

# DAS SOLAR

2022 ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) REPORT



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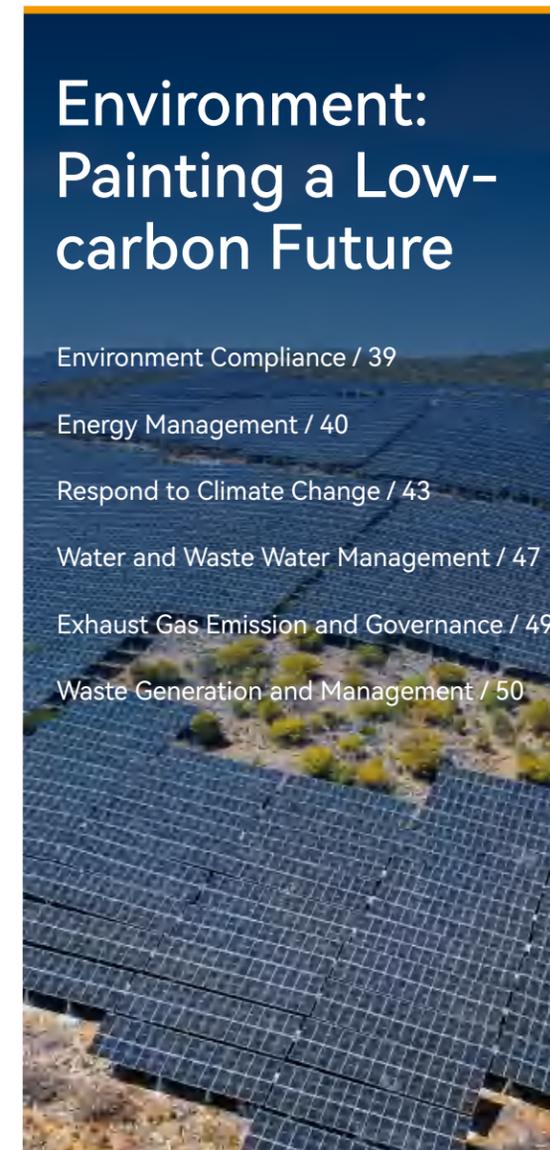
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# About the Report

Environmental, Social and Governance Report of DAS SOLAR (Quzhou) Co., Ltd. ("DAS SOLAR", "the Company", or "we") (hereinafter referred to as "the report" or "ESG Report") describes the environmental, social and governance approaches and performances of DAS SOLAR in 2022. Designed to disclose corporate sustainability philosophy to the public and to respond to stakeholder's concerns.

## Reporting Boundaries

The headquarters of DAS SOLAR (Quzhou) Co., Ltd. and its production bases already in operation by 2022. Detailed addresses of the headquarters and production bases are listed below:

Company	Address
DAS SOLAR (Quzhou) Co., Ltd.	No.43, Bailing South Road, Quzhou City, Zhejiang Province
DAS SOLAR (Taizhou) Co., Ltd.	No.108 Yaojia Road, Hailing District, Taizhou City, Jiangsu Province

Note: Some production bases were not completed or put into operation for one year during the reporting period and are thus not disclosed in this report.

## Reporting period

January 1<sup>st</sup> to December 31<sup>th</sup>, 2022. The report covers a part of data disclosure from previous years.

## Data Sources

The data in the report originated from internal original ledgers, corporate documents and statements of DAS SOLAR. Unless otherwise stated, the currencies in the report are all expressed in RMB.

## Reporting standards

The report has been prepared with reference to requirements of Global Reporting Initiative Sustainability Reporting Standards (GRI Standards), and refers to information disclosure instructions including SASB Standards for Solar Technology & Project Developers issued by Sustainability Accounting Standards Board (SASB), the United Nations Sustainable Development Goals (UN SDGs), and the *Recommendations Report of Task Force on Climate-related Financial Disclosures (TCFD)*.

## Statements

DAS SOLAR is responsible for the authenticity, accuracy and completeness of its contents.

## Third-Party Verification

The report has been authenticated by TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch, an independent third party, with an authentication report attached.

## Release of Report

The report is published electronically in simplified Chinese. In case of discrepancies with the English version, the simplified Chinese version shall prevail. The Electronic Version are available for download on our website at: <http://www.das-solar.com/>

## Contact Information

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## Chairman's Speech

How time flies. The year 2022 has already passed by. It was an extraordinary year, tinged with the threats of widespread pandemic and lack of energy supply. The Chinese people are looking forward to a greener low-carbon future more than ever. DAS SOLAR, a first-tier brand of new PV energy and key participant in the renewable energy industry, takes "light up your life" as its mission, actively embraces green changes, takes "carbon peaking and carbon neutrality" as its ultimate goal, and firmly follows the green, low-carbon, safe and responsible quality development path for sustainable social development of mankind.

Over the past year, we have vigorously implemented the innovation and development strategy, actively integrated into the new development layout, and achieved good results in promoting high-quality development, with record-high operating results. With further integration of corporate business development with ESG, we have promoted new progress in corporate governance, technological innovation, brand effect and green development.

### **We focus on standardization and efficiency, and continuous improvement of governance effectiveness.**

The company has revised and improved a number of corporate governance systems, solidly promoted the compliance management system establishment, improved the implementation effectiveness of internal control system, got ISO9001, ISO14001 and ISO45001 certification, and corporate PV modules have passed IEC61215 and IEC61730 module performance and safety certification. So far, PV modules have been certified by TUV, a prestigious German institute, and CQC, UL, CE, CGC, etc. With further practice of the ESG concept, enhanced ESG governance, and further management improvement benchmarking action, corporate management has been significantly upgraded to a new level. Integration and coordination of various supervision types for better supervision results. By adhering to the core value of "Collaboration and Mutual Success", and strengthening communication with customers, the company has managed to enhance corporate transparency thereof.

**We focus on innovation-driven development and have achieved fruitful results.** With the development strategy of "Be a Respected International New Energy Company", the company has established a leading group for intellectual property, continued to probe scientific and technological innovation, and accelerated the construction of new R&D centers and PV testing laboratories for better momentum inspiring innovation and vitality. The company is leading domestic N-type cell technology, with N-type bifacial cell mass production efficiency exceeding 25.2%, module power exceeding 600W+, and bifacial rate of 85%, boasting industry-leading results; independently developed lightweight flexible modules that fill the industry gap; independently developed C-terminal solar mobile power that fills the international gap. The company has achieved record-high 150 patents so far.

**We focus on diversification as a unique integrated service provider.** In recent years, we continue to enhance product supply capacity, expand production capacity layout, take Quzhou, Zhejiang Province as HQ, and have established over ten large PV production bases in Jiangsu, Fujian and Shanxi based on local conditions, set up DAS SOLAR system engineering innovation academy, and power station division, etc. The company is accelerating diversified business development, expanding the coverage of group development, utilizing industry-leading technologies such as "applications of three series and sixteen scenarios", turning into a professional in high-efficiency PV cells, modules and system applications of research and development, manufacturing and sales and integrated investment, construction, and operation of the power plant, committed to the full range of PV renewable energy system application solutions, and becoming a comprehensive service provider.

It's not easy, but it's worth it. The blueprint is already available. Now it's time for us to brave the waters and undertake heavy burdens. Let's spur and stride forward without fear. In order to achieve further development and enrich the ESG sustainability philosophy, all employees shall actively engage and discuss better tactics in the best interests of the company. At the same time, the company will insist on fulfilling its social responsibility, practicing ESG sustainability philosophy, promoting quality development, and becoming a respectful international renewable energy enterprise.

**Liu Yong**, Chairman and Founder of DAS SOLAR

# Our 2022

Bearing in mind the concept of "Collaboration and Mutual Success", DAS SOLAR takes "carbon peaking and carbon neutrality" as its mission, actively fulfills its economic, social and environmental responsibilities, promotes harmonious coexistence of ecological civilization and the company, and strives to be a respectful international renewable energy enterprise.

In February 2023, the Company announced that it had signed the United Nations Global Compact ("UNGC") and the China Business Climate Action ("CCCA"), actively practicing corporate social responsibility, promoting technological progress of the PV industry with the goal of sustainable development, and helping mankind to build a common "zero carbon" home with our N-type products boasting best cost effectiveness in the industry.



## Robust Operation



**944,256.27**

Business income (unit: RMB 10,000)

**0**

Violations due to fines/non-financial penalties

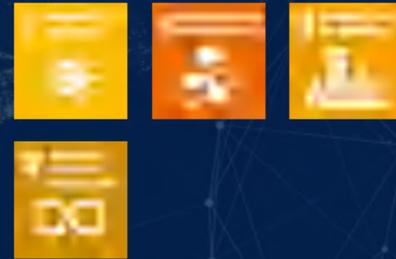
**0**

Violations of corruption and bribery, unfair competition and other business ethics-related incidents and litigation

**100%**

Suppliers receiving anti-corruption training

## Industry Innovation



**0.323**

Investment in product R&D (unit: RMB billion)

**150**

Granted patents

**100%**

Factory product inspection rate

**96.10%**

Customer satisfaction

## Green Ecology



**0**

Major accidents and above

**100%**

Hazardous waste compliance disposal rate

**100%**

Qualification rate of wastewater and exhaust gas pollutant discharge

**100%**

Completion rate of EHS promotion

## Social Win-Win



**2,770**

Employees

**27.92**

Average training hours per employee (unit: hour)

**100%**

Supplier access audit and screening applying environmental and social criteria

**12.7**

Social donations (unit: RMB 10,000)

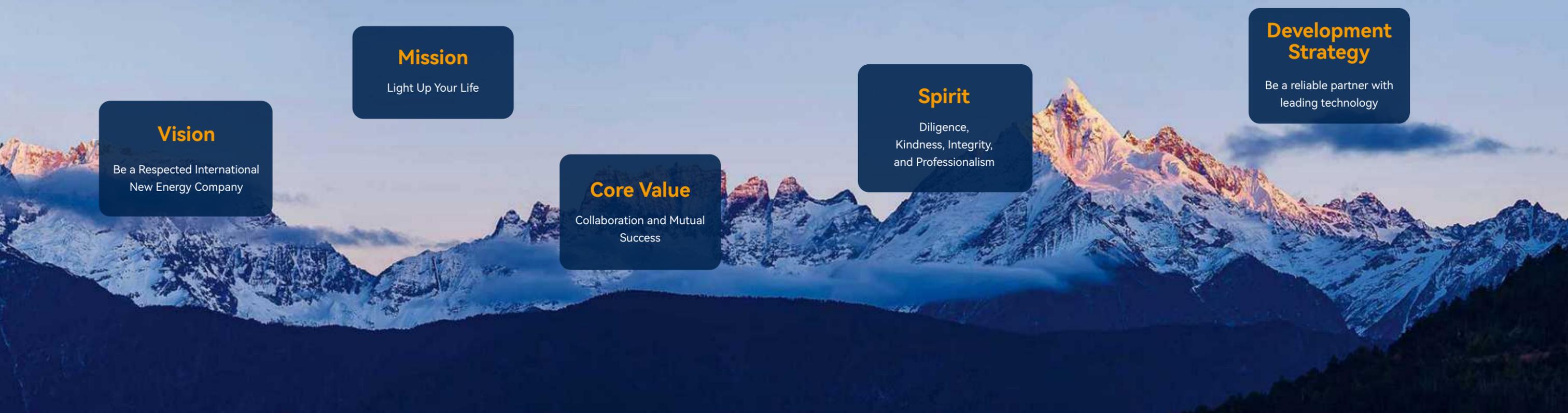
# About DAS SOLAR

## Company Profile

DAS SOLAR (Quzhou) Co., Ltd., established in August 2018, specializes in R&D, manufacturing and sales of high-efficiency solar cells, PV modules and system applications and integrated power plant investment, construction and operation. It is a state-level high-tech enterprise, recognized by the Ministry of Industry and Information Technology as conforming to *Photovoltaic Manufacturing Industry Specifications and Conditions*, acknowledged as "Specialized and Special New" enterprise and "Future Factory" by Zhejiang Province, and is also a strategic investment enterprise of central enterprises.

DAS SOLAR focuses on R&D investment and collaboration among industry, academia and research, its R&D and professional technicians account for 20%, and now have applied for more than 150 kinds of patents. As a leader in N-type photovoltaic technology, DAS Solar has two core products: N-type modules and lightweight modules, and three series of full-scenario, full-process PV system solutions: ecological PV, urban PV and offshore PV, and has been included in the procurement list of many large state-owned central enterprises. DAS SOLAR has built a comprehensive sales network at home and abroad, with products exported to over 60 countries and regions. In 2023, DAS SOLAR will build 30GW of N-type high-efficiency cell and 30GW of high-efficiency module capacity, becoming a new top-tier brand in the PV industry.

Company	DAS SOLAR (Quzhou) Co., Ltd.
Business Address	No.43, Bailing South Road, Quzhou City, Zhejiang Province
Date of Establishment	August 08, 2018
Nature of the Company	Limited Liability Company (foreign investment, non-sole proprietorship)
Total Employees	2,770 people
Major Changes	No Major Changes



**Vision**  
Be a Respected International  
New Energy Company

**Mission**  
Light Up Your Life

**Core Value**  
Collaboration and Mutual  
Success

**Spirit**  
Diligence,  
Kindness, Integrity,  
and Professionalism

**Development  
Strategy**  
Be a reliable partner with  
leading technology

## Financial Performance



Note: Business income data for 2020 exclude Taizhou base; business income for 2022 is still under audit, and the final result is subject to the Company's financial audit report.

## Project Cases



### Shanxi Taiyuan 1MW Commercial and Industrial Rooftop Project

- The project installed PV modules on a color steel tile roof with an area of about 20,000 square meters. Due to roof loading capacity, 320W lightweight PERC stacked tile modules, 375W conventional modules and 100kW string inverter were adopted for a PV power generation system with a total capacity of 1,027.8kWp.
- The total power generation is expected to be about 26.242816 million kWh in 25 years, i.e. about 1.049713 million kWh p.a.

### Shanghai Pujiang Industrial Park 1.6MW Rooftop Project

- The project utilized the idle roof of Shanghai Riyueming for a PV power station mainly for self-consumption. Monocrystalline single-glass PERC half-sheet PV modules and monocrystalline silicon flexible PV modules were adopted for PV power generation systems with a total capacity of 1,651 kWp.
- It is expected to generate about 1.642 million kWh of electricity p.a.



### Jiuduntan PV Sand Control Project in Liangzhou District

- The project is located in Jiuduntan, Liangzhou District of Wuwei City, covering an area of about 4.72 km<sup>2</sup>. As a large PV power generation system, it is scheduled to generate electricity under the first batch of power generation project construction index of wind power and PV power generation project of Gansu Province's 14th Five-year Plan. With a rated capacity of 200MW, the capacity ratio of 1.20:1 in consideration, it is installed with a total of 444,444 double-sided double-glass high-efficiency monocrystalline cells of 540Wp and the module installation capacity of 240MWp.
- It is expected to generate about 955 million kWh p.a. after completion.



### Hainan Baisha Project

- As a new type of agri-PV complementary project, the project is exploring the organic combination of PV power generation and ecological agriculture to create a green ecology. With 182 double-sided cell technology and double-glass packaging structure, these modules have the advantages of high efficiency, high double-sided rate, high reliability, and excellent power generation performance.
- The project is expected to supply clean electricity to the grid about 127,661,000kWh annually on average in 25 years after the completion of grid connection and save standard coal by 41,600 tons and reduce the emission of CO<sub>2</sub> by 127,500 tons, of SO<sub>2</sub> by 3,837.36 tons and of nitrogen oxides by 1,918.68 tons each year after it is put in production.



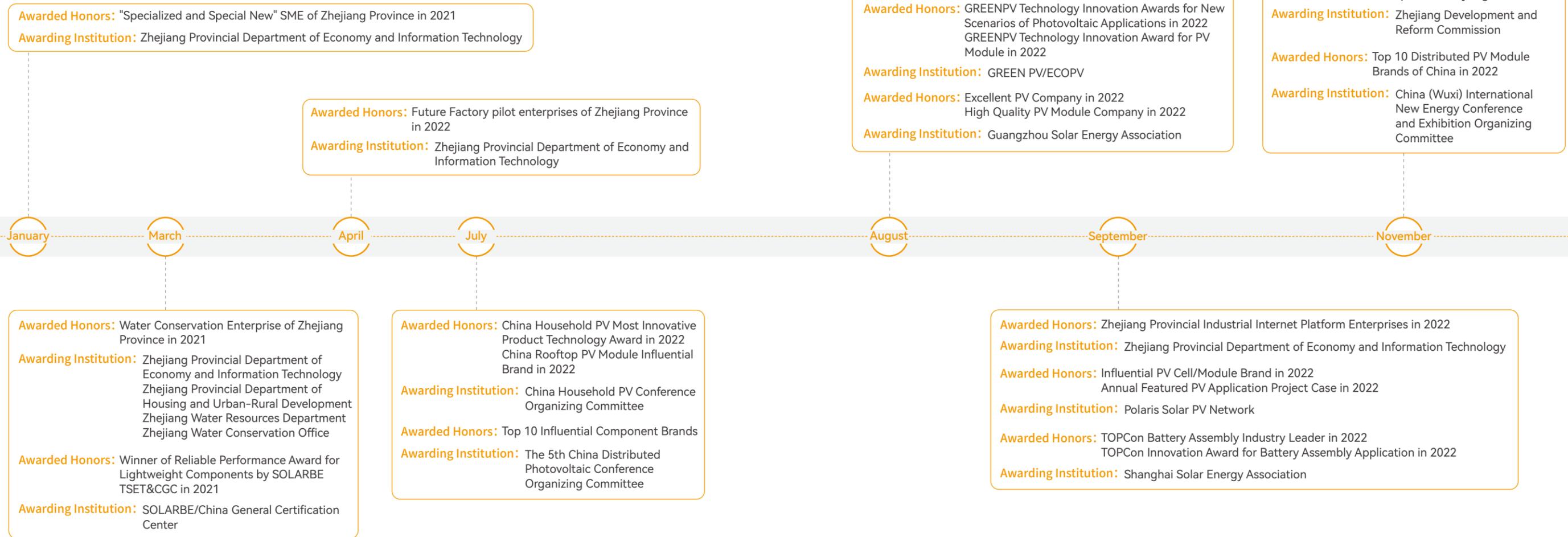
Note: Take only some projects as typical examples.

## Business Layout



## Honors and Certificates

In 2022, DAS SOLAR was awarded the following honors and certificates:



## Association Membership

DAS SOLAR obtained membership of the following associations in 2022:

Joining Time	Joining the Association	Status of the Company
June	China ECOV Alliance	Members
June	Photovoltaic Recycling Industry Development Cooperation Center	Members
July	National Federation of Industry and Commerce New Energy Chamber of Commerce	Vice Chairman
November	Jiangsu Province Renewable Energy Industry Association	Managing Director
November	"New Energy, New Infrastructure, New Industry" Alliance	Members
December	China Communications and Transportation Association - Low Carbon and Carbon Trading Promotion Branch	Managing Director

## System Certification

System Name	Coverage	Expiration Date
ISO 9001:2015 Quality Management System Certification	HQ and Quzhou base	April 14, 2025 (Quzhou)
	Taizhou base	August 3, 2024 (Taizhou)
ISO 14001:2015 Environmental Management System Certification	HQ and Quzhou base	March 14, 2023
ISO 45001:2018 Occupational Health and Safety Management Systems Certification	HQ and Quzhou base	March 14, 2023
ISO 50001:2018 Energy Management System Certification	HQ and Quzhou base	May 20, 2025
GB/T 29490-2013 Intellectual Property Management System Certification	HQ and Quzhou base	October 30, 2025

# Sustainability Management

DAS SOLAR is committed to complying with domestic and international labor-related regulations and standards, bearing in mind the corporate value of "collaboration and win-win", and taking "carbon neutrality and carbon peaking" as its mission, ensuring social responsibility management throughout daily corporate operations. At present, the Company's SA8000 social responsibility management system establishment has passed the first stage of system audit, and the whole project is expected to be completed in 2023. In the future, we will continue to refine sustainable development management from various aspects such as governance, target, strategy and action, and strive to become the advocate, practitioner and leader of sustainable development in the global clean energy sector.

## Company Statement

- Comply with national labor regulations, environmental regulations and related regulations.
- Respect freedom of workers. No employment of under-age labor, forced or compulsory labor, or prison labor.
- All employees are treated equally, regardless of gender, race, religion, or social affiliation, with zero tolerance of discrimination whatsoever.
- Provide safe and sanitary working and living conditions to ensure employee health and safety.
- Promote labor-management collaboration and respect employees' freedom of association and collective negotiation rights. Respect the basic human rights of employees and prohibit any form of degrading behavior or sexual harassment.
- Reasonable arrangement of workers' working hours, rest duration and vacation.
- Provide reasonable wages and benefits in accordance with relevant legal and regulatory provisions.
- Continuously improve working conditions and benefits of employees.

# Stakeholder Communication

Opinions of stakeholders from all walks of life have an important impact on corporate ESG efforts. We have established a regular communication mechanism with various stakeholders in various forms.

Key Stakeholders	Expectations and Demands	Communication Channel
Employees	Employee Entitlements Training and Development Occupational Health and Safety	Employee Satisfaction Surveys Performance Appraisal Contracts, Training, Employee Handbooks Daily Communication Employee Complaints
Shareholders and Investors	Financial Performance Governance Compliance Operation	Periodic Report Disclosure Daily Communication
Clients	Product Management Customer Relations Technological Innovation Intellectual Property	Customer Satisfaction Survey Customer Complaints Daily Communication
Suppliers and Partners	Sustainable Supply Chain	Periodic Assessment Audit Daily Communication
Government and Regulators	Compliance Operation	Info Disclosure Compliance Training
Community and Environment	Charity and Public Welfare Environmental Compliance Water Stewardship Energy Management Climate Change Pollution Prevention	Charity and Public Welfare Activities Regular Monitoring and Compliant Disposal Info Disclosure

# ESG Material Topics

In 2022, the Company benchmarked international initiatives and standards, investment and rating agencies, etc. and integrated feedback from various stakeholders for 22 ESG highly relevant topics.



Topic Category	No.	Topic Content	Impact Description	Materiality
Finance and Governance	1	Economic Performance	The direct result of the company's market performance, reflecting its status quo of development.	Medium
	2	Governance	Good internal corporate governance rules can promote rationalization of the shareholding structure and overall improvement of corporate decision-making results.	Medium
	3	Compliance Operation	Insist on honest and compliant operation, improve risk governance and guarantee robust business operation.	Medium
	4	Business Ethics	Develop preventive measures for anti-corruption and commercial bribery efforts to instill high business ethics standards.	Medium
	5	Product Quality and Safety	Quality management of product manufacturing meeting high standards to ensure product safety for consumers.	Medium
	6	Customer Relationship Management	Meet customers' diverse needs and enhance their user experience.	Medium
	7	Technology Innovation	The company boasts R&D innovation strengths as its main competitive edge in the industry.	High
	8	Intellectual Property Protection	Strengthen intellectual property management and enhance core competitiveness of the company.	Medium

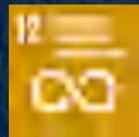
Topic Category	No.	Topic Content	Impact Description	Materiality
Environment	9	Respond to Climate Change	Mitigate the risks and seize the opportunities of climate change for corporate business continuity in future.	Medium
	10	Emissions Management	Disclosure of greenhouse gas emissions related information can boost the confidence for corporate environmental topics in the value chain.	Medium
	11	Waste Management	Regulate management of various types of waste, and evaluate upstream and downstream waste generation in the value chain for effective measures.	High
	12	Energy Management	Reduce fuel and power consumption and improve energy efficiency.	Medium
	13	Water Stewardship	Optimize the use of water resources and ensure proper treatment of wastewater to reduce environmental pollution.	High
	14	Ecological Impact of Project Development	Manage ecological impacts on project development to further protect environment and ecology alike.	Medium
	15	Product Life Cycle Management	Manage the entire product life cycle to reduce environmental and social impact.	Medium
Social	16	Human Rights Protection	Prohibit employment of child labor and forced labor in the workplace and create a healthy working environment for employees.	Medium
	17	Employee Entitlements	Protect basic employee welfare, take care of employees, and stimulate corporate vitality.	High
	18	Employee Training and Development	Help employees develop career plan, ensure mutual growth of employees and the company.	High
	19	Occupational Health and Safety	Take care of physical and mental health of employees in the workplace and reduce the risk of occupational diseases thereof.	High
	20	Sustainable Supply Chain	Manage actual and potential risks in the supply chain and promote upstream and downstream sustainable development of the supply chain.	High
	21	Community Relations	Contribute to community development and social well-being.	Medium
	22	Charity and Public Welfare	Organize public welfare and charity activities for better social development.	Medium



# Governance: Robust Operation

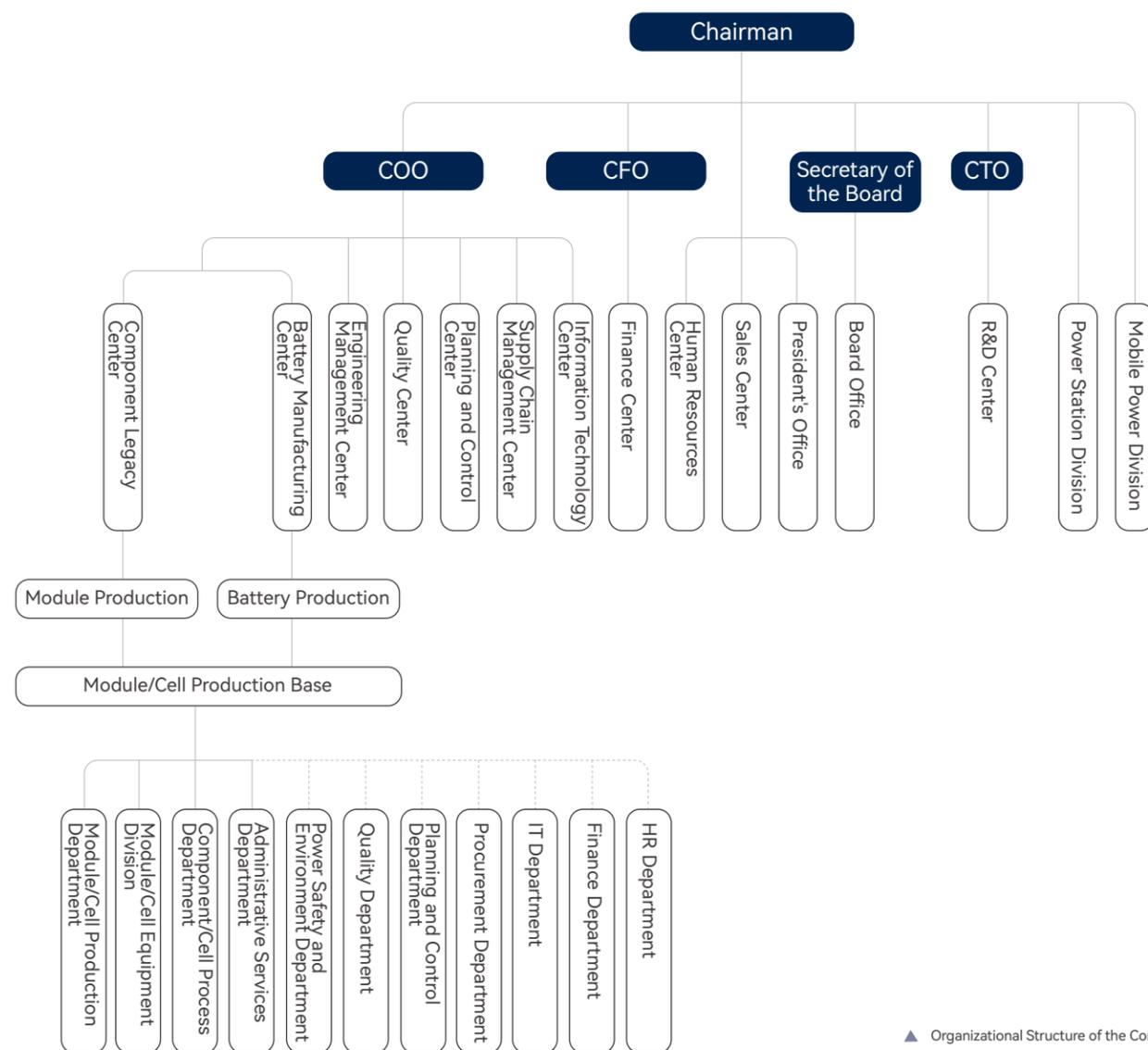
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# Corporate Governance

Healthy corporate governance is the cornerstone for stable and robust growth and sustainability of the company. DAS SOLAR strictly abides by the requirements of *Company Law of the People's Republic of China*, the *Foreign Investment Law of the People's Republic of China* and other relevant laws and regulations, and has established a clear, scientific and efficient corporate governance mechanism.



▲ Organizational Structure of the Company



The Board of Shareholders is the highest power organ of the Company. According to the *Articles of Association*, the Board of Directors is set up and accountable to the Shareholders' Meeting. There are 7 board members, i.e. 1 Chairman and 6 members of the Supervisory Board. A total of 11 board meetings were held in 2022, with 100% attendance from directors alike.

The Company takes full account of the skills, industry experience, background and gender of its Board members and leadership team to ensure an optimal and diverse composition thereof. Members are equipped with professional backgrounds in multiple fields such as engineering, business management, and finance, and all have gained extensive industry experience and are committed to improving corporate decision-making results with a more comprehensive perspective.

The appointment or dismissal of the corporate general manager, deputy general manager and financial officer and their remuneration shall be decided by the Board of Directors. The general managers of corporate HQ and subordinate bases shall be responsible for quality, environmental, and occupational health and safety management systems and ensuring their effectiveness for the integration of sustainability philosophy in corporate operations and business activities.

Board members

7

Supervisory Board Members

6

Board meetings in 2022

11

Attendance of Directors

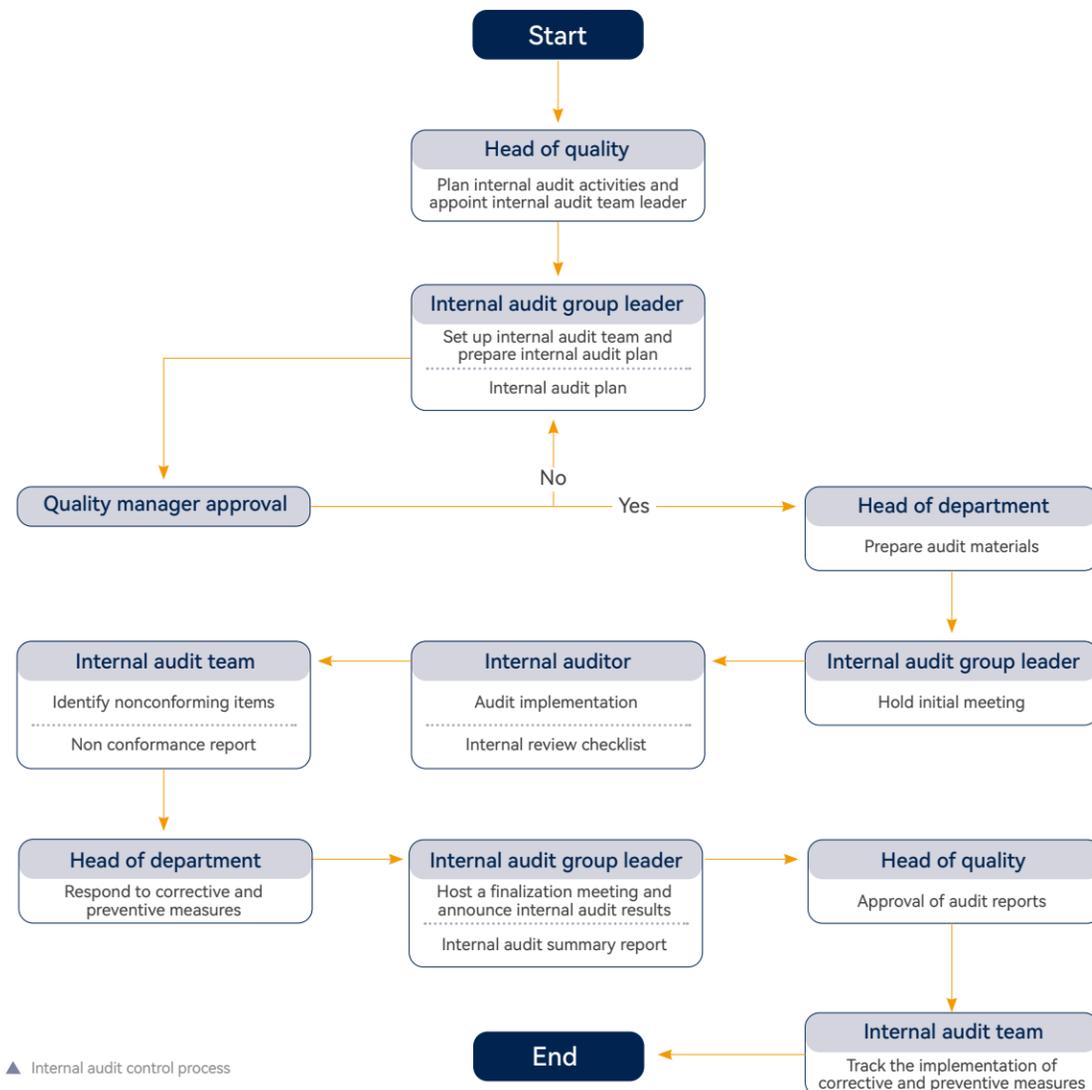
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# Compliance Management

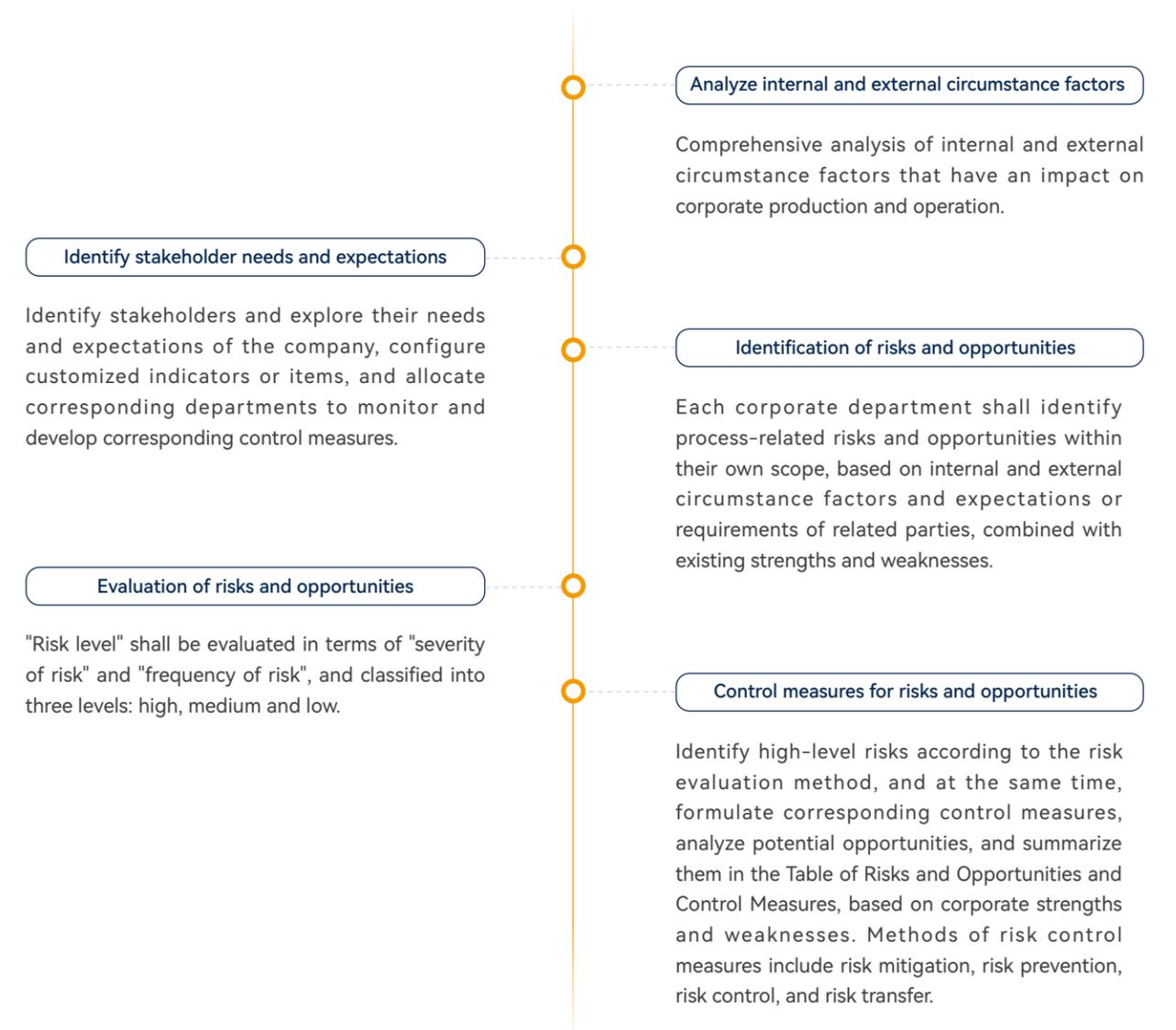
The Company effectively promotes anti-corruption & anti-bribery efforts in the course of operation, strengthens internal control and risk management, takes multiple measures to enhance compliant operation, and builds a solid foundation for stable and robust corporate development. No violations due to fines/non-financial penalties were found within the report period.

## Build a Solid Bottom Line in Compliance

We strictly abide by relevant laws and regulations, strive to mitigate legal risks, and safeguard legal rights and interests of the company in accordance with the law. We perform audit and supervision functions, strictly implement *Internal Audit Control Procedures* and follow other documents and systems to guarantee the quality of internal audit and protect healthy development of the company.



The Company attaches great importance to risk prevention and management, and has introduced *Organizational Risk Management* and other policies to build a risk management system led by the Board of Directors to proactively identify and evaluate various risks and opportunities in business management activities and formulate corresponding control measures to achieve strategic objectives.



Enhancing tax management helps allocate corporate resources in a rational manner and promote information transparency and sustainable development. We have set up a finance center to oversee implementation in this regard, identify, analyze and assess compliance risks, develop tax plans and integrate them into overall corporate strategy, and abide by corporate tax compliance and other guidelines.

We attach great importance to the training of tax-related personnel for better business skills and provide them with tax business policy training through various channels. In addition, we adopt internal inspections or assessments and engage third-party taxation firms to conduct regular health checks of tax-related operations, evaluate tax compliance on annual basis, and monitor key risks of significant matters.

### Adherence to Integrity and Honesty

The Company has established *Anti-Corruption and Anti-Bribery Control Procedures, Integrity Management Control Procedures* and other procedural documents, which are applicable to all employees, managers and board members, and ensure comprehensive supervision on integrity management, fair competition, anti-corruption, anti-fraud and avoidance of conflict of interest, etc. The Company holds a "zero tolerance" attitude towards violations of business ethics and breaches of integrity. There were no confirmed incidents of corruption or bribery, improper competition or other violations of business ethics and litigation throughout 2022.

We have expressed requirements for business ethics and professional codes in *Employee Handbook*. We require all personnel engaged in material procurement and other related activities to sign *Anti-Bribery/Anti-Corruption Pledge*.

We are committed to creating a transparent supply chain, and all customers, suppliers, service providers and contractors with whom we do business are required to sign *Anti-Bribery/Anti-Corruption Pledge* for Suppliers. We encourage employees and companies with whom we do business to report corruption incidents and strictly protect whistleblowers as required by the *Whistleblower Protection Management Control Procedures*. 100% of corporate suppliers have undertaken anti-corruption training for three consecutive years.

Anti-corruption communication and training-related performance for suppliers						
Supplier Types	2020		2021		2022	
	Number of suppliers	Proportion of suppliers receiving anti-corruption training	Number of suppliers	Proportion of suppliers receiving anti-corruption training	Number of suppliers	Proportion of suppliers receiving anti-corruption training
Class 1 suppliers (main materials)	338	100%	386	100%	418	100%
Class 2 suppliers (auxiliary materials)	542	100%	648	100%	720	100%
Class 3 suppliers (spare parts)	396	100%	462	100%	509	100%
Class 4 suppliers (others)	526	100%	596	100%	672	100%
Total	1,802	100%	2,092	100%	2,319	100%

# Intellectual Property

Intellectual property is an important corporate asset. The Company has passed the certification of intellectual property management system of *Enterprise Intellectual Property Management Code (GB/T29490-2013)*, issued *Intellectual Property Management Manual*, formulated *Intellectual Property Management System* and established *Intellectual Property Acquisition Control Procedures, Intellectual Property Risk Management Control Procedures* and other documents to standardize the management of company patents, trademarks, copyrights, software licenses, etc., and comprehensively supervise and manage the whole process of intellectual property creation, application and transfer.

We uphold the intellectual property policy of "promoting corporate upgrade and development with scientific and technological innovation, protecting corporate technological advantage with intellectual property". We have established an intellectual property system with patent protection as the core and trademark and trade secret protection as the supporting pillars, and continuously built a process-oriented, normalized and standardized intellectual property management system. During the reporting period, we conducted 6 training sessions on intellectual property, etc., covering nearly 100 employees from various departments.



Certificate of Intellectual Property Management System Certification

# Innovation: Leading Industrial Development

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Technology Innovation	32
Customer Relationship Management	35



# Product Stewardship

Product quality and safety issues are always one of the key concerns of the company. If product complaints are filed in terms of quality, performance and safety issues, it not only damages the corporate image in public, but also reduces corporate market value.

We attach great importance to the quality management system, and within the scope of the report, all bases have been certified by the management system of ISO 9001:2015. From incoming materials to finished products, each process undergoes quality inspection engaging all employees. On-site inspectors are responsible for patrol inspection, and key inspection positions implement 100% AI automatic identification and detection.

We have formulated *Component Reliability Sampling Test Specification* to ensure strict quality control on all products, and the factory product inspection rate is 100%, with the random inspection performed on an ad-hoc basis. We perform 5 routine tests and 9 sample tests on products according to IEC 61215:2021 and IEC 61730:2017, including environmental testing, product performance, service life, safety and reliability, etc.

In order to better test the quality and safety of products, we have established our own product testing laboratory, obtained the qualification certificate of PV product testing laboratory issued by TÜV NORD, and passed the testing capability verification by the National Institute of Metrology, China.

In terms of abnormalities in the production process, we have established *Component Production Abnormality Handling Process*, formulated red and yellow line standards thereof, taken timely corrective and preventive measures to cut off the flow of Non-conforming products to customers.

In addition, we are paying attention to the environmental performance throughout the product life cycle and actively employing recyclable materials. In 2022, the proportion of recyclable materials in manufactured battery products reached 1.39%; the proportion of reclaimed products reached 15.80%; and the proportion of secondary recycling of end-of-life products reached 100%.



Certificate of TÜV NORD Testing Qualification



Capability Verification Report by the National Institute of Metrology, China

# Technology Innovation

Intellectual property is an important intellectual asset of the company and critical sources of core competitiveness. Not only can they help improve corporate technological competitiveness, but also ensure long-term corporate development.

The Company attaches great importance to R&D investment and collaboration among industry, academia and research sectors, and boasts a core team of first-class senior experts and various technical personnel engaged in R&D, production and sales in the PV industry for many years at home and abroad. During the reporting period, we invested a total of RMB 323 million in product development and the company has applied for more than 150 patents of various types.

The number of domestic invention patent applications shall exceed **100** and the number of granted patents shall exceed **50** p.a.

To enhance core competitiveness of the company, we have set clear goals for technological innovation:

The cumulative number of patent applications shall exceed **1,500** and the number of granted patents shall exceed **1,000** in five years.

In 2022, we also ensured further protection of intellectual property by setting up a special IPR promotion and assessment team and proposed 9 improvement measures as follows:

- Intellectual property shall be linked to staff promotion and project assessment
- Establish a sound intellectual property management system and operational mechanism
- Improve the ownership and quality of the company's proprietary intellectual property
- Promote the transformation and application of the intellectual property to the marketplace
- Strengthen intellectual property education and training
- Improve patent information utilization rate
- Strengthen the capacity building of intellectual property protection
- Improve intellectual property management structure
- Increase reward standard

Meanwhile, we worked in joint efforts of industry, academia and research sectors with domestic and foreign institutions of higher education and research institutes for mutual research on new technologies. Continuously optimize product energy efficiency and make technological innovations.

We aim at green development with leading N-type technology. We have successfully developed TOPCon3.0 high-efficiency cells, with an experimental cell efficiency at 26%, a mass production cell efficiency at 25.2%, and a module efficiency at 22.8%, which greatly reduces the energy payback period of the PV module manufacturing process, lowering the industry average energy payback period of about 1.2 years to less than 0.9 years, and significantly reducing the product energy consumption per watt in the manufacturing process.

In addition, we have also been actively working with PV developers to explore full-scenario and full-process system solutions. It has created three series: ecological PV, urban PV, offshore PV and offers 16 kinds of concept solutions

Kubuqi PV Sand Control Project

Shandong Tai'an Pastoral and Solar Complementary Project

Shaanxi Fuping Mountain PV Project

Shanghai Pudong Airport Weichang River PV Project

Guangdong Qingyuan Farming and Solar Complementary Project

Guangdong Qingyuan Fishery and Solar Complementary Project

Shandong Shouguang Amphibious Floating Offshore PV Project

Laizhou Bay Piled Offshore PV Project

Jiangsu Yancheng Dafeng Offshore Wind and Solar Joint Power Farm

Rongwu Highway Slope PV Project

Shandong East Jinan Zero Carbon Service Area

Shanghai Songjiang Lightweight Component Commercial and Industrial Roofing Project

Kunshan Water Plant Large Span Flexible PV System

Anhui Tongling Power Plant PV Chlorine Synthesis Ammonia Integration Project

Hubei Laohekou County PV project

Fujian Dongshan Island Offshore Wind and Solar Storage Intelligent Microgrid Zero Carbon Plant

-  Ecological PV
-  Urban PV
-  Offshore PV

▲ National Pilot Project Diagram



# Customer Relationship Management

Maintaining customer relationships is the basis for stable financial returns, long-term financial growth and more corporate influence in external markets.

We hope to establish and maintain a long and close relationship with each customer, paying attention to the protection of customer privacy at the early stage and being devoted to providing perfect after-sale services at the late stage.

The Company has set up a confidentiality clause in the sales contract to protect customers' major trade secrets and personal privacy. In 2022, there were no confidential information breaches within the scope of the report, and no external complaints of customer privacy violations were received.

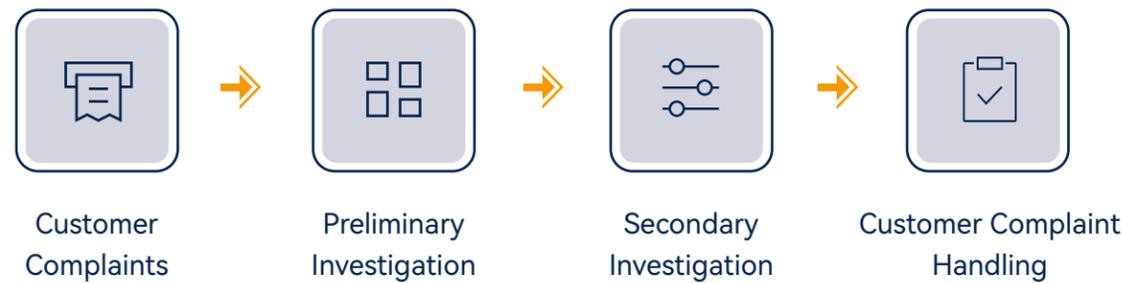
The Company has established *Component Customer Complaint Handling Process* to ensure the effective resolution of each after-sales problem for customers alike. If there is any after-sales problem, the customer can first inform the sales manager, who would feed back to the quality center for the initial investigation of such complaints; if it is identified as a product quality problem, a second investigation will be conducted by the production base, and final treatment measures will be defined thereof.

In addition, in case of any significant issue involving product safety, performance and reliability, we will carry out an evaluation of the potential risks systematically in product design, raw materials and manufacturing processes. We will initiate the product recall if serious potential safety hazards, substantial deviation from its designed performance, or short-term or long-term adverse effects on human health are identified during the use of the products. According to the relevant provisions of the *Component Customer Complaint Handling Process*, we will organize the product recall review meeting, determining the product recall batches, recall methods, recall times and disposal measures for recalled products. The sales manager will also actively communicate with customers and propose remedies to ensure that each customer is mitigated by the impact of the product recall and that its own interests are safeguarded to the maximum extent.

In 2022, no product recall took place within the scope of the report.

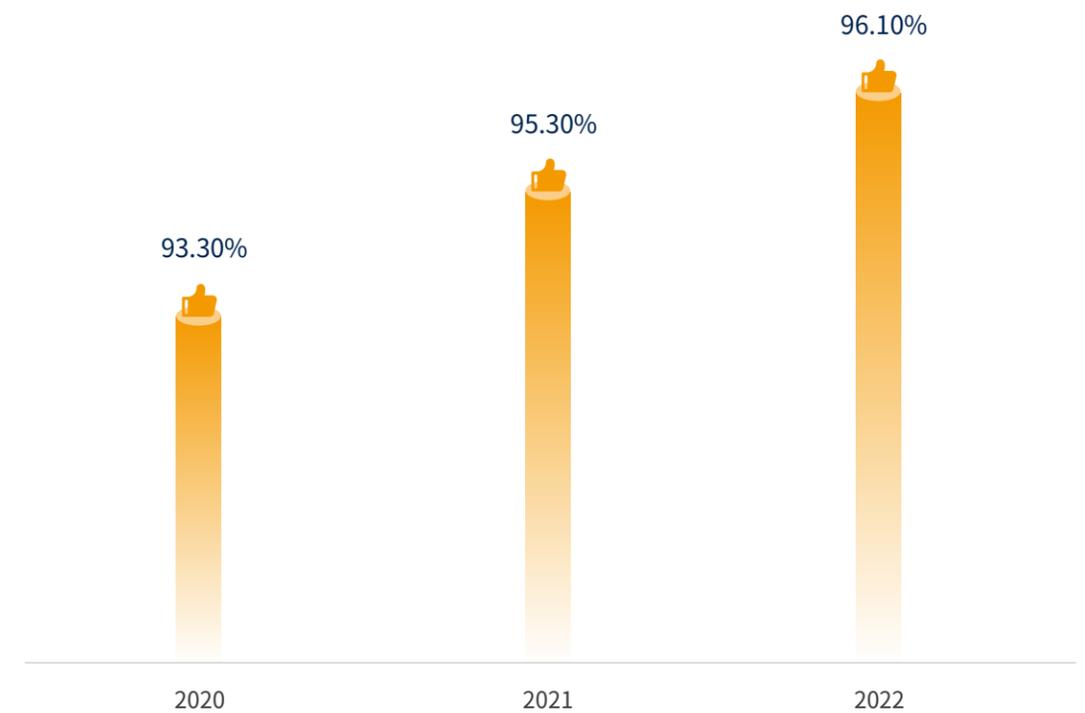
We attach importance to customers' evaluation of our products by developing the special *Customer Satisfaction Control Procedure*, regularly inviting customers to complete satisfaction questionnaires, listening to their voices, and continuously improving product performance to meet the needs of different customers.

Over the past three years, our customer satisfaction has steadily increased, reaching 96.10% in 2022.



Customer complaints in total within the report <b>54</b>	Major customer complaints <b>4</b>	General customer complaints <b>47</b>
Customer feedback <b>3</b>	Customer complaints handled <b>100 %</b>	

Customer satisfaction trend chart over the past three years



# Environment: Painting a Low- carbon Future

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# Environment Compliance

DAS SOLAR attaches great importance to environmental protection and environmental responsibility fulfillment. In 2022, all corporate production bases strictly followed relevant national environmental regulations and environmental protection requirements. As for the EHS management system, we have been controlling key milestones of environmental management to ensure a comprehensive annual target is set thereof. By clarifying responsible departments and quantifying performance indicators, environmental work has been taken as the focus of corporate management and compliance performance as the bottom line of corporate development. No major environmental violations were reported throughout the year.

We conducted an ecological evaluation during the development phase of the project to confirm the impact of the surrounding parcels and the ecological sensitivity of the area. For the scope of operations involving key ecological control areas, management requirements of the place to which they belong have been followed closely.

Meanwhile, based on ISO 14001 environmental management system, we have established management systems such as *EHS Operational Control Procedures*, *Environmental Factor Identification and Evaluation Process*, *Three Waste Management Regulations*, *Hazardous Waste Pollution Prevention and Environmental Responsibility System*, *Hazardous Waste On-site Storage Management System*, *EHS Accident Reporting Investigation and Handling Management Procedures*, *Hazardous Source Identification and Risk Evaluation Procedures*, etc. to guarantee compliance operation of the company. During the reporting period, Quzhou base has passed ISO 14001 system certification, and the new Taizhou base follows relevant system certification requirements and is expected to pass the ISO 14001 system certification in 2023.



Quzhou Base ISO 14001 System Certification

Major and above accidents

0

Compliance disposal rate of hazardous waste

100 %

EHS performance targets completed at

100 %

# Energy Management

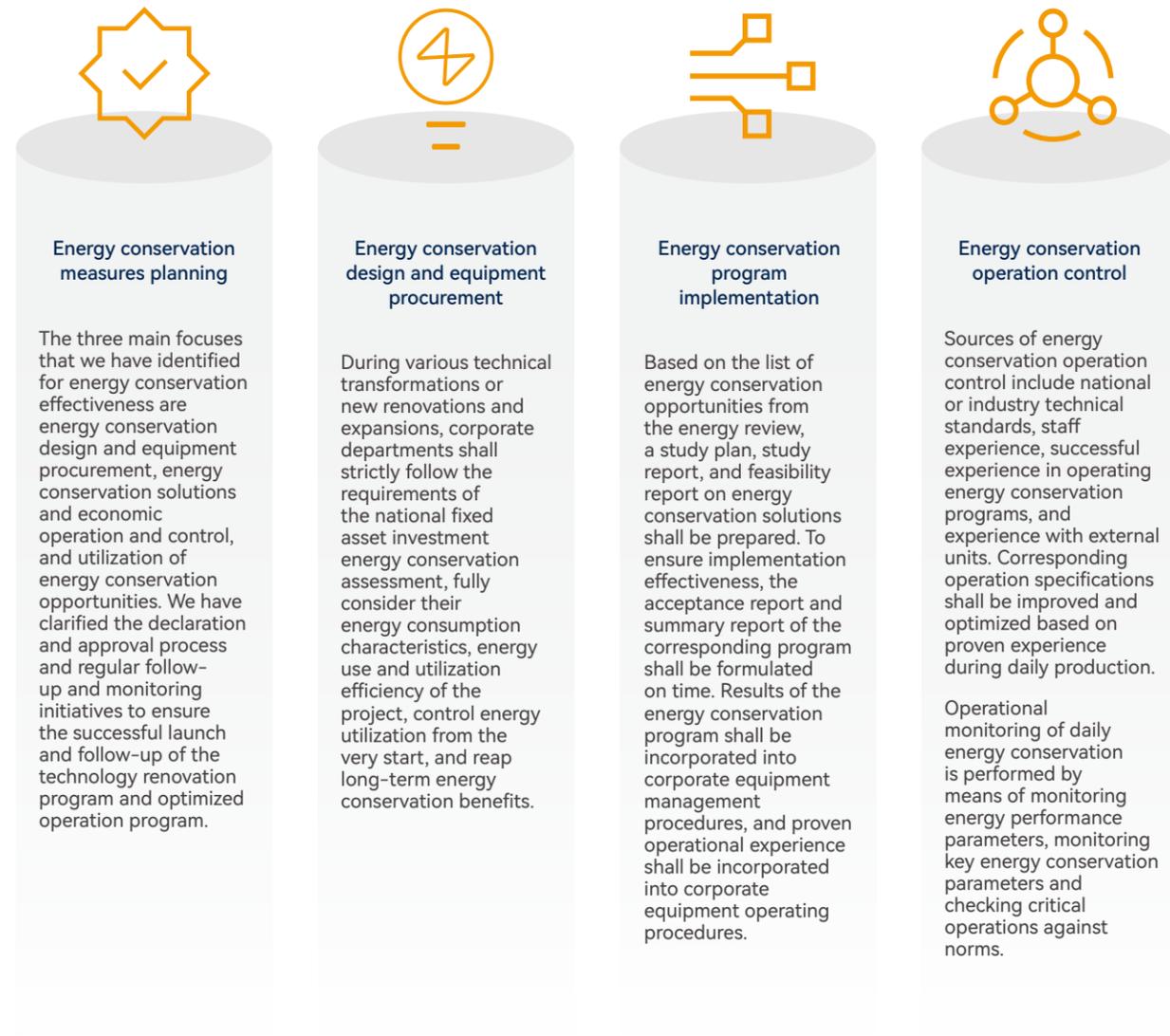
The Company is committed to improving energy efficiency, continuously promoting energy effectiveness, exploring and implementing energy conservation projects, and optimizing energy utilization. Quzhou base successfully obtained ISO 50001 energy management system certificate issued by CQM in 2022.



Type of Energy	Unit	2020	2021	2022	
Gasoline	Subtotal	L	10,301	14,987	21,312
	Total Thermal Amount	KJ	323,872,092	471,203,868	670,067,180
Diesel	Subtotal	L	6,449	16,023	33,408
	Total Thermal Amount	KJ	236,548,781	587,722,301	1,225,402,648
Natural Gas	Subtotal	m <sup>3</sup>	10,789	14,470	356,757
	Total Thermal Amount	KJ	420,023,279	563,327,171	13,888,798,308
Electrical Consumption	Subtotal	KWH	67,704,312	84,016,958	351,332,962
	Total Thermal Amount	KJ	243,735,523,200	302,461,048,800	1,264,798,663,200
Total Thermal Amount	KJ	244,715,967,352	304,083,302,140	1,280,582,931,336	
	GJ	244,716	304,083	1,280,583	

To rationalize the use of energy resources, reduce energy resource consumption, improve financial efficiency and sustainable development, we have formulated Energy Conservation Operation Management Regulations to ensure energy control and energy conservation and consumption reduction in energy utilization systems and chains, and ensure full-process management of improving energy resource utilization efficiency, and define clear responsibilities of each department.

## Four Pillars of Corporate Energy Efficiency Management



Through energy conservation management, a total of

**79.63** GJ

of Quzhou base

Taizhou base

**17.84** GJ

Total

**97.47** GJ

## Corporate Energy Conservation and Emission Reduction Case

Project Name	Item Description	Intended Effects
5# workshop PCW external gas pre-cooling energy conservation renovation	Cooling towers are adopted to provide chilled water below 18 degrees for PCW plate exchange, reducing ice machine load or turning off the ice machine and ice pump directly, resulting in overall power consumption savings for the power station.	RMB 410,000 p.a. is expected to be saved in terms of electricity costs
Cleanliness and temperature improvement in front lane area	By adding FFU to increase ice water temperature, energy conservation of the ice machine can be achieved without affecting workshop cleanliness.	Electricity consumption of the ice machine can be reduced worth nearly RMB 2 million in electricity costs p.a., and the air supply volume in the front of the workshop can be improved as well as continuous workshop cleanliness.
Power factor improvement report	The transmission power factor is increased by over 95% and up to 99% with modification of high voltage tap-chip path.	When cell components are produced in normal process, RMB 1.49 million can be saved in electricity costs p.a.
Improvement of recycling cell MAU humidification water and condensate	Automatic start/stop of pump level can be achieved by installing independent lifting wells. Meanwhile, the roof water pipe outlet is connected to the cooling tower to lift the condensate to the cooling tower.	RMB 534,000 can be saved in utility costs p.a.
Proposed improvement of cell # air pressure system energy conservation	Energy conservation and efficiency improvement can be achieved through gas consumption reduction and equipment machine renovation.	RMB 2.898 million can be saved in energy consumption of the air pressure system p.a.
Energy conservation measures for boiler gas	Control the cooling water return temperature by adding a cooling water electric bypass valve, with the manual increase of hot water temperature for reverse supply of the pure water station via the return system instead of using a boiler. The ice machine can cool and heat water at the same time without further burdening the working load.	With full capacity, the boiler can work with 65% load in winter, saving about RMB 4.91 million in operational costs p.a. (Except for extreme cold weather)
Quzhou Yishang PV intelligent operation and maintenance	Quzhou Yishang renewable energy 5.5MW distributed PV power generation project adopted the idle roof of Quzhou base for PV power generation, with an annual power generation potential of 5 million kWh, of which DAS SOLAR consumed 100% of PV power.	This leads to an annual reduction of about 2,000 tons of standard coal consumption, equivalent to a reduction of about 4,985 tons of carbon dioxide.

We will finely control energy use and management through digital means in the future, striving to develop more effective ways for energy saving and emission reduction while improving energy use efficiency.

# Respond to Climate Change

DAS SOLAR, a new top-tier PV brand, has been actively implementing the globalization development strategy, and better utilizing PV market layout, which contributes to shipments across over 60 countries and regions around the world, recognized as a reliable partner of many domestic and overseas customers. In recent years, PV energy has been a focal point of investment banks as an emerging industry. With the global target of "carbon neutrality", it is expected to take off gloriously. DAS SOLAR is thus in the limelight of the thriving capital, enlisted as one of the Venture 50 of Carbon Neutrality of the Investment Industry in 2022. In the future, we would continue to better utilize our leading N-type technology, provide efficient and highly reliable products for global customers, and contribute our efforts to building a global carbon neutrality development path.

## Case

### Dalian Koyo Industrial and Commercial Roofing Project

Located in Dalian City, Liaoning Province, the project uses the idle roofs of Dalian Koyo Wazhou Automobile Bearing Co., Ltd. to build PV power stations mainly for self-consumption. The power generated by the project is connected to the low-voltage 400V busbar of the customer, and connected to the power grid in strict accordance with the method of "self-generation for self-consumption, surplus power supply to the grid".

Under the planned capacity expansion by 1.32036MW, a total of 510 pieces of 540Wp double-sided double-glass PERC half-sheet modules and 2460 pieces of 425Wp lightweight PERC stack-tile modules are scheduled to be installed with an installed capacity of 1320.9kWp. It will generate about 1,450,348 kWh p.a. after completion.



## Case

### Nantong Yilisu Commercial and Industrial Roofing Project

The project adopted the idle color steel tile roof of Nantong Yilisu Electronics Industry Co., Ltd. for a PV power station mainly for self-consumption. The project was designed for a capacity of 1.1MWp, adopting monocrystalline single glass PERC half-sheet PV modules and monocrystalline silicon flexible PV modules, with an installed capacity of 111,8kWp. It is expected to generate about 1.226 million kWh p.a. after completion.



## Case

### Quzhou DAS SOLAR Commercial and Industrial Roofing Project

In this project, the PV system installation area covers idle color steel tile roofs, PV carports and PV rain sheds of DAS Solar (Quzhou) Co., Ltd. 8,917 monocrystalline silicon double-glass PV modules, 1,274 monocrystalline silicon single-glass PV modules and 1,450 monocrystalline silicon lightweight flexible PV modules will be installed in the period, with an installed capacity of 4,921.93 kWp on the DC side. The project is expected to generate about 4,742,900 kWh p.a. during the 25-year design life after it is put into production.



## Case

### Dali Heqing Junhua Photovoltaic Power Station

Located along the northern hillside area of Jingdongwan Village, Huangping Town, Heqing County, the Junhua Photovoltaic Power Station, Heqing, Dali (Jingdongwan Site) has a straight-line distance of about 12km from Huangping Town and a straight-line distance of about 53km from Heqing County. The terrain is open and suitable for PV construction.

The project adopts the 540W monocrystalline silicon modules manufactured by DAS Solar, with a total of 38 matrixes of 3.150MW consisting of 253,552 PV modules. The project was successfully connected to the grid at one time at the end of 2022, with the equipment running safely and stably and all performance parameters excellent. It can supply about 210 million kWh of green low-carbon electricity annually, equivalent to a saving of standard coal of 65,000 tons, reducing carbon dioxide emission of 170,000 tons, sulphur dioxide by 72 tons and nitrogen oxides by 72 tons, which will help early achieve the local "dual carbon" target and promote the healthy and sustainable development of the local economy and environment.



## Case

### Three Gorges Renewable Energy Wan'an PV Poverty Alleviation Project

Located in Shaokou Town, Wan'an County, the Wan'an Project uses the land of the Songwenshen Reservoir (575 mu), additional land of Meigang (647 mu), and the land of Xianrengang Reservoir (558 mu), for a total of 1,780 mu of land. A new 110kV booster station will be built and connected to Wan'an Yaotou Substation through a 13km transmission line across Ganjiang River. The project adopts a combination of floating and fixed elevated bracket schemes, with a floating array of about 54MW (Songwenshen Reservoir) and a fixed elevated bracket matrix of about 46MW, with 27 PV power generation units and a total capacity of 100MW.

Three Gorges Energy has planned PV projects for a total of 100 MW in Shaokou Town. In addition to the fishery-PV complementary project, there is also an agri-PV complementary power plant located at Meigang site, with all components to be supplied by DAS Solar.

The intensive development mode of "one resource, two industries" is formed through the complementarity of fishery-PV and agri-PV modes. During its 25-year economic life, the power plant will have an average equivalent utilization hour of 1,104 hours and an annual average power generation capacity of 110 million kWh in such 25 years, saving about 40,000 tons of standard coal and reducing carbon dioxide emissions by about 90,000 tons p.a. for the country, which will not only effectively relieve the pressure of local environmental protection in Wan'an, but also strongly promote the development of the regional economy.



DAS Solar's PV module products offered to the world are constantly providing clean and green electricity. It is estimated that by the end of 2022, it will save about 7.18 million tons of standard coal and reduce carbon dioxide emissions by about 17.95 million tons p.a., which will help the global "carbon neutrality" process. Let's join hands for a "zero carbon" future to promote the harmonious coexistence of man and nature, and to promote the building of a community of shared future for mankind. Next, we will focus on building the company's own capacity to ensure internal empowerment of the company and external benefits for society through actions such as identifying climate change risks, strengthening the internal greenhouse gas emissions database, and formulating climate change strategies and targets.

# Water and Waste Water Management

The company's main water intake is mainly from the municipal water supply, intended for boosting corporate production and manufacturing. Aqueduct™ tools, developed by WRI (World Resources Institute), are utilized to assess the annual water risk at all our sites, taking into account the amount of physical risk to local water resources (e.g. baseline water stress, meteorological hazard impacts), physical risk quality (water quality impacts), and regulatory and reputational risks. The assessment results show that the company's production and operation premises are not located in high-water-risk areas or very-high-water-risk areas.

## Water Intake of the Company

Production operation premises	Water risk level at operation premises	Water intake source and category	Unit	2020	2021	2022
Quzhou base	Medium (LM1-2)	Third party fresh water	ton	774,655	949,191	1,505,035
Taizhou base	Medium-high (MH2-3)	Third party fresh water	ton	n/a	48,113	1,415,139
Total water intake	/	/	ton	774,655	997,304	2,920,174

Note: The statistical scope excludes the living area sewage

In the process of operation, the main sources of production wastewater are acid and alkali wastewater from the cell workshop, spray tower wastewater from the exhaust gas treatment facility, site cleaning wastewater and collection wastewater from the installation area, with pollutants including ammonia nitrogen, chemical oxygen demand, pH, total nitrogen, total phosphorus, fluoride, suspended matter, etc. Each operation premise adopts a three-stage treatment process and strictly complies with *Emission Standard of Pollutants for Battery Industry (GB30484-2013)*. Each factory specially formulates relevant management regulations, regularly monitors, analyzes and reports the results of wastewater according to the monitoring plan, and inspects relevant production facilities and monitoring equipment in a timely manner to ensure wastewater discharge standards are satisfied thereof.

## Corporate Drainage Status

Production operation premises	Destination of drained water	Unit	2020	2021	2022
Quzhou base	Industrial wastewater is discharged after meeting municipal water pipeline drainage standards after treatment at the on-site sewage treatment station	ton	558,088	640,850	1,354,531
Taizhou base		ton	n/a	n/a	937,539
Total amount of water discharged	/	ton	558,088	640,850	2,292,070

## Corporate Water Consumption

Production operation premises	Unit	2020	2021	2022
Quzhou base	ton	216,567	308,341	150,504
Taizhou base	ton	n/a	48,113	477,600
Total water consumption	ton	216,567	356,454	628,104

## Case

### Wastewater recycling and renovation of pure water system

Concentrated water is highly saline wastewater from the high-purity water treatment process, and its regenerative use is of limited value. Considering that the existing concentrated water recovery system (ultrafiltration and ROR recovery system) is insufficient for daily production at present, Quzhou base has connected the flushing drainage of disk filter, ultrafiltration, primary RO, secondary RO and ROR recovery system to the peripheral concentrated water tank to meet the requirements of operation and maintenance of bathrooms, cooling towers, nitric acid towers, acid mist towers, wastewater stations, etc. This process transformation can save over 50,000 tons of water resources p.a.

We attach great importance to the supervision and management of water resources, and each plant prepares emergency response plans for environmental emergencies according to the characteristics of its own production and operation, and specifies the emergency response process in case of failure or breakage of wastewater collection and discharge facilities, etc. For water resources management, we organized training relevant to emergency plans for wastewater stations and pharmaceuticals for wastewater station systems in 2022. In 2022, we set a wastewater discharge target of 100% qualification, and there were no incidents of wastewater discharge exceeding the standard throughout the year.



Emergency plan training for wastewater station



Pharmacy training for wastewater station system

# Exhaust Gas Emission and Governance

In terms of exhaust gas management, *Three Waste Management Regulations* specify the responsibilities of Engineering and Power Department for the maintenance of exhaust gas treatment facilities. The Safety and Environment Department formulates the exhaust gas monitoring plan according to relevant regulations, regularly monitors organized and fugitive waste gas, and commissions a unit qualified by a third-party institute to perform inspections and issue test reports. In the event of abnormal emissions of process waste gases, emergency plans are implemented in a timely manner to ensure compliant emissions.

## Corporate Air Characteristic Pollutants

Emission organization	Resources and types	Operating premises involved	Emission standards
Organized Exhaust Gas	Component workshop string welding and lamination process: Organic exhaust gas	Quzhou base, Taizhou base	Emission Standard of Pollutants for Battery Industry (GB30484-2013) Emission Standards for Odor Pollutants (GB14554-93) Emission Standard of Air Pollutants for Boiler (GB13271-2014)
	Cell workshop linting, diffusion and cleaning processes: Acid and alkali exhaust gas		
	Coating process: Exhaust gas from coating process		
	Screen printing and other processes: Organic exhaust gas		
Boiler emissions: Sulphur dioxide, nitrogen oxides, particulate matter, flue gas blackness	Taizhou base		
Fugitive Exhaust Gas	Material storage and utilization: Fluoride, hydrogen chloride, chlorine gas, ammonia gas	Quzhou base, Taizhou base	
	Materials drying: Nitrogen oxides	Quzhou base	
	Wastewater treatment: Non-methane total hydrocarbons, hydrogen sulfide	Taizhou base	

In 2022, each plant set a corporate EHS performance target of 100% compliance in terms of air characteristic pollutant emissions. By organizing special training on exhaust gas system, Taizhou base ensured relevant employees understand the sources of exhaust gas generated in production operations and the working principle of exhaust gas treatment facilities, which effectively guarantees the quality of operation and maintenance of daily exhaust gas emissions management. No emission violations occurred during the reporting period.



# Waste Generation and Management

In terms of solid waste prevention and control, we follow the principle of "on-site collection and centralized storage". *Three Waste Management Regulations* provide guidelines for the management of production sites and waste storage rooms that generate solid waste. Ensure effective waste classification and collection, storage at designated locations, dedicated operation and training needs, daily registration and maintenance and regular inspection and assessment, and other solid waste management efforts.

Solid waste types	Operation premises	Waste breakdown	Management methods
General industrial solid waste	Quzhou base, Taizhou base	Waste battery cells, waste packaging trays, waste packaging cartons, removal dust, wastewater treatment sludge, waste RO membrane, waste cartridge	<i>General Industrial Solid Waste Storage, Disposal Site Pollution Control Standards</i> (GB18599-2001) and its standard revision sheet (Ministry of Environmental Protection Announcement No. 36 of 2013) are strictly followed. Establish a management ledger for daily management.
Hazardous waste	Quzhou base	Waste filter cotton, waste active carbon, waste packaging drum, waste SDG adsorbent, waste mineral oil, waste rags and gloves, waste xylene, waste silica gel	Collection and space occupation shall follow <i>Standard for Pollution Control on Hazardous Waste Storage</i> (GB18597-2001) and its standard revision sheet (Ministry of Environmental Protection Announcement No. 36 of 2013), <i>Technical Specification for Hazardous Waste Collection, Storage and Transportation</i> (HJ 2025-2012). During daily management, the registration system of the declaration shall be followed with the establishment of a ledger system; the disposal of hazardous solid waste shall be subject to report and transfer of series slips and other systems.
	Taizhou base	Waste active carbon, Waste packaging drum, waste mineral oil, waste rags and gloves, waste xylene, waste silica gel	

The company implements the principle of prevention-oriented, full-process management and pollution unit accountability of hazardous waste pollution. *Hazardous Waste Pollution Prevention and Control of Environmental Responsibility System*, and *Hazardous Waste On-site Storage Management System* are thus formulated to reduce hazardous waste amount, and ensure the best utilization of hazardous waste with no harm done. Dedicated management of hazardous waste temporary storage area is arranged; incoming hazardous waste for registration shall be signed off and accounted; no mixture or joint storage is allowed for hazardous waste and general waste. In strict compliance with the "three simultaneous" system, the company set up a leading group in a polluted environment, and demarcated responsibilities for hazardous waste-related work by appointing a team leader, a deputy team leader and team members. In 2022, a total of 65.71 tons of hazardous waste was generated, with a 100% compliance disposal rate.

# Social Responsibility: Building a Better Home

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# Protect Employee Rights and Interests

A good rights protection system can stimulate internal employees' passion for work, enhance work efficiency and instill more financial benefits; meanwhile, it can enhance corporate image and reputation in terms of social responsibility in the eyes of customers.

## Caring for Employees

We have been committed to equal and transparent labor policies and strictly comply with requirements of relevant laws and regulations of national labor laws, and have formulated a number of policy documents such as *Procedures for Rescuing Child Labor and Protecting Minor Workers*, *Procedures for Non-Forced Labor Management* and *Procedures for Anti-Discrimination Management* to ensure that every employee is entitled to proper human rights at work without any violation. Besides, the use of prison labor is strictly prohibited.

Employees who have been treated improperly can inform the company via various complaint channels, including complaint boxes, employee representative mailboxes and manager mailboxes. All complaints will be investigated and once confirmed, punishment in the form of education, warning, termination of contract, etc. will be imposed without exception. In order to avoid retaliation against the complainant, we will keep the information of the complainant strictly confidential. In 2022, there were no incidents of forced or compulsory labor, child labor and employment discrimination at all operating premises and suppliers within the scope of the report.

We will continue to improve the welfare of our employees and enhance corporate cohesion thereof. The company has established *Regulations on Remuneration Management* to ensure diversified incentive subsidies for different functions, including allowances, subsidies, bonuses, etc. Annual performance appraisals for all employees are performed according to *Performance Appraisal Management Regulations*, and salary adjustment or promotion for employees with excellent performance are in place as a result.

Welfare Types	Welfare Contents	Coverage
Company Benefits	Social insurance, provident fund, annual leave, maternity leave, family leave, entry physical examination, annual physical examination	Regular employees
Trade Union Benefits	Holiday benefits, wedding gifts, childbirth gifts, condolence money, work injury compensation	All staff

Note: Temporary employees are not entitled to family leave or annual physical examination

## Employee Engagement

The company has established two-way communication channels with its employees and has formulated *Freedom of Association and Collective Negotiation Work Procedures*. All employees are free to form and participate in trade unions and elect employee representatives to exercise their collective negotiation rights.

A trade union committee is also set up, and regular staff representative meetings are held for input from employees concerning their expectations and demands, so that employee engagement can be enhanced, legitimate rights and interests of employees can be protected and a sense of belonging can be instilled at work.

## Case

### Host democratic workshops for input from employees

Quarterly employee workshops are hosted by heads of production bases, HR centers and administrative departments, so that a direct talk with employee representatives can be in place for employee feedback and problem-solving on site.



The 10th Democratic Workshop

The company takes efforts to ensure the balance between life and work for all employees alike, whereby all kinds of activities are organized to enrich employees' leisure time and relief from work pressure thereof.



Basketball Tournament of Employees



Flower Delivery on Women's Day



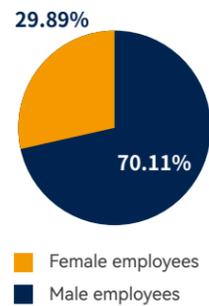
Employee Fellowship Party

## Equal Employment

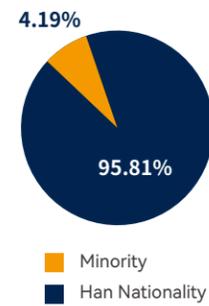
We desire to create a diversified and equal work environment. The Company strictly abides by national laws and regulations and international conventions, and enters into labor contracts with 100% of its employees. We prohibit any employee discrimination based on ethnicity, gender, age, religion, marital status and other differences. We firmly believe in the corporate value of "corporate success is achieved through employees in unison". We will never treat employees differently based on their ethnicity, gender, background and religion.

As of the end of the reporting period, there were a total of 2,770 employees included in the report, with 1,942 male employees, accounting for 70.11%, and 828 female employees, accounting for 29.89%, of which minority employees accounting for 4.19%.

Proportion of female employees among all employees

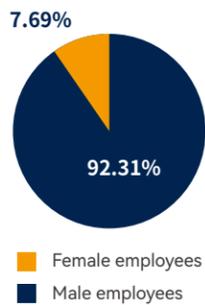


Proportion of minority employees among all employees

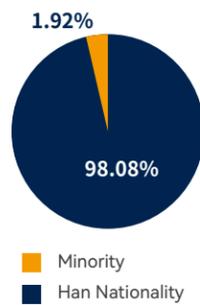


On the other hand, we also hope that along with the Company's growth, we can promote co-prosperity of the surrounding communities, and accelerate the flow of local human resources since the local senior management account for 9.62% of the company's total senior management. Diversity at the management is analyzed as follows:

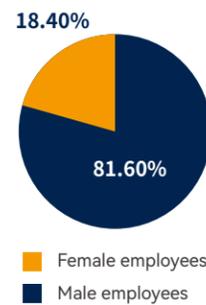
Proportion of women senior management



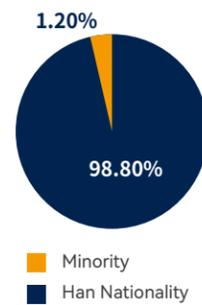
Proportion of minority senior management



Proportion of the rest women management



Proportion of the rest minority management

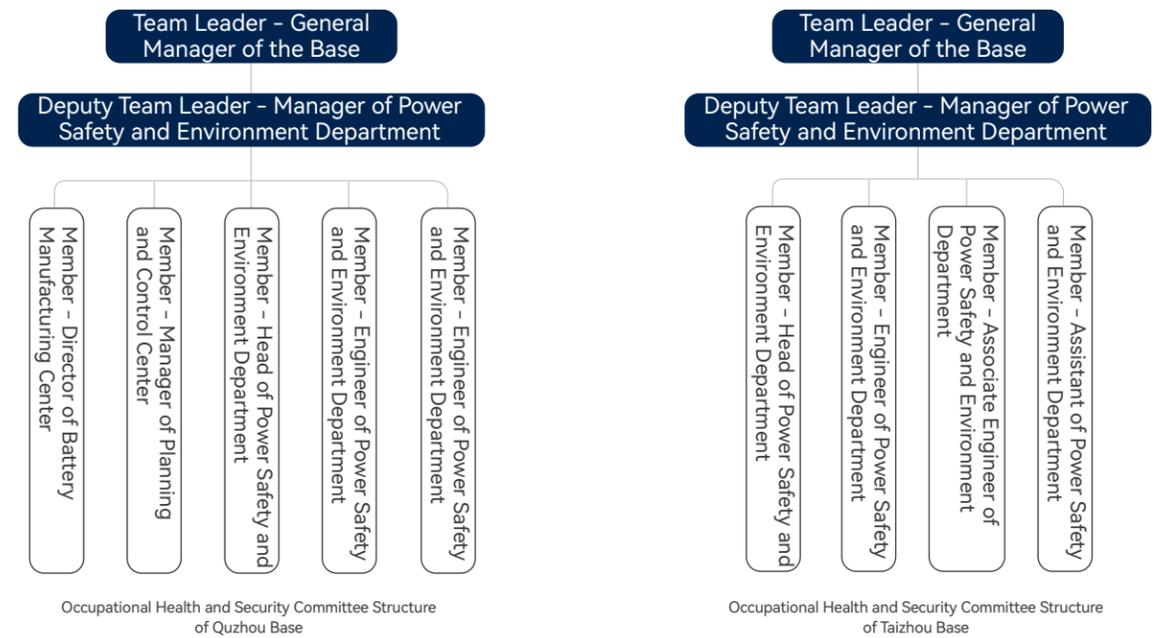


We respect the differences of each employee and hope that employees of different genders, nationalities and cultures can play their values in the company and work hand in hand with the company. Through its overall diversified and inclusive environment, the Company promotes communication and collaboration with various types of employees, enhancing the trust between the Company and its employees and consolidating the teamwork between employees. We will establish consistent salary standards for employees of different genders in the same position, treat men and women employees equally and give the same salary package and equal promotion opportunities on the principle of gender equality.

## Focus on Occupational Health

Employees' health and safety are the basis for corporate production and operation, and a sound occupational health management system can help ensure corporate sustainability in value creation.

We have established an occupational health and safety management system in accordance with ISO 45001:2018, and the proportion of premises within the scope of the report that has obtained system certification was 66.7%. Quzhou and Taizhou bases have established Occupational Health and Safety Committees with quarterly meetings between management and employee representatives to develop and implement OHS-related goals, targets and management programs, so as to ensure that the requirements of corporate occupational health and safety management system are integrated into daily business activities.



We have established Hazard Identification and Risk Evaluation Procedures and Occupational Health Guardianship Management Measures to identify and take control measures on OHS risks arising from operation activities, so as to mitigate potential risks and ensure employee health and safety and property safety. We entrust qualified third-party institutes to perform physical examinations and medical follow-ups when employees report duty, are on duty, off duty, and leaving duty.

In 2022, there were three Work-related injuries within the reporting scope, all of which were minor, with a total recordable incident rate (TRIR) of 0.107, and no employees were diagnosed with Work-related ill health thereof.

The main types of work-related injury	Number of cases	The number of hours worked	Total recordable incident rate (TRIR)
Fractures, cuts, contusions	3	5,574,387	0.107

Note: Total recordable incident rate is calculated assuming 200,000 man-hours.

In case of working hazards that are not identified in a timely manner during the management process, an anonymous box has been set up in the production base, whereby any employee can submit his/her complaint or report, and personal information as such will be strictly protected against potential retaliation.

For safety accidents that have occurred, we have established EHS *Accident Reporting Investigation and Handling Management Procedures* so that they can be controlled and handled in a correct and timely manner, the impact as such can be evaluated, and the occupational health and safety management system can be continuously improved. Meanwhile, in order to effectively prevent potential safety accidents, we have formulated an emergency plan in line with *Occupational Health Guardianship Management Measures*, set up an emergency rescue team, organized daily drills, and provided monthly occupational health and safety training for all employees.

### Case

#### Organize first aid training for better safety awareness

In order to improve corporate capacity in dealing with unexpected safety accidents, we have organized medical first aid training for employees to enhance their knowledge as such, enhance safety awareness and protect the lives and property of employees by combining theory with practice.



Regular health and safety training

# Promote Talent Development

We attach great importance to employee development. Employee training is not only intended for upskilling, but also for satisfying corporate requirements for strategic development in terms of talent supply and demand. A diversified talent pool can reduce corporate labor cost of various businesses.

The Company has formulated training requirements for management team, incumbent employees and new employees respectively, and has arranged diversified training programs to develop technical capabilities of employees in different positions. Each department is required to develop an annual training plan in line with employee development needs, and after each training session, participants are required to complete the training evaluation by means of a quiz or wrap-up of take-away thereof.



We have formulated *Regulations on Skill Assessment Management* and set up skill assessment items of different levels and an award system to encourage employees to improve their professional knowledge and practical operation capacity spontaneously. In addition, we offer special training activities based on specific departmental needs.

## Case

### TRIZ special training to stimulate innovative mindset

For R&D department, we provided a special training course on the Theory of Innovative Problem-Solving and Best Conceptual Design (TRIZ). Problem solving models and 40 principles of the invention for employees in R&D department were provided for the sake of improving their problem-solving skills and stimulating their innovation mindset.



TRIZ special training

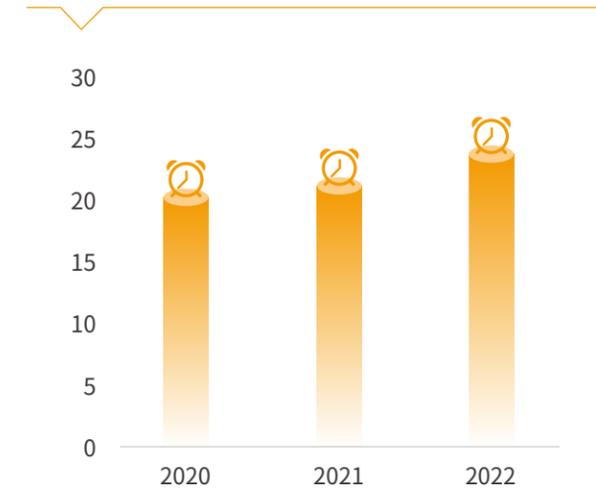
In order to facilitate learning resource sharing, we have built a learning platform called "DAS SOLAR in Unison", which offers 1,743 courses in management, professional, general studies and corporate culture for all employees, and organized 3 large forums on corporate culture, inviting top managers to share their industry insights and work experience, to instill a mutual development philosophy of employees and the company.



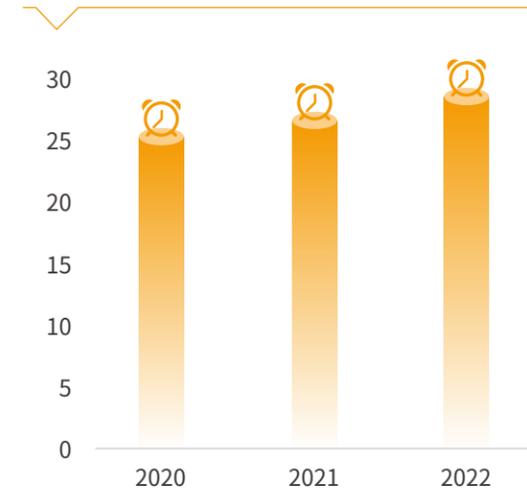
Poster of Big Shot forum

In 2022, the company made full use of online and offline training methods to expand the training coverage. Within the scope of the report, the total training hours of all employees were 77,352, with an average of 27.92 hours of training per person. The average training hours per male employee was 27.90 hours and that per female employee was 27.98 hours.

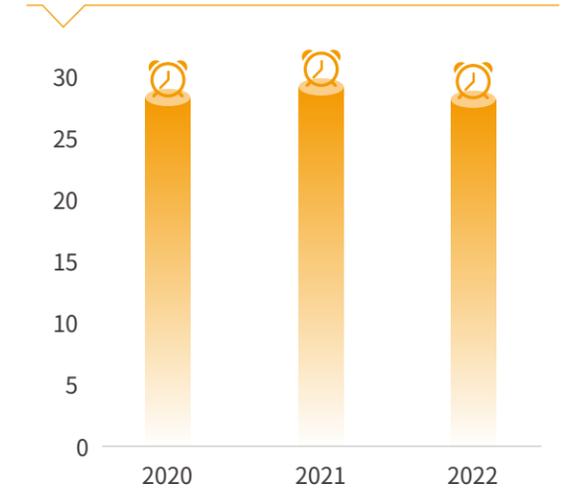
Average duration of training for Senior Management (H)



Average training hours for the rest management (H)



Average duration of training for individuals (H)



We have enhanced our training for medium and senior management over the past three years. Compared to 2020, the average training hours increased by approximately 20% for senior management and by approximately 8% for the rest of management while remaining stable for general employees in the reporting year.

# Create a Sustainable Supply Chain

Excellent supply chain management is not only reflected in the control of procurement costs for better efficiency, but also in reducing potential harm caused to the environment and society, so as to reduce the overall impact of external adverse factors on the company.

## Supplier Management

We are committed to building a high-quality supplier management system and fostering sustainable partnerships. The Company has formulated *Supplier Development and Management Process*, which clearly stipulates the access, review and elimination mechanism of suppliers.

We apply a 4-step access audit on new suppliers.



Meanwhile, to avoid potential corruption risks in the procurement process, we have developed a *Code of Conduct for Procurement* and require all suppliers to sign an *Anti-Bribery and Anti-Corruption Pledge* thereof.

We attach great importance to transparency in supply chain management. Social responsibility surveys are conducted on new suppliers concerning child labor, forced or compulsory labor, and excessive labor, and all suppliers are required to sign off a social responsibility pledge. During the reporting period, there were no incidents of improper labor employment by suppliers.

In 2022, the Company employed 220 new suppliers, ensured 100% access audits thereof, and applied environmental and social standards for screening without exception.

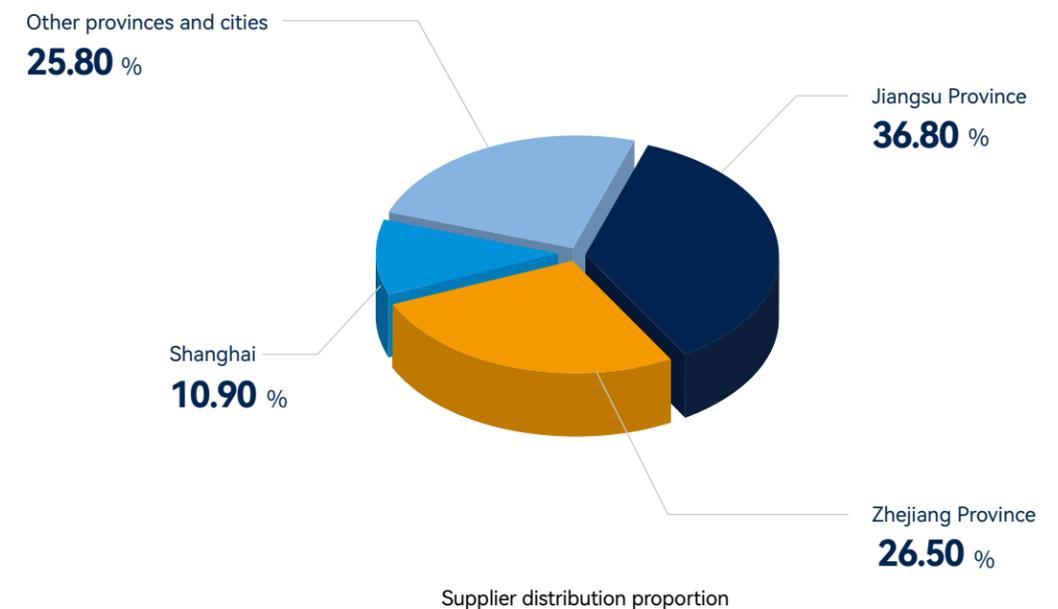
For qualified suppliers, annual QDCS audits are organized for performance evaluation in four dimensions: quality, delivery, procurement cost, and service. Class 1 suppliers are audited on monthly basis, and the key auxiliary material suppliers are audited on a quarterly basis. In 2022, 98% of the suppliers within the report scope were audited and all of them passed supplier audit without exception. The audit of 1 supplier was cancelled due to the pandemic impact.

In addition, we also attach great importance to daily communication and capacity building of our suppliers. We host quarterly communication and exchange meetings with key suppliers for their innovative ideas, continuously develop collaboration and trust thereof, and enhance core competitiveness in their respective fields for mutual benefits. For suppliers with average capacity, we also dedicate internal employees on-site for quality guidance and audit management systems so as to improve their service quality.

We have also introduced elimination mechanisms for suppliers who refused to improve. In 2022, we terminated cooperation with 2 suppliers due to product quality issues.

## Local Procurement

The Company is actively promoting a local sourcing strategy to promote local economic development and save transportation costs of the supply chain. In 2022, the Company's suppliers are mainly concentrated in China, with Jiangsu Province, Zhejiang Province and Shanghai as the top three provinces and cities in terms of domestic suppliers. The proportion of local procurement in the scope of the report was 56.37%<sup>1</sup>.



<sup>1</sup> Calculated based on the proportion of Quzhou and Taizhou suppliers' procurement budget to the total procurement budget in the scope of the report.

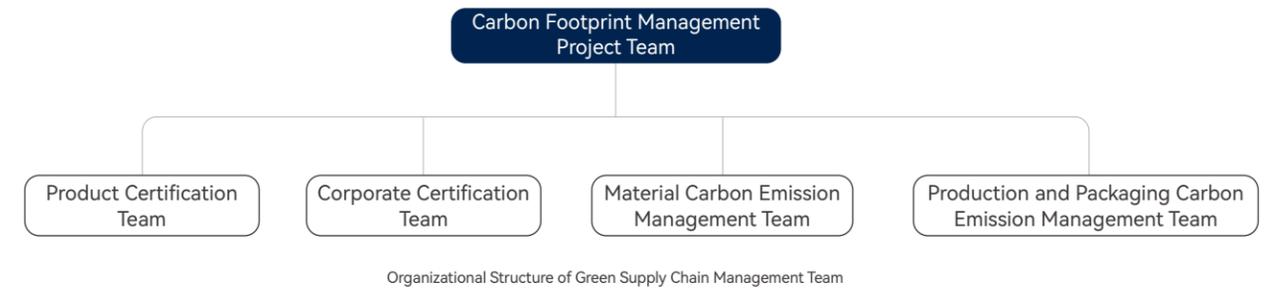
## Supply Chain Risk Identification

We are well aware of the significant impact on corporate business from policy changes, price fluctuations, and raw material quality. To mitigate potential risks, a risk assessment of the supply chain is conducted based on a SWOT analysis model that distinguishes internal and external factors.

Internal/ External	Event	SWOT analysis				Risk level	Control measures
		Strengths	Weaknesses	Threats	Opportunities		
External	Increase in raw material prices	Inventory value added	Cost increase	1.Order Losses 2.Cost shifted to customers	Strategic inventory can improve corporate profit margin	Medium	Communicate with sales department to mitigate pricing risks in order taking
	Decrease in raw material prices	Cost reduction	Inventory impairment	When inventory level is higher than that of peers, it will affect profit margin and product competitiveness in the negative sense	When turnaround ratio is higher than that of peers, it will improve market competitiveness of relevant products	Medium	Reduce inventory levels and increase order frequency
	Receipt of unqualified raw materials	/	Quality abnormalities are not handled effectively or timely	1.Economic losses due to the suspension of production lines; 2.Order delays lead to customer complaints	/	Medium	1. Strict review of supplier qualifications before introduction 2. conduct annual audit
Internal	Material changes are not communicated in a timely manner	/	Workshop unavailable	Delayed delivery date causing customer complaints	/	Medium	Timely notification of material changes to responsible departments
	Order demand beyond reasonable procurement cycle	/	Raw materials do not arrive as scheduled	Orders cannot be completed on time causing customer complaints	/	Medium	Ensure material requirements follow procurement cycle schedule

## Green Supply Chain

At the end of 2022, the Company set up a Green Supply Chain Management Team, led by Executive Vice President, responsible for building a green supply chain management system for the company.



Based on the decision of the Green Supply Chain Management Team meeting, we have been working on *Green Supply Chain Management Regulations* and *Green Supply Chain Carbon Value Traceability Management Process*, which are expected to be released and implemented in early 2023.

We are planning to establish a management system for product carbon footprint, and intend to form a traceability system for raw materials as well. Through traceability, we include upstream suppliers in the carbon footprint management system, for better understanding of the carbon value performance of materials at a glance, and ensure whole lifecycle management of raw materials while promoting low carbon transformation of the whole industry chain.

We have selected 6 products for application of French Energy Regulatory Commission CRE verification of carbon footprint, and planned for carbon emission controlling of the 6 products to 450-500 kg eq CO<sub>2</sub>/kWh, whereby the official certificate is expected to be awarded in March 2023. Meanwhile, we are also in the process of obtaining approval for our product lines for EPD certification and EU energy-related product efficiency labels, and corresponding certificates are expected to be awarded in 2023 as well.



On the other hand, we have been actively developing green recycling technology for PV modules and creating industrial demonstration lines. We have developed key technologies such as separation technology of EVA film and cell, thermal separation technology of glass and film, multi-component electrostatic sorting technology, etc. The green recycling demonstration line of retired PV modules developed in collaboration with Hebei University and other units is expected to be put into operation in 2023.

We are committed to promoting the green development of PV modules throughout their entire life cycle. At the start of 2023, the company was elected as the vice chairman unit of the PV Recycling Industry Development Cooperation Center, and Dr. Song Dengyuan, chief technology officer of the company, was re-elected as the director of the center.

## Support Social Causes

Social welfare has been one of the important publicity tools to enhance corporate image in public eyes. Although no substantial financial returns will be generated thereof, social welfare investment is both a token of appreciation to the public and an expression of corporate responsibility.

In 2022, we donated a total of 30,740ml of blood without compensation and donated materials worth RMB 127,000.

### Case

#### Consolidated efforts against pandemic

2022 witnessed recurring epidemic situations across the country. In order to better fight the epidemic, we donated epidemic prevention materials and 120 sets of solar mobile power to Quzhou Traffic Police Brigade for front-line epidemic prevention workers.

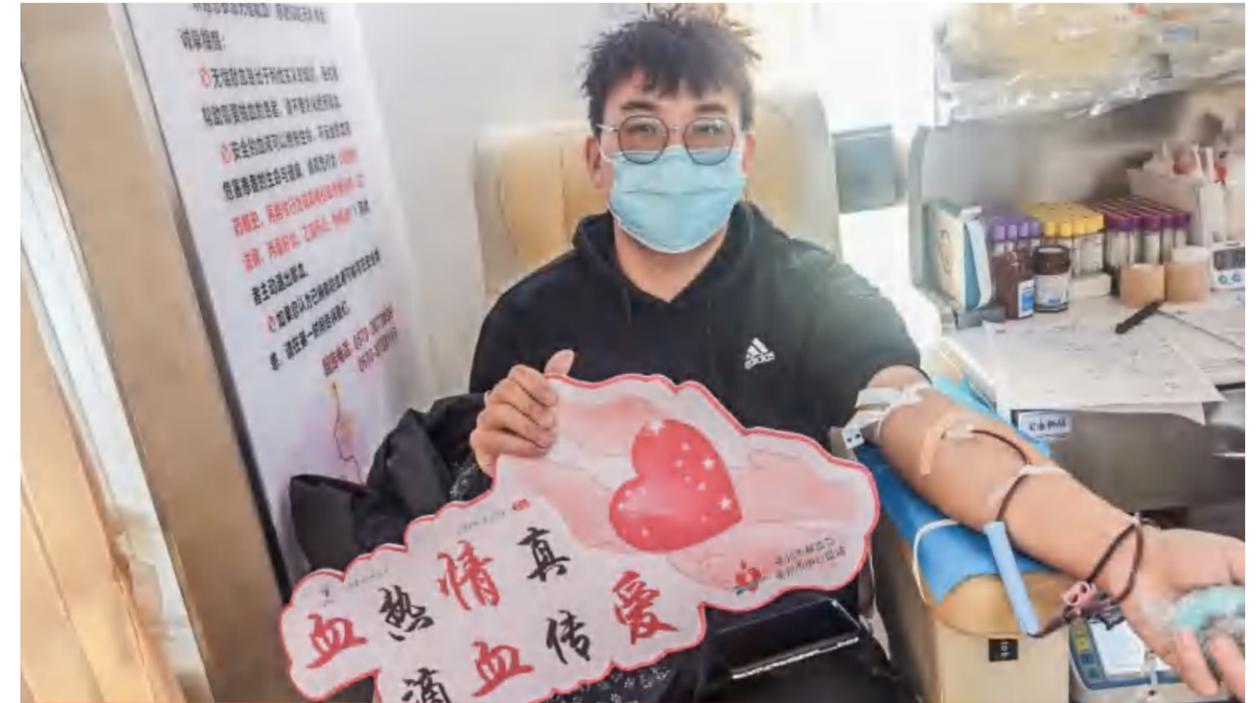


Donation of Epidemic Prevention Materials

### Case

#### Blood donation for philanthropic love

In 2022, we organized a blood donation activity in Quzhou production base in cooperation with the local blood station and Quzhou Women's Hospital with the theme of "blood donation for philanthropic love". We always uphold the spirit of "serving the community and society" and actively encourage employees to join the blood donation team for social welfare.



Blood Donation Activity



Blood Donation Activity

# Independent Verification Statement



To the management and stakeholders of DAS Solar Co., Ltd,

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch (hereinafter referred to as "TÜV SÜD") has been engaged by DAS Solar Co., Ltd. (herein referred to as "DAS Solar" or "the Company") to perform an independent third-party verification on 2022 Environmental, Social and Governance (ESG) Report (hereinafter referred to as "the Report"). During this verification, TÜV SÜD's verification team strictly abided by the contract signed with DAS Solar and provided verification regarding the Report in accordance with the provisions agreed by both parties and within the authorized scope stipulated in the contract.

This Independent Verification Statement is based on the data and information collected by DAS Solar and provided to TÜV SÜD. The scope of verification is limited to the given information. DAS Solar shall be held accountable for authenticity and completeness of the provided data and information.

## Scope of Verification

### Time frame of this verification:

- The Report contains the data disclosed by DAS Solar during the reporting period from January 1st, 2022 to December 31st, 2022, including economic, environmental and social information and data, methods for management of substantial issues, actions/measures and the Company's sustainability performance during the reporting period.

### Physical boundary of this verification:

- The verification took sampling way to carry out the onsite verification, the physical scope of the selected location is No.43, South of Bailing Rd., Quzhou City, Zhejiang Province.

### Scope of data and information for the verification:

- The scope of verification is limited to the data and information of DAS Solar and Factory under its operational control covered by the Report.

### The following information and data are beyond the scope of this verification:

- Any information and contents beyond the reporting period of this Report; and
- The data and information of DAS Solar's suppliers, partners and other third parties; and
- The financial data and information disclosed in this Report that have been audited by an independent third party are not verified again herein.

## Limitations

- The verification process is conducted on-site. Sampling and verification are adopted for the data and information in the Report by TÜV SÜD, and only the stakeholders within the organization are interviewed; and
- The Company's standpoint, opinions, forward-looking statements and predictive information as well as the historical data and information before January 1st, 2022 are beyond the scope of this verification.

## Basis for the Verification

This verification process was conducted by TÜV SÜD's expert team with extensive experience in the economic, social, environmental and other relevant areas and drew the conclusions "Moderate Assurance" thereof. The verification referred to the following standards:

- International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements other than Audits or Reviews of Historical Financial Information
- TÜV SÜD Procedure of Verification on Sustainability Report

In order to perform adequate verification in accordance with the contract and provide reasonable verification for the conclusions, the verification team conducted the following activities:

- Preliminary investigation of the relevant information before the verification;
- Confirmation of the presence of the topics with high level of materiality and performance in the Report;
- Onsite review of all supporting documents, data and other information provided by DAS Solar; tracing and verification of key performance information;

- Special interview with the representative of DAS Solar's management; interviews with the employees related to collection, compilation and reporting of the disclosed information; and
- Other procedures deemed necessary by the verification team.



## Verification Conclusions

According to the verification, we believe that the Report prepared by DAS Solar is true and reliable, and can be used for the stakeholders. The verification team has drawn the following conclusions on this Report:

Inclusivity	DAS Solar has fully identified the internal and external stakeholders of the organization, such as employees, shareholders and investors, customers, suppliers and other partners, government and regulatory agencies, communities and the environment, etc., and has established a stakeholder communication mechanism to regularly collect the real demands of stakeholders.
Materiality	DAS Solar has established a prioritization process for material topics, identified sustainability topics that are highly relevant to its industry and prioritized the topics, disclosed strategies, management actions and performance data in the company's sustainability management and operations process, and the Report content is substantive overall, with room for improvement in the material topics of individual topics.
Responsiveness	DAS Solar has clearly disclosed the management methods and performance of major issues in the areas of technological innovation, waste management, water resource management, employee rights, training and development, occupational health and safety, and sustainable supply chains., and has established various stakeholder communication mechanisms to fully respond to stakeholders' demands and expectations.
Impact	Starting from the four dimensions of governance, innovation, environment and society, DAS Solar discloses governance methods and performance indicators. Through the implementation of innovative development strategies, DAS Solar actively integrates into the new development pattern, promotes high-quality development and achieves good results, provides customers with high-quality products, provides sufficient protection for employees, and demonstrates full responsibility to the environment and society.

## Recommendations on Continuous Improvement

- It is recommended that the company optimizes the reporting data accounting system to ensure consistent data statistics and more accurate calculation results.

## Statement on Independence and Verification Capability

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Since 1866, TÜV SÜD has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks. Today, TÜV SÜD is present in over 1,000 locations worldwide with its headquarters in Munich, Germany. TÜV SÜD has been committed to sustainable development and actively promotes environmental protection related projects. Over the years, TÜV SÜD has been actively expanding its performance in energy management, renewable resources, and electric automobiles, etc., helping its customers meet sustainable development needs.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is one of TÜV SÜD 's global branches and has an expert team whose members have professional background and rich industrial experiences.

TÜV SÜD and DAS Solar are two entities independent of each other and both TÜV SÜD and DAS Solar and their branches or stakeholders have no conflict of interest. No member of the verification team has business relationship with the Company. The verification is completely neutral.

Signature:  
On Behalf of TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

TÜV SÜD Sustainability Authorized Signatory Officer  
Mar 31, 2023  
Shanghai, China

Zhu Wenjun

Note: In case of any inconsistency or discrepancy, the simplified Chinese version of this verification statement shall prevail, while the English translation is used for reference only.

# Appendices

## Index Sheet

### GRI Sustainability Reporting Standards (GRI Standards) Content Index

Statement of use	DAS Solar has reported the information cited in this GRI content index for the period January 1 <sup>st</sup> to December 31 <sup>th</sup> 2022 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI Standards	Disclosure Items	Page
General Disclosure		
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	2-2 Entities included in the organization's sustainability reporting	3
	2-3 Reporting period, frequency and contact point	3-4
	2-4 Restatements of information	10
	2-5 External assurance	67-68
	2-6 Activities, value chain and other business relationships	9-10
	2-7 Employees	55
	2-8 Workers who are not employees	55
	2-9 Governance structure and composition	23-24
	2-10 Nomination and selection of the highest governance body	24
	2-11 Chair of the highest governance body	24
	2-12 Role of the highest governance body in overseeing the management of impacts	24
	2-13 Delegation of responsibility for managing impacts	24
	2-14 Role of the highest governance body in sustainability reporting	5
	2-15 Conflicts of interest	24
	2-16 Communication of critical concerns	19-20
	2-17 Collective knowledge of the highest governance body	5-6
	2-18 Evaluation of the performance of the highest governance body	24
	2-19 Remuneration policies	24

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	2-20 Procedures to determine remuneration	24
	2-22 Statement on sustainable development strategy	5-6
	2-23 Policy commitment	7-8
	2-24 Embedding policy commitments	17
	2-25 Processes to remediate negative impacts	35-36
	2-26 Mechanisms for seeking advice and raising concerns	35-36
	2-27 Compliance with laws and regulations	23
	2-28 Membership associations	15
	2-29 Approach to stakeholder engagement	18
	2-30 Collective bargaining agreements	53
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GRI 3: Material Topics 2021	3-1 Process to determine material topics	19
	3-2 List of material topics	19-20
Economic Performance		
GRI 201: Economic Performance 2016	3-3 Management of material topics	19-20
	201-1 Direct economic value generated and distributed	11
	201-2 Financial implications and other risks and opportunities due to climate change	43-46
	201-3 Defined benefit plan obligations and other retirement plans	53
Market Presence		
GRI 202: Market Presence 2016	3-3 Management of material topics	19-20
	202-2 Proportion of senior management hired from the local community	55
Indirect Economic Impacts		
GRI 203: Indirect Economic Impacts 2016	3-3 Management of material topics	19-20
Procurement Practices		
GRI 204: Procurement Practices 2016	3-3 Management of material topics	62
	204-1 Proportion of spending on local suppliers	62
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GRI 205: Anti-corruption 2016	3-3 Management of material topics	19-20,27
	205-1 Operations assessed for risks related to corruption	27

GRI Standards	Disclosure Items	Page
	205-2 Communication and training about anti-corruption policies and procedures	27
	205-3 Confirmed incidents of corruption and actions taken	27
<b>Anti-competitive Behavior</b>		
GRI 206: Anti-competitive Behavior 2016	3-3 Management of material topics	19-20,27
	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	27
<b>Tax</b>		
	3-3 Management of material topics	19-20,26
	207-1 Approach to tax	26
	207-2 Tax governance, control and risk management	26
GRI 207: Tax 2019	207-3 Stakeholder engagement and management of concerns related to tax	26
	207-4 Country-by-country reporting	No country-by-country reporting is involved
<b>Materials</b>		
GRI 301: Materials 2016	3-3 Management of material topics	31
	301-3 Reclaimed products and their packaging materials	31
<b>Energy</b>		
	3-3 Management of material topics	40,41
GRI 302: Energy 2016	302-1 Energy consumption within the organization	40
	302-4 Reduction of energy consumption	41,42
	302-5 Reductions in energy requirements of products and services	41,42
<b>Water and Effluents</b>		
	3-3 Management of material topics	47,48
	303-1 Interactions with water as a shared resource	47,48
GRI 303: Water and Effluents 2018	303-2 Management of water discharge- related impacts	47,48
	303-3 Water withdrawal	47,48
	303-4 Water discharge	47,48
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<b>Biodiversity</b>		
GRI 304: Biodiversity 2016	3-3 Management of material topics	39
	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	39

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<b>Emission</b>		
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GRI 305: Emission 2016	305-6 Emissions of ozone depleting substances (ODS)	Operating sites are not involved
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and Other significant air emissions	49
<b>Waste</b>		
	3-3 Management of material topics	39,50
	306-1 Waste generation and significant waste-related impacts	50
GRI 306: Waste 2020	306-2 Management of significant waste-related impacts	50
	306-3 Waste generated	50
	306-4 Waste diverted from disposal	50
	306-5 Waste directed to disposal	50
<b>Supplier Environmental Assessment</b>		
	3-3 Management of material topics	61
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	61
	308-2 Negative environmental impacts in the supply chain and actions taken	No negative impacts of supply chains were found by the organization
<b>Employment</b>		
	3-3 Management of material topics	55
GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	53
	401-3 Parental leave	No parental leave was granted by the organization
<b>Labor/Management Relations</b>		
	3-3 Management of material topics	53-55
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	The organization has not granted the minimum notice period for operational changes
<b>Occupational Health and Safety</b>		
	3-3 Management of material topics	56-57
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	56-57
	403-2 Hazard identification, risk assessment and incident investigation	56-57
	403-3 Occupational health services	56-57
	403-4 Worker participation, consultation, and communication on occupational health and safety	56-57

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	403-6 Promotion of worker health	56-57
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	56-57
	403-8 Workers covered by an occupational health and safety management system	56-57
	403-9 Work-related injuries	56-57
	403-10 Work-related ill health	56-57
<b>Training and Education</b>		
	3-3 Management of material topics	58
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	60
	404-2 Programs for upgrading employee skills and transition assistance programs	59
	404-3 Percentage of employees receiving regular performance and career development reviews	53
<b>Diversity and Equal Opportunity</b>		
	3-3 Management of material topics	55
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	55
	405-2 Ratio of basic salary and remuneration of women to men	55
<b>Non-discrimination</b>		
	3-3 Management of material topics	53
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	53
<b>Freedom of Association and Collective Bargaining</b>		
GRI 407: Freedom of Association and Collective Bargaining 2016	3-3 Management of material topics	53
<b>Child Labor</b>		
	3-3 Management of material topics	53
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	53,61
<b>Forced or compulsory labor</b>		
	3-3 Management of material topics	53
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	53,61
<b>Local Communities</b>		
GRI 413: Local Communities 2016	3-3 Management of material topics	65-66

GRI Standards	Disclosure Items	Page
<b>Supplier Social Assessment</b>		
	3-3 Management of material topics	61
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	61
	414-2 Negative social impacts in the supply chain and actions taken	No negative impacts of supply chains were found by the organization
<b>Customer Health and Safety</b>		
	3-3 Management of material topics	35
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	31
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	36
<b>Marketing and Labeling</b>		
	3-3 Management of material topics	35
	417-1 Requirements for product and service information and labeling	The organization made public the product information
GRI 417: Marketing and Labeling 2016	417-2 Incidents of non-compliance concerning product and service information and labeling	No violation involving a discrepancy between the product information and the actual situation was found by the organization
	417-3 Incidents of non-compliance concerning marketing communications	No violation involving marketing communication was found by the organization
<b>Customer Privacy</b>		
	3-3 Management of material topics	35
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	36

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	Consumption and percentage of purchased electricity	40	
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<b>Water Management in Manufacturing</b>			
RR-ST-140a.1	Total water withdrawn	47,48	
	Total water consumption, percentage of each in regions with High or Extremely High Baseline Water Stress	47,48	
RR-ST-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	47,48	
<b>Hazardous waste management</b>			
RR-ST-150a.1	Amount of hazardous waste generated, percentage recycled	39	
RR-ST-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	39	
<b>Ecological impact of project development</b>			
RR-ST-160a.1	Number and duration of project delays related to ecological impacts	39	
RR-ST-160a.2	Description of efforts in solar energy system project development to address community and ecological impacts	/	
<b>Management of energy infrastructure integration and related regulations</b>			
RR-ST-410a.1	Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks	/	
RR-ST-410a.2	Description of risks and opportunities associated with energy policy and its impact on the integration of solar energy into existing energy infrastructure	/	
<b>Product End-of life Management</b>			
RR-ST-410b.1	Weight and percentage of recyclable or reusable items in the sold products	31	
RR-ST-410b.2	Weight of end-of-life material recovered, percentage recycled	31	
RR-ST-410b.3	Percentage of products by revenue that contain IEC 62474 declarable substances, arsenic compounds, antimony compounds, or beryllium compounds	/	
RR-ST-410b.4	Description of approach and strategies to design products for high-value recycling	/	
<b>Materials Sourcing</b>			
RR-ST-440a.1	Description of the management of risks associated with the use of critical materials	63	
RR-ST-440a.2	Description of the management of environmental risks associated with the polysilicon supply chain	/	
Activity Metrics	RR-ST-000.A	Total capacity of photovoltaic (PV) solar modules produced	13-14
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5 Gender Equality	55
6 Clean Water and Sanitation	47,48
7 Affordable and Clean Energy	33-34
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## Reader Feedbacks

Dear readers, Hello!

Thank you for reading the report. In order to improve corporate ESG work and enhance ESG management, we look forward to hearing your comments and suggestions. We sincerely hope that you can spare us some time to evaluate the report for continuous corporate improvement. We would appreciate your feedback by answering the relevant questions in the following form:

Please mark "✓" in the corresponding place

Question content	Yes	No	Not Sure
Do you think the report reflects the significant environmental, economic and social impacts and the environmental, economic and social achievements of the company?			
Do you believe that the disclosed information in the report is true, accurate and valid?			
Do you think the language description, content layout, and graphic design of the report are clear and accessible?			

### Open Questions:

What is your overall opinion of the report?

What do you think of the quality of the information disclosed in the report?

Which part of the report are you most interested in?

What else do you need to know that is not provided in this report?

Do you have any suggestions for our social responsibility or ESG work and report release in the future?

If convenient, you are welcome to leave us your personal information for further contact

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To get more corporate information, please log in official website of the Company.