



2023

Environmental Social And Governance Report



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Chairman's Message

Over the past year, the Company has worked hard to achieve rapid development in the face of multiple environmental impacts such as changing international situations and industry cycle fluctuations. With the successful completion and operation of our latest TOPCon cell production base, the Company's annual cell shipment volume has ranked the third globally, attaining noteworthy business outcomes that have garnered industry-wide attention. We remain steadfast in our mission to "Empowering the Green Life via Photovoltaics", taking every step towards sound operations, sustainable development, supporting energy transformation, and advancing towards a zero-carbon future.



In 2023, we upheld compliance and robust operations, continually enhancing our ESG governance system. We integrated the concept of sustainable development into our operational policies, deepened the board's involvement in environmental, social, and corporate governance, and integrated ESG governance into our daily operations and management. We emphasized communication and collaboration with investors, customers, and various stakeholders, actively responded to concerns and oversight from various parties regarding our sustainable development management, as well as formulated 15 material issues including climate change, carbon emissions, energy management, and more.

In 2023, we prioritized cooperation and development within the photovoltaic (PV) industry, collaborating closely with upstream suppliers and downstream customers across the industry chain to engage in multi-faceted partnerships. We contributed significantly to the PV industry's low-carbon emission reduction initiative, executing the Supplier Sustainability Empowerment Programme and focusing on customer service management. We actively engaged in exchanges and discussions with domestic and international partners to jointly build a low-carbon and sustainable value chain.

In 2023, we upheld the philosophy of "quality first" and integrated the concept of a green life cycle into every link from design to delivery. We emphasized the importance of corporate innovation capability, continually honing our technology to achieve enhanced cell conversion efficiency. Consequently, we delivered high-efficiency, reliable, and sustainable quality products tailored to varying application scenarios, which have garnered significant recognition from our customers.

In 2023, we incorporated social responsibility into our development strategy. We proactively fostered a healthy, safe, and secure working environment for our employees, prioritizing their welfare and care. We refined the talent training and promotion system, invigorating our employees' vitality, and fostering a sense of respect and happiness within our workforce. Additionally, we contributed to society, taking the lead in participating in social welfare initiatives and caring for the disadvantaged. Through consumer assistance, public welfare donations, and other channels, we aimed to promote rural revitalization and contribute towards societal progress.

We have always maintained a positive outlook and unwavering faith in the future, navigating the green sails of sustainable development amidst the advancing waves of the times. In the future, we aspire to collaborate actively with more partners, leveraging technological innovation, high-quality products, and services to drive the industry forward, promote the transition to low-carbon energy, and embrace the arrival of a zero-carbon world.

About SolarSpace

SolarSpace Technology Co., Ltd. was founded on 11 January 2011 and is headquartered in Xuzhou, Jiangsu Province. The Company's main business covers the research and development, production and sales of high-efficiency solar cells, as well as investing in some module production capacity, and providing customers with customized distributed PV solutions and professional support. According to PV InfoLink's statistics, the Company ranked third globally in terms of solar cell shipments in 2023. At present, the Company has 6 major production bases, 7 intelligent factories, with its product offerings reaching across global market. It has nearly 10,000 staff members.

6 **Manufacturing Bases**

7 **Intelligent Factories**

800+ **Overseas Clients***

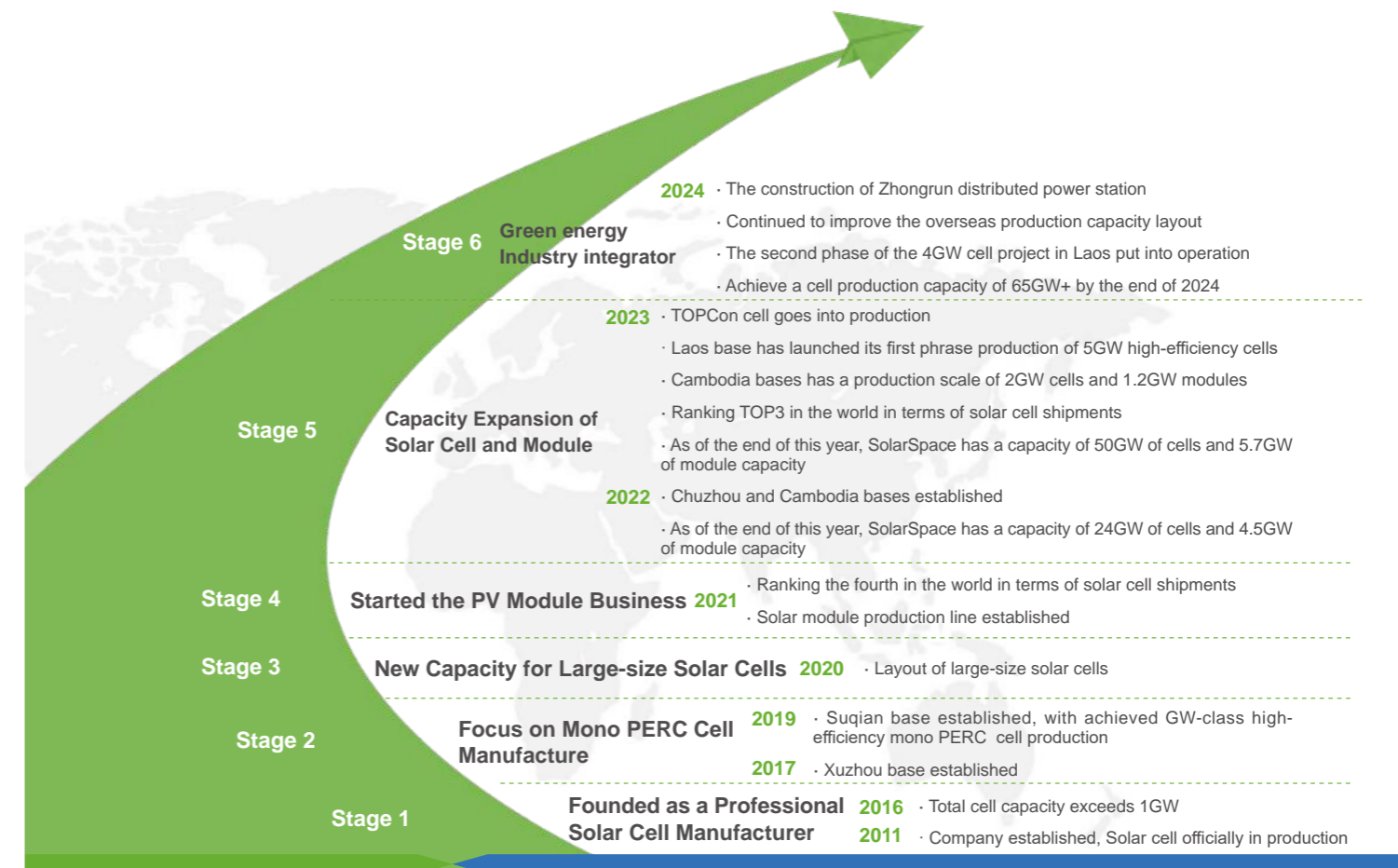


The Company is committed to "Building A Sustainable Low-carbon World" through the manufacturing of photovoltaic products. We focus on technological R & D and innovation, promote technological upgrading and product improvement, provide global customers with high-value photovoltaic products and service solutions that are "efficient, reliable and sustainable". In this way, we help to achieve the goals of low-carbon energy transition and carbon neutrality.

*Business in Germany, USA, India, Canada, Mexico, Korea, Italy, France, UK, Thailand, Korea, Vietnam, Jordan, Turkey, Tunisia, Armenia and other countries

1.1.Sustainable Development Milestones

SolarSpace Technology Co., Ltd. was founded on 11 January 2011 and is headquartered in Xuzhou, Jiangsu Province. The Company's main business is the research and development, production and sales of high-efficiency solar cells, as well as investing in part of the module production capacity, and providing customers with customised distributed PV solutions and professional support. According to PV InfoLink, the Company will rank third in the world in terms of cell shipments in 2023. At present, the Company has 6 production bases, 7 intelligent factories, product business in the global market, and nearly 10,000 employees.



Key Performance¹

Economic Performance

Assets RMB

24,868,403,400

yuan

Net profit attributable to shareholders of the parent company RMB

1,934,405,900

yuan

Net cash flows from operating activities RMB

1,536,619,300

yuan

Revenue RMB

17,926,907,500

yuan

Year-on-year growth rate of net profit attributable to shareholders of the parent company

360.19%

Environmental Performance

Product Carbon Footprint Verification

6

items

Total investment in energy conservation and environmental protection RMB

114.20

million yuan

Green factory

1

Pollution incident

0

Social Performance

Total number of employees

9,160

Major security incidents

0

Total investment in safety and occupational health RMB

42.1881

million yuan

Proportion of suppliers that have signed the SolarSpace Partners Code of Conduct

94.23%

R&D investment RMB

343.3949

million yuan

Social contribution per share RMB

9.24

yuan

¹Note: Due to the confidentiality of the information of the proposed listed company, the scope of the company's economic and social data statistics is limited to the information that has been publicly disclosed.



Honours and Recognition

December 2023	The Most Influential Photovoltaic Module Enterprise of 2023 "PV Cup" PV Industry Selection	Sobey-Photovoltaic Photovoltaic Cup Selection Organising Committee
December 2023	Most Influential Solar Cell Enterprises of 2023 "PV Cup" PV industry	Sobey-Photovoltaic Photovoltaic Cup Selection Organising Committee
December 2023	Xuzhou Economic and Technological Development Zone Integrity Demonstration Enterprise	Party Working Committee and Management Committee of Xuzhou Economic Development Zone
December 2023	Contribution Award of Carbon Neutrality in the Photovoltaic Industry	China National Inspection Corporation (CTC)
November 2023	Certificate of Top 100 Manufacturing Enterprises	Jiangsu Federation of Enterprises
September 2023	The 12th Polaris Cup 2023 Influential PV Cell Brand of the Year	Polaris Solar Photovoltaic Network
September 2023	The 12th Polaris Cup 2023 Influential PV Module Brand of the Year	Polaris Solar Photovoltaic Network
September 2023	The 12th Polaris Cup 2023 Influential PV Intelligent Manufacturing Excellent Employer Starlight Excellence Award	Polaris Solar PV Network
August 2023	Outstanding PV Enterprise of the Year 2023	World Solar PV & Energy Storage Expo Guangdong Hongwei International Exhibition Group Co.

August 2023	PV Module Quality Company of the Year 2023	World Solar PV & Energy Storage Expo Guangdong Hongwei International Exhibition Group Co.
August 2023	2023-2025 Internationally Famous Brands in Jiangsu Province	Department of Commerce of Jiangsu Province
March 2023	2023 Xuzhou International Famous Brand	Jiangsu Bureau of Commerce
March 2023	Leading Quality Brand in National Photovoltaic Industry	China Association for Quality Inspection
March 2023	Photovoltaic Storage Quality Award Solarspace PV Modules	TUVNORD

Verification

- IEC61215, IEC61730, IEC62804, IEC61701, IEC62716, IEC60068
- ISO9001: 2015: Quality Management Systems
- ISO14001: 2015: Environmental Management Systems
- ISO45001: 2018: Occupational Health and Safety Management Systems
- ETL Product Verification
- BIS Product Verification
- CQC Solar Product Verification

Environmental, Social and Corporate Governance

The Company is committed to "Building A Sustainable Low-carbon World". We establish open communication channels and cooperative relationships with stakeholders, define the Company's environmental, social, corporate governance and other ESG-related material issues in the light of the demands of major stakeholders. We clarify the division of internal responsibilities and implement key management projects. In this way, the Company aims to achieve high-quality development through positive impacts on the environment and society.

Governance Structure

Under the supervision of the Board of Directors, the General Manager leads the Company's ESG work and oversees the formulation and implementation of specific ESG strategies, including communications, disclosure and reporting. The ESG Working Group reports to the General Manager, who provides regular progress reports to the Board. The ESG Working Group consists of the heads of key functions who are responsible for developing and implementing ESG objectives relevant to their departmental functions. They seek opportunities for continuous improvement in key issues such as employees, community, products, and natural resources through actions that manage or mitigate risks.

Stakeholders' Communication

Based on the Company's industry and operational characteristics, and benchmarking the experience and practices of domestic and international industries, we have identified our key stakeholders as shareholders, customers, employees, government and regulatory authorities, and partners. We actively communicate with them through channels and methods such as our website, the media, meetings, reports, and events.

Key Stakeholders and Communication Means

Key Stakeholders	Subjects of Concern	Communication Means
<p>Shareholders and Investors</p>	<ul style="list-style-type: none"> Corporate governance Business ethics R&D innovation Product quality Environmental protection 	<ul style="list-style-type: none"> Disclosure AGMs Financial reports ESG reports Investor conferences Teleconferences
<p>Customers</p>	<ul style="list-style-type: none"> Business ethics Product quality Network and information security R&D innovation Intellectual property protection Customer relationship Management Environmental protection 	<ul style="list-style-type: none"> New product launch Product exhibition Product after-sales service Customer on-site research Customer satisfaction survey

Key Stakeholders	Subjects of Concern	Communication Means
<p>Employees</p>	<ul style="list-style-type: none"> Employee safety and health Employee welfare and rights protection Employee training and development Industry development and co-operation Cyber and information security 	<ul style="list-style-type: none"> Staff council Staff activities Staff training Staff satisfaction survey Staff suggestion box Staff seminar/union
<p>Government and Regulatory Bodies</p>	<ul style="list-style-type: none"> Corporate governance Business ethics Product quality Intellectual property protection Network and information security Employee safety and health Social welfare Climate change and carbon emissions Energy management Water resources management Pollution prevention and control 	<ul style="list-style-type: none"> Supervision and inspection Meeting communication Policy implementation Information disclosure
<p>Suppliers & Partners</p>	<ul style="list-style-type: none"> Business ethics Supplier management Industry co-operation development 	<ul style="list-style-type: none"> Supplier audits and training Partner code of conduct On-site surveys Industry seminars
<p>Community and Public</p>	<ul style="list-style-type: none"> Employee safety and health Social welfare Environmental protection 	<ul style="list-style-type: none"> Community volunteering activities Charity programmes
<p>Media, esp. News Media</p>	<ul style="list-style-type: none"> Corporate governance Product quality Environmental protection Social welfare 	<ul style="list-style-type: none"> Telephone/email communication Media interviews Information disclosure

Materiality Analysis

In ESG management, the Company implements the principle of stakeholder participation. By identifying important stakeholders and establishing a regular communication mechanism with them, the Company has gained an in-depth understanding of the opinions and expectations of various stakeholders, and has established effective communication channels to respond to them. During the process of screening stakeholder issues, we conduct thorough evaluation, analysis, and prioritization of the issues to ultimately determine the significant ones.

Our process for identifying material ESG issues consists of three stages: identification, assessment and reporting.

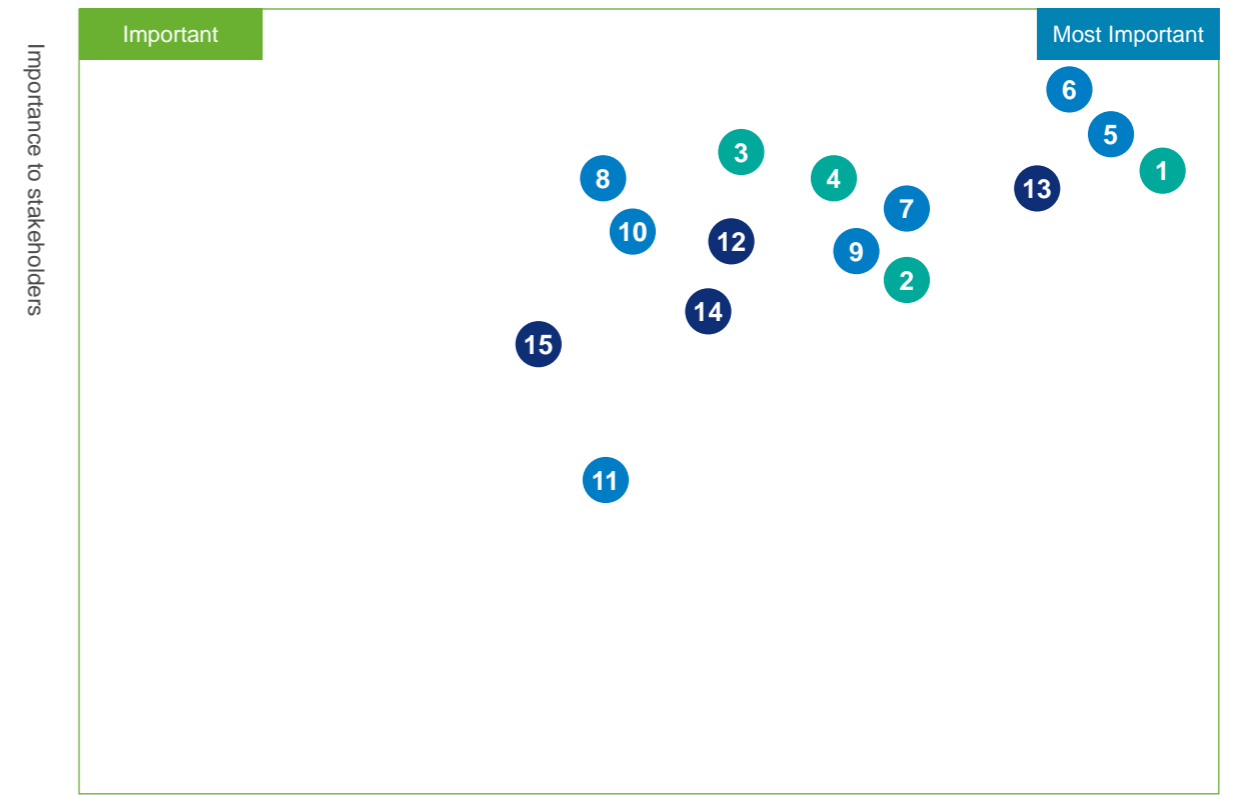
Identification: With reference to the latest policies of the Exchange and excellent practices of domestic and overseas peers, and based on its own business and operational characteristics as well as expert opinions, the Company carries out the identification and screening of material issues, taking into full consideration the demands and focuses of stakeholders.

Assessment: Through internal and external communication, we further understand the current status and work plan of the identified issues. We determine the significance of the issues based on their risks and opportunities. The issues are ultimately determined to be material and included in the recommended disclosure.

Reporting: The Board of Directors and senior management reviewed, confirmed and approved the results of the materiality analysis and carried out ESG management and disclosure of information regarding to the corresponding



Materiality analysis



Importance to the Company

Environment	Social	Governance
<ul style="list-style-type: none"> 1. Climate change and carbon emissions 2. Energy management 3. Water management 4. Pollution prevention 	<ul style="list-style-type: none"> 5. R&D and innovation 6. Product quality 7. Customer relationship management 8. Employee welfare rights and interests protection 9. Employee safety and health 10. Employee training and development 11. Industry development and cooperation 	<ul style="list-style-type: none"> 12. Business ethics 13. Supplier management 14. Corporate governance 15. Network and information security

01

Empowering Green and Low-Carbon Transformation

The Company is committed to "Building A Sustainable Low-carbon World". We adhere to the development roadmap of technological R&D and innovation, promote technological upgrading and product improvement, provide customers around the world with high-efficiency, reliable and sustainable photovoltaic products, and contribute to the development of green energy and the realisation of carbon neutrality.



Greenhouse Gas Emissions Management

With reference to the ISO 14064 greenhouse gas (GHG) inventory standard, the Company has initiated the calculation of GHG emissions from its principal manufacturing sites since the beginning of the reporting period. This effort aims to understand the Company's overall GHG emissions profile, thereby providing a data base for long-term carbon emission reductions in operations.

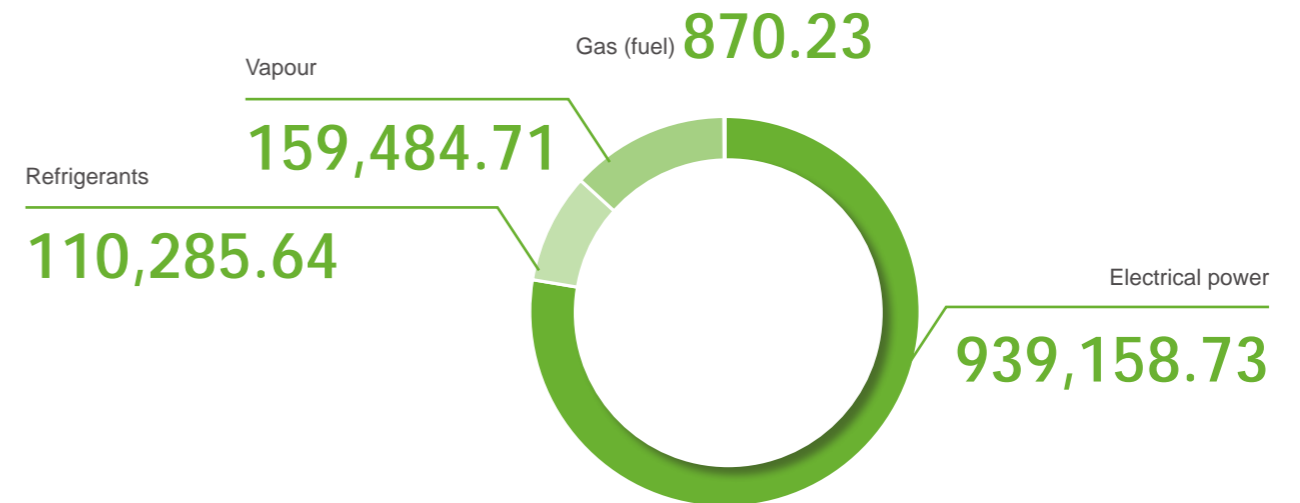
Description of Emissions and Distribution of Direct and Indirect Energy Emissions (Scope I and Scope II)

During the reporting period, the Company's GHG emissions amounted to 1,209,799.32 tonnes of CO₂e, with the main contribution coming from indirect energy emissions from the use of electricity, accounting for 77.63% of the company-wide emissions; followed by indirect emissions from purchased vapour, and direct energy emissions from the use of F-gas refrigerants in production, accounting for 13.18% and 9.12%, respectively; and the rest from diesel, unleaded petrol, gas, natural gas and other fuels, accounting for 0.07%.

GHG Emissions	2023 ²	Unit
Scope I (direct emissions)	111,155.87	Tonnes CO ₂ e
Refrigerants	110,285.64	Tonnes CO ₂ e
Diesel Oil	56.87	Tonnes CO ₂ e
Unleaded Petrol	128.42	Tonnes CO ₂ e
Coal Gas	6.13	Tonnes CO ₂ e
Natural Gas	678.82	Tonnes CO ₂ e
Scope II (Indirect Emissions)	1,098,643.45	Tonnes CO ₂ e
Electrical Power	939,158.73	Tonnes CO ₂ e
Vapour	159,484.71	Tonnes CO ₂ e
Total Emissions	1,209,799.32	Tonnes CO ₂ e

2.For information on the scope of data statistics, calculation formulae and coefficients, please refer to Appendix - Notes on the Calculation of Greenhouse Gas Emission and Comprehensive Energy consumption data.

Distribution of corporate GHG emissions (tonnes CO₂e)



In terms of business type, GHG emissions from cell production account for 98.43% of the Company's total emissions, while module production accounts for 1.57%. The Company will continue to improve the efficiency of all types of energy use and reduce the intensity of greenhouse gas emissions through the optimization of production processes, the implementation of intelligent manufacturing, and the intelligent monitoring and management of factory equipment (for more details, please refer to "Resource Utilization" in the "Environment" section).

In terms of regional distribution, GHG emissions from major domestic production bases accounted for 97.91% of the Company's total emissions, while Cambodia accounted for 2.08% and Laos for 0.02%.

Other Indirect Emission Sources (Scope III) Inventory Description

Since 2022, the Company has been conducting annual third-party carbon inventory projects in Suqian base(C) and Xuzhou base(M) which include an inventory of other indirect emission sources (Scope III) related to the two production sites. The Company has completed four emission inventories at the two production sites based on the corporate value chain criteria according to the GHG Protocol and principles of materiality screening of the ISO 14064 standard.

ISO14064-2018 Other Indirect GHG Emissions Principle of Materiality Screening

1.Data collectability	5.Industrial relevance
2.Data are calculated in a reliable or representative manner	6.Level of stakeholder interest
3.Emissions are empirically large	7.Reduction actions by counterpart companies
4.Frequency of activities	

Category	Description of the Objectives of the Inventory	Emissions in 2023 (tonnes CO ₂ e)
Indirect GHG emissions from products used by the organization (upstream)		
Goods and Services Purchased	It includes calculating the key raw materials required for production, utilizing the outcomes of the company's product carbon footprint audit as the criteria for determining calculation targets, and referencing the primary carbon emissions generated during the raw material stage of the products for this project's material-based calculations. The raw materials of Jingkai base(C)'s products include silicon wafers, pastes, stencils, chemicals, special gases, scrapers, countertops, packaging materials and trays; Xuzhou base(M) includes cells, glass, film, backsheets, frames, sealants and potting compounds, junction boxes, solder tapes, solder wires, nameplates and packaging materials used in the manufacture of products.	2,125.82
Indirect GHG emissions from products used by the organization (transportation)		
Downstream Transmission and Distribution Emissions	It includes calculating the GHG emissions from transporting the products shipped during the reporting period from two manufacturing bases to ports or airports via road transportation.	517.74
Staff Travel	It includes calculating the GHG emissions from business travel by employees at both sites; emissions are calculated on a vehicle-by-vehicle basis, including high-speed rail and own-use vehicles.	4.71
Employee Commuting	It includes calculating the GHG emissions of commuting to and from work for employees at both sites.	144.47

Providing Green Solutions

Life Cycle Management of Low-carbon Products

The Company is committed to Building A Sustainable Low-carbon World". We dig into the core elements affecting greenhouse gas emissions in the life cycle of cell and module products, and strictly control the energy consumption and energy conversion efficiency throughout the life cycle of the products through material selection, structural design, and manufacturing process. We strictly control the energy consumption and energy conversion efficiency of our products throughout their life cycle to ensure that each product has significant and long-lasting green and low-carbon characteristics.

During the reporting period, the Company has completed the third-party verification of Environmental Product Declarations (EPD) for three types of cell products (P-type 182 mono cells, P-type 183 mono cells, P-type 210 mono cells) and three types of module products (P-type 72 single-glass modules, P-type 72 double-glass modules and N-type 72 double-glass modules), which has contributed to building a new ecology of the PV industry in a sustainable development. In addition, the Company has obtained the LCA Life Cycle Assessment certification for PV modules issued by the French Environment and Energy Management Agency, signifying that the environmental friendliness of our products has been highly recognized by international authorities.

</> Green Life Cycle Practices of SolarSpace Cell Products

Carbon footprint of P-type 182 monocrystalline cell: 0.0695 kgCO₂e

Carbon footprint of P-type 183 monocrystalline cell: 0.0692 kgCO₂e

Carbon footprint of P-type 210 mono cell : 0.0538 kgCO₂e

Material Selection: Thinner Wafer Applications

Silicon wafers are the main raw material for PV cells, accounting for approximately 50% of the overall carbon emissions figure for PV modules. The use of thinner wafers can significantly reduce the consumption of silicon raw materials and lower the overall carbon emissions.

Structural Design: Higher Cell Conversion Efficiency and Double-sided Rate

Higher cell conversion efficiency: Higher conversion efficiency means that PV cells can generate more electricity under the same sunlight conditions, reducing the grid's dependence on fossil fuels.

Higher double-sided rate: By reducing the backside shading area and improving the conversion efficiency of the backside of the cell, the double-sided rate of the cell has been improved, effectively increasing the light utilization rate and power generation of the double-glass module.

Manufacturing Process: lower cell degradation

We adopt high quality silicon wafers. Through the optimized design of film layer structure and process design, we have improved the cell passivation effect and reduced the cell attenuation rate.

Green life cycle practices of SolarSpace module products

Carbon footprint of P-type 72 single-glass modules: 0.201 kgCO₂e

Carbon footprint of P-type 72 double-glass module: 0.231 kgCO₂e

Carbon footprint of N-type 72 double-glass module: 0.219 kgCO₂e

Selection of large-size wafers: improving power generation efficiency

The wafers have reduced resistive losses within the module, increased photoelectric conversion efficiency and reduced energy consumption during the power generation process

Gallium-doped cells: ultra-low LID (Light-Induced Attenuation) and LeTID (Light and Temperature-Induced Attenuation) attenuation

The cells has minimized the formation of boron-oxygen complexes by reducing boron content and optimizing the doping process to ensure the uniform distribution of gallium elements and the reduction of LID and LeTID attenuation

Multi-master grid design: Reducing the risk of hot spot effects

The design has improved current harvesting capacity of PV modules, reduced resistive losses and increased power generation efficiency

Non-destructive cutting: reducing the risk of hidden cracks and improving load strength

- Reducing the risk of hidden cracks: By optimizing the cutting parameters and process, this process ensures uniform stress during the cutting process of silicon wafers and reduces the stress concentration and hidden cracks caused by uneven stress.
- Enhancing load strength: By maintaining the integrity and structural strength of the wafer, it gives the cut wafer higher mechanical strength and stability, which helps to enhance the overall load strength of the PV module, enabling it to withstand greater external pressure and impacts.

Half-slice technology: reducing electrical losses and mitigating the risk of hot spots

- Reducing Electrical Losses: Half-slice technology cuts the cells into smaller units, resulting in lower internal resistance per cell. The reduction in cell area results in an increase in the number of cells connected in series, but the total series resistance does not increase significantly. This is due to the lower internal resistance of the half cell, which reduces the series resistance of the entire module and minimizes electrical losses.
- Mitigating the risk of hot spots: Half-slice technology cuts the cell into smaller units, each of which operates independently, with current flowing independently within each unit. When a unit is shaded or damaged, it only affects the performance of that unit and does not have a serious impact on the entire module. The spreading of the current reduces the risk of hot spots because even if one unit fails, it will not cause the entire module to overheat and form a hot spot.

High density packaging technology: enabling thin wafering

Through small-pitch encapsulation technology and optimized encapsulation structure and materials, the light-exposed area of the module can be effectively improved, thereby adapting to thinner wafers, reducing the risk of hidden cracks due to thinner wafers, making the whole photovoltaic module lighter and easier to install and maintain.

Optical and circuit design: better low light performance

- By using optical elements such as optical lenses, mirrors or light collectors, it gathers weak light onto the photovoltaic cell and increase the light intensity per unit area.
- By introducing the Maximum Power Point Tracking (MPPT) technology, it adjusts the output power of the PV array in real time to adapt to the load demand under different light conditions.

Thermal management technology: a more favorable temperature coefficient

We introduce advanced thermal management technologies, such as liquid cooling system, heat pipe technology, etc., to effectively control the temperature of PV modules

Environmentally Adaptive Design: an improved performance

Considering the adaptability of PV modules in different environments, we have designed reasonable protective measures to improve the performance of modules in harsh environments.



Clean Energy for All Scenarios

As one of the leading companies in China's photovoltaic industry, the Company has always been at the forefront of the industry in terms of technological research and development and product quality. By continuously improving its product performance through the continuous advancement of R&D of innovative technologies for batteries and modules and the upgrading of the manufacturing process, the company is committed to providing more efficient and reliable photovoltaic products for its customers around the world.

Helping German Agriculture to Explore New Models of Photovoltaic Farms

Germany is one of the first countries in the world to develop photovoltaic and renewable energy, and it has set forward-looking carbon neutral targets. To accelerate the development of renewable energy, Germany vigorously promotes photovoltaic farms and other power station projects.

SolarSpace has provided 72-piece double-sided double-glass modules of 7MW Lumina I series for an agricultural photovoltaic power plant project in Lottorf, Schleswig-Holstein, Germany. All the modules are equipped with SolarSpace's high-efficiency PERC cells, which boast excellent temperature coefficients and more reliable performance, making them suitable for the temperate climate in northern Germany. The double-sided power generation brings higher back-side gain, resulting in higher output power.



Sand Control by PV: Helping to Turn Deserts into Oases



Xilingol League,
Inner Mongolia

Located in the north of China,

Xilin Gol League has a natural grassland, known as the Pearl of the Grassland.

There are the wind-blown grass and sheep and cattle scenery, the thrilling Naadam Convention,

and the Hunsandak Sandy Land, known as the 'back garden of the capital'.



Hunsandak is both a garden desert and "The Fertile Oasis in the Northwest Border".

On the sand dotted with winding rivers and lush meadows that are now blue and green.

It used to be called the Great Sandbox.

After the Ximeng government and people persistently implement sand control measures,

only now there is a green wave rippling full of tired.



'Photovoltaic sand control' is one of the most effective countermeasures against sand

The base piles of photovoltaic modules can prevent wind and fix sand.

Photovoltaic panels cover the sand to reduce water loss through evaporation.

A comprehensive power generation + ecological management project turns deserts into blue oceans of power generation and green islands of ecology.



SolarSpace participated in Xilingol Desert Comprehensive Treatment Project, supplied 47.5MW modules for Abaga Banner PV project

The SolarSpace high-efficiency bifacial double-glazed modules are equipped with its own brand of high-efficiency bifacial cells, which passed third-party verification for salt spray, ammonia, sand and dust with excellent resistance to hot spots and hidden cracks. They are of stronger weather resistance and longer lifespan.

Double-glazed modules utilise the backside gain to increase power generation. They offer higher power output with lower attenuation. Used in 'PV+Desert Management' to help turn deserts into oases.



02

Steady and Compliant Operation

The Company focuses on value creation and social responsibility, upholds a customer-centric, employee-oriented, and shareholder-inclusive mindset. By adhering to a technology research and development-driven innovation path, the Company promotes technological upgrading and product improvement, provides customers around the world with highly efficient, reliable and sustainable PV products. This endeavor contributes to the development of green energy and the realization of carbon neutrality, and commits itself to "building a sustainable low-carbon world".

Corporate Governance



Business Ethics

Network and Information Security



Corporate Governance

The Company has formulated the Articles of Association and the Articles of Association (Draft) applicable post-listing in strict accordance with the Company Law of the People's Republic of China, the Guidelines for the Articles of Association of Listed Companies and other relevant national laws and regulations, and has established a relatively complete corporate governance structure and various internal control systems in conjunction with the actual situation of the Company. The Shareholders' General Meeting, the Board of Directors, the Supervisory Committee and the management of the Company have performed their respective duties and operated in a standardized manner in accordance with their respective rules of procedure and duties conferred by their respective work systems; the Directors, Supervisors and senior management of the Company are diligent in their duties; the Independent Directors fulfill their responsibilities with dedication; and the information disclosure is carried out strictly in accordance with the principles of being truthful, accurate, complete, fair, and timely in fulfilling disclosure obligations.

Well-established Governance Structure

The Company has established a modern corporate governance structure of "Three Meetings and One Layer". The General Meeting of Shareholders is the highest authority, the Board of Directors is the decision-making body, the Supervisory Committee is the supervisory body, and the senior management is the executive body. In order to meet the needs of strategic development, ensure scientific decision-making, enhance the Board's effective oversight of the management team, regulate the selection of directors and senior managers, and improve the assessment and remuneration system, the Company has set up four specialized committees under the Board of Directors, namely, Strategy, Auditing, Remuneration, and Nomination. Detailed working guidelines have been established for each committee to effectively safeguard the duties of each of these specialised committees. This approach not only promotes the professional operation of the Board of Directors, but also more effectively facilitates the Board of Directors' functions of supervision, balancing and decision-making.

Composition of the Board of Directors

The Board of Directors of the Company consists of 7 Directors, including 1 chairman, 3 non-independent Directors and 3 independent Directors. The Chairman also serves as the General Manager of the Company, thereby strengthening the connection between the Board of Directors and the management of the Company, fostering a sense of alignment among the management with the agenda of the Board of Directors, and ensuring the effective utilization of the Company's resources and policies and enhancing operational efficiency.

In accordance with the provisions of the Company Law and the Articles of Association of the Company, more than one-third of the Board of Directors are independent directors. The three specialized committees, namely Audit, Nomination and Remuneration and Evaluation, are chaired by independent Directors, and with a majority of these committees being comprised of independent members. Each independent Director does not concurrently serve as an independent Director of more than three domestic listed companies, ensuring the independence of the Board of Directors structurally, and ensuring that the independent Directors have sufficient time and energy to independently perform their duties.

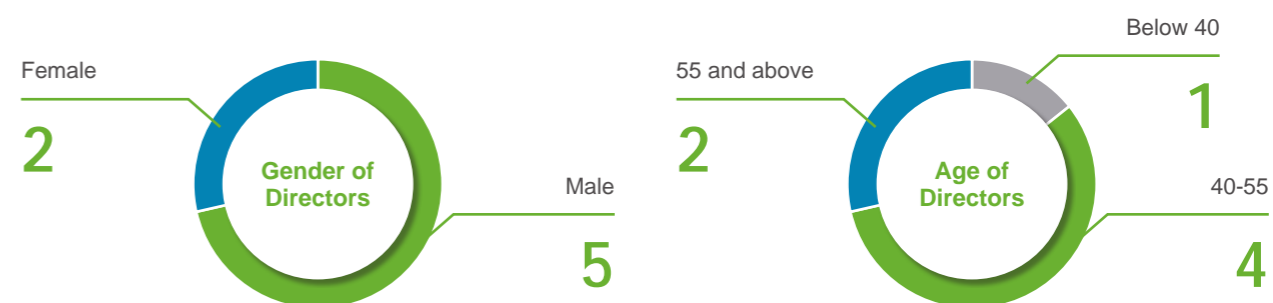
To prevent and mitigate conflicts of interest, the Board of Directors has outlined the circumstances warranting the application of the recusal principle in documents such as the Articles of Association, the Rules of Procedure of the General Meeting of Shareholders, the Rules of Procedure of the Board of Directors and other systems.

Board Membership

■ Directors of the Committee ■ Members of the Committee

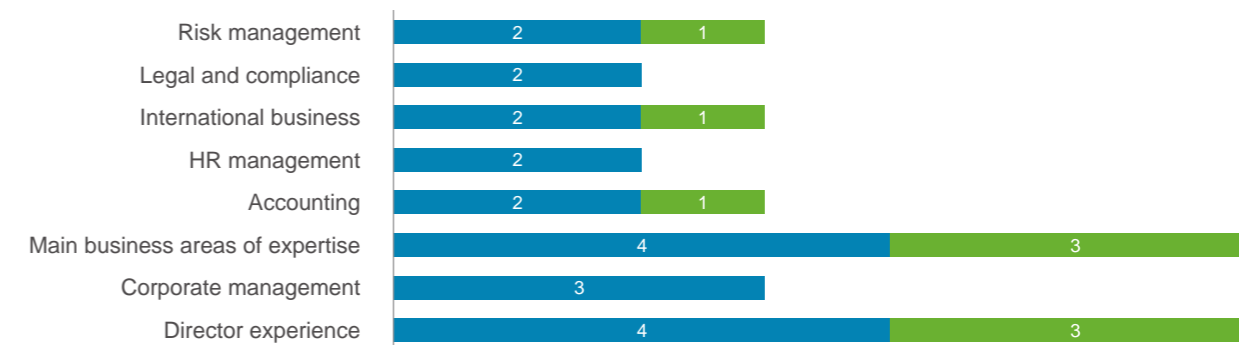
Board of Directors		Auditing Committee	Nomination Committee	Remuneration and Appraisal Committee	Strategy Committee
Long Daqiang	Chairman		■		■
Meng Liye	Director				
Wei Ping	Director			■	■
Xu Shuzhang	Director				
Liu Shiping	Independent Director	■	■	■	
Ma Xinzhi	Independent Director	■		■	
Yu Linwei	Independent Director	■	■		■

The Company focuses on the diversity of Board of Directors and seeks to enrich the representation of Board members in terms of gender, age, skills, experience, qualifications and backgrounds to provide the board with a broader range of perspectives, as well as support more holistic decision-making and improve the governance of the Company.



Directors' skills and experience

■ Independent director ■ Director



Duties and Delegation of Authority of the Board of Directors

The role of Board of Directors is to lead the Company and create value for shareholders over the long term. The Board is responsible for setting the Company's values and standards, ensuring that they are aligned with the Company's strategic objectives and desired business culture and are responsive to shareholders and other stakeholders, including employees, suppliers, customers and the environment in which the business operates. The Board approves the Company's strategic objectives and provides the financial and human resources necessary to attain these goals.

The Board of Directors delegates to the company's senior management, led by the General Manager, the authority to direct daily operational decisions and implement effective internal control measures, ensuring the company meets its commitments and expectations towards society and other stakeholders. The Board of Directors regularly reviews and evaluates the operational and management performance of the senior executives and evaluates them accordingly.

During the reporting period, the Company's Board of Directors held 5 meetings, the Auditing Committee held 2 meetings and the Strategy Committee held 1 meeting. The average attendance rate for all Board members, chairpersons, and members of the specialized committees was 100%.

Nomination and Selection of Directors

The Company's General Meeting of Shareholders has formulated the Company's Articles of Association to specify the relevant procedures and criteria for the nomination, qualification and evaluation of director candidates, which include criteria for the consideration of the independence and diversity of the Board of Directors.

According to the Articles of Association, Board members are nominated by the Board of Directors and elected by the General Meeting of Shareholders for a term of three years. If a substitute member is elected to the Board during the incumbent member's term of office, the newly elected member completes the predecessor's term of office.

Board Capacity-building and Performance Evaluation

In order to enhance the Directors' understanding of the Company's business and competitive environment, the Company organized a series of empowerment training for the Board of Directors, the Supervisory Committee and Senior Executives during the reporting period. The training covers topics closely related to the listing process such as developments in important capital market laws and regulations, so as to effectively enhance the level of corporate governance.

In order to further establish and improve the appraisal and remuneration management system for Directors, Supervisors and Senior Executives, the Company has set up a Remuneration and Appraisal Committee as a specialized body. This committee is to formulate, manage and appraise the remuneration of the Directors, Supervisors and Senior Executives of the Company, formulate the Rules of Work of the Remuneration and Appraisal Committee of the Board of Directors. Drawing upon the company's actual operational conditions, the salary levels prevalent in the industry and region, as well as the specific responsibilities attached to each position, the committee clarifies the remuneration schemes for directors, supervisors, and senior executives, and also provides appropriate allowances for independent Directors.

Business Ethics

As a core value, integrity guides the way we behave. The Company promotes integrity in its operations, actively guards against corruption and conflicts of interest, and seeks to earn the trust of all stakeholders, protect the Company's reputation, achieve the Company's short- and long-term goals, and avoid financial losses.

Governance Structure

In order to regulate the behaviour of our staff in business management activities, according to national laws and regulations and relevant policies, the Company has formulated anti-corruption and anti-bribery regulations such as the Management System of Integrity, the Operational Guidelines for Employee Integrity Management, and the Administrative Provisions Concerning the Acceptance of Gifts and Premiums by SolarSpace Staff. We require all staff to set an example of integrity and resolutely oppose any form of fraud, bribery and corruption. We foster a culture of transparency, uprightness, and self-discipline within the company, thereby facilitating the healthy development of our employees. In addition, the Company also adopts the "SolarSpace Partners Code of Conduct" to assist its partners to understand and jointly follow the Company's code of ethics, and to uphold the spirit of professionalism, honesty, transparency and ethics in carrying out their business activities, so as to assume social responsibility for their own employees and the society.

The Chairman of the Board leads the Company's anti-corruption work and is responsible for approving the penalty decisions of relevant investigation cases. The Audit and Supervision Department is responsible for receiving reports and supervision from all employees, investigating and verifying reports and irregularities, maintaining the Company's anti-corruption channels and investigating cases, and submitting investigation reports based on the results of the investigations. In addition, the Audit and Supervision Department is responsible for handling procedures related to the recovery and collection of fines; it also oversees the implementation of disciplinary actions and accountability measures. The Human Resources Department, based on the investigation results from the Audit and Supervision Department, enforces penalties on the concerned personnel, ensuring that employee performance evaluations, transfers, and salary adjustments are linked to disciplinary actions for rule violations. The Finance Centre is responsible for setting up a special account for integrity and collecting relevant funds; from business interactions across headquarters departments, recovers funds from investigated cases, and handles confiscated sums. The Administration Department is responsible for handling the collection and safekeeping of physical objects recovered from investigation.



Risk Management

Any violation of ethics, compliance or law may pose significant risks to the Company's operations. During the reporting period, the Company conducted relevant internal audits for major business segments such as procurement, sales and project management. To control business ethics risks, the Company has identified the following business ethics management priorities:

<p>Anti-corruption, anti-bribery and anti-money laundering</p>	<p>We abide by business ethics and resolutely oppose any form of bribery and corruption in business activities; comply with applicable anti-corruption laws and regulations in the countries and regions where the Company operates. The Company's employees shall not solicit, accept or provide bribes to any individual or organisation, and shall avoid providing the relevant parties with any facilitating gifts, fees and services that may lead to conflicts of interest or influence business judgement. The employees are prohibited from engaging in any form of financial crimes, including hiding illegal funds, financing terrorism, money laundering and assisting in tax evasion, etc.. We advocate a culture of integrity, encouraging employees and partners to report the above violations to the Company.</p>
<p>Anti-unfair competition</p>	<p>We oppose unfair competition in business activities, including restricting transactions, bid-rigging, price restrictions, fraud, differential treatment of customers and theft of business secrets, promoting fair, lawful and compliant transactions. We voluntarily uphold the market order of fair competition.</p>
<p>Disclosure of conflicts of interest</p>	<p>We promptly disclose any actual or apparent conflicts of interest between personal and business interests. Employees should endeavour to avoid committing potential or actual conflict of interest acts.</p>
<p>Books and records</p>	<p>We improve internal control systems to maintain true, accurate and complete books and records (including payments made on behalf of clients that are provided by or reimbursable to the client). We do not create or use any unpublished or unrecorded accounts, and prohibit employees from entering false, forged or misleading books and records.</p>
<p>Whistleblower protection</p>	<p>We have formulated a whistleblower protection policy that protects whistleblowers from unfair treatment such as retaliation or other unjust treatment. We have established effective whistleblowing procedures and response mechanisms that allow for anonymous reporting and ensure confidentiality of reported behaviour.</p>

Management Measures and Progress

In terms of business ethics governance, the Company is committed to preventing problems before they occur on the one hand, and identifying management loopholes in a timely manner through dynamic inspections on the other. The Company rectifies the loopholes in the spirit of continual improvement to ensure that the Company's employees and partners always comply with business ethics and jointly uphold a favourable business environment.

Phase	Focus	Measures	Progress During the Reporting Period
Prevention	Integrity in the workplace	<ul style="list-style-type: none"> Integrity and Self-Discipline Pledge. 	<ul style="list-style-type: none"> 100% coverage of new employees signing Integrity and Self-Discipline Pledge in 2023.
	Ongoing advocacy	<ul style="list-style-type: none"> Posters, regular integrity education. 	<ul style="list-style-type: none"> Poster campaigns on business ethics in all domestic operating locations. 1 integrity education conducted during the reporting period.
Dynamic Checkup	Internal inspection	<ul style="list-style-type: none"> Annual corporate internal control self-assessment. Internal audit. 	<ul style="list-style-type: none"> Conducted 12 anti-corruption-related internal audits during the reporting period, targeting business segments such as procurement, sales, engineering and project management.
	Complaint reporting	<ul style="list-style-type: none"> Reports and complaints can be made to the Audit and Inspection Department via e-mail or WeChat. Whistle-blowing email: sjjcb@solarspace.cn. 	<ul style="list-style-type: none"> No significant reports or cases of corruption were identified during the reporting period.
	Administrative penalties/legal sanctions	<ul style="list-style-type: none"> The Audit and Supervision Department, in accordance with the Enforcement Standards for Disciplinary Actions and Accountability in Violations and Misconduct, will propose penalties for fraudsters. Following approval by the Chairman, the HR Department is responsible for implementing these measures. Cases involving breaches of law are referred to judicial authorities. 	<ul style="list-style-type: none"> No major violations of laws and regulations by employees were identified during the reporting period.
Continuous Improvement	Recommendations for improvement	<ul style="list-style-type: none"> The Audit and Supervision Department is responsible for assessing whether violation events indicate systemic issues such as inadequate understanding of professional ethics guidelines. 	<ul style="list-style-type: none"> Identified 2 issues related to anti-corruption, carried out 5 optimizations of management processes and internal control procedures, comprehensively sorted out the Company's requisitioning process and continuously improved the Company's management processes and internal control procedures.

Compliance Culture Building

The Company advocates a compliance culture, and the Legal Department organizes relevant departments to conduct regular regulatory inventories on a daily basis, assisting them in reviewing the compliance of their business activities with the latest regulations; compiling typical cases of non-compliance as internal publicity and education materials, and assisting the relevant departments in updating their internal management systems to ensure that they meet the latest regulatory requirements. In addition, in order to strengthen employees' awareness of compliance, the Company also carries out compliance-related training for all regular employees and new recruits, and organizes relevant departments to prepare compliance training courses on various topics for employees' self-study.

During the reporting period, the Company operated in compliance with various applicable laws and regulations and did not experience any major incidents of non-compliance.

Cyber and Information Security

Information Security Management System

The Company strictly follows the requirements of laws and regulations such as the Cybersecurity Law of the People's Republic of China and the Personal Data (Privacy) Ordinance, and formulates systems such as the Information Security Management System, the Informatization Management System, and the SolarSpace Informatization Emergency Response Plan, etc. The scope of application includes all personnel, suppliers, and third parties involved in the compliance of data security and personal information. It also specifies the compliance requirements for personal information at the stages of collection, storage, use, processing, transmission, provision, disclosure and deletion, so as to protect the security and privacy of customers' personal information.

Regarding the risk management of customer personal information, both internally and externally, the company, in accordance with the Level 2 (Guidance Protection Level) requirements of the Cybersecurity Graded Protection 2.0 National Standard in China, outlines management requirements from five dimensions: physical security, network security, host security, application security, and data security backup.

Physical Security

- The server room area is divided into two parts: the main server room and the monitoring area.
- The server room is equipped with facial recognition electronic access control system and a surveillance system.
- Water leakage detection alarms are installed at the top and bottom of the server room.
- Redundant circuits are installed in the server room.

- Topology maps are updated regularly.
- Different VLANs are established, with traffic control policies configured, and access control strategies implemented. Key network devices and servers are segregated into independent zones, and border firewalls are deployed at the segment borders.
- Authentication mechanisms are in place for switches and firewalls.
- Network links, core network equipment and security equipment are designed to provide redundancy.
- Traffic identification devices are deployed across the network to identify non-compliant traffic within the Company.

Network Security

Host Security

- Server authentication mechanism, access control mechanism, security audit mechanism, anti-virus.
- Server clusters has been deployed.
- Prior to going live, servers and critical network devices undergo vulnerability scanning and assessment to avoid medium to high-level vulnerabilities, such as those in Windows systems, Apache middleware, database software, other system software, and open ports.

- The application's own functionality is compliant with the graded protection requirements, e.g. identity authentication mechanisms, audit logs, etc..
- Web application firewall has been deployed.

Application Security

Data Security Backup

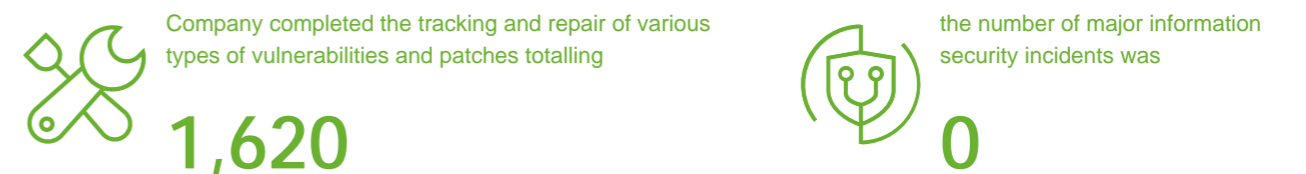
- It is to provide a local backup mechanism for data, with daily backups to local and off-site storage.

Emergency Response to Information Security Incidents

The Company has formulated the SolarSpace Information Technology Emergency Response Plan based on the Data Security Law and other relevant requirements, and has established an effective security protection and emergency response mechanism. It has clarified the data security management including data classification and grading, data lifecycle management requirements, data security incident response and other requirements, and has also clarified the monitoring and warning mechanism for personal information security incidents and the emergency response process, so as to improve the emergency response capability of the incident and to protect the personal information subject interests.

When a personal information security incident occurs, the Company will take measures such as closing ports, temporarily shutting down the relevant system, suspending the authorization of personnel privileges, and suspending third-party data cooperation. For large-scale personal information leakage incidents, we will inform affected users in a timely manner to mitigate the harm and prevent secondary and derivative events, and take necessary remedial measures in accordance with laws and regulations or regulatory requirements and the terms of the Company's Privacy Policy.

During the reporting period, the Company completed the tracking and repair of various types of vulnerabilities and patches totalling 1,620 items, and the number of major information security incidents was zero.



Information Security Training

The Company carries out information security training and interpretation of relevant regulations for employees in the R&D and operation and maintenance functions of the Information Technology Department, and archives and saves information security-related training materials, and builds an information security course system. These efforts facilitate the continuous promotion of relevant training and awareness-raising work.

03

Enduring Quality

As a professional PV cell developer and manufacturer, we promote innovation, focus on intellectual property protection, and continuously optimize product quality management. By creating high-quality products for our customers, we work together with them to accelerate the release of new productivity and explore the infinite possibilities of sustainable development in the photovoltaic industry.

Innovative management



Quality Management



Innovative Management

Since its establishment, the Company has dedicated itself to the R&D and manufacturing of PV cells for many years, and gradually extended to PV modules and distributed PV solutions. The Company has always adhered to customer-oriented principles, and constantly promoted the iterative upgrading of its own technology, products and processes, and gradually formed a more complete R&D system and continuous innovation mechanism. This has led to a wealth of rich technical expertise and achievements. The Company pays attention to the protection of its intellectual property rights to uphold its leading position of its core technologies in the industry.

Measures	KPIs	Progress During the Reporting Period ³
Increase investment in technology research and development	R&D expenses as a percentage of operating revenue ⁴	3.19%
	Cumulative R&D expenses ⁵	RMB 1,008,385,800 yuan
	R&D Team	875 people
Intellectual property protection	Accumulated patents ⁶	269 items
	Patents for inventions	31 items
	Utility model patents	238 items

Governance Structure

The Company has established a sound technology research and development system, in which the management researches and determines the direction of technology development, and formulates a series of R&D related management system. The Company has set up a Technology Centre, a New Energy Research Institute and a Process Department, forming a technology research and development system that combines the quality enhancement of existing technologies with the forward-looking layout of new technologies.

Risk Management

The industry in which the Company operates is technology-intensive, and technological upgrading and innovation plays a prominent role in the whole industrial chain. While focusing on the continuous quality improvement and efficiency enhancement of the existing technologies and mass-produced products, the Company has always maintained close tracking of cutting-edge technologies, and has actively carried out prospective development of new technologies and new products, and selected the appropriate time to introduce them into mass production in order to respond to the changes in the market demand in a timely manner, and to ensure that the Company continuously launches competitive and high-quality products.

³Note: Due to the confidentiality of the information of the proposed listed company, the scope of the company's economic and social data statistics is limited to the information that has been publicly disclosed.

⁴Data range: January-June 2023

⁵Data range: January 2020 to January-June 2023

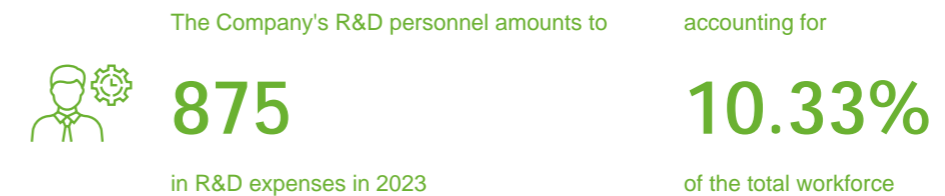
⁶Data as at 30 June 2023

Measures and Progress

The Company adheres to the innovation-driven development strategy, continues to increase investment in research and development, closely follow the industrial layout, constantly improve the intellectual property protection system, and work with partners from all walks of life to explore the development of industrial technology and innovation, and practice the spirit of unremitting innovation.

R&D Investment

The Company has continuously increased its investment in R&D in recent years. In 2023, the Company has invested RMB 343.3949 million yuan in R&D expenses. The Company's R&D staff amounts to 875, accounting for 10.33% of the total staff.⁷



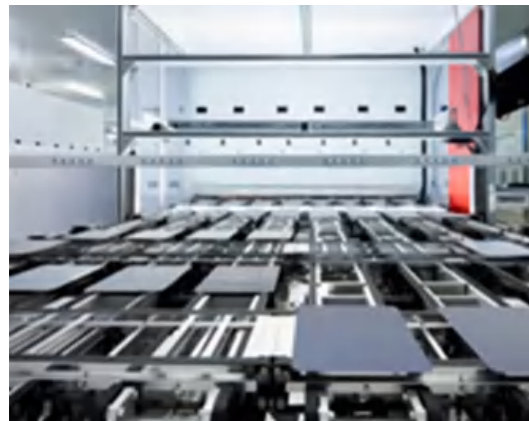
Technological Innovation

The Company's R&D team is committed to providing advanced technologies and highly customized solutions. Through innovative and precise engineering, we ensure that the solutions we provide not only meet current technology standards, but are also adaptable to future development needs, assisting our customers to achieve product success. The Company has proactively made the schedule for N-type cell technology and is pushing for efficiency improvements in N-type TOPCon batteries, as well as stockpiling more cutting-edge high-efficiency cell innovations.



Smart Manufacturing

The Company has seven smart factories with advanced equipment, each geared towards customer-centric customization. The production lines can be flexibly adjusted to meet individual clients' manufacturing standards and process requirements, delivering high-quality, low-cost and customized products. In addition, the factories have invested in advanced equipment such as AGV intelligent handling and industrial robots to achieve fully automated production. The company is also committed to advancing digital transformation and the construction of digital factories.



Automated production equipment

Protection of intellectual property rights

Under the trend of globalized economic and trade competition, the development strategy based on intellectual property rights is more and more crucial. The Company attaches importance to intellectual property protection, has zero tolerance for infringement, builds and continuously improves the intellectual property protection system, and carries out patent risk investigation and patent layout.

Intellectual Property Management System

In order to strengthen the management of intellectual property rights and reduce the risk of intellectual property rights, the Company has formulated the Management System of Intellectual Property Rights, Patent Management System, Intellectual Property Rights Attribution and Reward System and other management systems to clarify the responsibilities of each department in the process of research and development, index and analyze the existing technologies related to the project, and dig out the patents of R&D projects, so as to escort the research and development projects.

The Company has 269 in-country patents, including 31 invention patents and 238 utility models.

The Company carried out 2 training sessions on patent-related knowledge in 2023, and set up special rewards for employees who actively applied for job-related inventions.

Protection of Technical Secrets

The Company carries out strict control over technical secrets, implements the principle of compression control on the scope of knowledge of technical secrets, and the R&D personnel only know the relevant technical secrets on a need-to-know basis within the scope of their duties and responsibilities. At the same time, the Company and the R&D personnel enters into Confidentiality Agreement corresponding to the positions and duties, constantly enhancing the employees' awareness of confidentiality. Employees are required to adhere strictly to the stipulations of these agreements during their tenure and, for some key positions, even after leaving the company for a designated period. In addition, the Company also prevents the illegal transfer of source code through physical isolation, restricts the dissemination of information assets through encryption software and authority management, and carries out code review in the R&D process to ensure the legal and compliant references to external code.

Innovative Cooperation

The Company has been focusing on industry-university-research co-operation, actively establishing various forms of cooperation and collaboration with universities and colleges, ecosystem partners, strengthen ing exchanges and cooperation with domestic and foreign counterparts, effectively organizing and applying social resources to serve for enterprise innovation, and promoting the development and innovation of industrial technology.

Company R&D Innovation in 2023

Industry-Academia Collaboration	
<p>External Collaboration</p> <p>Key technology research on ultra-high efficiency monocrystalline silicon solar cells and new generation cells</p> <p>China University of Mining and Technology</p>	<p>External cooperation</p> <p>Research on new strategies for performance enhancement of PERC crystalline silicon solar cells</p> <p>China University of Mining and Technology</p>



Industrial Collaboration

February 2023

Madrid International Energy Fair, Spain



March 2023

International Exhibition on Solar Solutions and Energy Storage Technology Applications



March 2023

The 18th China (Jinan) Solar Energy Utilization Conference



March 2023

The 16th International Renewable Energy Exhibition in Italy



April 2023

The 15th International Solar PV Exhibition in Turkey

May 2023

The 16th SNEC International Solar PV and Smart Energy Exhibition

October 2023

Renewable Energy India



August 2023

World Solar PV & Energy Storage Expo 2023



June 2023

Intersolar Europe, Munich, Germany

November 2023

InfoLink PV & Energy Storage Trends Strategy Forum



December 2023

China Photovoltaic Industry Association "2023 PV Industry Annual Conference"

Company Participation in Industry Associations

Name of Organizations	Participation Status
SEIA	Watt Member
China Photovoltaic Industry Association	Member
Jiangsu Photovoltaic Industry Association	Governing unit
Jiangsu Renewable Energy Industry Association	Permanent member of council
All-China New Energy Chamber of Commerce	Governing unit
China Chamber of Commerce for Import and Export of Machinery and Electronic Products	Member



Product Quality

The Company attaches great importance to product quality management to provide customers with efficient, reliable and sustainable products. The Company continuously improves the quality management system, realizes the whole process quality management, ensures the standardization of the product manufacturing process, continuously improves the Company's core competitiveness, and brings long-term value to the customers.

Measures	Initiatives	Progress During the Reporting Period
Product quality system improvement	System administration	We strictly comply with laws and regulations, domestic and foreign product quality standards, and formulate and implement product quality system.
	Quality control	We have established a comprehensive quality control process for products, assessed quality control key performance indicators, and ensured the delivery of high quality and reliable products to customers.
	Quality audit	We organized 10 internal audits of quality management system in production bases, completed the quality management system certification audit of all production bases and the Group, and optimized and verified the closure of all items found to have room for improvement during the inspection.
Product lifecycle management	Design concept	Using methods such as DFMEA, we thoroughly examine product failure modes with a strong emphasis on safety. During the product design phase, we take into account customers' performance requirements and the compatibility of components. Concurrently, we optimize material configurations, balancing material consumption with the effectiveness of the finished product, aiming to minimize resource waste and enhance resource utilization efficiency.
	Product testing	Photovoltaic modules was rated "Best Performer" in product quality tests conducted by PVEL, an authoritative third-party testing laboratory; we are granted with High Performance Achievement Award from the Renewable Energy Testing Centre (RETC), USA.
	Quality assurance (QA)	Regarding to modules, we provide customers with 3-6 months warranty, and also provide CID, LID, PID, LeTID, acetic acid resistance and other related reliability warranties according to customer requirements. Regarding to modules, we provide customers with at least 12 years of design, material and workmanship warranty, as well as 25 to 30 years of power warranty.
Intensive product quality training	Performance	The module products have passed the tests of IEC61215, IEC61730, IEC61701, IEC60068-2-68, IEC62716 and other international standards. The use of self-produced batteries with excellent module encapsulation technology makes the test attenuation much lower than the IEC standard.
	Product quality training	We conduct product quality training on processes, standards and specific operations, covering the entire process of product production control.

Governance Structure

The Company has established a quality management system covering the whole life cycle of its products, and implements strict control in product development and design, raw material control, product production quality, product delivery quality and after-sales service. During the reporting period, all of the Company's operating and qualified production bases have passed ISO 9001 quality management system certification.

The Whole Process of Product Quality Management in the Company

Quality Management Manual

Raw material control

- Supplier source management
- Raw material technical inspection standard card control
- Sorting equipment improves control efficiency
- Traceability mechanism for feedback of substandard raw materials

Process control

- Confirmation of Management Regulations
- Multiple process control and quality inspection
- Unified Quality Control Process (QCP)
- Real-time push of SPC data anomalies
- CPK stabilization process capability analysis
- Highly accurate MES traceability

Reliability monitoring

- High-frequency monitoring programme covering every BOM set
- Industry-leading reliability monitoring frequency

Shipment control finished goods

- Finished products off the line to shipment through a full range of inspection and confirmation, minimizing delivery risks and enhancing customer satisfaction.

Products after-sales

- Conduct special analyses of customer complaints, give rectification measures, and formulate corresponding 8D reports.

Risk Management

The Company strictly abides by the Product Quality Law of the People's Republic of China, Standardization Law of the People's Republic of China and the location of the relevant laws and regulations and industry standards. From the control of raw material quality to production process quality control, and from finished product quality management, the company disseminates and implements quality management objectives throughout every stage of R&D, production, manufacturing, and delivery. Key quality indicators for products are set as performance metrics, subject to regular evaluations and management, ensuring quality control from the source to the end-user, across the entire process.

The Company adopts statistical techniques to analyze and evaluate product design, raw material supply control, manufacturing, operation and maintenance, recycling and many other aspects, and puts forward corresponding improvement measures. During the reporting period, we organized an internal audit of the ISO9001 management system, identified 73 issues and closed and rectified 73 issues.



Management Measures and Progress

Our commitment to product quality is all-encompassing. We are committed to providing consumers with high quality products, and conduct an all-round quality control in the aspects regarding to the establishment of a comprehensive product quality system, the execution of rigorous product quality audits, the implementation of effective product life cycle management and strengthened quality control capabilities, as well as the strict enforcement of banned substance control. During the reporting period, the Company did not experience any major liability accidents related to safety or quality of products or services.

Product Quality System

The Company strictly abides by the Product Quality Law of the People's Republic of China, Standardization Law of the People's Republic of China and other domestic and international product quality and safety policies and standards, and formulates a series of systematic documents such as quality management manuals, accident management, etc.. In this way, we aim to build a comprehensive and systematic quality management system, and strengthen the quality control process of the whole product life cycle, so as to ensure that we deliver highly efficient, reliable, and sustainable products to our customers. The Company's main production bases have all obtained ISO 9001 quality management system certification, and have been awarded the "National PV Industry Quality Leading Brand" by the China Quality Inspection Association.

Product Quality Audit

The Company regularly takes the initiative to carry out and accept internal and external management system audits and all kinds of special inspections, and rectifies and solves the problems found within set deadlines. During the period, a total of 10 internal audits of quality management system were organized for the production bases, and the quality management system certification audits of all production bases and the Group were completed throughout the year. All the items found to have room for improvement during the inspections have been optimized and verified as resolved.



Product Life Cycle Management

The Company uses self-produced cells with excellent module packaging technology to provide customers with high-performance cell or module products. Meanwhile, in the process of product design, product manufacturing, performance testing and after-sales warranty, the Company establishes a product life cycle management process and carries the concept of eco-friendliness through the whole life cycle of the products, analyzes the requirements of different environments for the products, and creates batteries and modules that are better adapted to a wide range of application scenarios.

Strengthening Quality Control Abilities

The Company actively invests in the refinement and R&D of testing methods. Currently, it has a chemical analysis laboratory, a crystalline silicon solar cell reliability laboratory, a cross-linking degree laboratory, and a wet leakage laboratory, covering different testing needs and research areas. It aims to ensure that the product development, the usage of raw materials, and product performances comply with the stringent testing standards, so as to provide solid QC support for product quality.

Meanwhile, we continue to optimize the monitoring mechanism and implement the automatic optical inspection (AOI) early warning mechanism. By adjusting and setting the G2 signal value through the AOI system, it triggers the alarm and shutdown function of the machine card control batch defective pieces, intercepting the defective products before shipment, reducing the consumption of resources for remanufacturing and the waste caused by product scrapping, and significantly alleviating environmental impact.

Control of Prohibited Substances

In order to protect human health and avoid polluting the environment, our company strictly abides by the safety and environmental protection laws and regulations of both our government and those of the regions where our products are sold, concerning the restriction of toxic, harmful, and dangerous substances. Stringent controls are enforced on hazardous materials to ensure product safety and quality. We have set up strict entry thresholds for raw materials supplied by our suppliers, requiring the provision of test reports issued by CNAS-accredited external laboratories complying with the specification of hazardous substances, and randomly sampling and testing to confirm the compliance of the raw materials. Samples of major products are taken during daily production and sent to qualified external laboratories for testing to facilitate timely detection of product defects or non-compliance with safety regulations.

We comply with regulations related to environmental protection, safety and health, and strengthen the control of hazardous substances in product design and production to minimize negative environmental impacts. We comply with the European Union's Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) standards, and are certified by an independent third party, SGS.

04

Win-win Partnership

The Company is committed to fostering a transparent and efficient business environment. Through customer and supplier management systems, as well as risk management, systematic policies and procedures have been established. This fosters close collaboration with all stakeholders, jointly creating a mutually beneficial and win-win business ecosystem.

Customer Relationship management



Supplier Management



Customer Relationship Management

The Company adheres to the service concept of "your need is my responsibility", establishes a cross-department customer service team, sets up a special coordination window, provides customers with quality services. This approach fosters deep relationships with customers, positioning the company as a trusted and relied-upon long-term partner.

Measures	KPIs	Targets	Progress During the Reporting Period
A Precise Response			
Work closely with customers to understand and address their needs and voices through regular meetings/questionnaires, thereby providing the best customer service possible	Customer satisfaction	100%	87%

Governance Structure

The Company adheres to the service concept of "customer-centred", and has set up a professional team through the whole process of customer service, which consists of "Customer Relationship Responsible Person + Product and Technology Responsible Person + Delivery and Service Responsible Person" on behalf of the Company to dock with the customer, and provide end-to-end follow-up services from pre-sales to after-sales.

At the same time, the Company has set up domestic after-sales service centers in Xuzhou, Jiangsu Province, Suqian, Jiangsu Province, and Chuzhou, Anhui Province; and oversea after-sales service centre in Vientiane, Laos and Kratie, Cambodia. We ensure worldwide 7 × 24 real-time response. We are equipped with professional technical service personnel to ensure swift response, providing customer with reassuring after-sales service guarantee.

Risk Management

In order to better test our service quality and reasonably control customer expectations, the Company has formulated the Customer Satisfaction Management Procedure. This procedure specifies the process and way of collecting and evaluating customer satisfaction, divides the customer satisfaction level, and continuously improves customer satisfaction in terms of product appearance, performance, packaging, delivery, customer service and new product development, etc., which helps the Company's continuous improvement of its customer service management capability.



To enhance the professionalism and service quality of the customer service team, the Company has formulated a standard service manual for the after-sales customer service personnel and conducts service training on a regular basis. In addition, the Company has set up after-sales service communication channels, such as service hotlines, email addresses, customer complaints and return application management system, and quality reporting platform. These measures that customer opinions are received and responded to effectively.



Management Measures and Progress

To create the best customer service experience, the Company builds a dedicated team of professionals to provide the most immediate assistance from product development, manufacturing to delivery, and establishes an exclusive coordination and communication window at each stage.

Precise Response

Feedback and opinions from customers are an important basis for the Company to continuously improve the development of customer relationships. To understand the needs of customers, the Company has comprehensively understood the needs of customers through unscheduled meetings, quarterly evaluation meetings and annual satisfaction surveys, etc., so that the Company can review, analyze and propose appropriate improvement plans on a regular basis, and maintain positive interactions with customers.

During the reporting period, the Company's customer service team held a total of 393 customer meetings with 135 customers; and executed 112 quarterly review meetings with 28 customers. The annual customer satisfaction survey covered clients representing the top 80% of the company's sales revenue, with a customer satisfaction rate reaching 87%."

Multi-faceted Customer Communication Channels



Reassuring Service

The Company attaches importance to the whole life cycle of product services, providing customers with full-process service support from pre-sales evaluation, in-sales follow-up to after-sales tracking, and creating exclusive service profiles for customers according to their management priorities and needs to improve their experience.



Supplier Management

Our suppliers are important partners of the Company, and we work together with them to create long-term value and enhance the environmental and social benefits of our products. We focus on sustainable development issues such as environmental protection, labour rights and business ethics as the cornerstone of our cooperation.

Governance Structure

The Company has formulated system documents such as Procurement Management System, Supplier Management Control Procedures and SolarSpace Partners Code of Conduct to effectively control the suppliers. Through the processes of supplier development, supplier audit, supplier management and supplier evaluation, the Company ensures that the quality, technology, cost and delivery (including safety) of suppliers can meet the needs of the Company in the long term. The Company also conveys its ethical and legal code of conduct to suppliers, and complies with the standards of social responsibility, environmental protection, business integrity and anti-corruption, etc. In this way, the Company continually optimizes the performance of suppliers' responsibility, and takes the initiative to carry out sustainable actions with suppliers.

Risk Management

The Company implements multi-faceted management of suppliers to firmly control supply chain risks. The Company has formulated the SolarSpace Partners Code of Conduct, the Supplier Environmental, Occupational, Health and Safety Agreement and the Supplier Trade Safety Commitment, which clearly define the requirements on social and environmental risk management for suppliers, and require qualified suppliers with whom it does business to sign the Confirmation Letter of Receipt of Partner Code of Conduct, the Supplier Environmental, Occupational, Health and Safety Agreement and the Supplier Trade Safety Commitment. The Company conducts qualification audits and on-site audits for new suppliers, determines qualified suppliers according to the audit rating and adds them to the Qualified Supplier List. In case of significant changes or anomalies in suppliers, the Company evaluates and verifies them according to the level of the changes, and carries out anomaly control of suppliers through the Raw Material Anomaly Management Provisions. The Company classifies the suppliers into A, B, C categories and conducts evaluations on a regular basis, takes corresponding incentive or improvement measures for suppliers according to the rating, and conducts on-site audits in accordance with the audit plan every year.

The Company effectively controls the job responsibilities and authority, application, approval, requisitioning, delivery, inspection and warehousing, and reconciliation and requisitioning of materials purchased by the Company through the Procurement Management System; organizes self-assessment of suppliers with whom the Company has business dealings in respect of safety and the environment, and provides continuous counselling to high-risk suppliers to mitigate risks, carries out training for suppliers, advocates good practices in social and environmental risk management, carries out responsible mineral due diligence and management, and promotes suppliers to carry out low-carbon and environmental protection projects. The Company plans to establish an ESG risk mechanism to improve ESG risk management, and conduct regular audits and ratings of suppliers in terms of environmental protection, occupational health, labour rights and business ethics, and conduct rating management based on the rating.

Management Measures and Progress

The Company continues to work closely with its supplier partners, conducts regular on-site audits and provides counselling for improvement, improves supplier quality through daily counselling, holds annual exchanges with key suppliers, organizes annual supplier evaluations, and awards outstanding suppliers. Furthermore, the company actively engages in responsible minerals management, drives continuous improvement of suppliers, and proactively initiates sustainable actions with its upstream suppliers.

Audit and Improvement

The Company combines the introduction conditions and qualification audit results of suppliers to conduct on-site audits in the areas of quality system, design control, procurement management, process management, finished product shipment, customer service, safety and environmental protection, etc. This process identifies the potential risks and opportunities for improvement to ensure the continuous and stable supply of suppliers. Suppliers are further guided and empowered through evaluations, improvement coaching, and capacity-building training. These efforts is to drive enhancements in supplier performance. The Company plans to incorporate ESG into on-site auditing projects, investigating suppliers' ESG practice through questionnaires, promoting the concept of sustainable supply chain development through online SA8000 empowerment training and offline ESG audit counselling, driving suppliers to carry out ESG management so as to establish a green and responsible supply chain.

Supplier category	Suppliers		Suppliers of Class A Materials		Supplier of Class B Materials	
	Number of Completions	Achievement Rate	Number of Completions	Achievement Rate	Number of Completions	Achievement Rate
Signing of the SolarSpace Partners Code of Conduct	88	94.23%	49	94.23%	31	93.94%
Completion of training on the SolarSpace Partners Code of Conduct	88	94.23%	49	94.23%	31	93.94%
On-site Audit	80	100%	55	100%	18	100%

During the reporting period, the Company provided a total of 27 rounds of counselling sessions on supplier health and safety improvement to grasp the risk management of suppliers. It has maintained the stability of material supply and services in the supply chain, and effectively enhanced the management level of suppliers in respect of health and safety.

Main Material Procurement Layout

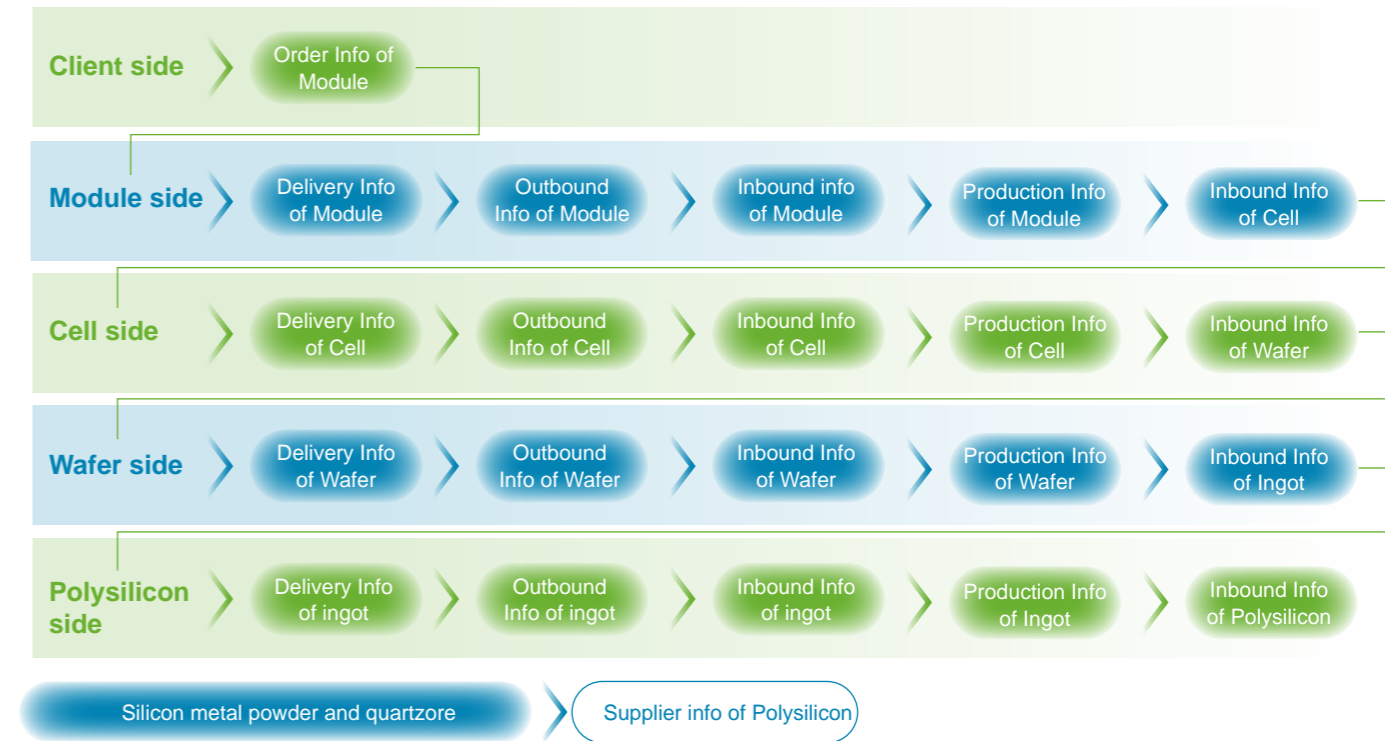
The Company has formulated complete procurement management actions for major materials, and has continued to cooperate with suppliers in five key areas, namely, supplier distribution, diversified sources of materials, quality control, local procurement and responsible operation. The Company sets quantitative targets for the annual development of new suppliers, provides diversified sources of raw materials, supports production and quality improvement counselling for raw material suppliers in the province, and, in accordance with the company's supplier standards, guides the sustainable development of suppliers. Additionally, the company collaborates with suppliers to promote the research and development of advanced materials, process innovation, and quality improvements,, thereby continually enhancing the resilience of the supply chain and consistently generating value through the circular economy.

Main Materials Measures	Silicon Chip	Slurry	Glass	Adhesive Film
Key Suppliers	8	8	3	4
Multifarious sources	14	10	6	8
Quality Control	15	15	6	3
Local Procurement	7	7	2	4
Responsible Operation	13	14	4	3

Traceability Management

To ensure the effective management and use of materials, the Company carries out material traceability management, tracking the flow of the Company's materials through a digital traceability system. Through the traceability management, the Company is able to monitor the source, flow, status and quantity of materials in real time, ensuring that every step from the supplier to the final product can be traced and verified. This approach enhances production efficiency, safeguards product quality, and, when necessary, facilitates rapid identification of problem origins, thereby ensuring compliance throughout the entire product manufacturing process.

Logic of Traceability Information



Responsible Minerals Management

Conflict minerals originating from the Democratic Republic of the Congo (DRC), or neighbouring countries/regions can be a source of funding for armed groups, infringing upon human rights and damaging the environment, posing a risk of fueling further conflicts.

The Company endorses the procurement of conflict-free raw materials to fulfil the social and ethical principles of humanism and human dignity. At the same time, the Company implements responsible mineral management and requires suppliers to purchase conflict-free raw materials. During the reporting period, the Company carried out responsible mineral due diligence on the upstream of four overseas wafer suppliers, tracing the origin of minerals to ensure that the suppliers complied with the Conflict Minerals Management Policy.

05

Labour Relations, Health and Safety

The Company is committed to creating an open management model, upholding diversity and inclusion, attracting and retaining talent from different backgrounds and professions. We offer competitive salaries and benefits, as well as a continuous learning environment and a safe and comfortable workplace, with the aim to become a company that employees are proud to be a part of.

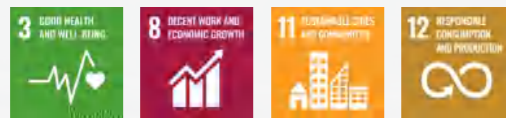
Talent Recruitment and Retention



Talent Development



Health and Safety



Talent Recruitment and Retention

Employees are the cornerstone of the Company's sustainable development. The Company provides its employees with market-competitive salary packages, protects labour rights, builds a comprehensive welfare system, and provides employees with a good working environment, thereby increasing employee satisfaction and employee stability to support the Company's sustainable development.

Governance Structure

The Company's Human Resources Department is responsible for executing the Company's talent planning, recruitment and retention strategies, setting annual human resources programme in accordance with the Company's business and development plans, and ensuring that the programme is aligned with corporate strategy to support the achievement of the Company's performance objectives.

At the same time, the Company has formulated the Recruitment Management System, the Welfare Management System, the Compensation Management System, the Performance Management System, the Promotion Management System, the Internal Lecturer Management System, and the Training Management System, etc., which regulate the workflow related to talent attraction and retention.

Management Measures and Progress

The Company adheres to the strategy of diversified talents, strengthens the construction of talent team, establishes the mechanism for the introduction of external excellent talents and the training of internal talents, and correspondingly supports the market-oriented salary, performance and incentive mechanism, provides the Company's talents with fair and reasonable promotion channels and superior welfare benefits, strengthens the construction of the Company's talent echelon, optimizes the structure of the staff continuously, and meets the long-term development needs of the Company's various business segments.

Compliance Employment

The Company strictly abides by the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China and other relevant laws and regulations, as well as the labour standards of the country where it is located. At the same time, the Company refers to relevant international norms, such as the conventions of the International Labour Organization, to safeguard the legitimate rights and interests of its employees in terms of labour human rights and employment relations.

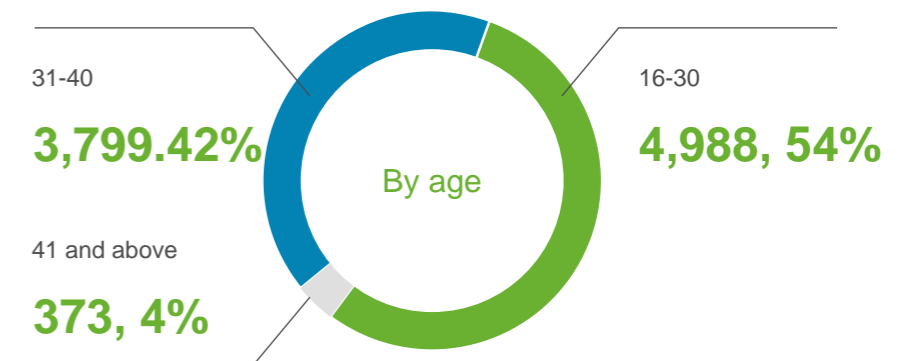
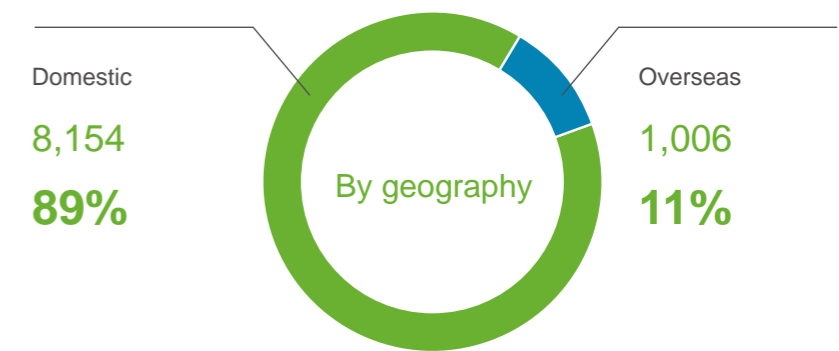
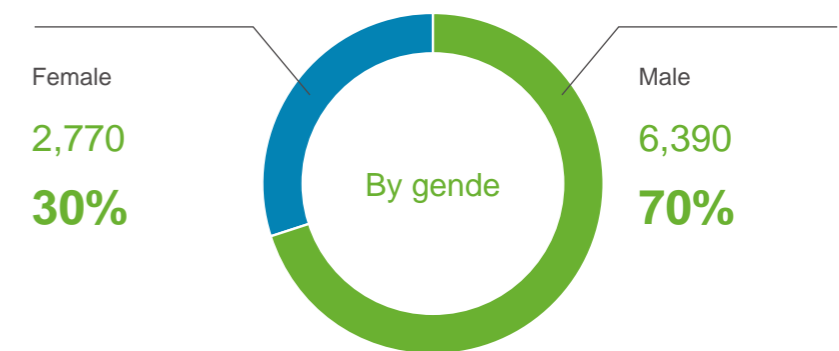
The Company respects and supports internationally accepted human rights norms, adheres to compliance and equal employment, and resolutely eliminates the occurrence of child labour and forced labour. The Company firmly opposes discrimination, harassment and other insulting behaviours in its own operations and management, provides employees with a safe and healthy workplace, and offers them diverse learning and career development opportunities.

In 2023, there were no incidents of illegal employment or violation of labour human rights in the Company.

Diversity and Inclusion

The Company has business all over the world, fully respects the individual differences of employees, attaches importance to the construction of multi-culture, and is committed to creating an open, equal, communal and friendly working atmosphere. The Company has formulated a diversified talent recruitment strategy, which not only attracts domestic talents, but also provides employment opportunities for people of different countries, nationalities, ages and backgrounds overseas.

The Company continues to expand its diverse talent pool, with a total of 1,006 foreign employees during the reporting period, accounting for 11% of the total workforce.



Talent Recruitment

In order to build a professional, diversified and international talent team, the Company focuses on business needs and organizational development, formulates future-oriented talent recruitment plans and recruitment channel construction, continuously increases talent recruitment efforts through social recruitment, internal recommendation, school-enterprise cooperation and other forms of recruitment, expands the talent pool, and ensures the construction of the Company's key talent echelon.



Based on the talent reserve demand for long-term development, the Company has formulated the recruitment and cultivation plan for three types of executive trainees, namely "Xingyu, Xingchen and Xingguang". Through campus recruitment and school-enterprise cooperation, the Company extensively absorbs excellent campus talents. Through "70/20/10 hybrid training", the Company provides talent reserves for its sustainable development.



Based on the Company's globalization strategy, the Company has set up a global talent recruitment plan to build a globalized and sustainable talent supply chain through a variety of talent recruitment initiatives, such as attracting overseas students to return to China and retaining foreign students coming to China.

Equal Communication

In terms of promoting staff integration and communication, the Company actively builds a communication platform, including various communication channels such as email, staff rationalization mailbox, complaint hotline and staff seminars. The Company's labour union regularly organizes communication meetings with employee representatives to jointly discuss remuneration, welfare, health, training and issues of concern to employees, so as to establish a good communication channel between the Company and its employees, and to strongly safeguard the rights and interests of employees.



Employee Benefits and Care

The Company understands that employees are the cornerstone of development. We continue to pay attention to the needs of employees. We have formulated the Welfare Management System to improve the employee welfare system. We actively provide all employees with employee care and welfare in addition to salary, and continuously improve and optimize the existing welfare system based on employee feedback.

The Company provides various employee care and welfare benefits to all staff, including five social insurances and one housing fund, staff canteens and dormitories, childbirth subsidies, cultural and sports activities, festival and birthday gifts, etc.

The Company advocates the work philosophy of "happy work, happy life". It organizes a series of sports competitions (such as basketball, fun games, etc.) and various thematic activities (such as team-building events, collective birthday parties, etc.) to enrich employees' leisure time and enhance their sense of well-being and belonging.

We attach great importance to female employees, and have set up female staff committees in the Group and major production bases, and regularly organize festive activities for female employees. We improve the infrastructure for pregnant and breastfeeding employees, providing mother-and-baby rooms and offering more flexible and humane working arrangements. The Company provides maternity leave, breastfeeding leave and other female employee benefits in accordance with the law, and the rate of female employees returning to work after maternity leave reaches 98%.



Rate of female employees returning to work after maternity leave reaches

98%

Public Welfare

In addition to care of employees, the Company is actively involved in social welfare activities, guiding employees to care for the community and enhance their sense of social belonging.

The chairman of the Company, Long Daqiang, participated in the signing ceremony of the charity fund for the community in the economic development zone and the preparatory launch ceremony of the "99 Charity Day" as the head of a caring enterprise. He donated 100,000 yuan in charity funds for the "99 Charity Day" to support social relief and assistance projects, promote common prosperity, and foster the vigorous development of public welfare and charity undertakings.



The Signing Ceremony for the Charity Fund of the Community in the Town/Street of the Economic Development Zone and the Preparatory Launch Event of the "99 Charity Day"

In addition, the Company also took the initiative to participate in the Spring Festival condolences Xuzhuang public welfare activities under the theme of "Charity Escorts, Love Overflows in the Economic Development Zone". During the approach of the Spring Festival, it not only sent holiday greetings to the needy in the community, but also brought them winter necessities such as quilts, milk, and cooking oil, conveying the warmth and care of society.



Spring Festival Sympathy Visit at Xuzhuang

Talent Development

The Company understands the importance of employee career development. We are committed to creating a comprehensive employee growth system. We provide our employees with a wealth of training resources designed to help them achieve their personal learning and career development goals. Through this mechanism, we encourage our employees to closely integrate their personal goals with the Company's long-term objectives, thus realizing their personal values while contributing to the development of the Company and creating a strong synergy effect.

Governance Structure

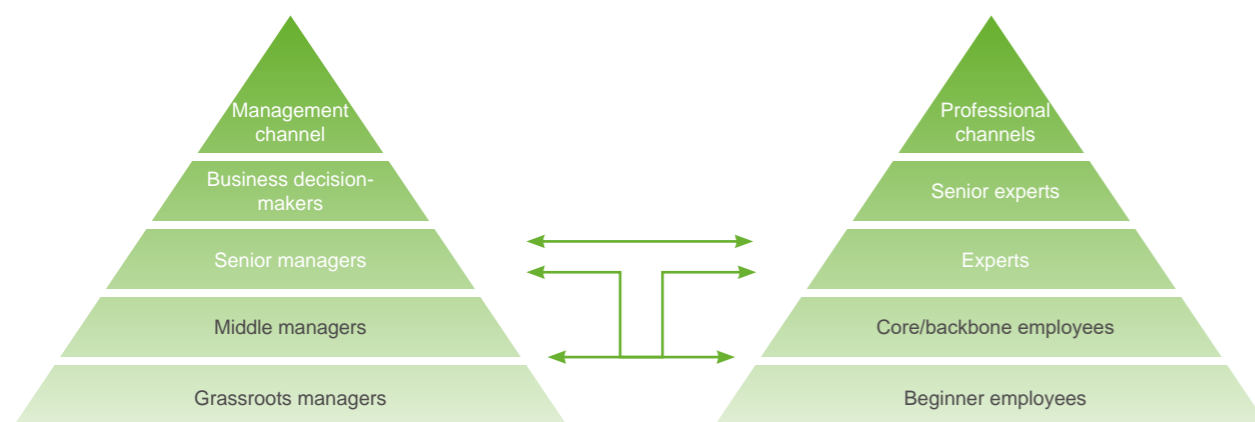
In order to establish a standardized talent training system, help employees to be competent in their positions, improve their performance, achieve common development of the Company and employees, promote the precipitation and dissemination of knowledge and experience, create an atmosphere of willingness to share, promote the continuous emergence of excellent lecturers, and support the Company's talent strategy and talent training work, the Company has formulated supportive management documents such as the Training Management System, the Internal Lecturer Management System. The Human Resources Department is responsible for the daily management and implementation of these documents.

Management Measures and Progress

The Company is committed to fostering a shared growth trajectory for both its employees and the enterprise itself. By implementing performance appraisals, education and training programs, establishing a shared knowledge repository, and cultivating internal instructors, the Company endeavors to address the specific developmental needs of its workforce. This approach propels both employees and the company forward on a collaborative path of advancement and growth.

Talent Development Pathway

The Company has set up a dual-channel career development path for professional and managerial growth, clearly defined the qualification requirements and standards for the development of each grade, which strongly pulls the ability of employees to improve and create value. At the same time, based on the Company's business development and organizational development, we fully respect and support the career development planning of the employees, and create a scientific, reasonable and transparent promotion mechanism.



Performance Appraisal Optimization

Based on the strategic development requirements, job functions and responsibilities, and comprehensive ability and quality dimensions, the Company sets up differentiated performance appraisals for employees at different levels. We evaluate the value contribution of employees through a scientific approach, conduct regular performance appraisals, and use the appraisal results as the basis for employee promotion, training and development, and salary adjustment, etc. This approach stimulates the enthusiasm of the employees and continuously improves their performance and the effectiveness of the Company.

Sound Incentive Mechanisms

The Company adopts a broad-band remuneration system in accordance with the development stage and external market level, and determines the remuneration level based on the personal value of employees, their performance and the supply and demand of talents. At the same time, the Company follows the principle of "efficiency prioritized, fairness considered, total expenses manageable", and makes flexible adjustments according to changes in the market and the industry, to match the achievement of the Company's business objectives and external market competition.

The Company has also set up an employee shareholding platform as an equity incentive to build up a benefit-sharing cooperation mechanism to fully mobilize employees. This fully motivates their creativity and maintain the stability of core and backbone employees, thus enhancing the Company's competitiveness.

Career Life Cycle Development Programme

The Company advocates the learning culture of "rapid learning and continuous iteration", and carries out targeted projects for different groups of people and capacity building needs based on business needs and staff development, and gradually builds an experienced training team to effectively support the training operation and create a learning organization. The Company has established a comprehensive course training system. During the reporting period, the average training hours per employee exceeded 24 hours, and the average satisfaction of employee training reached 94 points.

To expedite the integration and skill enhancement of management trainees, the Company employs a structured approach involving pre-entry orientation, concentrated induction training upon joining, mentorship under designated position tutors, and a positioning appraisal. This process facilitates a swift transformation from student to employee roles, enabling them to grasp core job competencies and seamlessly integrate as a reserve force for the Company's core team.

The Company attaches importance to the construction of the training system, and has revised and improved the Training Management System and Internal Lecturer Management System. The Company integrates its internal trainer resources, establishes the "Gold Medal Lecturer" cultivation programme, empowers the internal training lecturer team and helps them to carry out the courses according to their own job experience.

The Company attaches importance to the improvement of employees' professional and technical capabilities. According to the job requirements and competency requirements of employees, the Company integrates external specialized resources with internally consolidated experiential knowledge extraction. It has conducted various training programs to elevate professional competencies, covering topics such as operational skill enhancement, business knowledge acquisition, and external market insights sharing, thereby facilitating continuous specialization and expertise depth for its employees.



Average training hours per employee of the Company exceeded

24 hours

Average satisfaction of employee training reached

94 points

Health and Safety

Employee health and safety are paramount concerns for the employees and constitute a crucial manifestation of the Company's commitment to fulfilling its social responsibilities. The Company adheres to the safety policy of "safety first, prevention foremost", undertakes its responsibility for workplace safety, thereby fostering a healthy and secure working environment. This not only safeguards the lives and health of employees but also ensures the smooth and orderly operation of daily operations and business activities.



Governance Structure

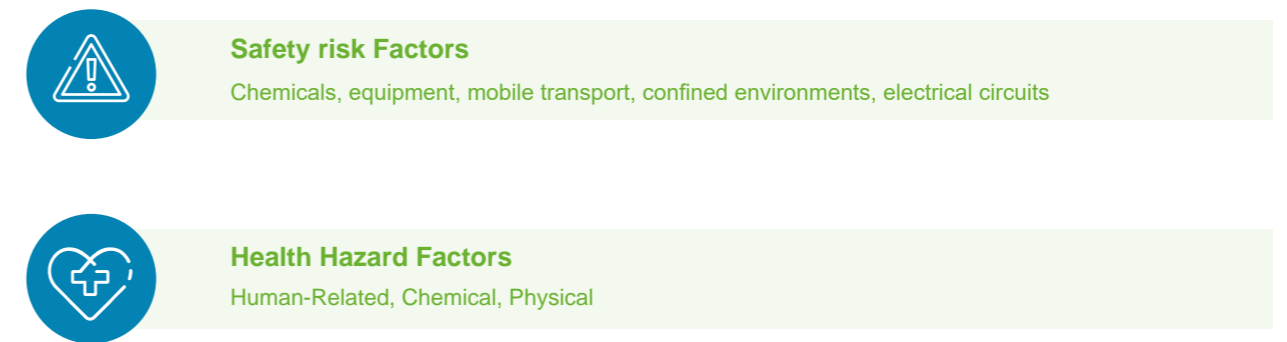
The Company abides by the requirements of laws and regulations such as Work Safety Law of the People's Republic of China, Law of the People's Republic of China on Prevention and Control of Occupational Diseases, Labour Law of the People's Republic of China, etc., and with reference to the ISO 45001 Occupational Health and Safety Management System, it has formulated a series of safety systems, such as Work Safety Objective Management System, Work Safety Responsibility System Formulation, Communication, Training, Evaluation, Revision and Evaluation Management System, EHS Education and Training Management System, Workplace Occupational Hazardous Factor Monitoring and Detection and Evaluation Management System, etc. We have incorporated production safety into the Company's business target management and assessment, and implemented the assessment to the individual through the decomposition of each department.

The Company's EHS Manager reports directly to the Company's General Manager. The EHS Manager is responsible for setting technical standards for safety and environmental workflows, leading the department in assessing, prioritizing and managing safety and environmental work across the Company, overseeing the status of the Company's safety and occupational health compliance and activities, and holding regular meetings with the relevant regulatory authorities to keep abreast of legal and regulatory developments and report on the Company's progress.

At the same time, the Company has set up a Safety Production Committee, which consists of the chairman, the general manager, the head of the responsible department, the head of the associate department, the safety administrator, and the employee representatives. The committee convenes quarterly to consider, coordinate, and promote the health and safety matters of the whole company. Representatives from units with interconnected businesses attend to report on the execution status of their respective departments' operations. The employee representatives have the authority within the Safety Committee to request explanations from units regarding the promotion and implementation status of health and safety measures.

Risk Management

In order to identify the sources of danger in the Company's activities and services related to products, evaluate their severity and determine the control measures to achieve effective prevention, the Company has formulated the Procedure for Safety Risk Identification and Control and System of Hidden Trouble Detection and Remediation. The EHS department guides the Company's hidden trouble detection work, with the principal responsible person personally organizing the formulation of the annual hazard identification and risk assessment work plan. Based on the Classification and Coding of Hazards and Harmful Factors in the Production Processes (GB/T13861) and Classification of Enterprise Employee Injuries and Accidents (GB6441), the Company comprehensively and systematically identifies hazards focusing on unsafe acts by individuals, unsafe conditions of objects, adverse environmental factors, and management inadequacies. Through investigation and analysis, the types of hazardous sources and safety risk levels are determined, risk control measures are formulated. The following occupational health and safety risks have been determined as a result of this process:



The Company adopts quantitative assessment methods such as operating conditions hazard analysis (LEC) or risk matrix method (LS), in conjunction with pertinent standards and its actual risk scenarios, to evaluate and calculate the inherent risk of each hazardous factor. Based on this assessment, the Company determines the risk level accordingly, carries out hierarchical control, establishes safety risk lists and files, and formulates countermeasures. The EHS department is responsible for organizing the departments to check and analyze the implementation of risk control measures and the effectiveness of the control measures, and adjust and improve the control measures. The EHS Department is responsible for organizing all departments to check and analyze the implementation of risk control measures and their effects, and to adjust and improve the control measures. At the same time, each unit of the Company reviews the operation of the hidden trouble detection and management in due course and on a regular basis to ensure its ongoing appropriateness, adequacy and effectiveness.



Management Measures and Progress

The Company embeds a people-centred safety culture, constructs a safe working environment to promote employees' physical and mental health, achieves work-life balance. In collaboration with stakeholders, the Company jointly endeavors to reduce health and safety risks in the workplace. During the reporting period, five of the Company's production bases that met certification criteria obtained ISO 45001 Occupational Health and Safety Management System certification, with a 100% certification coverage rate.

Safety Risk Management

The Company tracks the effectiveness of safety risk control in accordance with the work-related injury indicators recommended by the Global Reporting Initiative (GRI). During the reporting period, the Company invested RMB 42,188,100 yuan in work safety and occupational health, and all types of safety risk factors were effectively controlled, with no major injuries or fatalities. The types of recordable work injuries, mainly minor ones, included crush and pinch injuries. In response to these common types of accidents, the Company has implemented corrective measures such as retrofitting safety interlocking devices and increasing employee training on safe operation.

Indicators	Incident(s)	Lost Man-hour(s)	Probability of Occurrence Per 200,000 Working Hours
Serious consequences of work injuries (death excluded)	0	0	0
Serious consequences of work injuries (death excluded)	0	0	0
Recordable injuries at work	23	5,520	0.1477

Type of work injury	Male	Female
Clip/curl	9	3
Tumble	4	0
Punching/being punched	2	1
Cut/abrasion/scratch/puncture	2	0
Human-induced injury	1	0
Other	1	0

Note: Probability of occurrence per 200,000 man-hours = (number of incidents/total man-hours of all employees) *200,000

Safety factor	Associated risks	Countermeasures
<p>Chemicals</p>	Safety hazards caused by improper handling during transport, storage and use of chemicals	<ul style="list-style-type: none"> All chemicals are subject to a safety review process prior to entry into the plant. In 2023, one new chemical, diborane, was evaluated for introduction, with no accidents resulting from the use of new chemicals. Conduct of security training Assessment and implementation of security measures Assess and distribute of safety and protective equipment Develop and conduct drills of security emergency plans
<p>Appliances</p>	Safety hazards caused by improper equipment operation or equipment failure	During the reporting period and there were no accidents resulting from the use of new machines.
<p>Moving and transporting</p>	Falls from height and lifting safety accidents caused by irregularities in operation during work at height and lifting of machines.	<ul style="list-style-type: none"> Formulate Safety Risk Identification and Control Procedures, Forklift Management System, Warehouse Transportation Operation Procedures, Electric Handling Vehicle Operation Specifications and Flatbed Truck Management System. Organize safety education for personnel working at height and wear protective equipment as required. Carry out specialized work at height (electricity or gas connection, etc.) by professionals or holders of professional certificates. Regularly maintain handling tools and check the condition of each piece of handling equipment before use. Plan and demarcate motorways and non-motorized lanes and their parking areas Set up speed and height limit signs
<p>Limited space</p>	Safety hazards due to ventilation, low temperatures, high temperatures, etc.	<ul style="list-style-type: none"> Establish and improve the production safety responsibility system, formulate a perfect limited space safety management system and operating procedures and supervise their implementation. Maintain limited space daily, regularly conduct self-inspection, regularly check associated equipment such as toxic gas concentration detectors and alarm instruments, keep records Hazardous source areas are separated from other areas as far as possible. Operators strictly implement safety and technical operating procedures and conduct regular testing, and forced ventilation is carried out in limited spaces
<p>Circuits</p>	Safety hazards caused by improper use of electricity or faulty circuits, etc.	<ul style="list-style-type: none"> The factory's electrical system is safeguarded with both grounding and residual current protection. Periodic testing of earthing systems, insulation resistance testing Annual training on electricity safety for operational staff Regular infrared thermography checks are carried out to promptly identify and resolve any abnormal power consumption issues.

Health Hazard Management

The Company continues to build a safe and healthy working environment by repeatedly reviewing work projects and identifying the five major hazards of chemical, physical, human factors, and social/psychological hazards that may lead to occupational diseases in accordance with risk identification methods, and implementing corresponding preventive measures.

Health hazard factor	Associated risks	Countermeasures
Human-induced	Ergonomically related musculoskeletal injuries such as <ul style="list-style-type: none"> Sprains caused by incorrect lifting positions. Arthritis or joint pain caused by sitting and standing for long periods of time 	<ul style="list-style-type: none"> Procurement of automated equipment to reduce manual heavy lifting and replace manual labour with machinery. Organize safety education training for employees engaged in heavy manual labour. Allow employees to take intermittent breaks during operations to relieve physical fatigue from prolonged sitting, standing and prolonged visual inspection
Chemical	Effects on human health due to long-term exposure to chemicals such as <ul style="list-style-type: none"> skin allergy Respiratory diseases 	<ul style="list-style-type: none"> Establishment of a system for reviewing supplier chemical safety data sheets and real-time access to safety data sheet information for employees Regularly inspect chemical manual work areas in the laboratory to confirm that there is no risk of chemical exposure. Regularly check the configuration, issuance and wearing of labour protective equipment for employees in positions exposed to chemicals, and confirm that there is no risk of exposure. Transferring employees who are not suited to the work of the position in question
Physical	Effects on human health due to physical exposures such as glare, noise, dust, radiation, etc.	<ul style="list-style-type: none"> High-automation, enclosed, low-noise, and low-vibration equipment is adopted, with anti-vibration measures installed during equipment setup to fundamentally reduce noise intensity. For positions potentially exposed to noise and dust, personal protective equipment is issued, and regular checks are conducted to ensure proper usage by employees. Annual occupational health examinations are enforced, with work assignments following successful clearance. Pre-placement occupational health checks are implemented. We prohibit the wearing of pacemakers to engage in related machine operations
Social/psychological	Work environment, e.g., overwork	Reasonably arrange work to control employees' workload and rest periods.

During the reporting period, in order to take care of the physical and mental health of its employees, the Company carried out a rich variety of health care activities and provided a supportive environment. These efforts aimed to help its employees recognize and improve their physical and mental health, enhance their work efficiency and quality of life, and at the same time strengthen their sense of identity and loyalty towards the Company.

On 8th March 2023, the Administration Department organized the 38th Day activity themed the "Queen's Day" to convey respect, appreciation and care for female compatriots, with staff dressed in doll costumes distributing gifts and sending blessings.



From 18th to 19th May 2023, the Company held the Staff Fun Games with the theme of "Unity, Friendship, Love, Fighting and Winning", in which a total of 560 people participated to enhance the physical quality of the staff and strengthen the team's centripetal force.



From 21st to 25th August 2023, in order to eliminate the summer heat and send summer and autumn, the Company held a watermelon eating contest in the canteens of all bases, so that the staff could feel the Company's unique autumn care in the cheerful activities.



The Company has built a fitness room, basketball court, table tennis hall, running track, football field and other sports venues, encouraging employees to participate in fitness activities to enhance physical fitness.



Safety Culture Building

Over the years, the Company has been upholding a people-oriented safety culture, and has passed the ISO45001 Occupational Health and Safety Management System Certification. Managers at all levels have the obligation and responsibility to promote occupational health and safety. Through the management system system and norms, the Company ensures that employees comply with and implement the system, while continually examining safety factors related to personnel, the environment, and behavior. It continuously optimizes the management mechanism, with persistent training and publicity, to implement the management objectives of occupational health and safety.

Specialized training

We strictly implement the "three positions" personnel with a permit and enterprise workers first training system. Throughout the year, various training sessions were organized for these three key positions, totaling **7,109** participants. This included **652** participants in occupational health training, **387** in management training, **652** in safety operation procedure training, **768** in fire safety training, **743** in special equipment and special operations training, **734** in electrical safety training, **239** in skill assessment and qualification training, and **2,934** in other forms of training. All practitioners are certified in accordance with national requirements.

New Employee Training

In 2023, the coverage rate of the "Three-Level Safety Education" for new employees reached **100%**.

All-staff training

A total of **317** training sessions were conducted, including Safety Target Responsibility System, Job Safety Operating Procedures, Typical Accident Cases Warning Education, Fire Safety Knowledge, Work Safety Laws and Regulations, Occupational Health Training, Electricity Safety Knowledge, Pre-Holiday Safety Education, Special Operation Safety Training, etc., with a total number of **125,892** person-times.

Emergency drill

A total of **372** exercises with **15,936** participants were conducted.

Safety knowledge contest

In June 2023, the leading group of the campaign organized a safety knowledge competition for all staff, which further enabled the training and dissemination of knowledge on safety in the workplace

Contractor Safety Management

During the Company's production operations, it hires contractors to carry out plant construction, equipment modification and equipment and facilities inspection and maintenance services. If a production safety accident occurs during the contractors' provision of services, it may not only cause injuries to the contractors themselves, but also often brings disastrous consequences to the Company and the neighbouring communities.

In accordance with the Work Safety Law of the People's Republic of China, Circular of the State Council on Further Strengthening Work Safety of Enterprises and Basic Standard of Work Safety Standardisation (GBT 33000), EHS department has formulated Contractor Management Procedures, Contractor Management Manual, "Three Simultaneous" Management System for Safety Facilities of Construction Projects and other management systems to put forward specific requirements for contractor management, including strict examination of safety qualifications and professional and technical capabilities of contractors; clarification of access to plant areas, hazardous work, electrical work, chemical safety, material handling, and so on. Management System and other management systems put forward specific requirements for the management of contractors, including strict review of the safety qualifications and professional and technical capabilities of contractors to reduce the project risk; clear access to the plant, hazardous work, electrical work, chemical safety, material handling and storage, emergency response and other construction safety matters, as well as safety and health in the workplace. These measures aim to clarify the safety management responsibilities of both parties, enhance management efficiency and work quality, and ensure the safety and health of employees and stakeholders.

Before the contractor team enters the work site, we will also educate them on fire safety, protection of equipment and facilities, and social security, so as to enhance the overall safety awareness of the contractor team, prevent accidents, and protect the safety of personnel. In addition, contractors are required to clean the construction site, arrange waste materials at designated locations, collect or bag waste and rubbish, and effectively control dust to prevent pollution of the environment after the close of work each day. These practices contribute to a comfortable and tidy living environment for all.



Project Construction Guidance Training

06

Low Carbon & Eco-friendly Practices

The Company adheres to the philosophy of coexisting and prospering in harmony with Earth's ecosystems, and actively applies innovative environmental protection technologies to contribute to the green development of the industry by practicing a sustainable operation mode in all aspects through energy management, water resource management, resource recycling and pollution prevention.

Resource utilization



Pollution prevention and control



Resource Utilization

The Company actively fulfills its own social responsibilities. Through continuous improvement of production and operation and other modes, we enhance the efficiency of our resource utilization and promote the sustainable development of the environment and society.

Governance Structure

The Company attaches great importance to energy management work. It has established an Energy Management Leadership Team, headed by the General Manager and comprised of deputy leaders who are Plant Managers, with department managers as members. Additionally, there are Energy Management Working Groups in each plant, led by the respective Plant Managers, assisted by department managers as deputy leaders, and comprising energy management staff from various departments and workshops. The EHS department oversees daily operations, driving the company's energy management endeavors, ensuring rational utilization of resources, and minimizing resource consumption.

Management Measures and Progress

Energy Management

The energy consumed in the company's business operations primarily includes indirect energy such as electricity and steam, and direct energy such as gas, natural gas, diesel and unleaded petrol. During the reporting period, the Company consumed a total of 12,893,712.97 tonnes of standard coal for all types of energy, of which electricity accounted for 99.74% of the total consumption.

In terms of business type, the electricity consumption of the three domestic cell production bases accounts for 96.79% of the Company's total electricity consumption, the electricity consumption of the two overseas cell production bases accounts for 1.3%, and the three domestic and overseas module production bases accounts for 1.91%. The cell production process includes several power-consuming processes, such as fluffing, diffusion, pre-oxygenation, alkali blasting, post-oxygenation, coating, screen printing, etc. In order to reduce energy usage, the Company promote process improvement, equipment upgrading, and energy consumption structure adjustment of the cell production bases. It also optimizes energy management in each production base, and encourages all employees to make concerted efforts through the collection of energy-saving proposals, so as to translate the commitment to energy saving and emissions reduction into practical actions.



Company consumed a total of

12,893,712.97

tonnes of standard coal for all types of energy

Which electricity accounted for

99.74%

of the total consumption

SolarSpace Energy Consumption in 2023

Type of Energy		Actual Consumption	Standard coal Equivalent ⁸ (tonnes of standard coal)
Direct Energy	Gas (Standard cubic metre)	2,400.00	1.23
	Natural Gas (Standard cubic metre)	175,441.26	233.34
	Diesel (litres)	21,731.40	26.72
	Unleaded petrol (litres)	48,307.00	65.12
	Total direct energy consumption	--	326.41
Indirect energy	Saturated steam (tonnes)	82,106.00	7,532.17
	Superheated steam (tonnes)	278,000.00	25,454.53
	Electricity consumption (kwh)	1,580,543,142.00	12,860,399.85
	Total indirect energy consumption	--	12,893,386.56
Total energy consumption (tonnes of standard coal)		--	12,893,712.97
Green energy	PV power generation (kwh)	7,146,712.00	--
	Green electricity as a share of total electricity consumed	0.45%	--

⁸For information on the scope of data statistics, calculation formulae and coefficients, please refer to Appendix - Notes on the calculation of greenhouse gas emission and comprehensive energy consumption data.

SolarSpace energy saving and emission reduction initiatives

Awareness-raising on energy conservation

- We promote awareness of power saving in daily meeting and post energy saving signs to enhance staff awareness of energy saving.
- We carry out activities to encourage employees to carry out technical and technological improvements by means of material incentives, and set performance KPIs for unit consumption in the performance of each relevant person in charge, and carry out appraisals on a monthly basis.

Energy Management Optimization

- The Company has introduced an energy management system to achieve instant report monitoring and light health management, and uses an instant notification system to instantly control on-site energy use and optimize transport routes.
- The plant carries out daily inspections of power consumption and energy use in each distribution room, auxiliary room, workshop mezzanine and other areas, focusing on the use of transformers and other distribution equipment, chillers, nitrogen generators, air compressors and other energy use.
- The factory and office areas maintain reasonable spacing and window-to-wall ratios, making full use of natural light.
- The air conditioning box is set up with an electric control valve to regulate the flow size to achieve the effect of temperature and humidity control.

Adjustment of energy consumption structure: Domestic cell production base

- The production of solar cells requires the consumption of a large amount of electricity. To control the cost of electricity and help the Company's overall control of greenhouse gas emissions, the Company has progressively implemented photovoltaic power generation projects at its three major cell production bases in China. Among them, Suqian base(C) and Tongshan base(C) have installed photovoltaic power generation system in the main factory building, auxiliary house surface and carport top construction solar photovoltaic roof. During the reporting period, the photovoltaic power generation of Suqian base(C) accounted for 0.82% of the total electricity consumption, and Tongshan base(C) accounted for 0.30%. In addition, Tongshan base(C) completed the laying of roof photovoltaic during the reporting period and put it into use in 2024.

Investment in equipment upgrades

- All purchased equipment is rated at least Grade 2 for energy efficiency, which saves approximately **3%** more energy compared to Grade 3 efficiency equipment.
- LED energy-saving light tubes have been installed, and in auxiliary rooms, fluorescent lights and other energy-efficient lighting fixtures are utilized.
- Heat recovery systems have been added to auxiliary rooms where heat is required, enabling the utilization of residual heat from the workshop to reduce the need for steam.

Process Improvement: Jiangsu Longheng

- Coating equipment generates a large amount of heat; therefore, exhaust ducts were fabricated to expel this heat outside the workshop, improving the ambient temperature in the coating area and reducing air-conditioning power consumption by **5,692** kwh per day.
- An additional dust removal tower was installed in the silane exhaust to treat waste gases, saving electricity consumption of **2400** kwh per day.
- The compressed air system for the wastewater treatment was revamped, redirecting compressed air from the air compressor room in phase I to the wastewater station in phase I, reducing electricity consumption by **600** kwh per day.
- By converting the PCW cooling tower's operation from fixed frequency to variable frequency, the daily electricity consumption of the PCW cooling tower pumps was reduced by **3,171** kwh.

Zhongrun Chuzhou

- During winter, when tap water temperatures are low and demand high, it replaces cooling water to meet the cooling needs of the PCW and CDA systems, decreasing pump electricity consumption by **270,000** kwh.

Zhongrun Laos

- The steam humidification method in the screen printing area was changed from steam to a two-fluid dry mist system, reducing steam usage by **2,131** tonnes.
- By operating the roof exhaust fans at a lower frequency, annual electricity savings reached **2.259** million kwh.

Longqi, Cambodia

- Under the premise of ensuring the cleanliness of the workshop, the positive pressure of the workshop is reduced, and the annual power saving is **2,365,000**kwh.
- In the Phase I pure water system of the Lao cell plant, a "two sets of operation, two sets of shutdowns" rotation scheme for EDI units was implemented, saving energy consumption of **3,100** kwh per day.
- Different sections within the Phase I workshop of the Lao cell plant are controlled based on varying cleanliness requirements, reducing FFU operating frequency and saving energy consumption of **1900** kwh per day.
- The ice water supply of the Phase I chiller in the Lao cell plant is flexibly adjusted according to external environmental changes, achieving daily energy savings of **10,000** kwh.
- The air compressor of the nitrogen generator is converted to frequency converter operation, and the running speed of the compressor is adjusted according to the actual use situation, which saves about **2,000**kwh of energy consumption per day.

Water Resource Management

The Company complies with the Water Law of the People's Republic of China, the Law of the People's Republic of China on Prevention and Control of Water Pollution and other laws and regulations, establishes a perfect water resources management system and ensures the rational utilization and effective protection of water resources. The water for its daily production and operation is sourced from municipal water pipeline networks, and the main water sources for some overseas production bases are surface water and groundwater. During the reporting period, the Company obtained a total of 17,445,055 tonnes of water through the above water sources, with tap water accounting for 98.24%.

In terms of business type, the water consumption of the three domestic cell production bases accounted for 97.48% of the Company's total water consumption, the water consumption of the two overseas cell production bases accounted for 2.35%, and the three domestic and overseas module production bases accounted for 0.17%. The cell production process involves more water consumption links, such as fluffing, alkali casting, quartz boat room, graphite boat room, etc. To improve the water consumption efficiency of each production and operational process, the Company promotes the upgrading of cell production process, optimizes the process formula, reduces the amount of chemicals, builds water reuse system to improve the reuse rate of production wastewater. At the same time, all cell production bases have installed sub-water meters for fine control of water consumption, and comprehensively implement water-saving practices through facility upgrades, awareness campaigns, and other initiatives.



Company obtained a total of

17,445,055

tonnes of water through the above water sources

With tap water accounting for

98.24%

SolarSpace Water Use in 2023

Classification by Use	Category	Amount
Water Withdrawal ⁹	Piped water	17,138,655
	Rainwater	300,000
	Underground water	6,400
Total Water Withdrawn		17,445,055
Reuse	Wastewater reuse	616,000
Sewerage	Production wastewater	9,637,110
Water Consumption¹⁰		7,807,945

⁹The water withdrawal of Cambodia base comes from saved rainwater and underground water. The rainwater intake is estimated based on the volume of the cistern, and the underground water intake is estimated based on the daily intake and the actual number of days of intake. The relevant intake practices are in accordance with the local regulations.

¹⁰Water consumption = total water intake - total water discharge. Part of the Company's domestic wastewater is directly connected to the municipal pipeline network, and there is no record of the amount discharged, so the water consumption disclosed here is the estimated value, and the actual water consumption is lower than the estimated value.

SolarSpace Water Conservation Initiatives

Upgrading of water conservation facilities

- Install water-saving taps and toilets in office and living areas
- Construct reservoirs and rainwater collection lines at the edge of the plant. Recycled water is purified and used for tap water in the plant.
- Install condensate recovery system for air-conditioning tanks, with the recycled condensate water being reused in the cooling towers and the pure water station.

Water use inspection and control

- Conduct daily inspection of the water supply network, water purification station and water equipment to check whether there is any leakage phenomenon; install water meters in the production site to accurately monitor the production of water consumption; regularly check the water meter to analyze the abnormal water consumption; quickly identify the root cause of the problem and take appropriate measures.

Water conservation awareness campaign

- Promote water-saving awareness in daily meetings, carry out water conservation publicity and training, and post water conservation logos and water conservation posters to enhance staff awareness of water conservation.
- Organize activities to encourage employees to carry out technical and technological improvements by means of material incentives, and set performance KPIs for unit consumption in the performance of each relevant person in charge, and carry out appraisals on a monthly basis.

Concentrated water recycling: Tongshan base(C)

- The concentrated ultrafiltration water of the water purification station is reused to the original pool after passing through the sand and carbon filtration system, saving 396,000 tonnes of tap water annually.
- The concentrated water from the EDI (electrodionization) system is recycled back to the first-stage reverse osmosis (RO) system, saving 65,000 tons of tap water per year.

Product Recycling and Packaging Management

PV cells contain a variety of recyclable materials, such as silicon, aluminum and copper. Recycling these materials can effectively reduce the exploitation of natural resources and improve the efficiency of resource utilization. On the other hand, PV cells contain heavy metals such as lead, cadmium, chromium, etc. If not properly handled and recycled, these heavy metals may cause harm to the environment and human health. To promote the sustainable development of the PV industry, the Company utilizes its worldwide logistics network to recycle the cells.

In addition, the Company has jointly launched a packaging material recycling project with silicon wafer suppliers. The overseas bases recycle packaging materials such as pallets, cartons, and foam from suppliers, achieving green recycling of packaging materials, improving their utilization rate, and simultaneously helping the company reduce procurement costs.

Pollution Prevention and Control

The Company complies with environmental protection laws and regulations and industry standards, integrates ecological and environmental protection requirements into the Company's development strategy and governance process. Through environmental technology transformations, improvements in process levels, and other efforts, it strives to reduce waste generated during production, minimize the Company's environmental pollution, and contribute to addressing the escalating global environmental challenges.

Governance Structure

In order to integrate the ecological and environmental protection requirements into the enterprise development strategy and governance process, the Company has effectively fulfilled its environmental protection responsibilities in accordance with the environmental protection laws, regulations, rules, and technical specifications such as Environmental Protection Law of the People's Republic of China, Regulations on the Management of Environmental Protection in Construction Projects, taking into account the degree of impact on the environment by its own production and operation characteristics. In the year of 2023, Solarspace Technology Co., Ltd., Jiangsu Longheng New Energy Co., Ltd., Jiangsu Huaheng New Energy Co., Ltd., Solarspace Technology (Laos) Sole Co., Ltd., Solarspace New Energy (Cambodia) Co., Ltd. passed the ISO14001 environmental management system certification.

The EHS Manager reports to the General Manager of the Company, responsible for setting technical standards for safety and environmental workflows, evaluating, prioritizing and managing safety and environmental work across the Company, overseeing the environmental compliance status and activities of our businesses, and holding regular meetings with regulators to keep abreast of the latest regulatory trends, share company practices, standardize the Company's environmental management practices and actively fulfill our corporate environmental responsibilities.

Risk Management

In order to better respond to the Emergency Response Law of the People's Republic of China and Environmental Protection Law of the People's Republic of China and standardize the emergency management work, the Company formulated the Emergency Response Plan for Environmental Emergencies in accordance with the actual operation situation. The Company has set up a professional environmental emergency response team to carry out the emergency response drills for environmental accidents such as leakage of hazardous chemicals, fire and explosion, and failure of the waste gas treatment facilities, etc., and continuously has improved the emergency response team's ability to deal with environmental emergencies. The Company also revises, updates, and files its environmental accident emergency response plans in accordance with relevant national regulations.

The Company has formulated the Procedures for Identification and Evaluation of Environmental Factors, and annually organizes all departments to assess and analyze environmental risks and opportunities in accordance with the evaluation guidelines, and forms corresponding control measures based on the results of the analysis. During the reporting period, the Company identified 526 environmental risk factors, of which 486 were low-risk and 40 were high-risk, and all risks have been effectively controlled.

Management Measures and Progress

We comply with environmental laws and regulations and other requirements, and endeavour to protect the environment by establishing voluntary management standards. To reduce our environmental burden, we have established and operated an environmental management system to continuously improve and promote the prevention of environmental pollution. During the reporting period, the Company did not have any environmental liability accidents or major irregularities in energy conservation and emission reduction, and the pollutants discharged met the corresponding national and local emission standards.

Control of Air Pollutants

The exhaust gas generated from the Company's production and operation mainly comes from cell manufacturing, module welding, wastewater treatment, kitchen cooking, and other processes, including acid mist exhaust, boron diffusion exhaust, non-methane total hydrocarbons, coating exhaust (particulates, nitrogen oxides, ammonia), graphite boat cleaning exhaust, malodorous gas from wastewater treatment, kitchen fumes, etc. The Company has formulated institutional documents such as the Waste Gas Emission Control Management System, Environmental Protection Facility Operation Management System, Outfall Management Measures and other institutional documents to control the entire waste gas emission process to ensure compliance with the law. Regularly, the Company entrusts qualified third-party testing units to test various types of waste gas emissions to ensure compliance with the law. During the reporting period, the Company's air pollutant emission indicators complied with the relevant regulatory requirements and standards, and there were no illegal emissions.

The Company is committed to reducing air pollutant emissions, and continuously practicing green manufacturing. It utilizes multi-stage treatment technologies such as acid/alkali spraying, bag dust collection, high-temperature oxidation, activated carbon adsorption, and combustion, combined with stainless steel combustion barrels, industrial dust collectors, and oil smoke purifiers to enhance pollutant treatment efficiency. At the same time, the Company actively implements monitoring and management of the total emission volume of pollution control equipment, monitors exhaust stacks with emission concentration baselines that exceed regulatory standards, and uses uninterrupted power systems as electrical assistance to ensure that air pollution control equipment maintains optimal stability throughout the year, achieving source reduction and reducing emission concentrations.

In view of the characteristics of the existing process, in order to avoid the risk of air pollution caused by the process and chemicals, the Company has adopted the exhaust gas treatment programme of Shijing Company, which adopts air treatment equipment such as combustion, washing and dosing, adsorption and other equipment for treatment according to the characteristics of the exhaust gases, and has carried out monthly and quarterly maintenance strictly in accordance with the regulations. During the reporting period, monthly and quarterly maintenance was strictly carried out in accordance with regulations, and old, low-efficiency motors were replaced with more energy-efficient ones. For volatile organic gases, the pressure difference between the front and back of the activated carbon is checked every month, and the activated carbon is dismantled and checked for completeness during the quarter, so as to ensure that the activated carbon removes organic substances with high efficiency and to enhance the treatment efficiency of the pollutant control equipment.

SolarSpace's emissions of air pollutants in 2023



Volatile Organic Compo

12,783.57 kg

Nitrogen oxide

1,700.78 kg

Particulate matter

1,061.07 kg

Sulfide

0.37 kg

In addition, for the pipeline with dust passing through, we regularly measure the pipeline wind speed. Pipelines with substandard wind speed will be plugged and cleaned up, using physical means to remove the dust scale attached to the pipe walls. We regularly check the tightness of the pipeline clamps to prevent the entry of moisture and air from entering and causing scale deposits and blockages. Given the strong adhesion characteristics of volatile organic compounds (VOCs), we coordinate with the workshop to periodically maintain the pipelines, drain oil from the oil collection grooves, disassemble the pipeline openings, and clean the organic matter attached to the inner walls. This effectively reduces the accumulation and emission of VOCs, ensuring the normal operation and production efficiency of the production equipment.

Wastewater Management

Daily wastewater comes from production and office life, including process (cell production) wastewater, lye spray tower wastewater, silane exhaust gas lye spray tower wastewater, initial rainwater, pure water preparation wastewater, circulating cooling water, and employees' domestic sewage. In order to effectively control the pollutants in wastewater, the Company has formulated the Wastewater Discharge Control Management System and constructed the drainage system in accordance with the requirements of "rain and sewage diversion, clean and sewage diversion". Daily life wastewater is discharged into the drainage network of the factory through grease separator and septic tank, and is uniformly collected and processed in the wastewater treatment station before being discharged. The production wastewater is classified and qualitatively collected according to the characteristics of wastewater. Production wastewater is classified and collected according to the characteristics of wastewater, and then discharged into the wastewater treatment plant after being processed by the two-stage chemical fluoride treatment system, reduction treatment system, neutralization treatment system, MVR evaporation system, biochemical system and other wastewater treatment systems in the plant's regulating pool (neutralization).

In addition, we carry out daily monitoring of the acidity and alkalinity of production and domestic sewage discharges and make monitoring records, as well as real-time monitoring of the concentration of pollutants in the sewage discharged from the sewage treatment plant, and regularly overhauling the sewage treatment equipment to ensure that all the equipment operates normally. During the reporting period, the Company's wastewater discharge indicators complied with the relevant regulatory requirements and standards, and there was no illegal discharge.

SolarSpace's wastewater pollutant discharge in 2023



Chemical Oxygen Demand COD

712.2 tonnes

Ammonia NH₃-N

42.12 tonnes

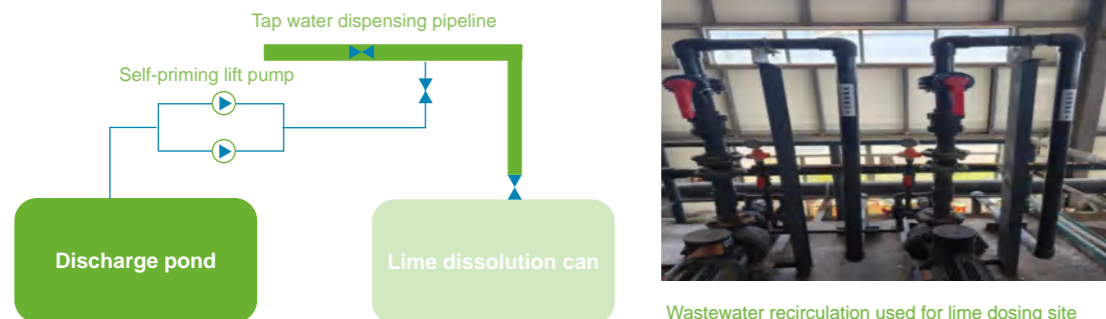
Total nitrogen

115.67 tonnes

Total phosphorus

2.65 tonnes

In order to reduce the use of tap water, the cell production base drilled a hole on the main pipeline between the wastewater station discharge pool and the Parshall flume, leading a UPVC pipeline to the lime dissolution tank. The diverted water is used for lime preparation, achieving wastewater reuse and thereby reducing the use of tap water.



Chuzhou base(C) has set up an 1,800 cubic metre self-flowing accidental emergency pool to collect accidental wastewater, implement automatic accidental water cut-off and collection measures, and ensure that accidental wastewater is not directly discharged into surface water bodies. In addition, the base also builds a drainage system to implement clean and sewage diversion, rain and sewage diversion norms to set up outfalls, and takes zoned seepage control measures in the production device area, raw material area, sewage treatment facilities, in-plant hazardous waste temporary storage sites, hazardous goods warehouses, and accident emergency pools to prevent contamination of the groundwater environment.



Emergency pool



Sewage outfall



Waste Management

The Company strictly abides by national laws and regulations on waste management, establishes a waste management list according to the Solid Waste Discharge Management System in the environmental management system, and carries out classification management and compliant treatment of waste generated in the course of the Company's production and operation in accordance with the principle of disposal of "minimization, resourcing, and harmlessness". It ensures that waste classification, storage, and disposal are properly implemented in all production processes. During the reporting period, solid wastes has been treated and disposed of in a harmless manner or recycled, with zero external discharge.

SolarSpace's waste discharge in 2023

Type of waste	Waste generated(tonnes)	Third-party disposals(tonnes)
Hazardous waste ¹¹	128.04	128.04
Municipal waste ¹²	49,180.22	48,992.65
Of which, sludge ¹³	48,273.22	48,086.65
Waste paper	275	275
Cardboard	632	632

The Company's non-hazardous waste includes general industrial waste, domestic rubbish, sludge, etc. Hazardous waste consists of waste acid and alkali cartridges, waste activated carbon particles, waste oil, etc., which are generated in the production process. Among them, recyclable waste is sold for comprehensive utilization or recycled by renewable resources recycling units, and non-valuable waste is handled by professional waste treatment service providers. Hazardous waste is uniformly concentrated in the hazardous waste warehouse for unified storage and management, and then incinerated, landfilled or purified by qualified hazardous waste disposal units.

In addition, to implement the responsibility of waste removal, disposal and flow management, the Company conducts qualification audits on waste clearance service providers to ensure that waste is transferred to professional third-party service agencies promptly for compliant disposal in accordance with relevant regulatory requirements organization. Moreover, we have set up a rigorous product validation procedure for the recycling of empty chemical drums, so that the empty solvent drums can be returned to the supplier for refilling and reuse by the Company, thus promoting the recycling of waste resources.

Noise Management

The main noise sources of the Company are production equipment such as battery production lines, exhaust gas treatment fans, air compressors, and water pumps. We choose high-efficiency and low-noise equipment, and adopt noise reduction measures such as noise elimination, vibration reduction, architectural sound insulation, reasonable layout, and enhanced greening to ensure that the noise at the plant boundary meets the emission standards, minimizing noise pollution to employees and the surrounding environment.

¹¹The scope of hazardous waste includes Suqian base(C), Tongshan base(C), Chuzhou base(C), Xuzhou base(M), Suqian base(M) and Cambodia base

¹²The scope of municipal waste includes Suqian base(C), Tongshan base(C), Chuzhou base(C), Xuzhou base(M), Suqian base(M) and Laos base.

¹³Of the sludge generated during the reporting period, 187.57 tonnes of undisposed sludge was due to Suqian base(C)'s failure to remove the sludge in a timely manner in December 2023, which was removed in early 2024.

Appendices

Index for "Self-Regulatory Guidelines for Listed Companies of the Shenzhen Stock Exchange No. 17 - Sustainability Reporting (for Trial Implementation)"

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Article 22: (a)	Assessment of the impacts of climate change on corporate strategies and business models, and ways to address related impacts	The company will carry out research on related topics in due course.
Article 22: (b)	Significant uncertainties considered by the Company in assessing its climate resilience	The Company will carry out research on related topics in due course.
Article 22: (c)	Ability of companies to adapt their strategies and business models to climate change in the short, medium and long term	The Company will carry out research on related topics in due course.
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Article 23: (c)	Transformation plan, and the underlying assumptions on which it is based	The Company will carry out research on related topics in due course.
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Article 24	Verification or certification of greenhouse gas emissions (encouraged) 3.1 Greenhouse gas emissions management
Article 25: (a)	Greenhouse gas emissions from business units or facilities 3.1 Greenhouse gas emissions management
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Disclosure	Location
Article 47: (b)	Quality management-related certifications and quality management system certifications for major products and services obtained by the Company 5.2 Product quality
Article 47: (c)	Major safety and quality responsibility accidents related to products and services that occurred during the reporting period 5.2 Product quality
Article 47: (d)	Establishment and enforcement of after-sales service and product recall systems 6.1 Customer relationship management
Article 48: (a)	Establishment and operation of data security management system and specific measures, and certification obtained (if any) 4.3 Cyber and information security
Article 48: (b)	Details of data security incidents that occurred during the reporting period 4.3 Cyber and information security
Article 48: (c)	Construction and operation of customer privacy protection system system 4.3 Cyber and information security
Article 48: (d)	Details of incidents of leakage of customer privacy during the reporting period 4.3 Cyber and information security
Section IV. Staff	
Article 49	Roundup 7. Labour relations, health and safety
Article 50: (a)	Policies and Implementation regarding employee recruitment, compensation, and benefits 7.1 Talent recruitment and retention
Article 50: (b)	Basic information on occupational health and safety 7.3 Health and safety
Article 50: (c)	Basic Information on Employee Career Development and Training 7.2 Talent development
Chapter V. Disclosure of governance information related to sustainable development	
Section I. Governance mechanisms related to sustainable development	
Article 51	Roundup 2. Environmental, social and corporate governance
Article 52	Due diligence in identifying and addressing negative impacts or risks related to sustainable development 2. Environmental, social and corporate governance

Disclosure	Location	
Article 53: (a)	Construction, implementation of stakeholder communication system	2. Environmental, social and corporate governance
Article 53: (b)	Channels for listening to and giving feedback to stakeholders and implementation of recommendations	2. Environmental, social and corporate governance
Section II. Commercial behaviour		
Article 54	Roundup	4.2 Business ethics
Article 55: (a)	Establishment and operation of anti-commercial bribery and anti-corruption risk management system	4.2 Business ethics
Article 55: (b)	Assessment of the risk of commercial bribery and corruption	4.2 Business ethics
Article 55: (c)	Total number and percentage of directors, management and employees trained in anti-bribery and anti-corruption programmes	4.2 Business ethics
Article 55: (d)	Details of incidents of commercial bribery and embezzlement during the reporting period	4.2 Business ethics
Article 56: (a)	Establishment and operation of the management system for preventing unfair competition (such as false advertising, monopolistic practices, infringement of trade secrets, etc.) and specific measures	4.2 Business ethics 5.1 Innovation management
Article 56: (ii)	Litigation or significant administrative penalties resulting from the Company's acts of unfair competition during the reporting period and rectification measures	4.2 Business ethics

GRI Content Index—Referencing GRI Standards

Statement of Use	Solarspace Technology Co., Ltd. has reported the information cited in this GRI content index for the period from 1 January 2023 to 31 December 2023 with reference to the GRI Standards.	
GRI 1 Used	GRI 1: Foundations 2021	
GRI STANDARD	DISCLOSURE	LOCATION
GRI 2: General Disclosures 2021	2-1 Organisational details	1. About SolarSpace
	2-2 Entities included in the organization's sustainability reporting	Appendix - Notes on the preparation of the report
	2-3 Reporting period, frequency and contact point	Appendix - Notes on the preparation of the report
	2-5 External assurance	Appendix - Assurance Report
	2-6 Activities, value chain and other business relationships	1. About SolarSpace
	2-7 Employees	7.1 Talent attraction and retention
	2-8 Workers who are not employees	7.1 Talent attraction and retention
	2-9 Governance structure and composition	4.1 Corporate governance
	2-10 Nomination and selection of the highest governance body	4.1 Corporate governance
	2-11 Chair of the highest governance body	4.1 Corporate governance
	2-12 Role of the highest governance body in overseeing the management of impacts	4.1 Corporate governance
	2-13 Delegation of responsibility for managing impacts	4.1 Corporate governance
	2-14 Role of the highest governance body in sustainability reporting	Appendix - Notes on the preparation of the report
	2-15 Conflicts of interest	4.1 Corporate governance
	2-16 Communication of critical concerns	4.2 Business ethics
	7.1 Talent attraction and retention	
	2-17 Collective knowledge of the highest governance body	4.1 Corporate governance
	2-20 Process to determine remuneration	4.1 Corporate governance

GRI STANDARD	DISCLOSURE	LOCATION
GRI 2: General Disclosures 2021	2-22 Statement on sustainable development strategy	1. About SolarSpace
	2-23 Policy commitments	4.2 Business ethics
		7.1 Talent attraction and retention 8.2 Pollution prevention and control
	2-24 Embedding policy commitments	4.2 Business ethics
		7.1 Talent attraction and retention
		8.1 Resource utilization 8.2 Pollution prevention and control
	2-25 Processes to remediate negative impacts	4.2 Business ethics 7.1 Talent attraction and retention
	2-26 Mechanisms for seeking advice and raising concerns	4.2 Business ethics 7.1 Talent attraction and retention
	2-27 Steady and compliant operation with laws and regulations	4.1 Corporate governance 4.2 Business ethics 4.3 Cyber and information security 5.1 Innovation management 5.2 Product quality
		6.1 Customer relationship management 6.2 Supplier management 7.1 Talent attraction and retention 7.3 Health and safety 8.1 Resource utilization 8.2 Pollution prevention and control
2-28 Membership of associations		5.1 Innovation management
2-29 Approach to stakeholder engagement		2. Environmental, social and corporate governance
2-30 Collective bargaining agreements		/
GRI 3: Material Topics 2021		3-1 Process to determine material topics
	3-2 List of material topics	2. Environmental, social and corporate governance

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	3.1 Greenhouse gas emissions management
		4.1 Corporate governance
		4.2 Business ethics
		4.3 Cyber and information security
		5.1 Innovation management
		5.2 Product quality
		6.1 Customer relationship management
		6.2 Supplier management
		7.1 Talent attraction and retention 7.2 Talent development 7.3 Health and safety
		8.1 Resource utilization 8.2 Pollution prevention and control
GRI 101: Biodiversity 2024	101-8 Ecosystem services	3.2 Providing green solutions
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	1. About SolarSpace
	201-2 Financial implications and other risks and opportunities due to climate change	3.2 Providing green solutions
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	4.2 Business ethics
	205-2 Communication and training about anti-corruption policies and procedures	4.2 Business ethics
	205-3 Confirmed incidents of corruption and actions taken	4.2 Business ethics
GRI 301: Materials 2016	301-2 Recycled input materials used	8.1 Resource utilization
	301-3 Reclaimed products and their packaging materials	8.1 Resource utilization
GRI 302: Energy 2016	302-1 Energy consumption within the organization	8.1 Resource utilization
	302-2 Energy consumption outside of the organization	8.1 Resource utilization

GRI STANDARD	DISCLOSURE	LOCATION
GRI 302: Energy 2016	302-3 Energy intensity	8.1 Resource utilization
	302-4 Reduction of energy consumption	8.1 Resource utilization
	302-5 Reductions in energy requirements of products and services	3.2 Providing green solutions
GRI 303: Water and Effluents 2018	303-2 Management of water discharge-related impacts	8.1 Resource utilization 8.2 Pollution prevention and control
	303-3 Water withdrawal	8.1 Resource utilization
	303-4 Water discharge	8.1 Resource utilization 8.2 Pollution prevention and control
	303-5 Water consumption	8.1 Resource utilization
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	3.1 Management of greenhouse gas emissions
	305-2 Energy indirect (Scope 2) GHG emissions	3.1 Management of greenhouse gas emissions
	305-3 Other indirect (Scope 3) GHG emissions	3.1 Management of greenhouse gas emissions
	305-4 GHG emissions intensity	3.1 Management of greenhouse gas emissions
	305-5 Reduction of GHG emissions	8.1 Resource utilization
	305-6 Emissions of ozone-depleting substances (ODS)	3.1 Management of greenhouse gas emissions
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	8.2 Pollution Prevention and Control
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	8.2 Pollution Prevention and Control
	306-2 Management of significant waste-related impacts	8.2 Pollution Prevention and Control
	306-3 Waste generated	8.2 Pollution Prevention and Control
	306-4 Waste diverted from disposal	8.2 Pollution Prevention and Control
	306-5 Waste directed to disposal	8.2 Pollution Prevention and Control
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	6.2 Supplier management
	308-2 Negative environmental impacts in the supply chain and actions taken	6.2 Supplier management

GRI STANDARD	DISCLOSURE	LOCATION
GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	7.1 Talent attraction and retention
	401-3 Parental leave	7.1 Talent attraction and retention
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	7.3 Health and safety
	403-2 Hazard identification, risk assessment, and incident investigation	7.3 Health and safety
	403-3 Occupational health services	7.3 Health and safety
	403-4 Worker participation, consultation, and communication on occupational health and safety	7.3 Health and safety
	403-5 Worker training on occupational health and safety	7.3 Health and safety
	403-6 Promotion of worker health	7.3 Health and safety
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	7.3 Health and safety
	403-8 Workers covered by an occupational health and safety management system	7.3 Health and safety
	403-9 Work-related injuries	7.3 Health and safety
	403-10 Work-related ill health	7.3 Health and safety
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	7.2 Talent development
	404-2 Programs for upgrading employee skills and transition assistance programs	7.2 Talent development
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	4.1 Corporate governance
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	7.1 Talent attraction and retention
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	7.1 Talent attraction and retention
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	7.1 Talent attraction and retention

GRI STANDARD	DISCLOSURE	LOCATION
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	6.2 Supplier management
	414-2 Negative social impacts in the supply chain and actions taken	6.2 Supplier management
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	3.2 Providing green solutions 5.2 Product quality 6.1 Customer relationship management
	416-2 Incidents of non-Steady and compliant operation concerning the health and safety impacts of products and services	5.2 Product quality
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	5.1 Innovation management 6.1 Customer relationship management
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	4.3 Cyber and information security

Assurance Report



Independent Assurance Statement

Introduction

TÜV Rheinland (Shanghai) Co., Ltd., member of TÜV Rheinland Group, Germany (hereinafter "TÜV Rheinland", "We") has been entrusted by the management of Solarspace Technology Co., Ltd. (hereinafter "SolarSpace", "the Company") to conduct independent assurance of SolarSpace 2023 Environmental, Social and Corporate Governance (ESG) Report (hereinafter "the Report"). All contractual contents for this assurance engagement rest entirely within the responsibility of SolarSpace. Our task was to give a fair and adequate judgment on the Report.

The intended users of this assurance statement are stakeholders who have relevance to SolarSpace's overall ESG performance and impacts of its business activities during year 2023 (1 January 2023 ~ 31 December 2023).

TÜV Rheinland is a global service provider of Corporate Social Responsibility (CSR) & Sustainability Services in over 65 countries, having qualified professionals in the field of Corporate Sustainability Assurance, Environment, Social and Stakeholder Engagement. We have maintained complete impartiality and independence during the assurance engagement, and we were not involved in the preparation of the Report contents.

Assurance Standard

TÜV Rheinland undertook the assurance work in accordance with the AA1000 Assurance Standard v3 (AA1000AS v3) Moderate level of assurance.

Scope & Type of Assurance

Our assurance engagement was carried out in accordance with the AA1000AS v3, Type 1, Moderate level on SolarSpace's ESG performance information and data disclosed in the Report. The following assurance criteria were used in performing the assurance work:

- With reference to GRI Sustainability Reporting Standards (GRI Standards)
- Self-Regulatory Guidelines for Listed Companies on the Shenzhen Stock Exchange No. 17 - Sustainability Report (Trial)
- The United Nations Sustainable Development Goals (UN SDGs)
- Adherence to the AA1000 AccountAbility Principles of *Inclusivity, Materiality, Responsiveness, and Impact*.

Assurance Methodology

Our assurance activities included:

- Reviewing the company's management practices and processes, to evaluate ESG system, including corporate governance, compliance management, risk management, stakeholder communication, material issue analysis, and key performance.
- Conducting interviews with company's senior management and managers responsible for gathering and analyzing information on ESG performance.
- Reviewing and examining ESG management practices and performance information and data to test the accuracy of such information and data based on a sample basis and applied analytical procedures.
- Reporting assurance observations to management provides an opportunity for the company to take corrective actions before the assurance process is completed.
- Collecting documentary evidence and assessing management representations to support adherence to the AccountAbility Principles.

Limitations



TÜV Rheinland performed the assurance based on the scope of defined engagement agreement, and on a moderate level assurance under the AA1000AS for engagement. Information and performance data subject to assurance is limited to the contents of the Report.

Our assurance work did not cover financial report and its financial data, and other information not related to sustainability.

Conclusions

Based on our methodology and activities performed within the scope of this assurance, we can reach a conclusion that no instances or information came to our attention that would be to the contrary of the statement made as below:

- SolarSpace 2023 ESG report and its contents adhere to the AA1000 AccountAbility Principles.
- The ESG information and performance indicators disclosed in this report have been evaluated and supported by documentary evidence.

TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision on SolarSpace based on this Assurance Statement.

Adherence to the AA1000 AccountAbility Principles

Inclusivity

According to the report, the key stakeholders identified by SolarSpace include shareholders and investors, customers, employees, governments and regulators, suppliers and cooperative partners, communities and the public, and the media. We recommend that SolarSpace establish a stakeholder communication strategy and plan and measure the outcome of stakeholder engagement.

Materiality

Considering the characteristics of the company's business operations and industry practices, SolarSpace evaluated and prioritized the importance of topics from the two dimensions of "importance to stakeholders" and "importance to the company". As shown in the issue matrix, high-materiality issues include, but are not limited to, climate change and carbon emissions, R&D and innovation, product quality, corporate governance, and customer relationship management. The Board of Directors of the company reviewed and approved the results of the assessment of the above-mentioned material issues.

Responsiveness

SolarSpace communicates with its key stakeholders on ESG issues via multiple channels. Its communication methods mainly include institutional visits, government policy exchanges, customer technical seminars, employee training, grievance mechanisms, supplier audits and training, and industry cooperation and exchanges, etc.

This report discloses data on performance indicators covering greenhouse gas (GHG) emissions, energy and water resources, pollutant emissions, employee management, health and safety, and supplier management, etc.

Impact

SolarSpace conducts risk management on high-material issues and discloses management strategies and progress in the report. We recommend that SolarSpace conduct environmental and social impact analysis on its own operations and business relationships, and establish appropriate processes to measure, evaluate and manage these impacts.

Daniel Pan
Corporate Sustainability Service Technical Manager
TÜV Rheinland (Shanghai) Co., Ltd
Shanghai, China, 13 June 2024



Explanation of the Meaning of Words or Phrases

The Company, SolarSpace, we	meaning	Solarspace Technology Co., Ltd.
The Company's Main Production Base		
Suqian base(C)	meaning	Jiangsu Longheng New Energy Co., Ltd.
Tongshan base(C)	meaning	Solarspace New Energy (Xuzhou) Co., Ltd.
Chuzhou base(C)	meaning	Solarspace New Energy (Chuzhou) Co., Ltd.
Peixian Base	meaning	Xuzhou Zhonghui Photovoltaic Technology Co., Ltd.
Jingkai base(C)	meaning	Jiangsu Huaheng New Energy Co., Ltd.
Xuzhou base(M)	meaning	Solarspace Technology (Xuzhou) Co., Ltd.
Suqian base(M)	meaning	Solarspace Technology (Suqian) Co., Ltd.
Cambodia base	meaning	Solarspace New Energy (Cambodia) Co., Ltd. (formerly: L-Q New Energy Co., Ltd.)
Laos base	meaning	Solarspace Technology (Laos) Sole Co., Ltd.
Terminology and Professional Designations		
Reporting period	meaning	2023
IEC 61215	meaning	The International Electrotechnical Commission (IEC) has developed a basic assessment standard for the qualification and sizing of PV module designs to ensure stable performance and safe operation of PV modules under different environmental conditions.
IEC 61730	meaning	Safety standards for photovoltaic (solar) modules developed by the International Electrotechnical Commission (IEC) are used to assess and verify the safety performance and reliability of photovoltaic modules.

Terminology and professional designations		
IEC62804	meaning	A standard for weather resistance testing of photovoltaic (photovoltaic) modules developed by the International Electrotechnical Commission (IEC).
IEC 61701	meaning	The International Electrotechnical Commission (IEC) has developed a standard for salt spray testing as a method of testing the corrosion performance of electrical equipment in a marine environment.
IEC 62716	meaning	A standard developed by the International Electrotechnical Commission (IEC) for stress test methods for photovoltaic (photovoltaic) modules in humidity high temperature environments.
IEC60068	meaning	The International Electrotechnical Commission (IEC) has developed environmental test standards that specify methods and requirements for testing electronic and electrical products under different environmental conditions.
ETL Product Certification	meaning	Electronic Testing Laboratories (ETL) is a safety certification mark used in North America. Products that have obtained ETL certification indicate their compliance with North American mandatory standards, thereby facilitating their entry into the North American market for sale.
BIS Product Certification	meaning	The Bureau of Indian Standards (BIS), the issuing body of ISI certification, is responsible for product certification, and the ISI mark issued by BIS is a sign that the product complies with Indian standards.
CQC Solar Product Certification	meaning	China Quality Certification Centre (CQC), the certification mark indicates that the product meets the relevant quality, safety, performance, electromagnetic compatibility, and other certification requirements.

Explanation of the Calculation of GHG Emissions and Integrated Energy Consumption Data

Scope of data:

including Suqian base(C), Tongshan base(C), Chuzhou base(C), Xuzhou base(M), Suqian base(M), Cambodia base and Laos base.

Calculation of reference standards

Refrigerant Greenhouse Gas Emissions: The Hong Kong Stock Exchange's Guidelines on Reporting of Environmental Key Performance Indicators (Updated on 25 March 2022)

Formula: Carbon dioxide (CO₂) equivalent emissions (E) = (Cs + Ci - Cd - Ce) / 1000 × GWP

Where each symbol represents:

E = The amount of CO₂ equivalent emissions caused by refrigerant leakage during equipment operation (tonnes)

Cs = The amount of refrigerant in storage at the beginning of the reporting period (not in use in equipment) (kg)

Ci = The additional amount of refrigerant put into storage during the reporting period, measured in kilograms (kg)

Cd = The amount of refrigerant responsibly disposed of or recycled during the reporting period(kg)

Ce = The amount of refrigerant in storage at the end of the reporting period (not in use in equipment) (kg)

GWP = The Global Warming Potential value, which indicates the potential impact of different refrigerants on global warming. Specific values should be referred to relevant resources, for instance, various refrigerants' GWP values can be accessed via <https://esgsage.cn/s/qsbH6qPc>

Other direct GHG emissions: The formulae and emission factors (except Note 1) refer to the Hong Kong Stock Exchange's Guidelines on Reporting of Environmental Key Performance Indicators (updated on 25 March 2022); Note 1 emission factors refer to the US Environmental Protection Agency's Greenhouse Gas Inventory Emission Factors (updated on 13 February 2024).

Formula: Carbon dioxide (CO₂) equivalent emissions (E) = A × EF

Where each symbol represents:

E = Emissions, expressed in terms of carbon dioxide equivalent (in tons) after summing up all the fuel types that have been utilized.

A = Amount of fuel consumed (in terms of volume such as liters or weight such as kilograms) for that particular type of fuel.

EF = Emission factor for carbon dioxide (CO₂) (see table below)

Energy Type Coefficient type	Natural gas (note 1)	Coal gas	Diesel oil - stationary combustion source	Diesel - mobile combustion source	Gasolin
Carbon dioxide (CO ₂)	1.9225kg/m ³	2.549kg/m ³	2.614kg/L	2.614kg/L	2.36kg/L
Methane (CH ₄) GWP: 28	0.0364kg/m ³	0.0000446kg/m ³	0.0000239kg/L	Passenger cars with 24 seats or less, light goods vehicles: 0.000072kg/L Medium and heavy goods vehicle: 0.000145kg/L Other mobile machines: 0.0000239kg/L	Passenger cars with 9 seats or less: 0.000253kg/ L Light goods vehicle: 0.000203kg/ L
Nitrous oxide (N ₂ O) GWP: 265	0.0035kg/m ³	0.0000099kg/m ³	0.0000074kg/L	Passenger cars with 9 seats or less: 0.00011kg/L Passenger cars with 10-24 seats, light goods vehicles: 0.000506kg/L Medium and heavy goods vehicle: 0.000072kg/L Other mobile machines: 0.000007kg/L	Motorcycle: 0.000046kg/ L Passenger cars with 9 seats or less, light goods vehicles: 0.001105kg/ L

Electricity GHG emissions: The formula refers to the Hong Kong Stock Exchange's Guidelines on Reporting of Environmental Key Performance Indicators (Updated on 25 March 2022) According to the "Announcement of the Ministry of Ecology and Environment and the National Bureau of Statistics on the Release of CO₂Emission Factors for Electricity in 2021" dated 12 April 2024, the national factor is taken as the national average CO₂ emission factor for electricity in 2021 (excluding market-traded non-fossil energy electricity), which is 0.5942kgCO₂ /kWh.

Formula: Carbon dioxide (CO₂) equivalent emissions (E) = Q × EF

Where each symbol represents:

E = Emissions expressed in tonnes of CO₂ equivalent

Q = Quantity of electricity purchased

EF = Emission factor

Steam GHG Emissions and Thermal Energy: The formulas refer to Guidelines for Enterprise Greenhouse Gas Emissions Accounting and Reporting - Power Generation Facilities 2023.

Greenhouse gas emission formula: Carbon dioxide (CO₂) equivalent emissions (E) = AD_{st} × EF

E = Emissions expressed in tonnes of CO₂ equivalent

AD_{st} = Net outsourced heat power

EF = Carbon Emission Factor for heat supply [Heat (equivalent value) / Electricity (equivalent value) * National Factor = 0.164964tCO₂ /GJ]

Formula for Thermal Energy: AD_{st} = Mast × (En_{st} - 83.74) × 10⁻³

AD_{st} = Heat of the steam in gigajoules (GJ).

Ma_{st} = mass of steam in tonnes of steam (t).

En_{st} = Enthalpy per kg of steam at the temperature and pressure to which the steam corresponds, taken from the Enthalpy of Saturated Steam Tables, see <https://esgsage.cn/s/qsbH6qPc>, in kilojoules per kilogram (kJ/kg).

83.74 = Enthalpy of water at 20 °C in kilojoules per kilogram (kJ/kg).

Comprehensive energy consumption (equivalent to standard coal): the formula and coefficients refer to the General Principles for the Calculation of Comprehensive Energy Consumption GB/T 2589-2020 by the State Administration for Market Regulation and the Standardization Administration of the People's Republic of China.

Formula: $E = \sum_{i=1}^n (E_i \times k_i)$

E = Combined energy consumption.

n = Number of energy types consumed.

E_i = Actual amount of energy of type i consumed in the production and/or service activity (including the amount of energy consumed by energy media).

k_i = The standard coal equivalent coefficient of the i-th type of energy source.

Note: Comprehensive energy consumption is used to examine the total energy consumption of energy-consuming entity.

Note: Comprehensive energy consumption is used to examine the total energy consumption of energy-using units.

Energy Type Coefficient type	Natural gas	Coal gas	diesel oil	Gasolin	electrical power	thermodynamic
Standard coal (kgce)	1.1000kgce/ m ³ - 1.3300kgce/ m ³	0.5143kgce/ m ³	1.4571kgce/ kg	1.4714kgce/ kg	0.1229kgce/ (kwh)	0.03412 kgce/ MJ



Report Preparation Instructions

Scope of the Report

This report encompasses Solarspace Technology Co., Ltd. and its subsidiaries. Unless otherwise specified, the scope aligns with the consolidated financial statements range as presented in the prospectus of Solarspace Technology Co., Ltd.

Time Scale

This is an annual report covering the period from 1 January 2023 to 31 December 2023. Where information extends beyond this timeframe, it will be clarified at the respective points within the report.

Basis for Reporting

The report is compiled in accordance with the Self-Regulatory Guidelines for Listed Companies of the Shenzhen Stock Exchange No. 17 - Sustainability Reporting (for Trial Implementation) and with reference to the Global Reporting Initiative (GRI) Sustainability Reporting Standards (GRI Standards 2021), the UN Sustainable Development Goals (SDGs) Enterprise Action Guidelines for Enterprises.

Data Description

The data and cases in the report are taken from the original records or financial reports of the actual operation of the Company.

The financial data in the report are all in RMB. Where the financial data is inconsistent with the Company's annual financial report, the annual report shall prevail.

Reliability Guarantee

the Company undertakes that there are no false records, misleading statements, or material omissions in the contents of this report, and the Board of Directors of the Company is responsible for the truthfulness, accuracy and completeness of its contents.

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