices.

In 2022, the Group recorded zero material corruption-related litigations.



Products and Services

The Group has been engaged in the field of new energy for a long time, always adhering to the development concept of “green, recycling, synergy, symbiosis, and win-win”. With the new energy industry as the main line, the Group insists on building a national brand in the new energy industry with integrity and quality, continuously improving quality control and service level, developing technological innovation and constantly creating value for customers.

1. Product Quality

Product quality is the life of an enterprise and the guarantee of benefits. The Group strictly abides by laws and regulations related to product quality and safety such as the Product Quality Law of the People’s Republic of China (《中華人民共和國產品質量法》), the Standardization Law of the People’s Republic of China (《中華人民共和國標準化法》) and the Regulations of the People’s Republic of China on the Administration of Production Licenses for Industrial Products (《中華人民共和國工業產品生產許可證管理條例》), strictly enforces the relevant national and industrial quality control standards, constantly optimizes and improves the quality management mechanism, strengthens the foundation of quality management, and continuously promotes the enhancement of quality management awareness and capacity building of all staff, so as to further improve the quality of products and projects.

1.1 Building quality system

The effective operation of the quality management system is a powerful guarantee for corporate management efficiency and economic benefits. The Group has formulated and implemented a series of internal systems and standards including the Quality Assessment Management System (《質量考核管理制度》) and the Construction Project Quality Management Rules (《工程建設項目質量管理規定》), carrying out the fulfillment of quality management system standards, strengthening the quality control of the whole process from product production to engineering construction with focus placed on fostering a quality-oriented culture, promoting quality improvement and standardization with the help of information technology, and further improving the quality of the Group’s products and projects.

The Group conducts strict file management and annual review of relevant systems and documents, and realizes dynamic management of product and project quality through continuous optimization of relevant systems. During the Reporting Period, the Group further improved relevant systems such as the Project Quality Management System (《工程質量管理制度》), the Product Quality Management System (《產品質量管理制度》) and the Process Card Management System (《工藝卡片管理制度》), and further normalized and standardized the quality management requirements of various links such as production process, quality assessment and pre-delivery inspection, providing multiple guarantees for outstanding product quality and excellent project quality.



Products and Services

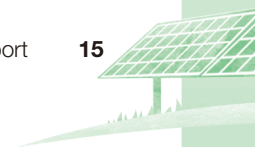
In 2022, the Group conducted the “Look Back” activity on quality problems, compiled case study manuals and equipment operation manuals, and established a continuous improvement system with Lean Six-Sigma as the core, so as to constantly enhance our product quality.

1.2 Quality process control

The Group has firmly established the business philosophy of “quality prioritization”, fully exerted the quality management functions in the whole process of the enterprise, promoted the construction of a quality information platform, built a whole-process quality management platform, and realized the effective connection and capture of quality information from various systems and platforms. As a result, the efficiency of quality management has been enhanced, the product quality has been steadily improved, and the customer satisfaction has been continuously increased.

In terms of the construction of polysilicon projects, the Group has launched the construction of a digital factory based on the concept of intelligent manufacturing for quality improvement. In accordance with the principle of unified “planning, design, standards, construction, investment and management”, the Group established an intelligent manufacturing management model of “company + factory (base)” and implemented intelligent manufacturing factory-level standards in all aspects to realize fully automated and intelligent production of polysilicon products and full-process visual control of product quality. As of the end of 2022, the automation rate of the Group’s polysilicon production line in Baotou, Inner Mongolia had exceeded 90%, with 100% of the automated equipment in operation, and the automation rate of the polysilicon production line in Ganquanpu, Xinjiang increased by 50% year-on-year.

In terms of polysilicon products, the Group continued to work with customers to carry out quality research, improve the quality stability control evaluation standards for the entire polysilicon process, implement quality control in the links of R&D and design, raw material procurement, manufacturing and product delivery, strengthen the synergy of process, equipment and quality, and improve the quality of polysilicon products through measures such as the renovation of cold hydrogenation equipment, intelligent and refined control of reduction furnaces, and optimization of raw material acceptance. In 2022, through standardized management measures, the Group achieved a year-on-year increase of 1.14 percentage points in the proportion of polysilicon products above electronic grade, a year-on-year increase of 1.69 percentage points in the proportion of monocrystalline materials, and a year-on-year decrease of 2.23 and 7.72 percentage points in polysilicon body and surface metal, respectively.



Products and Services

In terms of the construction and operation of wind power and PV power stations, the Group focused on the construction of a quality system for all employees around the goal of “high-quality projects”, and strictly strengthened the quality management planning of front-end projects, the quality control of components, the supervision and control of key equipment, and the quality management during the construction process and the acceptance of key construction process. It strictly controlled project acceptance and completion acceptance, and carried out in-depth post-project evaluation to improve project quality management, reduce quality compliance risks, and ensure that project quality meets national industry standards and contract requirements. The Group gave full play to the role of the intelligent operation and maintenance platform of the operating power station, reinforced the remote monitoring of the centralized control center, asset management platform and E-cloud platform, and strengthened module research through focusing on fault alarms, equipment performance assessment and health evaluation, so as to improve the quality and level of intelligent operation and maintenance of operating power stations.

In terms of inverters, SVG and other products, the Group organized quarterly review and annual internal review of the quality system based on the management dimension of “safety, high quality, guaranteed delivery, and cost control”, and closed 100% of unqualified items. The Group introduced automatic testing equipment in the product production process to realize automatic judgment and recording of results and reduce quality misjudgment of manual operation, thus realizing a year-on-year increase of 1.34% in the pass rate of string inverter debugging, and a year-on-year decrease of 0.43% in the failure rate in string inverter market. The number of external quality problems of a single centralized inverter decreased by 0.72% year-on-year; and the availability of SVG increased by 0.24% year-on-year.

The Group continued to increase its efforts in the establishment of ex-factory product quality control standards while strictly implementing the established procedures for quality inspection and disposal of defective products. Products failing to pass the tests and verifications would be blocked from leaving the factory. In addition, the Group further regulated the scope of product testing by establishing a centralized process for defective product recall, which would be repaired or retired based on their conditions and in accordance with the Group’s product recall policies. In 2022, the Group continued to improve its testing standards and product recall policies, and recorded zero cases of sold or delivered products that need to be recalled for safety and health reasons.

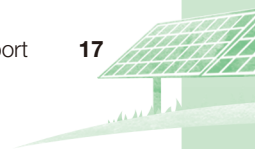


Products and Services

1.3 Quality achievements

During the Reporting Period, more than 99% of the Group's polysilicon products and inverters successfully passed the sample test on the whole. The Group completed the construction of 40 model projects, and no major quality defects occurred in the engineering projects. In 2022, the Group received a number of recognitions from the society for its quality management performance, as summarized as follows:

- The Tongshanling Wind Power Farm in Jiangyong County, Yongzhou City, Hunan Province, undertaken by the Group, was granted the China Power Quality Project Award and the Hunan Province Quality Project Award in evaluation results of the “2022 China Power Quality Project” announced by the China Electric Power Construction Association and the “2021 Quality Project Award” announced by the Hunan Renewable Energy Association.
- The Group's research topic of “Improving the One-time Acceptance Rate of the Construction of Directly Buried Cables in Wind Farms” (《提高風電場直埋電纜施工一次驗收合格率》) was awarded the “Third Prize” and “Excellent Prize” of the quality management group in the evaluation results of the electric power construction quality group activities announced by the China Electric Power Construction Association and the 2021 engineering construction quality management group activities announced by the Hunan Renewable Energy Association.
- The Group's quality research topic of “Improving the Leveling Accuracy of Wind Turbine Foundation Anchor Plates” (《提高風機基礎錨盤調平精度》) was awarded the “Second Prize” of the quality management group in the evaluation results of the electric power construction quality group activities announced by the China Electric Power Construction Association.
- The Group received three major awards for its excellent performance, i.e. the “Most Influential Power Station/Energy Asset Management Enterprise”, the “Most Influential Power Station Investment/Development/EPC Enterprise” and the “2021 Most Influential Photovoltaic Inverter Enterprise” in the “Solar Energy Cup” Influential Photovoltaic Brand Selection Ceremony jointly organized by Solarbe (www.solarbe.com) and Solarbe Consulting.
- The Group won three awards, i.e. the “China Excellent Photovoltaic Enterprise • 2021 Photovoltaic Leader”, “Top Ten Inverter Suppliers” and “Excellent Photovoltaic Material Supplier” at the “Sixth China Photovoltaic Industry Forum and 2021 Ceremony of Excellent Photovoltaic Brands in China” hosted by the all-media platform of in-en.com.



Products and Services

- The Kunliulong project equipped with the Group's UHV flexible DC converter valve has been operating efficiently and stably, which has strongly supported the consumption of new energy power since its operation, reducing standard coal consumption by approximately 9.5 million tons/year and carbon dioxide emissions by approximately 25 million tons/year.
- The string inverters designed and produced by the Group with high protection level and wide temperature adaptability have been used in PV Power Station in Yimin, Hulun Buir, Inner Mongolia. The temperature of the project site is around minus 30°C for a long time, but the operation of inverters remains stable even in extremely low temperature environment.

2. Customer Services

2.1 Customer satisfaction

The Group adheres to the customer-oriented service principle, establishes a complete customer service workflow, and continuously strives to improve customer satisfaction. From time to time, the Group revised system documents such as the Customer Relationship Management System (《客戶關係管理制度》), the 400 Customer Service Management Measures (《400客戶服務管理辦法》) and the Standardized Working Hours Processing Sheet (《標準化工時處理表》), and established an efficient customer complaint and feedback mechanism to provide timely and effective responses to feedback and opinions from customers. The Group conducted an overall assessment and confirmation on our problem-solving effect by adhering to the guidance of customer opinions, so as to accurately improve service quality. In 2022, the Group received 13 customer feedback issues, with a 100% issue addressing rate. The Group assessed customer satisfaction through self-evaluation and third-party surveys. In 2022, our customer satisfaction score increased by 1.6 points compared with the same period of the previous year. In recent years, the Group has been granted a number of awards by various customers, including “Strategic Partner Award” and “Excellent Quality Award” and “Service Award in Hardships”.



Products and Services



2.2 Customer privacy protection

The Group regards customer privacy protection and information security as its own responsibility. In order to protect customer information and privacy and strengthen confidentiality management, the Group has formulated relevant systems such as the Information Security Management System (《信息安全管理制​​度》), the Application System Operation and Maintenance Management Measures (《應用系統運維管理辦法》) and the Trade Secret Management System (《商業秘密管理制​​度》), clarified the relevant work management departments and responsibilities, established the authority of the customer relationship management system, customer information transmission process and assessment requirements. And it has encrypted documents through information-based confidentiality measures, and strictly managed customer information through the adoption of hierarchical authorization of information, the execution of Confidentiality Agreement and protection clauses, and training and education measures, aiming to prevent leakage of customer information to the greatest extent.

In 2022, the Group achieved its goal of safeguarding business information security with no major information security incidents occurred and no complaints received from any customers or official authorities regarding incidents of leakage of customer privacy.



R&D Innovation

With strict adherence to its business philosophy known as “led by innovation”, the Group believes that innovation capability is its core competitive strength and driving force for development, and is committed to promoting forward-looking technology innovation orienting the state-of-the-art technology and industry frontier. In order to empower the Group’s development to gain vitality with the support of technology, the Group has been constantly updating and optimizing its scientific and technological innovation system to facilitate patent research and development and industrialization of its achievements, keep its intellectual property rights under good protection and management, and promote new product development, technology leaning and other innovation, so as to maintain a long-lasting driving force for the sustainable development of the Company.

1. Innovation System and Platform Construction

The Group continuously optimizes and improves the construction of scientific and technological innovation system and incentive system to inject impetus into and tap the potential of scientific and technological innovation, endeavoring to build a multi-level technological innovation platform. The Group has established four major R&D centers in Urumqi of Xinjiang Autonomous Region, Baotou of Inner Mongolia Autonomous Region, Wuqing of Tianjin City and Xi’an of Shaanxi Province respectively to improve the innovation incentive system. Focusing on the cultivation of high-end technological talents, the Group stepped up investment of funding and manpower to fully play the role of scientific and technological innovation system and platform guarantee.

- In 2022, the Group carried out the evaluation of innovation capability in accordance with the requirements of the National Enterprise Technology Centre Appraisal and Company Technological Innovation Effectiveness Improvement Plan (《國家企業技術中心評價暨公司科技創新成效提升方案》). Given the current innovation environment and status quo in the industry, and in consideration of advices of the expert team, the Group completed the innovation capability appraisal model and improvement plan, and formulated the Three-Year Action Plan for Innovation Capability (《創新能力三年行動方案》) to promote the improvement of innovation capability and the output of innovation value.
- With an eye to industry-university-research collaboration, the Group has, since its establishment, signed school-enterprise cooperation agreements with more than 10 research institutes, such as Tsinghua University, Peking University, Tianjin University, Xi’an Jiaotong University, and North China Electric Power University, in a bid to establish partnership and continue to deepen the integration of industry and education. In 2022, the Group launched joint innovations with research institutes on more than 10 subjects, including process optimization of reduction furnaces, string inverters, energy storage, new zirconium-based materials, and R&D in silicon nitride technology.



R&D Innovation

- According to the Publicity of the Third Batch of Intelligent Photovoltaic Pilot Demonstration List (《第三批智能光伏試點示範名單公示》) issued by the Electronic Information Department of the Ministry of Industry and Information Technology of the PRC, the Group was awarded the National Intelligent Photovoltaic Pilot Demonstration Enterprise.
- The Group's Xinjiang Photovoltaic Engineering Technology Research Center was awarded the title of "Excellent Engineering Technology Research Center" in the performance evaluation results of engineering technology research center in Xinjiang Uygur Autonomous Region in 2022.



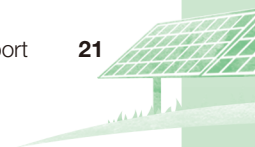
2. Product Technology and Business Innovation

Leveraging on its leading technological advantages and strong R&D capabilities in the new energy industry, the Group focused on the integration and innovation of new technologies, new fields, new processes, and new solutions, strengthened basic research on product technology innovation, promoted core technology breakthrough, and constantly broke through technological boundaries, to provide technical support for improving the performance of new energy products and reducing the cost of electricity.

With regard to polysilicon, the Group focused on implementing its science and technology development plan under the "14th Five-year Plan" and breaking the bottlenecks in technology and quality in various product lines, promoting various technological innovation and accelerating the conversion and promotion of scientific and technological achievements into productivity with priority given to cost reduction and efficiency improvement.

- In 2022, the Group focused on key technologies such as polysilicon rectification and carbon removal, reducing the consumption of reduction furnace and N-type monocrystalline material quality improvement to promote technological innovation and research and industry-university-research projects, so as to break bottlenecks in technology and achieve quality and efficiency improvements. That has effectively promoted the technological upgrading and efficiency improvement of the Group, and provided strong support for the Group to lead technological development of the industry and enhance its competitiveness.
- In 2022, the Group's "Implementation and Industrialization of Key Technologies for Quality Improvement and Consumption Reduction of High-purity Polysilicon" was selected as the 2022 patent implementation project of Xinjiang Uygur Autonomous Region.

In terms of construction and operation of wind and PV resources, the Group carried out technological innovation focusing on achieving the lowest Levelized Cost of Electricity (LCOE), optimal engineering design, intelligent microgrid, and intelligent operation & maintenance, etc., and launched new inverters, SVG and other products focused on improving quality and efficiency.



R&D Innovation

- In terms of wind power projects, in 2022, the Group achieved a 50% increase in the construction efficiency of wind power projects compared with traditional solutions through the construction design optimization of decentralized wind power projects, saving 10% of the cost of equipment other than wind turbines and towers. In terms of PV projects, in 2022, the Group developed a management system for residential PV power plants spanning their whole lifecycle, to realize online whole process management of residential PV power plants from development, design, construction to acceptance, and improve the development efficiency of residential PV projects. Currently, more than 1,300 power stations have been built.
- In terms of inverter products, in 2022, upon completion of the integrated solution for string inverter boost, the Group launched the optimized 228kW 40A string inverter products, as well as a new generation of 1,500V 3.125MW outdoor centralized PV grid-connected inverter products, overcoming the shortcomings of centralized inverters such as inconvenient operation and maintenance and high loss rate of power generation.
- In terms of SVG products, in 2022, the Group launched three types of SVG products, namely distributed small-capacity TSVG outdoor units, TSVG 3.0 products and TSVG 4.0 products, which reduced the size of equipment by 20% through the improvement of modulation algorithm, the upgrade of control system and the application of new IGBT.
- In terms of energy storage products, the Group focused on leading-edge products with risk-free, low levelized energy storage costs and high cycle efficiency. In 2022, the Group completed the design of new liquid-cooled battery cabinet 1.0 and string energy storage boost integrated unit.
- In 2022, the Group continued to promote the update and iteration of digital operation and maintenance control systems and the R&D and application of new technologies. It further optimized the functions of intelligent operation and maintenance systems such as centralized control center, E-cloud system, mobile inspection terminal and asset management system, to achieve online and offline closed-loop management, and to meet its own and customers' demands to enhance power generation efficiency and reduce operation and maintenance costs through a process-oriented, digital and intelligent operation and management approach.
- The “UHV Multi-terminal Hybrid DC Power Transmission Key Technology and Demonstration Application Project” participated by the Group won the first prize of the 2022 Electric Power Construction Science and Technology Progress Award. This technology achievement has been fully applied to the Kunming-Liuzhou-Longmen DC project, a major project of “West-East Power Transmission”, providing core technologies for the project and increasing the transmission capacity by 3,000MW.



R&D Innovation

- In 2022, the Group completed the R&D of “Comprehensive Energy Planning Simulation System for Zero-Carbon Parks”. Through comprehensive carbon accounting of the park, analysis of the characteristics of wind and PV natural resources and data analysis of load characteristics, the Group made capacity planning and configuration for wind power, PV, energy storage, cooling energy, thermal energy and other energy systems, aiming at reduction of carbon emissions, investment costs and new energy consumption rate. In the meantime, the Group simulated operation of various energy types for typical 8,760 hours in a year. The total energy balance and hourly energy power balance throughout the year are compared and analyzed to form the optimal configuration and operation plan.
- In 2022, the Group, Xi’an Jiaotong University and China Electric Power Research Institute Co., Ltd. (中國電力科學研究院有限公司) jointly developed and launched new M3C inverter, the core equipment for frequency division power transmission, which effectively improved the quality of power output.
- In 2022, the Group’s “Key Technology Research and Industrial Application of Multi-Port Power Routers Suitable for New Distribution Networks” won the second prize of Xinjiang Uygur Autonomous Region Science and Technology Progress Award.



3. Intellectual Property Protection

Intellectual property is the core strategic resource of an enterprise, and also the core element of its comprehensive strength and competitiveness. The Group strictly abides by national laws and regulations related to intellectual property rights such as the Patent Law of the People’s Republic of China (《中華人民共和國專利法》) and the Rules for the Implementation of the Patent Law of the People’s Republic of China (《中華人民共和國專利法實施細則》), and carries out intellectual property protection work in accordance with the Company’s Intellectual Property Management System (《知識產權管理制度》). The Group has set up a special post for intellectual property management, and built a complete intellectual property handling process. Around high-quality creation, high-level application, high-efficiency protection and high-level management of intellectual property rights, the Group comprehensively promoted intellectual property management and layout, better empowering and guaranteeing its quality development.



R&D Innovation

In 2022, the State Intellectual Property Office of the PRC approved the establishment of a silicon-based new material industry intellectual property operation center in Urumqi. This is the first national-level industrial intellectual property operation center approved to be established in Xinjiang Uygur Autonomous Region, and the Group is responsible for its construction and operation. The operation center can enjoy the support of the State Intellectual Property Office of the PRC in terms of policy coordination, talent cultivation and expert resources. Focusing on technological innovation and industrial development, it will improve the level of intellectual property creation, application, protection, management and service of the Group, strengthen the stability and competitiveness of industrial chain and supply chain, improve the efficiency of the use of intellectual property rights oriented to promote industrial development and regional integration, thus boosting the high-quality development of the industry.

In 2022, the Group was successfully selected into the 2022 “Intellectual Property Demonstration Enterprise” list by the State Intellectual Property Office of the PRC.

During the Reporting Period, the Group attained inspirational achievements in scientific and technological innovation with 95 authorized patents. As at 31 December 2022, the Group had a total of 740 domestic patents and 7 international patents, and cumulatively participated in the formulation of 77 published standards, including 6 international standards, 39 national standards and 32 industrial standards.

Supply Chain Management

Building a healthy, stable and sustainable supply chain system is the basis for the high-quality development of enterprises. Since its establishment, the Group has formed a fine tradition of close cooperation with suppliers, adhered to good moral principles and business norms, and created a fair, co-constructed and win-win cooperation environment. On the basis of protecting the legitimate rights and interests of suppliers, the Group assists in improving the management level of suppliers, guides and drives suppliers to fulfill their social responsibilities, and insists on growing together with suppliers.

1. Optimizing Supply System

The Group has always insisted on building a supply chain system with win-win cooperation and sustainable development, and has built an open, fair and just business environment for suppliers by continuously optimizing the systematization and informatization of supplier management. The Group has developed a synergistic information platform for supply and demand, focusing on the entire process of end-to-end product delivery, managing the entire process from raw material procurement cycle, production cycle to sales and transportation cycle, and enabling information sharing among sales, R&D and supply chain in steps to greatly improve supply chain efficiency.

Leveraging on the integrated supply chain project, the Group improves the sample testing and small-batch verification process of new suppliers by optimizing access conditions, performance management, structure and quantity of suppliers. It strengthens the cooperation with strategic suppliers in depth, improves the quality of suppliers' products and suppliers' response efficiency to further enhance their competitiveness. In 2022, the Group completed the compilation of integrated supply chain management manual and the drawing of 15 EBPM supplier management flowchart, and formulated 15 process manuals.

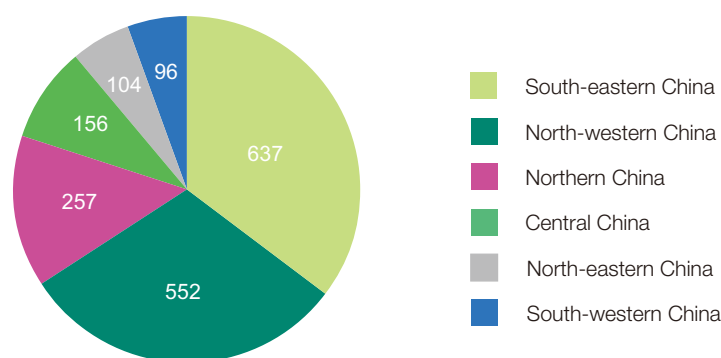
In 2022, the Group has established a multi-level supply chain planning synergy system for long, medium and short term to achieve hierarchical synergy. A supply chain synergy meeting is organised on the 25th of each month to issue supply chain requirements according to customers' demands, forming a unified planning directive for suppliers and customers to synergise, effectively improving suppliers' efficiency.

The Group publishes the procurement bidding process, sets reasonable purchase prices, makes payments in accordance with the relevant agreements of the contracts and safeguards the legitimate rights and interests of suppliers. In order to prevent corruption and commercial bribery in the procurement process, the Group demands that the Anti-Corruption Agreement (《廉政協議》), the Compliance Risk Assessment Form of Business Partner (《商業夥伴合規風險評估表》), and the Compliance Questionnaire of Business Partner (《商業夥伴合規調查問卷》) must be signed before entering into a contract, requiring the Group to maintain professional integrity with suppliers, prevent commercial bribery and promote the healthy and orderly development of business with suppliers.

Supply Chain Management

The Group carries out annual evaluation of suppliers where the suppliers are evaluated and graded in 4 categories of A/B/C/D, favoring the payment methods and purchase orders of category A and B suppliers, reviewing category C suppliers and eliminating category D suppliers. In 2022, a total of 1,802 qualified suppliers were registered in the Group's Qualified Suppliers Directory (《合格供應商名錄》).

The distribution of qualified suppliers by region is as follows:



2. Responsible Procurement

The Group concerns about the compliance and sustainability of supply chain management, integrates the requirement of social responsibility into the management of suppliers. In 2022, the Group optimized and improved the supplier commitment and procurement agreements in accordance with international standards and guidelines such as ISO9001 in quality, ISO14001 in environment, and ISO45001 in occupational health and safety, to specify its requirements in terms of safety, environment and society, clarifying that:

- Before suppliers deliver goods, the Group requires them to provide safety and technological specifications of the constituent elements or parts which are hazardous materials and sufficient written warning and notification of any products (including proper labels on the cargo, container and packaging).
- Suppliers should develop and provide environment-friendly products or services characterized by safety use, efficient utilization of energy and natural resources, recycling, re-utilization or proper disposal.
- The production activities and products and services provided abide by related national laws, regulations and standards in terms of environment and occupational health and safety.



Supply Chain Management

- Suppliers should sufficiently identify risks (including potential risks) of products related to environmental and occupational health and safety incurred during the process of transportation, disassembling, installation and operation, and take effective control measures.
- The construction project is required to adopt measures to control and treat environmental pollutions and damages caused by dusts, exhaust gases, wastewater, solid wastes, as well as noises and vibrations at the construction site.



3. Win-win Cooperation

During its long-term and stable cooperation with suppliers, the Group exchanges information on industry development through continuously effective communication, to broaden the scope of cooperation with suppliers and innovate the way of cooperation. It reaches strategic cooperation with leading supply chain enterprises in the industry to establish joint laboratories, jointly develop new products, and construct a cooperation platform in the industrial chain to jointly promote innovative technology research in the industry. Moreover, through complementary advantages and benefit sharing, the Group is committed to achieve win-win cooperation.

The Group has established a quality evaluation model for key raw and auxiliary materials. Through the quality evaluation work, it cooperates with suppliers to improve the quality of raw materials and guarantee product quality at the source. In 2022, the Group implemented analysis on supplier quality for 14 times, including onsite evaluation for 10 times, and conducted “Look Back” activities for 4 times on quality problems. To respond to the problem which has many quality-related feedbacks during use, the Group formulated a supplier improvement plan based on category differences, and conducted targeted training and counseling, especially for newly developed suppliers. It provided special counseling for half a year and urged suppliers to complete rectification on time to help them improve management level and perfect their management system.



Environmental Protection

Actively combating climate changes is the consensus of countries and enterprises worldwide, and it is also the responsibility of enterprises to fulfill their social responsibilities and promote global sustainable development. The Group actively responded to domestic and foreign policies on climate changes and the national strategy of “achieving carbon neutrality” by giving play to the role of the new energy industry in optimizing the energy structure and building an ecological civilization. While devoting itself to the fields of clean energy, energy conservation and environmental protection, the Group strengthened the construction of its own environmental management system and strove to achieve green development.

In strict compliance with the Environmental Protection Law of the People’s Republic of China (《中華人民共和國環境保護法》), 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污染物防治法》) and other laws and regulations, the Group has formulated the Environmental Protection Management Regulations (《環境保護管理規定》), the Hazardous Wastes Management System (《危險廢物管理制度》), the Pollution Source Online Monitoring System Management Regulations (《污染源在線監控系統管理規定》), the Environmental Factors Identification and Evaluation Regulations (《環境因素識別與評價規定》) and other institutional documents. It constantly optimized and improved the system construction, identified and kept an eye on important environmental factors, and actively monitored various environmental indicators to ensure they meet or surpass relevant emission standards and achieve green production.

1. Energy Conservation and Consumption Reduction

Achieving the goal of “carbon neutrality” is the concerted action of the world’s major economies, for which the key path is to adjust energy structure and conserve energy and reduce consumption. The Group strictly abides by the requirements of laws, regulations and standards related to the use of energy and resources, and conducts regular identification and evaluation of environmental factors. The Group formulates and complies with its internal energy conservation and consumption reduction system, conducts standardized management on production and operations, and continuously increases investments in technologies, equipment, manpower, and financial and material resources for energy conservation and consumption reduction. It also establishes an environmental information statistics platform to monitor and count the use of various energy and resources in real time.

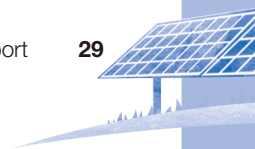


Environmental Protection

The Group's energy consumptions are mainly coal and electricity used in the production of polysilicon. In 2022, the Group shared resources and reduced energy consumption through capacity expansion projects. At the same time, by optimizing power consumption management, the Group promoted technological transformation in terms of reducibility power consumption, raw material power consumption and cold hydrogenation power consumption, realizing a decrease in the integrated power consumption per unit of polysilicon. In 2022, despite the increase in polysilicon production throughout the year, the integrated power consumption per unit dropped by 2.30% as compared with the annual target. With regard to coal-fired power plants, the fine management of coal mines was enhanced through the optimization of combustion boilers, fine control of air distribution for combustion and intelligent fuel control systems, resulting in an improvement in the combustion efficiency of coal and a decrease of 0.5% in overall standard coal consumption per unit as compared with the annual target.

The Group values the protection of water resources, implements strict water resource management system, and sets an annual target for polysilicon-related water consumption to be less than 100 tonnes/tonne. In 2022, the Group has achieved the goal of reducing the water consumption per unit of polysilicon production year-on-year through the formulation of waste water treatment standards and the projects of comprehensive ladder utilization of waste water. Meanwhile, the Group implemented an advanced sewage treatment and recycling project. Upon the completion of the project, the recycled water meets the demand for greening in summer, as well as the demand for refilling industrial circulating water in winter. Through waste water and rainwater recovery and treatment, the Group reuses the recovered water resources in production and park greening, improves the utilization rate of water resources and reduces the waste and usage of water resources. In the construction of power plants in a desert area and PV projects in a mountainous area, the Group installs machinery, equipment, and vehicle flushing and recycling water devices, and establishes rainwater collection systems at large construction sites in the area with abundant rainfall. During the Reporting Period, the Group did not find any problems in obtaining water sources.

In respect of packaging materials usage, the Group continuously strengthened the improvement of packaging materials for polysilicon products, replaced paper packaging boxes with degradable plastic integrated turnover boxes, and reduced the use of wooden and paper materials per unit. It adopted vacuum sealing technology to reduce the damage of packaging bags caused by friction between the goods and packaging bags during the sealing and transportation process, and reduced the damage of inner and outer packaging bags to less than 3%, thus further reducing packaging costs and resource consumption.



Environmental Protection

The usage amounts and density of the Group's main energy and resource are as follows:

Item	2022		2021	
	Consumption	Density ⁽¹⁾ (per tonne)	Consumption	Density ⁽²⁾ (per tonne)
Energy:				
Electricity (ten thousand kWh)	875,262	6.95	508,053	6.50
— Consumption in Production	874,285	6.94	507,331	6.49
— Consumption in Office	976	0.01	722	0.01
Diesel (tonne)	117	0.00	223	0.00
Coal (tonne)	2,574,665	20.45	2,380,116	30.44
Water:				
— Consumption in Production (ten thousand m ³)	8,431,144	66.97	5,983,123	76.51
— Consumption in Office (ten thousand m ³)	7,743,423	61.50	5,434,311	69.49
— Consumption in Office (ten thousand m ³)	687,721	5.46	548,812	7.02
Packaging Materials:				
Wooden materials (tonne)	3,767	0.03	2,569	0.03
Paper materials (tonne)	3,232	0.03	2,192	0.03
Plastic materials (tonne)	2,079	0.02	1,410	0.02

(1) Density is calculated based on the Group's output of 125,900 tonnes of polysilicon in 2022.

(2) Density is calculated based on the Group's output of 78,200 tonnes of polysilicon in 2021.

2. Low Carbon and Emissions Reduction

The Group is a demonstration enterprise that has passed the green factory, green product, green supply chain and green design certification, and is also an undertaking unit of national system integration project of green manufacturing. To better respond to the strategy of "achieving carbon neutrality" and aim to build a "zero-carbon" factory, the Group as a core backbone of green energy in the new energy industry, strictly abides by 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, actively implements emission reduction transformation projects and promotes the application of new green energy technologies. The Group carries out various environmental protection activities, strengthens the operation, maintenance and management of environmental protection equipment, and enhances the supervision and assessment of energy conservation and environmental protection.



Environmental Protection

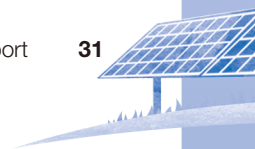
In the concept of “small circulation of devices, middle circulation of industries and large circulation of parks (裝置間小循環、產業中循環、園區大循環)”, the Group builds a green and ecological circular industrial chain, and advocates the joint construction of a green, low-carbon and circular economy industrial park to realize common green development with enterprises in the park, promoting the harmonious unification of corporate economic benefits, social benefits and environmental benefits.

2.1 Development of clean energy and ecological protection

Under the general trend of global energy green and low-carbon transformation, the Group has assumed the responsibility for the environment and society while developing rapidly in production and operation. The Group strengthens the construction of green energy bases and the acquisition of wind energy and PV resources, expands the scale of the Group’s new energy operation power stations, improves the efficiency of new energy power generation, and continuously contributes green and clean energy, striving for the goal of benefiting the human society.

The Group deeply integrates clean energy and digital technology to build zero-carbon solutions for new power systems, optimizes and rebuilds energy sources, grids, storage, and loads to innovate energy asset management models, and enables future-oriented energy Internet more intelligent, reliable, affordable and sustainable, fully contributing to the “carbon neutrality”. In 2022, the “Comprehensive Energy Planning Simulation System for Zero-Carbon Park” of the Group obtained the registration and certification of National Computer Software Copyright.

Through the construction and operation of wind energy and PV power plants, the Group is expected to deliver approximately 5.2 trillion kWh of clean power to the society every year. It continuously promoted the development and utilization of clean energy, and facilitated the optimization and transformation of the energy structure, thereby playing an active role in promoting global energy conservation and emissions reduction. During the Reporting Period, the installed capacity of PV and wind power projects of which the revenue was recognized by the Group was approximately 2.30GW. As of the end of 2022, the Group has built wind energy and PV power plants with a power generation scale of more than 2.61GW, which can reduce carbon emissions by approximately 5.2 million tonnes each year.



Environmental Protection

The Group's PV projects are mostly 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. 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 2022, the Group was awarded the “2021 Carbon Peak Carbon Neutral Green Supplier (2021 碳達峰碳中和綠色供應商)” in the “2021 Carbon Peak Carbon Neutral Path Discussion and High-quality Development Innovation Case Conference (2021 碳達峰碳中和路徑研討暨高質量發展創新案例發佈會)” sponsored by China Energy News and academically support by China Institute of Energy Economics.

2.2 Waste Management

The Group strictly abides by the Law on the Prevention and Control of Environmental Pollution by Solid Wastes (《固體廢物污染環境防治法》) and other laws and regulations, and properly handles various wastes in accordance with the principle of “separate recycling, centralized storage, and unified treatment”. Among the wastes discharged by the Group, exhaust gases are mainly nitrogen oxides and sulfur oxides emitted during the production of polysilicon; the solid and liquid wastes mainly include hydrolyzate produced during the polysilicon wastewater treatment process and fly ash, furnace slag and desulfurization gypsum produced by boiler operation of the self-contained power plant; hazardous wastes mainly consist of waste oil produced during equipment maintenance and spent catalyst emitted during the replacement of power plant denitrification facilities. The Group strictly follows the national environmental protection standards regarding pollutants emission, strengthens the construction and operation monitoring of environmental protection facilities, and enhances the implementation of the measures for emission control and pollutant prevention and control, without any incident that violates the national pollutants emission standards.



Environmental Protection

The discharge amounts and density of the Group's main wastes are as follows:

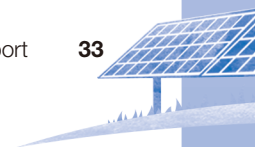
Item	2022		2021	
	Emissions (tonne)	Density ⁽¹⁾ (tonne/ tonne)	Emissions (tonne)	Density ⁽²⁾ (tonne/ tonne)
Exhaust gas and greenhouse gas:				
Dust	30.12	0.0002	52.22	0.0007
Sulfur dioxide	312.75	0.0025	258.90	0.0033
Nitrogen oxides	712.55	0.0057	663.29	0.0085
Carbon dioxide:	5,420,603	43.0548	4,938,136	63.1475
Scope 1 (direct emissions)	4,373,460	34.7376	4,270,420	60.0622
Scope 2 (indirect emissions)	1,047,143	8.3173	667,716	8.5386
Wastewater:				
COD (chemical oxygen demand)	37.93	0.0003	13.86	0.0002
Ammonia nitrogen	3.86	0.0000	1.53	0.0000
Hazardous waste:				
waste oil	100.71	0.0008	229.48	0.0029
Waste denitration catalyst	183.64	0.0015	187.90	0.0024
Non-hazardous waste:				
Fly ash	267,583.42	2.1254	236,626.23	3.0259
Furnace slag	232,373.28	1.8457	194,284.95	2.4845
Hydrolyzate	72,710.09	0.5775	54,409.52	0.7174

(1) Density is calculated based on the Group's output of 125,900 tonnes of polysilicon in 2022.

(2) Density is calculated based on the Group's output of 78,200 tonnes of polysilicon in 2021.

The Group has adopted various measures to reduce emissions or to properly dispose of the above-mentioned discharged wastes. The handling details are as follows:

- In 2022, the Group carried out the alkaline washing tower replacement project of the exhaust gas and residual liquid device, the alkaline liquid pool at the lower part of the alkaline washing tower was excavated and cleaned, and the sprinklers, alkaline liquid pipelines and circulating pipelines of the alkaline washing tower were replaced, which have minimized pollutant emissions.



Environmental Protection

- The Group handed over hazardous wastes such as waste oil and waste denitration catalysts generated in the production process to units that meet the qualifications for hazardous waste disposal for legal disposal, and signed strict disposal agreements with cooperative units to meet various relevant national requirements.
- The Group upgraded the online exhaust gas monitoring equipment and connected it to the government grid to realize real-time data transmission and monitoring. For the flue gas data of its self-contained power plants, the Group accepted the quarterly monitoring comparison implemented by the Urumqi Municipal Ecological Environment Bureau according to law, and its compliance rate reached 100%. The Group completed the flexible closed renovation of dry coal sheds, coal-unloading trenches and ash storehouses, which greatly improved the consistency of online equipment data and effectively reduced dust pollution to surrounding environment during coal-unloading operation.
- Part of the coal ash, furnace slag and desulfurization gypsum generated by the Group's self-contained power plant were recycled by the Group for the production and sale of aerated concrete. The Group produced approximately 247,700 m³ of aerated concrete in 2022. As for the remaining part, the Group entered into disposal and utilization agreements with construction material companies for the purpose of construction materials production. With these measures, the Group achieved a 100% recycling rate for solid wastes generated by its self-contained power plants.
- In 2022, the Group will carry out a comprehensive utilization project for the advanced treatment of desulfurization wastewater from self-owned power plants, adopting the "three-effect flash evaporation + high-temperature bypass flue evaporation" process technology, using the waste heat of flue gas as a heat source, and using three-effect flash evaporation equipment to treat desulfurization wastewater Evaporate and condense, and directly recycle the liquid water after condensation to achieve a recycling rate of 90%. After treatment, the chloride ion of desulfurization wastewater is less than 400mg/L, the total dissolved solid content is less than 400mg/L, the conductivity is less than 200 μ s/cm, and the suspended solids SS is less than 70mg/L.
- In 2022, the Group's domestic sewage treatment stations will receive and treat a total of 195,675m³ of domestic sewage, and reuse 175,418m³ after treatment. The annual domestic sewage recovery rate is 89.65%.



Environmental Protection

Through the above measures, the Group has effectively reduced the amount per unit of pollutants discharged while realizing the reuse and eliminated and reduced environmental pollution, striving to achieve coordinated and sustainable economic and environmental development. In 2022, the Group was awarded the honorary title of “Excellent Member Unit” in the Decision on Commending the Special Contribution Award of the Autonomous Region Ecological and Environmental Protection Industry Association (《關於表彰自治區生態環境保護產業協會特殊貢獻獎的決定》) announced by the Xinjiang Uygur Autonomous Region Ecological and Environmental Protection Industry Association. During the Reporting Period, the Group achieved its annual target of a year-on-year decrease in the emissions per unit of hazardous and non-hazardous waste.

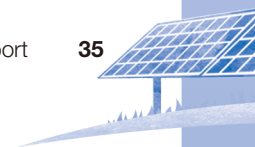


3. Combating Climate Change

The risk of climate changes has become a key issue which is non-negligible in the world, and will have a profound impact on global economic and social development. In 2022, the United Nations Climate Change Conference (COP27) was held in Sharm el Sheikh, Egypt. The conference made further arrangements on climate change mitigation, adaptation and other key issues of the Paris Agreement, with a number of resolutions passed. Once again, the meeting has strengthened the determination of countries to accelerate energy transition, promote green and low-carbon development, and work together to protect the earth home of human beings.

Extreme weather such as thunderstorms, frost, sandstorm, extreme low and extreme high temperature weather may affect the construction of new energy projects, thus slowing down the progress of the projects. During the operation of new energy power plants, the extreme weather may cause damage to wind turbine equipment, PV power generation equipment, infrastructure operation facilities or damage to transmission lines, thus affecting stable operation of power plants and safe operation of projects. Prior to the construction of new energy power plants, the Group uses the long-term statistical data of local meteorological department of the projects, introduces methods such as mathematical statistics and probability theory to calculate extreme climate data through simulation, optimizes the project design plan, and enhances the power plants’ ability to withstand different extreme climate conditions, so that it can adapt to severe weathers of the project location. The Group actively researched and analyzed the possibility of various future climate changes in the project venues and its potential impact on the production and operation at the site, and specifically deployed and adopted countermeasures and solutions according to different situations. During the construction and operation of projects, the Group’s digitalized platform has integrated the data from the world’s mainstream meteorological sources including NASA, Meteonorm, SolarGIS and Fengyun-4 meteorological satellite, and used the computing software to simulate the evolution of the atmosphere for a period of time in the future, predicted the characteristics of meteorological disasters at the project site, made an early warning of meteorological disasters, and improved response capabilities.

In 2022, the Group has not encountered climate change and related matters that have a material adverse impact on corporate operations.



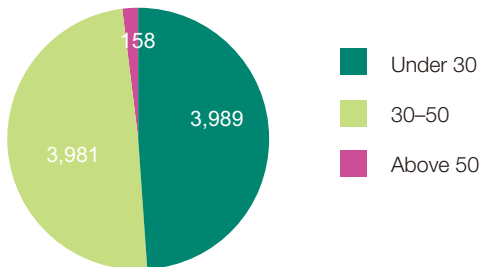
Employee Care

The Company 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 the development fruits are shared with employees” with 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’ material life and spiritual culture through continuous development of the Company, and makes unremitting efforts to realize the aspiration of employees for a better life.

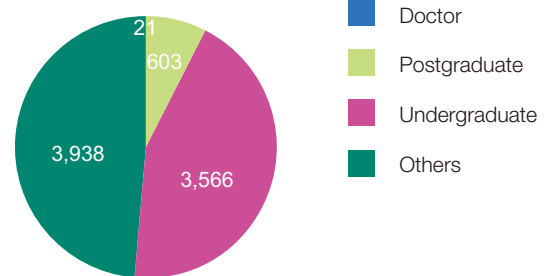
1. Profile of Employees

As at 31 December 2022, there were 8,128 employees in the Group including 7,563 regular employees, 565 workers from labor dispatch agencies, among them, 1,463 were female employees. The details are as follows:

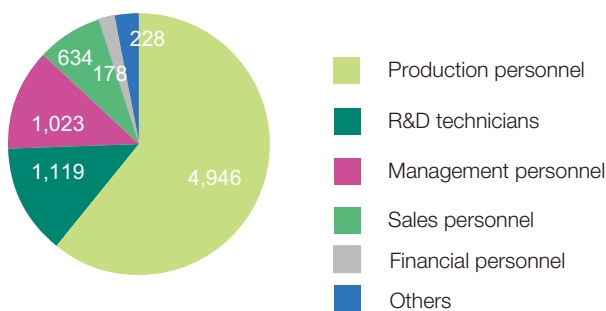
1.1 By age



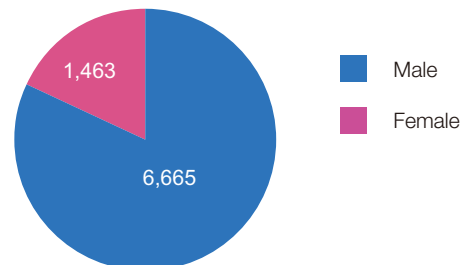
1.2 By education level



1.3 By functional role



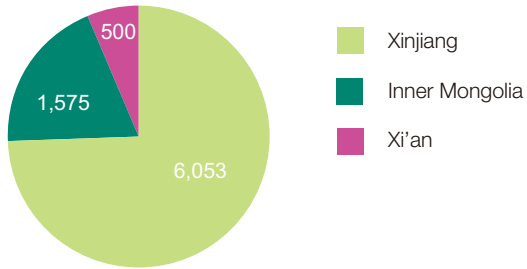
1.4 by gender





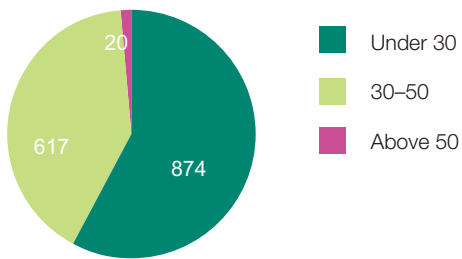
Employee Care

1.5 By geographical region

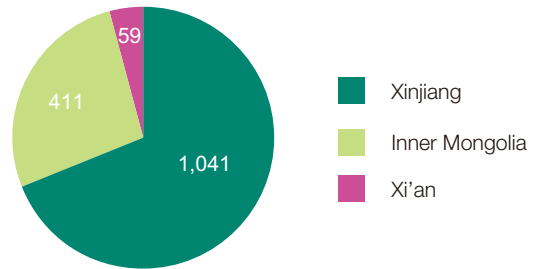


In 2022, a total of 1,511 employees resigned from the Group and the staff turnover rate was 18.59%. The specific statistics are as follows:

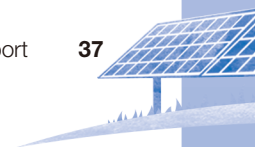
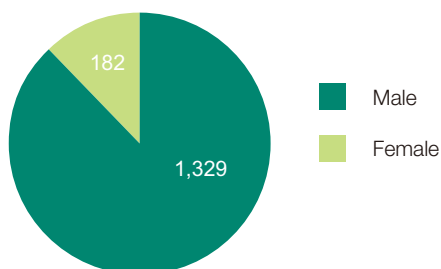
1.6 Staff turnover by age



1.7 Staff turnover by geographical region



1.8 Staff turnover by gender



2. Equal and Regulated Employment

The Group strictly abides by 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 Trade Union Law of the People's Republic of China (《中華人民共和國工會法》) and other relevant laws and regulations and follows the relevant international conventions approved by the PRC government and the relevant laws, regulations and systems of the project location. The Group pursues an equal and non-discriminatory employment policy, treats employees of different races, skin, nationalities, genders, ages, religious beliefs and cultural backgrounds equally and fairly, prohibits and resists any form of employment of child labor and forced labor. The Group has formulated a Recruitment Management System (《招聘管理制度》) to standardize employee recruitment process, ensures that the employment of employees complies with legal and regulatory requirements. In the recruitment procedures of localized talents outside the PRC, the Group takes the initiative to understand the requirements of labor laws and regulations of various countries and the specific requirements of local personnel to enhance the humanity and compliance of talent recruitment and management. The Group enters into a labor contract with legal effect with each employee to protect his/her legal rights and interests, including the number of regular working hours to avoid excessive labor. At the same time, if any breach of labor laws and regulations is found in the Group, it will be handled in strict accordance with the Company's system.

During the year 2022, the Group did not experience any major labor disputes or any case of child labor, forced labor and discrimination, nor did it suffer any punishment arising from serious violation of labor laws and regulations of the location of employees.

3. Employee Remuneration

Adhering to the purpose of reassuring employees, the Group has built a scientific, fair and competitive remuneration incentive system, centered on value creation, and integrated the corporate culture of "creating and sharing" into its remuneration management. At the same time, the Group connects the interests of the Company with those of employees through the dual incentive system of "spiritual incentives" and "material incentives", and promotes the continuous growth of employees around the principles of value creation, evaluation and sharing. Every year, the Group obtains internal and external remuneration information through industry benchmarking, data analysis of government's public price levels, third-party remuneration reports and internal research, and establishes a remuneration system that takes into account both external competitiveness and internal fairness. The Group implements the corporate culture of "development for employees and relies on employees, and the development fruits are shared with employees". In 2022, the Group paid its employees on time and there were no cases of delayed payment or non-payment of wages.



Employee Care

4. Training and Development

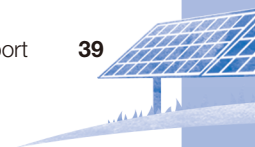
The Group establishes a comprehensive and multi-level talent training system to meet the learning needs of employees to improve their professional knowledge and basic vocational skills, encouraging employees to choose appropriate development paths according to their own conditions, and to promote the Company's development while realizing their self-worth.

4.1 Employee Training

The Group provides employee training oriented at business needs, based on post competencies, and guided by lack of capabilities or shortcomings in quality, and develops special training plans and management measures closely around management cadres, front-line skilled personnel, professional technical personnel, and core groups in key lines. Through the construction of skill master studios, the application of high-skilled talent training bases, industry-university-research cooperation, and support from external institutions, the Group ensures the quality of training for groups of core positions and the output of results, and provides employees with full-cycle and all-round training, thus achieving a benign interaction between employees' growth and the Group's development.

During the Reporting Period, the average number of training hours in the Group was approximately 281 hours per person, the average number of training hours for senior management was approximately 508 hours per person, the average number of training hours for middle management was approximately 466 hours per person, and the average number of training hours for frontline employees was approximately 247 hours per person. The average number of training hours for male employees was approximately 287 hours per person, the average number of training hours for female employees was approximately 254 hours per person and the proportion of trained employees reached 100%.

- The Group targets to carry out “new employee pre-job training”. Comprehensively taking into account the work experience, profession and target position of new employees, and in consideration of the construction of skilled talent training system, the Group has formulated “corporate culture”, “industry knowledge”, “pre-job knowledge and skills” and other more refined trainings, so that what they learn is really useful.
- The Group continues to carry out leadership improvement training. In 2022, the Group launched the fifth training session of the “100 People Plan”, hired external professional training institutions for leadership improvement to lead the training, and implemented the training results on a monthly basis to effectively ensure the quality of training. In addition, the Group has been promoting the leadership improvement of management cadres by implementing training programs such as “360 Assessment”, “Star Project”, “New Cadres Turnover Plan in 90 Days”, and “Backup Successor Scheme”, closely focusing on topics such as advanced control, digital thinking, strategic decoding, and Amoeba management.



Employee Care

- In 2022, the Group invited external experts to participate in the development of internal trainer training courses every quarter, carried out internal trainer training programs, organized internal trainer certification training camps, empowered internal trainers to teach, and improved the quality of internal trainer teaching.
- In 2022, the Group was granted the title of “2022 Autonomous Region-level High-Skilled Talent Training Base” by the Department of Human Resources and Social Security of Xinjiang Uygur Autonomous Region.

4.2 Employee Development

Guided by the principle of “everyone is a talent, horse racing instead of only horse selection” and the practice of morality-oriented and performance-priority, the Group adopts regular competition of all employees and irregular internal recruitment at the end of every year through the combination of open selection and competitive employment, to ensure the matching between talents and positions and the right talents for specific positions. It strives for the optimal allocation of human resources, actively creates a fair competitive environment for recruitment, and constantly improves the overall management level.

The Group has built “H-shaped” and one horizontal and two vertical career development dual channels to promote the multi-directional development of employees. “One horizontal” refers to the implementation of internal competition through talent review, by means of secondment, rotation and reassignment, to meet the job rotation needs of employees. The “two verticals” refer to the design of management path and professional development path for employees. During the Reporting Period, the Group has established a position system with 8 major groups and 45 segmented professional lines in horizontal such as R&D, technology and management, and 12 levels in vertical, and each position is grouped into a line and level to form a chart, through which a variety of career development channels are established for employees to choose.

The Group builds a platform for academic promotion and professional title acquisition. In terms of academic promotion, it cooperates with well-known domestic universities to build a platform for employee’s academic promotion, invites university teachers to give lectures in the Company, and adopts measures such as paid leave for classes and tuition subsidies to improve employees’ academic qualifications while reducing their capital and time costs in this regard. In terms of acquiring professional titles and vocational qualifications, the Group actively invites external training institutions to come to the Company for training while organizing employees to actively participate in the acquisition of professional titles and vocational qualifications to enhance their professional capabilities.



Employee Care

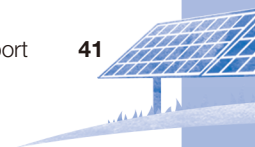
The Group encourages the rotation of R&D line staff to marketing and technical marketing positions, to intervene in customer needs from the front end of the product and carry out technical implantation to promote the effective connection between R&D and the market. The Group facilitates an open channel of talent development, to practice the staff's broader business perspective and promote the transfer of talents among various organizations, as well as to break the ossification of departmental personnel and achieve internal talent structure adjustment. At the same time, the Group continues to promote the “zigzags” growth pattern of our cadres to facilitate the spiral development and promotion of talents. The Group encourages the rotation of both mid-office and back-office departments to the front lines of the development and marketing operations to gain a deeper understanding of the business and develop a customer perspective and product perspective.

5. Employee Care

The Group insists on caring for its employees, strives to enhance their sense of gain and well-being, and actively creates a harmonious and positive communication atmosphere and a good working environment. It pays attention to the balance between work and life of its employees, and organizes various cultural and sports activities to enrich their spare-time life and promote their physical and mental health, so as to enhance the cohesiveness and sense of belonging of employees.

5.1 Employee Communications

The Group promotes an open and transparent working environment for its employees, keeps them informed of the Group's business and operational development as much as possible, carefully listens to their opinions and suggestions, and at the same time understands their needs and satisfies them reasonably. The Group improves the democratic management system with employee representative meetings as the basis, fully listens to employees' opinions and suggestions, and protects their right to know and participate. By planning and implementing multi-level employee communication activities, such as employee surveys, employee communication meetings and performance communication meetings, the Group has been able to establish an open communication channel and operating mechanism between the Group and employees, and continuously improved management transparency. At the same time, the Group distributed employee satisfaction questionnaires to carry out research and rectification for the whole staff and continuously improved the overall satisfaction of employees.



Employee Care

5.2 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 food, health, travel and housing. In 2022, the Group distributed various holiday benefits such as Spring Festival, Lantern Festival, March 8th Women's Day, Ruzi, Eid al-Adha, Children's Day, Dragon Boat Festival and other holiday benefits to employees, with a total of more than 30,000 person-times and a total amount of more than RMB20 million. The employee benefits of the Group mainly include:

- Staff canteen with meal subsidies and lower than market price
- Three-star to four-star hotel-style staff dormitory
- Mother and baby rooms for breastfeeding employees
- Free medical checkups for all employees
- Various benefits, including holiday benefits, labor union benefits, birthday and wedding and childcare benefits
- Employee shuttles and care vehicles for business use
- Extra commercial insurance in addition to five social insurances and one housing fund
- Various subsidies, including telephone fee subsidy, computer subsidy, high temperature subsidy and remote area subsidy
- Arrangement of family members of employees to visit relatives at the project site



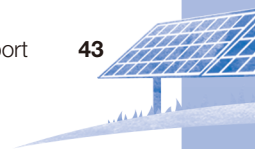
Employee Care



5.3 Work-life Balance

Recreational and sports activities are an important part of corporate culture construction, an important factor to enhance employees' well-being, an effective way to show enterprise image and enhance corporate cohesion, and an effective carrier to improve employees' quality and stimulate their work enthusiasm. The Group balances the work and life of employees through sports and cultural activities, providing professional sports equipment, fitness facilities and venues to encourage employees to develop interests and cultivate hobbies. It regularly organizes a variety of cultural and sports activities to improve the physical fitness and health of employees while increasing their sense of belonging.

- The Group has indoor table tennis court, billiard court, badminton court, fitness room, outdoor plastic track, basketball and football field with lights as well as many other sports venues to meet various sports hobbies of employees. The Group regularly organized sports matches such as football, basketball, table tennis, badminton and fun sports, and held amateur cultural activities such as “The Voice”, “Art Performance”, and “Endeavour Cup Speech Contest” to encourage the employees to participate actively and enrich their lives.
- On 1 June 2022, the Group invited the families of employees to participate in the employee parent-child fun sports meeting with the theme of “Inheriting a Good Family Tradition, Childlike Innocence to the Future” to practice our care for the employees' families.
- In 2022, relying on the national online fitness exercise platform for employees, the Group carried out “Labor Beauty” themed exercise and weight loss activities, and invited all employees to participate, encouraging them to improve their physical fitness and health through physical exercise.
- The Group organized family day activities and invited employees' families to visit the office park to understand the working environment of employees and the development of the Group, there by promoting the sense of belonging of employees' families. In 2022, the Group organized family day activities and invited more than 500 employees and their families.



Occupational Health and Safe Production

Employee health and safe production have always been the utmost priority in the Group's business management. Based on the concept of "people-oriented, safety first", the Group strictly complies with the Law on Prevention and Treatment of Occupational Diseases of the PRC (《中華人民共和國職業病防治法》), the Regulations on Supervision over the Occupational Health at Workplace (《工作場所職業衛生監督管理規定》), the Regulations on the Administration of Labor Protection Appliances (《勞動保護用品管理規定》) and other laws and regulations. At the same time, the Group has formulated relevant management systems such as the Occupational Health Management System (《職業健康管理制度》), the Safety and Environmental Protection Production Responsibility System (《安全環保生產責任制》), the Emergency Response Plan Management System (《應急預案管理制度》) to protect the health and safety of all employees and provide a safe working environment for employees.

1. Occupational Health

The Group has obtained the occupational health and safety management system certification and is subject to external certification audit on a regular basis every year. The Group provides employees with labor protective equipment in compliance with national and industry standards, develops occupational hazard job matrix, ensures that employees understand and master occupational disease hazards and prevention by means of system guarantee, pre-post training and warning publicity panels, etc. The Group regularly conducts occupational health monitoring work and training on occupational disease hazard prevention for employees, and invites third-party institutions to conduct occupational disease hazard factor inspection and training every year.

- In 2022, the Group carried out occupational health check-up activities and conducted occupational disease medical check-ups for employees working in positions exposed to toxic and hazardous hazards, with a total of more than 5000 medical check-ups, and 100% passing rate of check-ups, no suspected and confirmed occupational disease cases, and no new cases of occupational diseases.
- Based on the Catalogue of Occupational Disease Hazard Factors (《職業病危害因素目錄》), the Group conducted a comprehensive identification of hazard factors on the site, identifying a total of 35 occupational disease hazard factors. At the same time, based on the Technical Specifications on Occupational Health Monitoring (《職業健康監護技術規範》), the Group sorted out the exposure limits of occupational disease hazard factors, occupational contraindications and occupational disease check-up cycles on site, forming a ledger to serve as the basis for occupational disease check-up and pre-post notification. In 2022, the Group completed the signing of notification letters for 1,942 people, with a coverage rate of 100%.
- In 2022, the Group carried out health checkups for all employees and invited experts from the Safety Education and Training Center in Urumqi and Xi'an to conduct special trainings on pandemic protection, occupational health, environmental management, personal injury first-aid knowledge and occupational disease protection for our employees in batches.



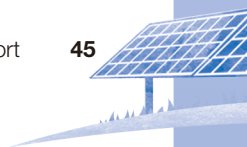
Occupational Health and Safe Production

2. Safe Production

The Group implements the policy of “safety first, prevention first, and comprehensive governance” conscientiously to improve the construction of safety system. Focusing on the safety production standardization and the achievement of safety standards at work, the Group strengthened the safety production responsibility, enhanced the safety production awareness of all employees and regulated the safety behavior of employees by means of investigation and governance of accident hazards. The Group strictly implements the requirements of safety production laws and regulations of the supervision region, and actively carries out the construction of safety production standardization. In 2022, the Safety Production Standardization System (《安全生產標準化制度》) was amended and improved to standardize the construction and implementation of safety production standardization, and further improve the safety management of the Group. During the Reporting Period, the Group continued to promote safe production culture construction activities, and strengthened employees’ safety awareness and strengthened safe production defense through safety games, visualization management, knowledge competitions and safety month theme activities.

In addition, the Group continued to optimise the emergency response plan system, established a three-tier emergency management structure covering each department and business unit, each subsidiary and project department, specifying the types and quantities of emergency response plans. During the Reporting Period, the Group had a total of 13 comprehensive emergency response plans, 101 special emergency response plans, and 260 on-site management plans. The Group had established the emergency response expert team and part-time emergency rescue team, and regularly conducted emergency rescue training.

- The Group reviewed the implementation and conducted assessment every month according to the annual safety inspection plan, with assessment results incorporated into the safety performance of the month for rewards or punishments. The Group has organized 12 major inspections by the safety committee and 6 inspections on legal holidays in the year. In 2022, the Group was subject to inspections by relevant government departments of the state, Xinjiang Uygur Autonomous Region, Urumqi City and Ganquanpu Zone, with all inspections successfully passed.
- Aiming at strengthening safe production publicity and education, enhancing employees’ safety awareness and facilitating the sustainable and stable development of safe production, the Group organized a series of activities in various forms in response to the 21st National “Safe Production Month”, made banners for safe production month and panels to create a strong atmosphere for safe production with the theme of “Implementing Safety Responsibility and Promoting Safety Development”.



Occupational Health and Safe Production

- In 2022, the Group organized 2,091 safety training sessions at company level, workshop level and team level for a total of 83,132 persons, and 635 training sessions for a total of 5,597 persons for related parties; carried out training for legal representative and safety management personnel to obtain certification and pass re-examination, with a pass rate of 100% where additional 593 persons obtained certification for special operators, 43 persons obtained certification for special equipment operation, and 591 persons obtained certification for cardiopulmonary resuscitation; promoted the popularisation of registered safety officers. In 2022, the Group had 30 persons passed the registered safety officer examination (the examinations were postponed in some areas due to the epidemic).
- In 2022, focusing on “Internet +” safe digital factory, and based on the industrial Internet platform, the Group unified management concepts and management standards, with real-time data monitoring through systems such as personnel positioning and GIS maps, and standardized online processes such as special operation bill standards, to further improve the safety of on-site operation; conducted overall management for thirteen elements in the safety field and formulated an online technical monitoring plan to achieve online monitoring of major hazards and data quantification of elements.
- In 2022, the Group was awarded the title of “2021–2022 Advanced Unit for Standardization Operation” granted by the Standardization Commission of China Photovoltaic Industry Association.
- In 2022, the Group obtained the certificate and license of the “Grade II Enterprise for Safety Production Standardization” issued by the Emergency Management Department and the Safe Production Association of Shaanxi Province.
- In 2022, the Group obtained the certificate and license of the “Grade II Enterprise for Safety Standardization” issued by the Safety Production Standardization Office of Xinjiang Uygur Autonomous Region.
- In 2022, the Group was awarded the “Winner” of the “Ankang Cup” jointly held by the Baotou Municipal Federation of trade unions, the Emergency Management Bureau of Baotou City and the Health Commission of Baotou City of Inner Mongolia Autonomous Region.

During the period from 2020 to 2022, the Group had no work-related fatalities, and the number of lost workdays due to major work-related injuries was nil. There were no major accidents, nor was any punishment imposed on us for serious violation of relevant laws and regulations regarding occupational health and safety in China.

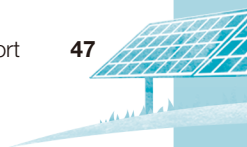


Social Contribution

It is the responsibility and obligation of the Company to develop together with the society, and it is the mission and responsibility of the Company to undertake social responsibility, create social value and carry out charity activities. Since its establishment, the Group has adhered to its original aspirations by leveraging its corporate expertise to bring benefits and give back to the society. The Group actively utilizes its own advantages to carry out in-depth social activities in local areas, so as to promote the harmonious integration between the Company and the society. In 2022, the Group paid nearly RMB5,400 million in taxes, contributing to the local economy and finances of the industry.

In 2022, the Group continuously promoted local economic development with stable tax contributions and employment opportunities, and actively participated in social public welfare undertakings by vigorously supporting the development of local public utilities such as education, culture and health, thus playing an active role in social construction.

- In 2022, the Group organized sanitation activities, focusing on more than 10 areas in the communities surrounding the Company, with the participation of more than 70 volunteers, cleaning 50,000 square meters of lawn and 10 roads.
- In 2022, the Group donated tables, chairs and various reading materials to primary schools in poverty-stricken areas, with a total value of approximately RMB100,000.



Prospects

Looking ahead, the world is ushering in an era of low-carbon development, with the global energy sources evolving towards high efficiency, cleanliness and diversification. It has become a global consensus to accelerate energy transformation and promote sustainable development. In the face of such historic opportunities, the Group will unswervingly implement sustainable development strategy, deeply integrate the concept of sustainable development with its business operations, and pursue harmonious development with high quality and efficiency, so as to inspire more excellent practices that can benefit the common development of economy, society and environment. The Group will actively leverage its strengths in the new energy industry and firmly implement technological innovation to promote global green energy transformation, practice the philosophy of “green, circular, synergy, symbiosis, and win-win” in development with practical actions, striving for green and sustainable development of the Company.

Environmental, Social and Governance Reporting Contents Index

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KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	33
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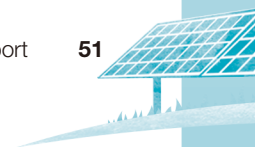
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Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	28
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	30
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	30
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	28–29
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.	29
KPI A2.5	Total packaging materials used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	29
Aspect A3: The Environment and Natural Resources		
General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources.	31
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	31
Aspect A4: Climate Change		
General Disclosure	Policies on identification and mitigation of significant climate related issues which have impacted, and those which may impact, the issuer.	35
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	32, 35



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B. Social		
Employment and Labor Standards		
Aspect B1: Employment		
General Disclosure	Information on: (a) 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.	38
KPI B1.1	Total workforce by gender, employment type (for example full- or part-time), age group and geographical region.	36-37
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	37
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) 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.	44
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	46
KPI B2.2	Lost days due to work injury.	46
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	44



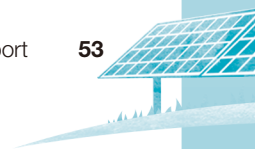
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Subject Areas/Aspects	Disclosure Index	Page
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	39-40
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	39
KPI B3.2	The average training hours completed per employee by gender and employee category.	39
Aspect B4: Labor Standards		
General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.	38
KPI B4.1	Description of measures to review employment practices to avoid child and forced labor.	38
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	38
Operating Practices		
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	25
KPI B5.1	Number of suppliers by geographical region.	26
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	26
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.	27



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Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling, privacy matters relating to products and services provided and methods of redress.	14
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	16
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	18
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	23
KPI B6.4	Description of quality assurance process and recall procedures.	16
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	19
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) 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.	12
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.	13
KPI B7.2	Description of preventive measures and whistleblowing procedures, and how they are implemented and monitored.	12–13
KPI B7.3	Description of anti-corruption training provided to directors and staff.	12



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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 that its activities take into consideration the communities' interests.	47
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	47
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	47



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