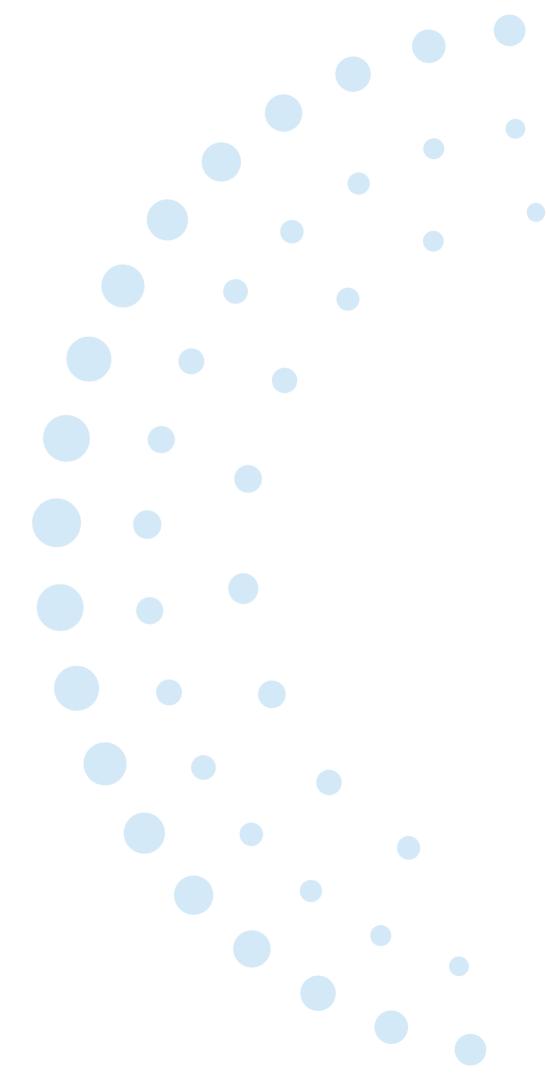






# Power Beyond Solar



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## **About the Report**

#### **Introduction of the Report**

The Report is the third annual sustainability report issued by Trina Solar Co., Ltd. This is the 13<sup>th</sup> consecutive year that we have been publishing corporate social responsibility/ESG/sustainability reports since 2011. With the aim to disclose the Company's sustainability-related management strategies, practices, and performance in a transparent and open manner, we strive to respond to the concerns and expectations of various stakeholders, including shareholders and investors, customers, government and regulatory authorities, employees, business partners, local communities, and media.

#### **Reporting Standards and Guidelines**

The Report is prepared with reference to the Guidelines No.14 of Shanghai Stock Exchange (SSE) for Self-Regulation of Listed Companies—Sustainability Report (Trial) and the Guidelines No. 13 of the SSE Science and Technology Innovation Board (STAR Market) for Self-Regulation of Listed Companies—Compilation of Sustainability Reports. It also refers to the Global Reporting Initiative (GRI) Sustainability Reporting Standards (GRI Standards), the International Sustainability Standards Board (ISSB) International Financial Reporting Standard S2 - Climate-related Disclosures, the Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standards, the United Nations Sustainable Development Goals (SDGs), and the Ten Principles of the United Nations Global Compact.

#### **Reporting Scope**

The Report is an annual publication covering the period from January 1, 2024, to December 31, 2024. To enhance the completeness of the Report, some information pertains to previous or future years. The policies, statements, and data in the Report cover the actual business scope of the Company, and the organizational scope of the Report is consistent with the Company's "2024 Annual Report". The environmental data cover all production bases and major offices. Any deviations in the scope of specific data are noted within the relevant sections.

#### **Abbreviations**

For convenience and clarity, "Trinasolar", "Trina", "our company", "the Company", and "we" in the Report refer to Trina Solar Co., Ltd. and its subsidiaries.

Full Name of the Company	Abbreviated Names Used in the Report	Relationship
Trina Solar Co., Ltd.	Trinasolar	Group Headquarters
Trina Solar Yiwu Technology Co., Ltd.	Yiwu Technology	<b>Holding Subsidiary</b>
Trina Solar (Yancheng Dafeng) Co., Ltd.	Yancheng Dafeng Factory	Holding Subsidiary
Trina Solar Energy Development Company Limited	Vietnam Thai Nguyen Factory	Wholly-owned Subsidiary
Trina Solar (Qinghai) Technology Co., Ltd.	Qinghai Technology	Wholly-owned Subsidiary
Trina Solar (Dongtai) Technology Co., Ltd.	Dongtai Technology	Wholly-owned Subsidiary
Trina Solar (Suqian) Optoelectronics Co., Ltd.	Suqian Optoelectronics	Wholly-owned Subsidiary
Trina Solar (Huaian) Optoelectronics Co., Ltd.	Huaian Optoelectronics	Wholly-owned Subsidiary
Trina Solar (Qinghai) Optoelectronics Co, Ltd.	Qinghai Optoelectronics	Wholly-owned Subsidiary

Full Name of the Company	Abbreviated Names Used in the Report	Relationship
Trina Energy Storage (Chuzhou) Co., Ltd.	Chuzhou Energy Storage	Holding subsidiary
Trina Energy Storage Solutions (Jiangsu) Co., Ltd.	Trina Energy Storage	Holding subsidiary
Trina Solar(Vietnam) Wafer Co., Ltd.	Vietnam Wafer	Wholly-owned subsidiary

Note: This table only includes the abbreviations of company names mentioned in the Report

#### **Data Source**

All monetary amounts in the Report are recorded in RMB. Unless otherwise stated, the information and data cited in the Report are sourced from the Company's managed documents, financial reports, or public information and have been reviewed by responsible departments.

#### **Reliability Statement**

The Board of Directors is responsible for the authenticity, accuracy, and completeness of the Report. Trinasolar has entrusted TÜV SÜD (China) Co., Ltd. to conduct an independent audit in accordance with the ISAE3000 standard, and the independent audit statement can be found on page 133 of the Report.

#### **Review and Approval**

The Board of Directors reviewed and approved the Report on April 28, 2025.

#### **Access to the Report**

The Report is published in Simplified Chinese and English. In case of any discrepancies between the two versions, the Simplified Chinese version shall prevail.

The Report is published in electronic form. Both Chinese and English versions can be downloaded from Trinasolar's official website at

https://www.trinasolar.com/en-glb/esg/download

Historical sustainability information and data of the Company can be reviewed and downloaded by scanning the QR code.



Company official website

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Your feedback is valuable to us. For any questions or suggestions about the Report, please contact:

**☑ Email:** ESG@Trinasolar.com

Address: No. 2 Tianhe Road, Trina PV Industrial Park, Xinbei District, Changzhou City, Jiangsu Province





The year 2024 presents both opportunities and challenges for global photovoltaic enterprises. This year, the PV industry demonstrated consistent growth, with new installations increasing by 35.9% year-on-year globally. Demand in regions such as the Middle East and Southeast Asia exhibited sustained growth, and technological innovation drove industrial upgrades. Meanwhile, PV companies confronted challenges, including decelerating market demand growth in Europe and intensified competition on the supply side. In navigating through the industry cycles, Trinasolar solidates its commitment as socially responsible enterprise, adhering to its mission of "Solar Energy for All" and striving to be the "pathfinder, leader, and guardian" of China's PV industry.

#### Innovation drives a green future and defines technological leadership

Trinasolar's development is driven by technological innovation. As industry pioneer, we have led the establishment of the 600W+ Photovoltaic Open Ecosystem Alliance and spearheaded its upgrade to 700W+. Our strategic promotion of 210mm silicon wafer technology has redefined industry development paradigms, establishing new benchmarks for high-efficiency manufacturing.

Through our collaboration with top-tier academic institutions in establishing the National Key Laboratory of Photovoltaic Science and Technology, we have established a university-enterprise joint laboratory. We are advancing the PV industry cluster in Yancheng, Changzhou, Suqian and Huaian toward national-level advanced manufacturing clusters. We will continue to adhere to independent innovation, cooperative innovation, model innovation and management innovation, and focus on building a high-quality development system that integrates "technology research and development, intellectual property rights and industry standards" into a trinity of mutual synergy.

We have set and broken the world record for photovoltaic conversion efficiency 32 times, with over 6,600 patent applications. We have achieved significant advancements in perovskite-silicon tandem technology, ranging from cell efficiency to module power output. We are dedicated to being the first to commercialize tandem cells in this field. The Company holds the global leading position in perovskite solar cell patents. We were the first to propose international standards to the International Electrotechnical Commission (IEC), led the development of 230 industry standards, and published 155 standards. This work transformed leading-edge technological capabilities into high-power, low-cost-per-kilowatt-hour module products.

We are also adapting our business to meet the diverse needs of the global market, accelerating strategic transformation and upgrading. We proactively expand our business into new areas, including photovoltaic trackers and energy storage systems, to offer a more comprehensive solution strategy. The Company is committed to the principles of "customer-centric and scenario-oriented". This approach involves continuously assessing customer needs and delivering green energy systems and comprehensive solutions that address these needs in a holistic manner. We will concentrate our efforts on various fields, including distributed, centralized, and new scenarios. We will also cultivate new growth poles such as the integration of PV and energy storage with application scenarios, smart microgrids, virtual power plants, zero-carbon parks, green computing power, and green electricity production of hydrogen, ammonia, and alcohol production.

We actively promote the construction of a robust technological ecosystem in the photovoltaic industry. We collaborate with upstream and downstream enterprises in the industry chain to advance joint innovation in next-generation photovoltaic technologies. We jointly own intellectual property rights to drive high-quality industrial development. We go beyond our own interests to drive industry progress through corporate social responsibility.

#### Green leadership fulfilling "zero-carbon" commitments

Green development is an integral part of Trinasolar's core principles. We are committed to providing green energy products and actively addressing climate change throughout our entire production and operation. We are dedicated to achieving car-





bon neutrality goals. We are developing a low-carbon system that covers the entire product lifecycle. The concept of a "zero-carbon factory" serves as the central theme, with the green supply chain playing a pivotal role in achieving this objective.

In 2024, our Vertex N-type full series modules obtained the French Carbon Footprint Certification; the Vertex N-type full series modules received the UL Solutions Product Carbon Footprint Certificate, and the Vertex N-type Little King Kong series modules achieved the Norwegian and International EPD certification. Our Yancheng Dafeng Factory has successfully obtained the TÜV Rheinland "Zero Waste" and "Zero Carbon" factory certificates, and our Yiwu base has been honored with the "Zero Carbon" factory certificate. These achievements fully recognize our long-term commitment to reducing waste and carbon, as certified by third-party organizations.

Green smart manufacturing is the foundation of our approach to the circular economy. We collaborate with partners at all levels of the photovoltaic module supply chain to ensure the efficient recycling of materials from decommissioned modules. This collaboration has resulted in the development of the world's first fully recycled module, which boasts excellent performance. This significant innovation marks a critical transition from "linear manufacturing" to "circular regeneration," propelling the photovoltaic industry chain towards a more sustainable and regenerative future.

We also integrate sustainability into every aspect of our supply chain management, empowering our supply chain partners to incorporate environmental and social sustainability performance into their supplier evaluation and due diligence processes. We employ a variety of measures to require responsible practices from source to end, driving ESG upgrades across the entire industry chain.

#### Co-creating value through human capital

Trinasolar's sustainability is powered by the dedication and expertise of our team members. In our globally operated enterprises, we make every effort to establish mechanisms that protect employee rights across supply chains, provide comprehensive welfare and health care, construct diverse and inclusive teams, support career development and skill enhancement, build a people-oriented value ecosystem, and pass the international standard certification for corporate social responsibility.

We also leverage the potential of industrial technology to empower public welfare management and enhance social well-being. We focus on areas such as low-carbon transformation, social engagement, and ecological protection. We do this by donating PV and energy storage systems, organizing employee volunteer activities, and providing low-carbon solutions. Our goal is to establish a global model of sustainable communities and collaboratively develop a vision of a better life.

We are committed to advancing the standardization and effectiveness of our governance system, fully integrating the "SO-LAR" sustainability management culture into our corporate governance, actively constructing and improving our risk prevention and control as well as compliance management systems, and strengthening our risk prevention and control capabilities. We strictly adhere to the laws and regulations of the regions where we operate globally, uphold business ethics, promote fair competition, and advance data governance, responding to industry changes with resilient governance.

In today's accelerated global energy transition and climate governance, we adhere to the principle of altruism. We are at the forefront of collaborative innovation, developing cutting-edge technologies that define the next generation of solutions. We are committed to building an open and collaborative new ecosystem and driving the PV industry toward high-level collaborative development, as well as achieve high-quality development.



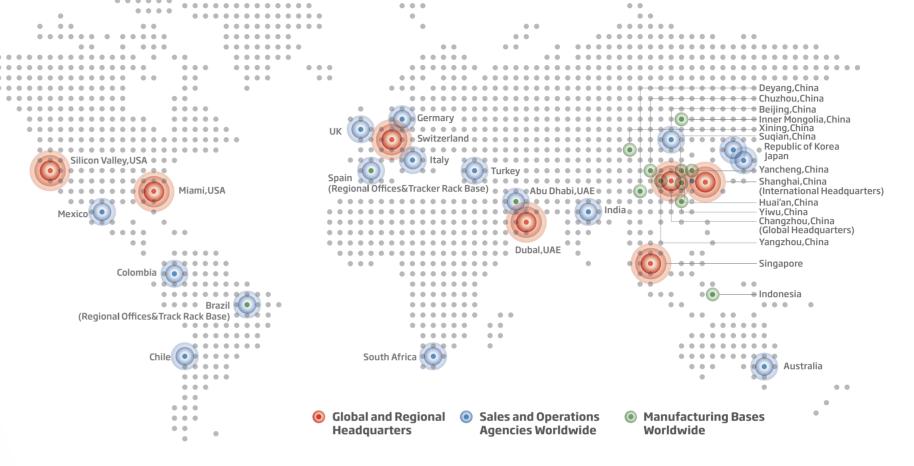
# **About Trinasolar**

#### **Company Profile**

Founded in 1997, Trina Solar Co., Ltd. (stock symbol: Trinasolar; stock code: 688599) is mainly engaged in PV products, energy storage, system solutions and digital energy service. With the strategic goal of "Creating a new industrial ecosystem led by Trinasolar, and promoting Trinasolar as a leader in smart PV and energy storage solutions", we are committed to leading the way in smart PV and energy storage solutions and facilitating the transformation of new power systems for a net-zero future. On June 10, 2020, Trinasolar was listed on the Science and Technology Innovation Board (STAR Market) of the Shanghai Stock Exchange (SSE). It is the first PV and energy storage company that has gone public on the STAR Market providing PV products, energy storage, system solutions and digital energy service.

Globalization is regarded as Trinasolar's main corporate strategy. Trinasolar began to build up its global presence from its inception. The Company was founded in Changzhou, Jiangsu Province, China, where its global headquarters is based. In 2022, Trinasolar established its international headquarters in Shanghai. It actively strengthened the building of global teams. In recent years, the Company has recruited international high-level management and R&D talents from more than 70 countries. It has set up regional headquarters in Zurich (Switzerland), Silicon Valley and Miami (USA), Singapore, and Dubai (UAE), offices or branches in Madrid, Mexico, Sydney, Rome, etc., as well as manufacturing bases in Indonesia and UAE, exploring a new model for glocalization and promoting localization operation for American cooperative base, with operations in more than 180 countries around the world.

With innovation-driven development as its most important strategy and core driving force, Trinasolar has put in place a comprehensive and leading science and innovation system. The Company works closely with world-class R&D and certification testing institutions to build a technological innovation team consisting mainly of outstanding scientific researchers at home and abroad. As a pioneer among Chinese PV and energy storage enterprises to participate in the formulation of international standards, the Company has become the innovation leader and standard-setter in the global solar energy industry, and the number of valid invention patents continues to be the leading position in China's PV and energy storage industry. Trinasolar achieved the "best performance in history" by breaking the world record 4 times in 3 months, with breakthroughs in the conversion efficiency of n-type cell technologies such as TOPCon. As of the date of the Report, the Company has cumulatively set or broken 32 world records in terms of PV cell conversion efficiency and module output power.





#### **PV Products**

Module business



#### **Energy Storage**

Energy storage business



#### **System Solutions**

Solar mounting system business Distributed system business Centralized power plant business Others



#### **Digital Energy Service**

New energy operations and maintenance services New energy power generation business

#### **Mission and Values**

#### **Corporate Mission**

Solar Energy for All

#### **Corporate Vision**

Leading the way in smart PV and energy storage solutions and facilitating the transformation of new power systems for a net-zero future.

#### **Core Values**

Focus on the **C**ustomer Persist in Open Innovation Persevere through **D**edication and Hard Work Strive for **E**xcellence **S**hare the Responsibility and Create and Share Value Together

## **Our Sustainability** Performance in 2024

#### **Contributing to UN SDGs**

# **ECONOMIC**











#### **Trinasolar Progress**

Total revenue

80.28 billion RMB

R&D investment

5.56 billion RMB

Share of R&D investment in main business revenue

7.05%

The cumulative shipment of modules exceeded

**260** GW

Cumulative patents and software copyrights obtained

**2,966** pieces





Reduction of greenhouse gas (GHG) emissions intensity (tCO₂e/ MW) of cell from base year

**36.44%** 

Reduction of comprehensive energy consumption intensity (tce/MW) of cell from base year

**39.51%** 

Reduction of water consumption intensity (tonnes/MW) of cell from base year

**86.85%** 

Renewable electricity generated

223,794 MWh

Investment in energy saving and environmental protection

997,275,500 RMB

Reduction of greenhouse gas (GHG) emissions intensity (tCO₂e/ MW) of module from base year

**♣ 65.55%** 

Reduction of comprehensive energy consumption intensity (tce/MW) of module from base year

**40.19%** 

Reduction of water consumption intensity (tonnes/MW) of module from base year

**♣ 67.68%** 

Clean energy generation from solar power plants held in China

**241,935.69** MWh

• 2 production bases obtained zerocarbon factory certification

• 12 products obtained carbon footprint certification



Total number of employees

29,975

Employee training coverage rate

100%

Occupational health and safety

90.64 million RMB

Total investment in employee training

**11.91** million RMB

Total training hours of employees

**1,704,309** hours

Total community contributions and charities investment

15.64 million RMB









Female directors ratio

33.33%

Anti-commercial bribery and anti-corruption training coverage rate

100%

Annual audit plan achievement rate

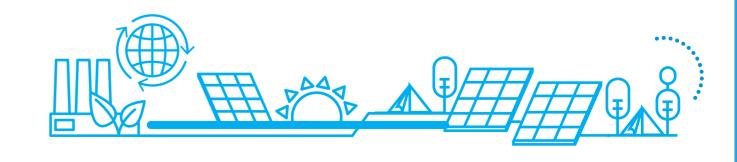
100%

Business ethics whistleblowing handling completion rate

100%

Proportion of core suppliers who have signed the CSR Code of Conduct of Trinasolar Supplier in 2024

98.41%









## **Awards and Honors**

#### 2024 Sustainability Awards and Honors

Awards	Awarders			
Fortune China ESG Impact List	Fortune China			
Sustainable Development (ESG) TOP 50 of Energy Listed Companies in China	GreenergyDaily.com			
Bloomberg Green ESG 50 Most to Watch List in China	Bloomberg Green			
ESG Golden Bull Award TOP 100	China Securities Journal			
Green Sustainable ESG TOP 10	China Energy News, China Energy Economic Research Institute, Green Light Climate Academy			
Standard Pioneer Award	British Standards Institution (BSI)			
Silver Certification of SSI ESG Standards	Solar Stewardship Initiative (SSI)			
Fortune China 500	Fortune China			
China Top 500 Enterprises	China Enterprise Confederation, China Enterprise Directors Association			
Global New Energy Top 500 Enterprises	China Energy News			
STAR Market Most Valuable Investment Enterprise	CAIJING			
Best Practice Award for Investor Relations Management of Listed Companies	China Association for Public Companies			
2023-2024 Annual Information Disclosure Evaluation Result: Highest Grade A	Shanghai Stock Exchange			
Influential Photovoltaic Development Investor/EPC Brand Influential Photovoltaic and Energy Storage Integrated Solution Enterprise	SolarStar			
Most Influential Photovoltaic EPC Enterprise  Most Influential Photovoltaic Operation and Maintenance Enterprise	Solarbe Global			

#### **Environmental**

Water stewardship of the year-APAC

**Bureau Veritas** Green Supply Chain Leadership Award

#### Social

Silver Award in the 25th China Patent Award

People's Government of Jiangsu Province Jiangsu Province Enterprise Technological Innovation Award

American Environment + Energy Leader Top Energy Innovation of the Year Award

Outstanding Human Resource Management Award

#### Industrial Development Promotion Center of the Ministry of Industry and Information Technology

First Prize in the Photovoltaic Module Recycling Competition under the Solar Photovoltaic Track of the 2nd National **Energy Electronics Innovation Awards** 

#### **Fudan University**

Science and Technology Innovation Talent Recruitment Award

#### SolarStar

Outstanding Employer in Influential PV Power Plant Construction & Operations

#### **ESG** Ratings







**BBB** MSCI



Climate Change "B" Water Security "B" CDP



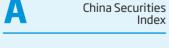
Rating "2" **Band Score 81**  Sustainable

**Ecovadis** 

#### **Participating Institutions** and Initiative Organizations

- Member of the United Nations Global Compact (UNGC)
- Signatory Company of the United Nations Women's Empowerment Principles (WEPs)





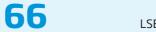
**S&P Global** 





LSEG DATA & ANALYTICS

LSEG





Wind ESG

天合光能

Wind ESG Rating

S&P CSA



## **Sustainability Management**

#### Trinasolar's Sustainability Management Culture

✓ Maintain

## Sustainability

#### /Drive climate action to enhance environmental management

- ✓Improve energy efficiency
- Emphasize circular economy and waste management
- **Environmental**

Compliance Response to **Climate Change** 

**Energy Use and** Management

**Green Lifecyle** Management











- ✓ Optimize governance and management structure
- ✓ Optimize supply chain management
- ✓ Reduce consumption with smart manufacturing technologies
- / Improve logistics and operational efficiency

Corporate

Governance

**Sustainable Supply** 

Chain

Digital

**Transformation** 

Leading

technology and

market leadership

in the PV industry

**Innovation and** 

**Technological** 

Leadership

Industry

**Cooperation and** 

Development

Clean Energy

Technology

innovation

#### **Action**

- √ Compliance and Anti-Corruption
- ✓ Promote industry standards through R&D innovation
- ✓ Invest in new resilience to technologies to be forward-leading

- /Identify and respond to charity ESG risks and
- /Enhance product climate change

opportunities

/Create industry chain ESG ecology and win-win future

**Compliance and** 

**Risk Management** 

Sustainable

**Development** 

Management

13 ===

#### Responsibility

- √ Take corporate responsibility
- ✓ Promote public
- ✓ Lead community cooperation and environmental awareness
- /Cultivate international talents
- ✓ Safeguard employee right and benefits

#### **Labor Practice**

**Human Capital** Development

**Social Engagement** and Community Contribution











#### **Sustainability Vision**

Solar Energy for All

#### **ESG Governance Culture**

Innovation

value

#### Preservation

Remember the Pioneer concept and keep and create. the bottom line

### Win-win

Lead green. development and win-win cooperation

#### **Sustainability Management Culture**

Adhering to the sustainability vision of "Solar Energy for All", Trinasolar has established a distinctive SOLAR sustainability management culture, focusing on Sustainability, Optimization, Leading, Action, and Responsibility, to spearhead the Company's sustainability transformation.

The Company is proactively aliqning with the global sustainability agenda by responding to both domestic and international development initiatives. As a participant in the United Nations Global Compact (UNGC), we are committed to fulfilling its ten principles based on the United Nations conventions, covering human rights, labor standards, environmental stewardship, and anti-corruption, and carrying out more responsible business practices to support the realization of the United Nations Sustainable Development Goals (SDGs).

To fulfill our mission, the Company has formulated a sustainable development plan and phased goals, following the development path of "Forward-looking Insights", "Systematic Planning", "Strategic Planning", "Governance Leadership", "Operational Implementation" and "Value Creation". This initiative sets a benchmark for sustainable development in the industry, and the Company is steadfastly advancing towards the sustainability vision of "Solar Energy for All".

#### **Sustainability Management System**

The Company has established a scientific and effective ESG management system to implement sustainability plans and phased targets, and to ensure the smooth operation of ESG management. The Company has also established and continuously improved the ESG governance structure, clarified governance responsibilities, and strengthened the institutional system.

#### Performance-linked compensation system

We align the performance incentives of our senior executives with key ESG performance targets, particularly the achievement of health and safety targets.



## Performance monitoring and assessment

The Company is proactively promoting ESG digital transformation, leveraging digital platforms to collect, analyze, and monitor ESG management progress and performance, ensuring the efficient operation of the ESG performance evaluation system.

The Company is committed to achieving good performance in sustainability management. On the one hand, we require internal and external stakeholders to monitor the Company's ESG management commitments, target indicators, and action practices to maintain and enhance the Company's business reputation. On the other hand, we also strengthen internal audits, independent 3rd-party audits, stakeholder engagement, and other supervisory control mechanisms to continuously improve the ESG management system and enhance the quality and transparency of ESG information across our operations and with external stakeholders, including suppliers, communities and customers.

#### **ESG Governance Structure**

The Company has established an ESG governance structure that includes the governance level, the management level, the executive level, and the supervision level. This structure clearly defines the functional divisions of each level of ESG management. The Company has made a strategic investment in strengthening the governance level, with a focus on integrating ESG functions into the Strategic Executive Committee. This committee plays a critical role in regularly proposing recommendations to the Board on material ESG topics and ensuring effective Board oversight of ESG matters.



#### **Trinasolar Sustainability Governance Structure**



#### **Board of Directors**

#### **Strategic Executive Committee**

The Board of Directors, as the highest governance body for ESG matters, oversees and directs the management of ESG and sustainability issues. The Strategic Executive Committee is the governance body for ESG management and the highest decision-making body for ESG matters. It is accountable to the Board of Directors and bears core responsibility for ESG decision-making and reporting, and is responsible for reviewing and deciding on ESG strategies and long-term ESG plans. The Strategic Executive Committee is led by the Chairman and oversees the ESG strategy.



#### **ESG Management Committee**

The ESG Management Committee, as the administrative body for ESG matters, is responsible for organizing and advancing ESG management work, reviewing key control mechanisms, approving ESG strategy deployment plans and performance assessment frameworks, ensuring alignment between ESG KPIs and corporate strategic objectives, developing integrated ESG roadmaps and annual action plans, coordinating cross-functional governance of critical ESG issues, and monitoring the operation of the ESG management system.



#### **ESG Working Group and Undertaking Departments**

ESG undertaking departments under Business Units (BUs) and Marketing Units (MUs) are responsible for ESG management, compiling ESG information within their departments, implementing plans and executing ESG decisions. The ESG Working Group designates specific individuals to be responsible for ESG management and to coordinate ESG-related issues.



#### **Internal Audit Department**

The third line defense mechanism is established to provide independent supervision of ESG management.

#### **Stakeholder Engagement**

The Company prioritizes stakeholder communication and considers stakeholders' concerns to be essential for guiding ESG management enhancements. The Company has identified key stakeholders, including customers, shareholders and investors, government and regulatory authorities, employees, suppliers and business partners, and the community. We have established diverse communication channels to deeply understand their demands and expectations, and we are actively responding to concerns from all sectors with practical actions.

Stakeholders	Focused Sustainability Issues	Corporate Communication Channels
Customers	<ul> <li>Technological Leadership</li> <li>Product Safety and Quality</li> <li>Customer Management</li> <li>Environmental Compliance</li> <li>Green Lifecycle Management</li> <li>Information Security and Assurance</li> </ul>	<ul> <li>Information Disclosure</li> <li>Press Conferences, Technical Exchanges</li> <li>Industry Exhibitions, Seminars</li> <li>Customer Satisfaction Surveys</li> <li>Customer ESG Research, Communication and Audits</li> <li>Official Website, Social Media</li> <li>Contract or Agreement Terms</li> </ul>
Shareholders and Investors	<ul> <li>Economic Benefits and Investment Returns</li> <li>Corporate Governance</li> <li>Innovation and Technological Leadership</li> <li>Labor Practices</li> </ul>	<ul> <li>Information Disclosure</li> <li>Shareholder Meetings</li> <li>Investor Communication and Site Visits</li> <li>Hotline, Email, and Online Investor Communication</li> </ul>
Government and Regulatory Authorities	<ul> <li>Compliance and Risk Management</li> <li>Anti-Corruption and Business Ethics</li> <li>Corporate Governance</li> <li>Social Engagement and Community Contribution</li> <li>ESG Strategy and Management</li> <li>Environmental Compliance Management</li> </ul>	<ul> <li>Compliance Operation</li> <li>Lawful Tax Payment</li> <li>Discussion and Communication</li> <li>Specialized Briefing</li> <li>Research, Supervision, and Inspection</li> <li>Information submission</li> </ul>
Employees	<ul> <li>Labor Practices</li> <li>Human Capital Development</li> <li>Occupational Health and Safety</li> <li>Diversity, Equity, and Inclusion</li> <li>Compliance Operation</li> </ul>	<ul> <li>Employee Communication Meetings</li> <li>Employee Satisfaction Surveys</li> <li>Employee Feedback and Suggestion Platforms</li> <li>Employee Training Programs</li> <li>Team Building, Birthday Parties, Festival Celebrations, and Other Recreational Activities</li> </ul>
Suppliers and Business Partners	<ul> <li>Product Safety and Quality</li> <li>Industry Cooperation and Development</li> <li>Sustainable Supply Chain</li> <li>Labor Practices</li> <li>Technological Leadership</li> </ul>	<ul> <li>Procurement Contracts or Agreement Terms</li> <li>Supplier Code of Conduct</li> <li>Supplier Evaluation and Audits</li> <li>Supplier Communication and Training</li> </ul>



Stakeholders	Focused Sustainability Issues	Corporate Communication Channels		
Local Community and Non-Governmental Organizations	<ul> <li>Environmental Compliance Management</li> <li>Labor Practices</li> <li>Biodiversity Conservation</li> <li>Social Engagement and Community Contribution</li> </ul>	<ul> <li>Charity</li> <li>Low-carbon Education and Popularization</li> <li>Information Disclosure</li> <li>Support for Local Development</li> <li>University-Enterprise Cooperation</li> <li>Social Engagement</li> </ul>		
Media	<ul><li> Environmental Compliance Management</li><li> Product Safety and Quality</li></ul>	<ul><li>Information Disclosure</li><li>Interview</li></ul>		

#### Summary of Stakeholder Engagement Highlights in 2024



We engaged an independent third-party institution to conduct a global customer satisfaction survey. A total of **307** valid questionnaires were collected. The overall satisfaction score was **81** out of 100, ranking us at **the forefront of the industry** 



We conducted over **300** investor communication events, answered more than **700** calls on the investor hotline, and responded to **87** inquiries on the SSE e-Interactive platform.



We held **44** employee communication sessions in diverse formats, reaching **5,755** participants. We properly handled **3,500** employee inquiries through channels, including the internal communication platform T-Link and email.



We conducted ESG training for suppliers, covering **98%** of core suppliers with over **300** instances of training feedback collected. Through a combination of online questionnaires and on-site audits, we performed ESG risk due diligence on suppliers, and promoted them to make improvements and enhancements based on the findings.

#### **Double Materiality Assessment**

The Company's annual materiality assessment is a critical tool for understanding, determining, and managing ESG matters. In 2024, the Company conducted the double materiality assessment on sustainability issues, in accordance with the requirements of the Guidelines No.14 of Shanghai Stock Exchange (SSE) for Self-Regulation of Listed Companies—Sustainability Report (Trial). The Company followed the steps of "Identification-Assessment-Analysis-Confirmation" to conduct its materiality assessment, combining insights from stakeholder surveys and internal management interviews. This process enabled the assessment and confirmation of the impact and importance of issues from both the "financial materiality" and "impact materiality" dimensions. The materiality assessment results were then integrated into the Enterprise Risk Management (ERM) process. The Company distributed impact materiality assessment questionnaires to both internal and external stakeholders, administered online surveys, and ultimately collected 338 valid questionnaires. Top management and management representatives of business departments were invited to participate in financial materiality assessment surveys. Following discussions and interviews with external experts and company management, the Company finalized the 2024 double materiality analysis results of ESG issues.

#### **Double Materiality**

#### Impact Materiality

The performance of the Company's ESG issues has a significant actual or potential impact on the economy, society, and the environment.

#### Financial Materiality

The issue is expected to have a significant impact on the Company's business model, business operations, development strategy, financial condition, etc., in the short, medium, and long term.





Considering industry characteristics and the Company's current situation, as well as changes in the internal and external ESG environment (including regulatory policies, standards, industry trends, peer focus, etc.), 25 ESG issues of high relevance to the Company's sustainability management were identified and analyzed in terms of their economic, social and environmental impacts, as well as the potential risks and opportunities for the Company.



Define different evaluation dimensions and develop the "Impact Materiality" and "Financial Materiality" assessment questionnaires separately. Distribute the Impact Materiality assessment questionnaire to 10 key internal and external stakeholders, including shareholders and investors, customers, suppliers and partners, industry associations, etc., and obtain their assessment opinions. Collect their assessment results on financial and impact materiality through interviews with management and business department representatives.

#### Assessment dimensions of impact materiality

**Assessment dimensions** of financial materiality

Scale of impact

Possibility of occurrencey

Scope of impact

Degree of impact

**Possibility of occurrencey** 

Irreversibility of negative impacts



**Step Three** 

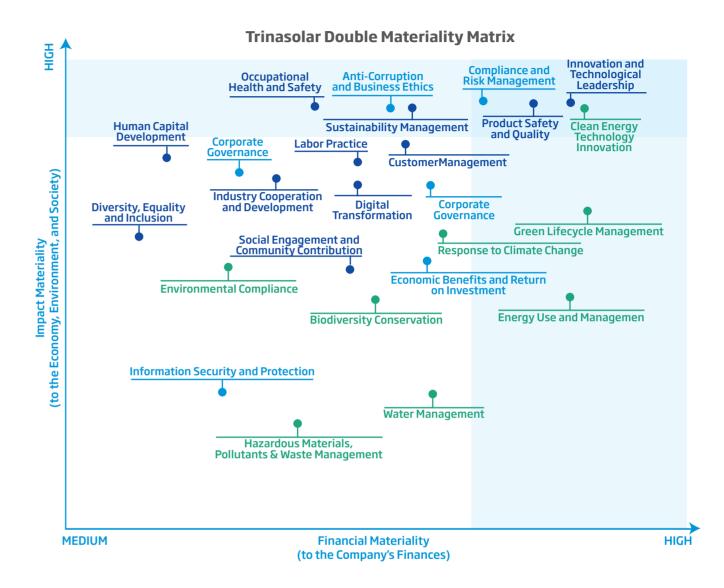
**Analysis** 



17

Analyze the impact materiality and financial materiality of ESG issues. Calculate the degree of importance and discuss the results with external experts and company management to formulate the results of the dual materiality analysis of ESG issues.

The results of the double materiality assessment are reviewed by the ESG governance layer after management discussion and confirmation. The results are then presented to the Board of Directors for approval.



### · Environmental issues · Social issues · Corporate governance issues

According to the outcome of the materiality assessment, the Company identifies key issues based on their financial and impact materiality. The Company then conducted a thorough review of these issues, assessing their scope of impact, risks, and opportunities. Finally, we highlighted relevant management strategies, measures, and performance, including targets and KPIs, in the Report. By taking this action, the Company is effectively addressing the concerns of its stakeholders regarding Trinasolar's sustainability efforts.

During the research process, the Company also seeks and collects expectations and suggestions from various stakeholders on key issues and sustainability work. These insights are used to continuously enhance internal management plans and sustainability performance.



NO	High-priority Issues	Materiality Dimensions	Value Chain Segment	Stakeholders	Impact Cycle	Impact Materiality Description	Financial Materiality Description	Management Strategies and Indicators
01	Innovation and Technological Leadership	Impact Materiality Financial Materiality	Upstream Operations Downstream	Suppliers and business partners Shareholders and investors Customers	Short-term Medium-term Long-term	The Company is committed to driving innovation through technological research and development, leveraging our leading R&D capabilities and technical expertise to provide value to customers and deliver clean technology solutions to the market.	The company's ability to maintain its competitive position in the market may be hindered by missteps in its R&D strategy or by its inability to effectively utilize cutting-edge technology. These shortcomings could potentially result in the aging of the company's brand, a continuous reduction in market share, and a decline in revenue and profits.  When equipped with state-of-theart R&D capabilities, it helps the Company establish technical barriers, enabling it to expand its market share.	The Company prioritizes innovation leadership as its primary development strategy and core driving force. We focus on enhancing the R&D system, consolidating R&D resources, accelerating technological breakthroughs, and facilitating product upgrades. During the reporting period, R&D investment reached RMB <b>5.558</b> billion, accounting for <b>7.05%</b> of the main business revenues.
02	Clean Energy Technology Innovation	Impact Materiality Financial Materiality	Upstream Operations Downstream	Suppliers and business partners Shareholders and investors Customers Local community	Short-term Medium-term Long-term	The Company enhances photovoltaic power generation efficiency through technological and application innovations, reduces both production and operational costs, and accelerates the popularization and application of clean energy.	It assists the company in continuously reducing operating costs, expanding market opportunities and market share, and constantly enhancing brand image, thereby achieving revenue growth.	The Company is committed to bringing clean energy to a broader global region and population in an affordable and accessible manner. To that end, the Company is collaborating with value chain partners and other stakeholders through industrial cooperation, public welfare cooperation, and other diverse paths to promote the popularization and use of clean energy. As of the end of the reporting period, the Company's global cumulative shipment of photovoltaic modules exceeded <b>260 GW</b> .
03	Product Safety and Quality	Impact Materiality Financial Materiality	Upstream Operations Downstream	Suppliers and business partners Government and competent authorities Customers	Short-term Medium-term Long-term	The Company has established a comprehensive quality management system that spans the entire product lifecycle. This initiative ensures product stability and reliability, safeguarding customer rights and interests.	In the event of product quality or safety issues, regulatory penalties, customer complaints, and other adverse consequences may ensue, resulting in increased operating costs, accelerated customer attrition, tarnished brand reputation, and diminished market share.  Long-term product quality management will continuously enhance customer satisfaction, determine and ensure the high market competitiveness of the Company's products and services, and secure stable business revenue.	The Company adheres to the quality management policy of "Innovating with wisdom, excelling with quality, lean management, and achieving customer success." During the reporting period, the Company did not record any health and safety-related violations or major responsibility incidents involving its products and services.



NO	High-priority Issues	Materiality Dimensions	Value Chain Segment	Stakeholders	Impact Cycle	Impact Materiality Description	Financial Materiality Description	Management Strategies and Indicators
04	Compliance and Risk Management	Impact Materiality Financial Materiality	Upstream Operations Downstream	Shareholders and investors Government and competent authorities Customers	Short-term Medium-term Long-term	The Company is committed to ensuring sustainable operations and safeguarding the rights and interests of global customers and consumers. This commitment is upheld through legal and compliant business operations, as well as comprehensive risk management.	Engagement in non-compliant business activities by the Company may result in sanctions or administrative penalties, direct economic losses or property damage, and reputational damage, which could lead to a continuous decline in business revenue.	The Company strictly adheres to the laws and regulations of the countries in which it operates. It upholds the compliance policy of "sound governance, compliant operation, steady development, and value creation." It integrates compliance management into business processes, offering clarity through the internal management system and process management system. It continuously improves the risk management system, constructing a comprehensive mechanism that encompasses risk identification, assessment, analysis, tracking, and control. This approach ensures the effective operation of each link through appropriate methods. The Company has obtained ISO 37001 Anti-Bribery Management System certification and ISO 37301 Compliance Management System certification. During the reporting period, the Company established compliance management goals, including "compliance training participation rate exceeding 90%," "compliance commitment/conflict of interest declaration completion rate of 100%," and "tracking and rectification completion rate of 90%." All goals have been successfully achieved.
05 M	Green Lifecycle Management	Financial Materiality	Upstream Operations Downstream	Suppliers and business partners Shareholders and investors Customers Local community	Short-term Medium-term Long-term		Failure to ensure the full lifecycle green management of products may result in the Company falling short of customer expectations, leading to a loss of product competitiveness, and a decline in market share, and a decline in revenue.  Implementing product green lifecycle management can help the Company reduce raw material and energy costs, meet customer demands for environmentally friendly and sustainable products, enhance market competitiveness, and elevate brand value.	The Company integrates the green development concept into its business strategy and production operations, promoting emission reduction and carbon reduction throughout the entire life cycle of product design, production and manufacturing, circulation, use, and recycling. By offering a wider range of green and clean energy storage products and services, the Company provides diversified solutions to customers, contributing to the transition towards a net-zero future. 12 products have received carbon footprint certification.
06	Energy Use and Management	Financial Materiality	Operations	Shareholders and investors Government and competent authorities Local community	Short-term Medium-term	/	Engaging in energy management activities helps the Company improve energy efficiency, reduce energy costs, and enhance its brand image of sustainable development.	The Company places significant emphasis on energy management, leveraging a range of strategies including technological innovation, process optimization, and energy-saving management practices to achieve energy conservation and consumption reduction. By establishing solar photovoltaic power generation facilities and implementing other measures, the Company has improved energy utilization efficiency and optimized the energy use structure. During the reporting period, the Company implemented 47 energy-saving projects across its 32 production bases, resulting in a total electricity consumption reduction of 55,496.48 MWh. Since 2021, cumulative electricity savings amount to 168,176.48 MWh.





#### **Product Design**

The Company's commitment to environmental responsibility is evident in its comprehensive approach to green design in industrial products. This commitment is deeply ingrained in every stage of the product lifecycle, from research and development to production and utilization. We adhere to a series of systems and corresponding procedures, including the Circular Economy Policy and the Product Stewardship Policy. These systems enable us to conduct a comprehensive lifecycle environmental impact assessment for each product, encompassing raw material selection, production, distribution, use, recycling, and disposal. Our objective is to ensure that products are designed with environmental sustainability in mind from their very inception.

The Company's commitment to lightweight design ensures optimal product performance and photoelectric conversion efficiency. This commitment is exemplified by the introduction of low-weight adhesive films and the reduction of silicon material usage, thereby minimizing resource consumption from the source. We prioritize the use of recyclable, renewable, and reused materials, and we conduct extensive research on the application of eco-friendly materials, such as recycled aluminum, in module products to maximize resource utilization. The Company is also committed to the development of technical alternatives that reduce or eliminate the use of harmful materials in products, thereby minimizing environmental impact.

The Company recognizes the importance of developing high-performance green products as a key strategy for contributing to global emission reduction. Through technological innovation, we continuously enhance the photoelectric conversion efficiency of our products, boost the electricity generation throughout the product's entire lifecycle, and fortify the durability design to extend the product lifespan. This offers users high-performance, low-carbon emission product choices and more efficient use of natural resources.

#### **Product Manufacturing**

The Company has a comprehensive green manufacturing program, including systematic environmental and energy management. We have conducted ISO 14064 GHG emissions verification, obtained ISO 50001 energy management system certification, and ISO 14001 environmental management system certification. We systematically carry out environmental and energy management to ensure green and low-carbon production and operation at all levels. Concurrently, the Company is implementing multi-dimensional, stringent, and systematic environmental certification standards at production bases, accelerating a comprehensive upgrade to green production. By the close of the reporting period, 9 of our production bases have been designated as Green Factory, with the Yiwu Technology and Yancheng Dafeng Factory receiving "Zero Carbon" factory certification.

#### **Clean Production**

The Company is committed to constructing a clean and low-carbon production model, implementing water and energy-saving measures, and continuously reducing resource and energy consumption in the production and manufacturing process. This commitment is achieved through the elimination of high-energy-consuming and high-water-consuming equipment, modification of existing equipment, and optimization of production processes. We are committed to the effective utilization of wastewater, waste gas, waste liquid, and waste, with the aim of reducing the generation of pollutants and waste. The Company is committed to increasing the proportion of renewable energy use by installing rooftop photovoltaic power stations and purchasing green electricity. This initiative is part of a broader commitment to reduce greenhouse gas emissions in the production process, making the entire production process more environmentally friendly.

#### **Recycled Materials**

The Company has established a set of guidelines, the Specification for the Recycled Use of Photovoltaic Module Materials, which outlines the use and management of recycled materials in products, and sets targets for the recycling and reuse of materials such as glass, profiles, and packaging. These measures are intended to steadily increase the utilization rate of product materials.



Case | Yancheng Dafeng Factory Passes "Dual Zero" Factory Certification



The Production Base in Dafeng, Yancheng

Trinasolar's Yancheng Dafeng Factory passed the TÜV Rheinland "Zero Waste" and "Zero Carbon" factory certification audits with high marks in environmental management system construction, energy conservation and emission reduction, and waste treatment. The factory has been recognized for its

environmental sustainability, having been awarded the "Zero Waste" factory certification and the 2023 "Zero Carbon" factory (Type I) three-star certification. Notably, it is the first enterprise in the photovoltaic industry to obtain the TÜV Rheinland "Dual Zero" factory certification.

#### **Product Circulation, Use, and Recycling**

To further reduce the environmental impact of its value chain activities, the Company is implementing measures such as optimizing its logistics system, exploring opportunities for recycling, and actively exploring methods for better utilizing resources during the product scrapping phase. These efforts are driving collaboration with partners to enhance green management.

#### **Transportation and Logistics**

The Company is committed to enhancing its green logistics transportation management to reduce the environmental impact of its global business growth. By optimizing transportation routes and methods, improving loading rates, and promoting new energy transportation tools, the Company accelerates the construction of a low-carbon and efficient logistics system, reducing the carbon footprint in the process of freight transportation.



#### **Operation and Maintenance**

The Company prioritizes the development of reliable and durable high-quality products. It is committed to the principle of repair over replacement, with the objective of minimizing the frequency of repairs and replacements, extending product lifespan, reducing resource consumption during operation and maintenance, and achieving economic and emission reduction benefits.

#### **Recycling and Reuse**

The Company places significant emphasis on the recycling and reuse of products at the conclusion of their lifecycle. It maintains close collaboration with partners at all points in the industry chain, continuously overcoming technical challenges. The Company promotes the establishment of a recycling and reuse system for decommissioned photovoltaic modules, explores commercial and large-scale paths for module recycling, and is committed to opening up a green recycling pathway for the photovoltaic industry.

The Company is committed to exploring feasible business models, adhering strictly to the EU's Waste Electrical and Electronic Equipment Directive (WEEE Directive) and the EU's Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH Regulation), and voluntarily participating in product recycling programs. The Company is also engaged in long-term cooperation with PV CYCLE to establish a recycling and processing mechanism for photovoltaic modules. It assists customers in recycling and reusing solar modules that need to be replaced or have reached the end of their life, reducing the environmental impact of waste while maximizing resource utilization. In February 2025, the Company, in collaboration with industry ecosystem partners, released the "2024 China Photovoltaic Recycling and Circular Utilization White Paper." This document explores the industrial space and technical paths for photovoltaic product recycling, and helps advance the green governance of the entire Chinese photovoltaic manufacturing chain.

As vice chairman of the PV Committee of the China Green Supply Chain Alliance (ECOPV), the company leverages its technological leadership advantages by taking the initiative in exploring and researching module recycling and promoting the expansion and extension of the photovoltaic industry chain. The company prioritizes green environmental protection, cost-effectiveness, and high recovery rates. It conducts research on technologies related to the dismantling and recycling of waste photovoltaic modules, developing and testing various technological routes, and continuously improving technologies such as automated dismantling, laminate separation, silver removal from solar cells, and silicon material cleaning and purification. As of the end of the reporting period, the Company has applied for 31 patents in the field of module recycling, including 24 au-

Case | Successfully Manufactured the World's First Fully Recycled Photovoltaic Module

In September 2024, the Company, in collaboration with upstream and down-stream partners, successfully produced the world's first fully recycled photovoltaic module. This achievement was made possible by recycling waste photovoltaic module materials, including glass and aluminum frames, broken silicon wafers, and silver powder. This achievement was recognized with the First Prize in the Photovoltaic Module Recycling Category of the Solar Photovoltaic Track at the 2nd Energy Electronics Industry Innovation Competition, which was organized by the Industrial Development Promotion Center of the Ministry of Industry and Information Technology. The TOPCon 210N-66 recycled photovoltaic module features a golden size, with a conversion efficiency of up to 20.7%, and a power output exceeding 645W, marking a significant breakthrough in the field of waste photovoltaic module recycling and circular utilization. This initiative is poised to infuse fresh momentum into the ongoing development of the photovoltaic industry chain, underscoring a commitment to excellence and innovation.



First Prize in the Photovoltaic Module Recycling Competition under the Solar Photovoltaic Track of the 2nd National Energy Electronics Innovathorized and publicly disclosed invention patents. The Company has played a leading role in formulating 4 related standards for module recycling, as well as 2 key national standards. We have also undertaken 2 national key projects on circular economy.

Regulation Concerning Batteries and Waste Batteries (EU) 2023/1542 establishes requirements for the recycling of energy storage products and the use of recycled materials in the production process. The regulation covers various aspects, including cell performance safety, information disclosure, and supply chain due diligence. To address the challenges posed by the complexity, long-term nature, uncertainty, and progressive nature of the regulation, the Company has established a special task force and built a comprehensive and systematic institutional framework to respond to the challenges brought by the regulations. This framework ensures that energy storage products can meet relevant requirements from design, production, to decommissioning and recycling. As of the end of the reporting period, the Company had fulfilled all its obligations concerning the submission of performance, durability, and safety parameter documents, labeling, and information disclosure, in addition to adhering to restrictions on substances. The establishment of the special task force and the complete institutional framework will also ensure that the Company meets all requirements for cell recycling and recycled materials as scheduled.



Our Highlighted Achievements

- √ The Vertex and Vertex N series modules have passed the UL Environmental Product Declaration (EPD) certification and are mutually recognized with the Italian EPD
- ✓ The Vertex S+ series modules have passed the Norwegian and international EPD certifications
- ✓ The Vertex N series modules have obtained the French carbon footprint certification
- ✓ Trina Energy Storage's Elementa 2 storage products have successfully completed the EPD certification, and also completed the ISO 14067 carbon footprint certification simultaneously
- ✓ TrinaTracker's Vanguard 1P, has obtained the carbon footprint certification from Bureau Veritas
- **√** .....





# More Diverse Application Scenarios

Trinasolar is committed to its mission of "Solar Energy for All". We collaborate with value chain partners and participate in public welfare projects to provide affordable and easily accessible clean energy to a wider range of regions and people around the world. We are committed to improving energy accessibility, sharing our expertise, and collaborating with stakeholders to promote the use and popularization of clean energy.

As of the end of the reporting period, Trinasolar's global cumulative shipments of photovoltaic modules exceeded 260 GW, reducing CO<sub>2</sub>e emissions by approximately 349.95 million tonnes. This is equivalent to planting 19.1 billion trees worldwide. The Company will encourage the involvement of all sectors of society in environmental protection and clean energy consumption actions through more proactive business practices and uniquely creative environmental protection activities, creating a clean and beautiful future together.



#### Multi-scenario, Promoting Innovative Development through Cooperation

The Company recognizes the pivotal role of photovoltaics in the transformation of clean energy and sustainable development. We are committed to technological innovation, model innovation, and application innovation, and we are dedicated to the integration of PV and energy storage products into a variety of daily and production scenarios. Our goal is to make clean energy "accessible everywhere".



#### Trinasolar's 210 Vertex Series Modules

Undergo Outdoor Testing in Extreme Cold Climates at China's Northernmost Point - Mohe After enduring two harsh winters

#### Vertex N-Type 700W Series:

Power generation in January: approximately 276 kWh System efficiency ratio exceeds 100%

#### Vertex 670W Series:

Bifacial modules achieve a total effective utilization of 1,138.15 kWh/kWp Power generation increase by 7.34%



Hainan Wanning agrivoltaics power generation project Integrated with the energy storage station using **the Elementa System Offering an integrated solution for tropical scenarios** IP67 standard high-protection

PACK structural design + AI bionic liquid cooling system
Capable of handling humid and
hot environments as well as salt fog erosion

#### **Trinasolar Smart Cloud Platform**

Rapid response to grid emergency risks and full assurance of power supply reliability on the island Capable of supplying daily electricity for 5,000 households throughout the year



Integrated PV and energy storage Application Solution

Industrial and commercial intelligent energy storage cabinet:

Potentia Blue Ocean

Equipped with full-stack self-developed automotive-grade Trina chip Connected to the Trina Cloud Platform intelligent energy management system Providing an

"integrated solar, energy storage, and usage solution"

By real-time monitoring of grid load and voltage



Distributed PV and energy storage Integrated Solution

**Tropical** 

Scenario

**Solution** 

#### Vertex N-Type 700W+ modules

Paired with the industrial and commercial intelligent energy storage cabinet: **Potentia Blue Ocean**By leveraging multi-energy complementarity and energy storage response

Achieve grid friendliness and the goal of load following source Realize peak-valley arbitrage of 296,000 RMB annually

Generates nearly 8 million kWh of electricity for enterprises annually Equivalent to saving 1,000 tonnes of standard coal per year, planting 340,000 trees, and reducing carbon emissions by 4,800 tonnes



#### Case Innovative Agrivoltaics and Aquavoltaics in Coal Mining Subsidence Area

The agrivoltaics and aquavoltaic project is located in the coal mining subsidence area of Shiheng town, Feicheng city, Shandong province. Trinasolar has thoroughly explored and coordinated available resources, including coal mining subsidence land. The company has innovatively introduced an integrated solar-storage model combing agriculture and aguaculture. This model provides a reliable green power source for the local area, as well as the ability to manage electricity distribution and peak shaving through its integrated energy storage system. This combination of features offers significant economic and ecological benefits. During the reporting period, Trinasolar's Vertex 670W series modules demonstrated stable operating efficiency, achieving actual power generation that exceeded expectations. This effectively safeguarded the investment returns of customers. The project is equipped with the Elementa series liquid-cooled energy storage system, from fully self-developed cells



The aquvoltaic solar-storage project in Feicheng city,

to PCS. This system fully utilizes the advantages of product combinations to enhance after-sales service efficiency and customer value.



#### Case | Mountain Reclamation-Agrivoltaics PV and Energy Storage Integration

Due to factors such as terrain and climate, Liulin County in Shanxi Province possesses vast expanses of barren mountains and underutilized land. Trinasolar participated in the 100MW local barren hill management and agrivoltaics project construction. The project was completed using a comprehensive and stereoscopic approach, utilizing idle and abandoned land to install photovoltaic products. The soil under the PV products has been enhanced, creating ideal conditions for crop planting. This multifaceted approach of photovoltaic power generation, crop planting, and barren hill management is poised to drive the advancement and expansion of the agrivoltaic model. The project has been fully connected to the grid since 2024, strongly driving the transformation and upgrading of the local energy structure and the growth of agricultural planting benefits. The model's unique land use approach, cutting-edge ecological and environmental protection concepts, significant economic advantages, and extensive application scenarios illustrate its comprehensive and valuable promotional potential. The Company will continue to explore inno-



The Agrivoltaics Project in Liulin, Shanxi

vative applications of photovoltaics, contributing Trinasolar's strength to the development of green agriculture, ecological management, and energy transformation.



#### **Multi-regional, Cleaner Solutions**

The Company prioritizes technological innovation and product upgrades. We collaborate with global partners, connect with leading industry experts, and deliver localized smart solar and energy solutions to global customers. Our Vertex series modules have become "green messengers", providing reliable clean electricity to multiple communities in China, the United States, New Zealand, the United Kingdom, and other countries, deeply serving the global green transformation.



#### Case | Creating Green Roof for Community Medical Institutions

Inspira Health is a nonprofit healthcare organization in the United States that is dedicated to improving the health and well-being of its local community. Trinasolar participated in the rooftop photovoltaic project of Inspira Health in Deptford, New Jersey, USA. This project involved retrofitting an old sporting goods building into a facility optimized for green energy through Trinasolar's Vertex N-type modules. This initiative contributes to reducing operational pressure and electricity costs. Completed in

2024, the project has an estimated annual power generation of 450 MWh. This output will meet approximately 70% of the energy needs of the Inspira Health medical center, equivalent to the annual electricity consumption of 61 households. It is estimated to reduce CO<sub>2</sub>e emissions by 314 tonnes annually, providing substantial environmental benefits and social value.



#### Case

Trinasolar Powers New Zealand's Largest Solar Farm with Integrated Module-Tracker Solution

In 2024, Trinasolar, in collaboration with our New Zealand partner Lodestone Energy, successfully completed the construction of the Kohirā solar farm project, the largest solar farm in New Zealand to date. Covering 64 hectares, the solar farm includes 61,000 Trina Solar Vertex 550W bifacial dual glass panels on TrinaTracker Vanguard 2P smart tracking systems, with 33MW DC capacity. It is expected to generate around 55 GWh of electricity annually, powering over 7,770 households. The construction of this photovoltaic power station has prioritized the conservation of the original farmland ecology. This ensures the uninterrupted operation of livestock and crop planting activities, while providing a reliable supply of clean electricity for local industries and households. This approach effectively combines carbon reduction with industrial development. It fosters a symbiotic



Kohirā Solar Farm Project

relationship between environmental sustainability and economic growth.





#### **Sustainability Issues**

Clean Energy Technology Innovation Innovation and Technological Leadership Digital Transformation Product Safety and Quality Customer Management Industry Cooperation and Development **SDGs** 







**Key Performance Indicators in 2024** 

155 standards

Published standards led by or participated in by the Company **1,452** pieces

Patents and software copyrights obtained in the year

**2,966** pieces

Cumulative patents and software copyrights



# Technological Innovation and Digital Transformation

#### **Research and Development Innovation**

Tinasolar's primary development strategy is innovation, with a focus on enhancing the research and development (R&D) system, integrating R&D resources, accelerating technological breakthroughs and product upgrades, and building competitive advantages in the industry's new development pattern. This approach is intended to drive the development of new quality productive forces.

#### **Innovation Achievements**

The Company adheres to the concept of "mature one generation, reserve one generation", continuously enhancing the technology reserve of N-type TOPCon cells, and promoting the industrialization of N-type TOPCon technology. The Company has made significant progress in key technical areas, including TOPCon cells, perovskite/crystalline silicon tandem cells, and high-efficiency N-type photovoltaic modules.



#### Cel

#### TOPCon Cell

In November 2024, the Company's independently developed high-efficiency n-type bifacial i-TOPCon cell was certified by the German Institute for Solar Energy Research in Hamelin (ISFH) testing laboratory, achieving a maximum cell efficiency of 26.58%. This achievement sets a new world record for TOPCon solar cell efficiency and marks the 28th time that Trinasolar has set and updated world records. The core technology of this cell, i-TOPCon Ultra, incorporates full passivation, contact suppression, and optical parasitic absorption, and ultra-fine grid lines. These features represent a significant advancement in efficiency and power



enhancement for TOPCon technology, thereby ushering in a new era for the industry.



#### Cell

#### HJT Cell

In December 2024, the Company's independently developed high-efficiency n-type full passivation heterojunction (HJT) cell was certified by the ISFH testing laboratory, achieving a maximum cell efficiency of 27.08%, and setting a new world record for HJT solar cell efficiency. This achievement

marks the 29th time that Trinasolar has set and updated world records, achieving a breakthrough with the efficiency of the front and back contact structure cell exceeding 27% for the first time.



### **Module**

#### TOPCon 2.0 Module

In December 2024, the Company launched a comprehensive Vertex N-type product series, featuring large, medium, and small modules built on cutting-edge TOPCon Ultra technology. This series boasts seamless compatibility with complex scenarios, including large ground-mounted power stations, industrial and commercial buildings, mountainous regions, and residential rooftops. The modules offer power outputs ranging from 495W to 760W, with efficiency gains of up to 1.8%, delivering significant advancements in both power and efficiency. Additionally, the series excels in bifaciality, low irradiance performance,



temperature coefficient, and overall reliability, setting a new benchmark for high-performance solar solutions.

#### HJT Cell Module

In January 2025, the Company's independently developed high-efficiency n-type fully passivated HJT module, certified by the Fraunhofer CalLab of the Fraunhofer Institute for Solar Energy Systems in Germany, achieved a maximum module aperture efficiency of 25.44%, setting a world record for large-area HJT module aperture efficiency. This

achievement marks the 30th time the Company has established and refined a world record, and it also represents the highest record for crystal silicon modules with front and back contact structures, setting a world record for the photoelectric conversion efficiency of monocrystalline silicon solar cell modules.





#### Energy storage

#### Elementa 2

In December 2024, the Company successfully completed comprehensive integrated testing of Elementa 2 liquid-cooled cell energy storage system. The system underwent rigorous testing in four key areas: communication, startup and shutdown, operation, and fault management. Through this thorough evaluation, the safety, stability, and reliability of Elementa 2 were fully validated. This comprehensive assessment underscores the Company's technical leadership in energy storage solutions for complex application scenarios, and instills confidence in the successful



deployment of future large-scale energy storage projects across Europe.



### **Bracket**

#### SuperTrack Smart Algorithm

The Company established an Intelligent Tracking Photovoltaic System Research Institute and developed a new generation of intelligent tracking technology, "SuperTrack Smart Algorithm", which seamlessly integrates intelligent algorithms, multi-source data, and software platforms. The comprehensive solution, designed for multiscenario applications, combined with the Trina Tracking Smart Cloud Platform, provides advanced tracker hardware and enables customers to maximize power generation revenue from their photovoltaic tracking systems through intelligent management. The solution has undergone multiple rounds of technical validation and certification by authoritative third-party institutions, such as Det Norske Veritas (DNV), Technische



Überwachungsvereine (TÜV), Société Générale de Surveillance (SGS), and Beijing Certification Center for High-tech (CGC). According to assessments, Trinasolar's intelligent tracking algorithm can boost power generation by up to 3%-8% compared to conventional tracking algorithms.

#### **R&D Management**

The Company is dedicated to proactively advancing the R&D system, strengthening the development of innovation platforms, and focusing on in-depth research into cutting-edge photovoltaic technologies. The Company established a central research institute to oversee R&D initiatives, implemented and refined a scientific innovation management model, and promoted innovation efforts in a more integrated and efficient manner.



#### Case

## New Generation of Photovoltaic Technology and Equipment Manufacturing Innovation Center

In March 2024, Trinasolar took the lead in a joint declaration with representatives from 10 shareholder units and 18 alliance units in Changzhou, officially establishing the new generation of photovoltaic technology and equipment manufacturing innovation center. The Company will collaborate with leading enterprises in the photovoltaic industry chain, universities, and other innovation entities to carry out collaborative innovation around the photovoltaic industry, jointly laying out the new-generation photovoltaic products of crystalline silicon tandem solar cells. The Innovation Center aims to reconstruct the photovoltaic industry chain by advancing materials, equipment, and technology, accelerating the industrialization of tandem cells. It will fully leverage China's strengths in innovation resource



integration, actively implement pilot innovation policies, and contribute to building a globally influential innovation platform.







representing 9.77% of the overall workforce



including 715 individuals with master's degrees and 58 with doctoral degrees or higher.

The Company is committed to investing in R&D resources and cultivating a robust team of research talents to sustain its leading position in scientific research and innovation. The Company has established a comprehensive system for talent recruitment, development, and incentives to foster creative vitality and accelerate the development and commercialization of cutting-edge research outcomes. Supported by advanced platform facilities and a high-caliber scientific research team, the Company continues to drive innovation forward. As of the end of the reporting period, the Company employed a total of 2,928 R&D personnel, representing 9.77% of the overall workforce, including 715 individuals with master's degrees and 58 with doctoral degrees or higher.



#### Case | Advanced Training Courses in Cutting-Edge Solar Cell Technology

In 2024, the Company prioritized advancing expertise in solar cell technology and implemented specialized training programs for our R&D team members. The project included 14 courses led by distinguished experts from prestigious institutions such as the University of New South Wales, Oxford University, and the Fraunhofer Society. The training employed a blend of online and offline instruction, expert workshops, and other interactive formats. With over 200 participants throughout the year, the program effectively broadened the R&D team's professional horizons and continually strengthened their innovation capabilities.



On-Site Lectures by Experts in the Field of Solar Cells

The Company considers intellectual property (IP) management and protection as crucial to fostering R&D innovation. To this end, the Company has developed a comprehensive intellectual property strategy aimed at facilitating the transformation of scientific and technological achievements, enhancing industrialization efforts, and safeguarding the Company's innovative development.

The Company has established a comprehensive intellectual property protection system, which includes the formation of an Intellectual Property Management Committee under the Executive Management Team (EMT) to oversee all intellectual property matters. The Intellectual Property Department, alongside the Intellectual Property Working Group and the Patent Review Committee, collaborates to enhance the creation, protection, utilization, and management of intellectual property. The Company reformed the intellectual property processes, segmented the management modules and released intellectual property management and operations. The Company's achievements in intellectual property management have been recognized with prestigious awards, including the Third Prize in the Yangtze River Delta High-Value Patent Operation Competition and the Silver Award at the 25th China Patent Award, conferred by China National Intellectual Property Administration.

#### Six Major Modules of Intellectual Property Management

#### IP strategic planning

Establish clear guidance for the development of intellectual property to ensure that the company maintains a competitive edge in the global market

#### **IP** construction and quality management

Promote the protection of innovative achievements and the realization of their market value, while enhancing the commercial potential of intellectual property assets

#### IP risk control and compliance management

Minimize intellectual property infringement, litigation, and compliance risks, along with their associated economic losses, as well as prevent legal disputes arising from negligence or non-compliant operations.

#### **IP** operation management

Engage in market-driven operations, facilitate the value transformation of intellectual property, and explore new business models, which contribute to enhancing the Company's overall revenue

#### IP dispute resolution management

Take proactive and timely measures to resolve intellectual propertyrelated legal disputes, promptly identify and halt infringing activities, and effectively safeguard the Company's intellectual property rights

#### **IP process affairs** management

Ensure the efficient and orderly execution of intellectual property management activities by leveraging systematic and standardized mechanisms to improve daily operational efficiency

### **Intellectual Property Protection**

over 30 intellectual property management policies. These improvements have significantly increased the efficiency of

#### **Intellectual Property Key Performance**

Obtained in 2024

1.452

patents and software copyrights Obtained in 2024

**56** 

trademark licenses

in 2024

1.596 invention patent applications

in 2024 243

invention patents granted

in 2024

valid patents

2,857

2,966 patents and software copyrights

827 trademark licenses

Cumulative to the end of 2024

1,117

invention patents applied to the



The Company upholds a strict zero-tolerance policy regarding infringement actions, while simultaneously demonstrating a strong respect for the intellectual property rights of others. The Company integrates intellectual property management requirements into the Code of Business Conduct and Ethics for Employees. Additionally, we also foster awareness and capability regarding intellectual property protection among all employees, which is accomplished through various initiatives, including Intellectual Property Week, resources available on the Company website, internal publications, and patent search competitions.

#### **Digital Transformation and Intelligent Manufacturing**

The digital transformation era is rapidly approaching. The Company is dedicated to advancing this transformation by integrating technologies such as artificial intelligence and digital platforms across production and operational processes. We seek to drive business innovation and reshape management practices, thereby continuously enhancing the Company's market competitiveness.

#### **Digital Transformation**

The Company has established a Joint Digital Transformation Promotion Office, entrusted with the responsibility of overseeing the comprehensive advancement, resource coordination, and risk management of digital transformation projects. In alignment with the Company's business strategy and management needs, we have upgraded our digital management platform. The new platform focuses on two main themes: "digital business operations driven by customer value" and " digital and intelligent management operations driven bu data". The Company aims to ensure comprehensive coverage of digital transformation while driving lean improvements in operational quality and efficiency.

## Digital business indicator analysis platform



The Company has proactively advanced the digitalization of its management systems. We developed a sales and business indicator analysis platform that visualizes real-time management dynamics. The platform has effectively shortened the review cycle for business indicators, enabling the Company to make more scientific and timely business decisions. Consequently, the Company has continuously enhanced both production efficiency and management effectiveness

## Al scenarios construction



The Company is at the forefront of promoting the construction and application of AI scenarios, achieving significant progress across multiple fields. We have verified the feasibility of 19 AI application scenarios and successfully implemented five key AI initiatives in areas such as smart procurement, including industrial chain information management, raw material price forecasting, and procurement strategy formulation

#### **Intelligent Manufacturing**

The Company is committed to digital transformation as a core strategy, systematically promoting the strategic upgrade of smart manufacturing. We strive to achieve a dual leap in production efficiency and quality control by building a new manufacturing paradigm of "data-driven + smart collaboration". The Company is developing an intelligent manufacturing MOM platform that integrates factory data and management processes at the enterprise level. The platform will combine Manufacturing Execution System (MES), Artificial Intelligence (AI), Internet of Things, and digital twin technology to create an intelligent hub that covers the entire manufacturing production process. With its ability to seamlessly connect modules and leverage real-time data, the system enables dynamic visualization of production metrics, AI-driven quality control, and autonomous decision-making for equipment collaboration, thereby driving the transformation of factories towards intelligent operations.

#### Core Utilization Scenarios of the Intelligent Manufacturing System

Digital production and operation management

The equipment achieves 100% industrial IoT connectivity, enabling real-time monitoring and data-driven performance analysis.

Al-powered centralized control system

Utilizing AI technology, it reduces manual labor requirements by 50% per production module, while enhancing quality assurance efficiency by 40%, and decreasing defect rates by 5%-10%.

Automated production line

IoT platform realizes full-process connectivity, ensuring seamless interoperability between equipment and production systems.

Intelligent logistics and distribution management

Automatic guided vehicles (AGV) combined with intelligent material handling system, achieving 100% delivery accuracy while reducing manual transportation labor by 50%.

**Automatic labeling** 

Automatic labeling machines integrated with IoT platform, enhancing production efficiency by 5% and improving traceability accuracy.

Automatic packaging

Intelligent packaging system realizes full automation of the entire business process from module grading to warehousing







#### Key Achievements in Intelligent Manufacturing in 2024



Achieving automation in scenarios such as module logistics management, AGV handling, automatic packaging, labeling, tape peeling etc.



Realizing AA-level traceability and comprehensive IoT in a cell digital factory in scenarios such as production process traceability, quality control, real-time management, energy management, equipment management, and automatic packaging



Achieving AA-level traceability, comprehensive automation, and full IoT in scenarios such as automated vertical warehouses, RFID automatic entry and exit, automatic sorting and inspection, overhead rail logistics, real-time production kanban, and indicator transparency



Realizing comprehensive intelligence, digitization, and full IoT connectivity in scenarios such as automatic feeding for silicon ingots pulling, automatic detection and conveying for machining, automatic centralized control, transparent indicators, real-time management, and consistency between consumption and inventory

#### **Honors and Recognition**



	Awarded to	Honor/Recognition	Awarded by		
1	Trinasolar	Fine Digital Management and Control of Supply Chain Based on Integrated Production and Marketing – National-level Digital Supply Chain Case	Ministry of Industry and Information Technology		
	Chuzhou Energy Storage	"High-efficiency Energy Storage Cell Digital Workshop"	Chuzhou Municipal Bureau of Industry and Information Technology		

# Product Quality and Customer Service

#### **Product Quality Management**

Trinasolar is committed to achieving excellence in quality. Guided by a rigorous quality management policy of "Intellectual Innovation, Excellent Quality, Lean Operation, Customer Centric", we place customer requirements at the core of our efforts. We continuously optimize product and service quality to consistently enhance customer satisfaction.

#### **Quality Management System**

The Company refers to laws and regulations such as the Product Quality Law of the People's Republic of China, Code of Practice for the Design of Photovoltaic Power Generation Projects, Code of Practice for the Construction of Photovoltaic Power Generation Projects, and Code of Practice for the Acceptance of Photovoltaic Power Generation Projects, as well as industry standards, to establish comprehensive quality management mechanisms and processes, such as the Quality Management Manual and Quality and Operation Planning Management. The Company's quality management framework focuses on five key modules: quality system management, continuous improvement and digitalization, quality operation management, quality engineering, and supply chain quality management. The modules have been effectively implemented to enhance quality management and audit procedures, thereby ensuring the overall effectiveness of the Company's quality management system. During the reporting period, the Company successfully passed the annual audit of the ISO 9001 Quality Management System.

The Company has developed and implemented a comprehensive digital quality management plan, fully empowering our quality management processes. We have established a standardized, integrated, and intelligent quality management platform, and built a digital system to ensure traceability of quality information across the entire industry chain. Through multi-system integration, we achieve comprehensive oversight of quality management operations, enabling efficient collection, analysis, and response to information. Digital transformation has effectively shifted our quality management approach from "passive prevention and control" to "proactive prevention and control," ensuring the delivery of high-quality and highly reliable products and services.

The Company has formulated a Quality Audit Management Procedures to establish a multi-tiered and multi-dimensional quality audit framework. The Company conducts quality management system audits for all business lines and production bases, including system audits, process audits, product audits, integrated audits, pre-launch audits, and external audits. This systematic approach covers the entire business process from customer demands identification to customer satisfaction enhancement, with continuous improvement initiatives addressing critical issues and non-conformities to ensure effective operation of the quality management system.

During the reporting period, the Company maintained a clean record with zero health and safety compliance violations related to products/services, and experienced no major liability incidents concerning safety or quality standards.



#### **Quality Certifications and Awards**

Awarded to	Certification/Award	Awarded by
Trinasolar Photovoltaic Modules	REACH Compliance Certification	SGS
Trinasolar Vertex N-type 630W Single- glass Module	"Best Single-glass Module" Excellence Award	CGC
Trinasolar Vertex N-type Bifacial Module	Bankability Test Certification	TÜV Rheinland
Trina Storage Elementa 2	NFPA69 Explosion-proof Ventilation System Certification	TÜV Rheinland
Trina Storage Residential Energy Storage System	JIS C 4441 Standard cCell Thermal Runaway Test Certification	Japan Electrical Safety & Environment Technology Laboratories
Crystalline silicon PV module	IEC 61730, 61215 Quality Certification	TÜV SÜD

#### **Product Recall**

The Company strictly adheres to all applicable domestic and international regulations to ensure effective management of product recalls, thereby safeguarding customer rights and interests. Through the implementation of the Product Recall Management Mechanism and the Module Product Recall Management Procedures, the Company clearly defines and rigorously enforces the timing, processes, mechanisms, and requirements for product recalls. During the reporting period, the Company did not experience any recalls related to health or safety risks associated with our products.

#### **Quality Culture**

The Company places great emphasis on cultivating a strong quality culture, reinforcing employees' understanding of the qualifications required for quality-related positions. Through a combination of comprehensive quality training, case studies, and quality culture promotion activities, the Company continually enhances employees' quality awareness and skills, fostering and embedding a culture of quality throughout the organization.



#### Case | Six Sigma Green Belt Quality Empowerment Training

From July to October 2024, the Company organized a series of "Six Sigma Green Belt" quality empowerment activities to meet the needs of business development and enhance product quality management. A total of 499 trainees participated in the training, resulting in 65 quality improvement projects, with an estimated annualized benefit of RMB 24 million.



Six Sigma Green Belt Quality Empowerment Training Activities

#### **Supply Chain Quality Management**

The Company has established a sound supplier quality management system, formulating regulations such as the Management Mechanism for Supply Quality and the Guidelines for Supplier Quality Management in Product Business. We implement quality control and supervision measures throughout the entire lifecycle of suppliers to ensure product quality at the source of supply, thereby further mitigating quality risks.

The Company has revised the Management Mechanism for Supply Quality, established red/yellow-line alert and issue escalation mechanism for supplier quality control. We implement supplier quality management maturity assessments to drive continuous improvement, adopting multi-dimension risk prevention measures across operational layers to ensure supply reliability and stability.

#### **Supplier Quality Improvement Measures**

#### **Quality Management System (QMS)**

A new supplier audit module has been introduced, featuring preconfigured assessment templates and automated audit scheduling, with intelligent systems generating standardized evaluation reports and thereby significantly improving the efficiency of quality audits.

#### Supplier Relationship Management (SRM) system

We have established dedicated supplier quality improvement and performance evaluation modules, enabling online management of incoming material inspection, production line commissioning issues, and supplier performance assessments.

#### **Supplier Quality Critical Control Points**

We have implemented supplier quality critical control points across five core operational phases: supplier qualification, sample approval, incoming quality inspection, product reliability testing, and annual audits. This enables rapid identification and timely response to supplier quality issues.

## Proactive Supplier Quality Management

We further identify the key control points in the supplier's manufacturing process, monitor the process through digital means, shift the control point forward, and improve the risk management of material quality.

The Company closely monitors key performance indicators of supplier quality management, including the defect rate for each batch, the parts per million (PPM) of production lines, and the percentage of purchases from suppliers on the Approved Vendor List (AVL) of key materials. To enhance product quality and market competitiveness, the Company offers a range of support to suppliers, such as empowerment training, technical guidance, and targeted improvement plans. This collaborative approach is designed to drive industry transformation and promote continuous upgrading.





#### **Case** | Supplier Empowerment Training

In October 2024, the Company successfully hosted the 11<sup>th</sup> Supplier Empowerment Training Conference, effectively leading suppliers to build a quality culture and promote high-quality development of the industrial chain. The training is titled "Quality Foundation, Lean Improvement, Excellent Takeoff", covering essential topics such as quality management and quality control. The training was attended by 138 participants from 77 suppliers.



The 11<sup>th</sup> Supplier Empowerment Training

## **Responsible Marketing and Customer Service**

Tinasolar prioritizes customer needs, maintaining a commitment to delivering exceptional, reliable, and high-quality products and services. Our firm commitment is upheld through responsible marketing practices and an agile service management system, ensuring continuous value creation for customers.

#### **Responsible Marketing**

The Company strictly adheres to all relevant laws and regulations in our operating regions, including the Advertising Law of the People's Republic of China, the Consumer Rights Protection Law of the People's Republic of China, and the EU's Unfair Commercial Practices Directive as well as the Product Green Claims Directive. We ensure that all advertising and promotional content is truthful and legal, eliminating false advertising and fostering a healthy and fair market environment.

The Company has formulated and rigorously implements Management Procedures for Reviewing Sales Contracts of Module Business to ensure the accurate communication of product and service information to both the market and customers. Additionally, the Company provides responsible marketing training for the marketing personnel, covering compliance requirements related to intellectual property protection and the prevention of unfair competition during external promotions, thereby ensuring the standardization of marketing activities. During the reporting period, the Company did not experience any violations related to marketing or product labeling.

#### **Customer Service Management System**

The Company is committed to the core value of "Focus on the Client" and has established a customer service system composed of three major modules including global customer service management, integrated service management, and customer satisfaction management. The management system addresses customer needs promptly and efficiently, thereby enhancing the overall customer experience.

#### **Customer Service System**



Global Customer Service Management

Serving as the communication hub between headquarters and regional offices, responsible for optimizing customer feedback processes, responding promptly to customer issues, empowering regional technical support teams, and continuously enhancing overall service capabilities and standards



Responsible for product return management, process and system support, and other business modules, ensuring efficient response to customer needs and continuous improvement of overall processes



Focusing on ESG audits, pre-order quality audits, and customer satisfaction surveys, formulating improvement measures based on customer feedback, responding to customer demands promptly, and enhancing customer satisfaction



#### Case | Global Customer Service (GCS)

Trinasolar is actively expanding our partnerships with the goal of empowering global customer business development through the provision of high-quality services. Our regional technical support (RTS) teams, established in regions such as Asia-Pacific and Europe, serve as the core units responsible for global customer service. These teams undertake key responsibilities such as customer communication, consultation, response, and technical services. The GCS headquarters regularly dispatches employees to various regions to provide guidance to the RTS teams, ensuring the consistent delivery of professional services to customers worldwide and upholding the highest standards.



In 2024, the Company dispatched headquarters customer service personnel to countries across Europe, Latin America, and the Asia-Pacific region multiple times. These personnel provided specialized training to RTS teams, identified common customer issues, and offered practical solutions, with the aim of addressing customer needs through professional collaboration and high-quality service. As the number of overseas distribution customers continues to grow, the Company has also increased our investment in training for distributors and service providers. The enhanced training enables them to better serve end customers and further improve customer satisfaction.



Employees from GCS Traveled Overseas to Provide Guidance and Serve Customers



#### **Customer Satisfaction Management**

The Company employs systematic customer feedback management procedures, including the Customer Feedback Management Procedures for Module Business, to ensure the prompt and appropriate handling of customer feedback and complaints. The Company has established multiple channels to ensure customer communication, including the official website, a customer service interface, a service hotline, a service email, and applications such as "Voice of the Customer" and "Trina Service". These channels operate on a 24/7 basis, enabling timely receipt and response to customer inquiries and feedback. The Company implements comprehensive process management on the customer complaint handling platform, where each customer complaint is assigned a unique code to facilitate tracking and closed-loop management. Additionally, the Company continuously monitors service indicators to optimize and improve service processes, enhancing customer satisfaction. During the reporting period, Trinasolar achieved an actual customer complaint closure rate of 95% globally, successfully meeting the annual target.

The Company developed the Customer Satisfaction Survey Management Procedures, leveraging a combination of internal and external research to gain a deep understanding of customer needs and genuine feedback. During the reporting period, the Company commissioned an independent third-party institution to conduct a global customer satisfaction survey, covering key dimensions such as pre-sales consultation, in-sales service, after-sales support, and product performance. A total of 307 valid questionnaires were collected, resulting in a comprehensive satisfaction score of 81 points (out of 100), placing the Company's overall satisfaction rate among the industry leaders.



#### Case | Dragon Roar Action: Trinasolar's Customer Support Initiative

The Company prioritizes understanding customers' needs and challenges to deliver effective solutions. In response to the uncertainties in the PV and energy storage markets, as well as customer confusion, the "Dragon Roar Action" initiative was launched. The program established a dedicated professional team aimed at providing robust support and addressing customer concerns comprehensively. A thorough introduction was provided on the performance and system advantages of Trinasolar's N-type modules, commercial and industrial energy storage solutions, and flexible tracker products. Our introduction integrated

the latest technical developments in the PV and energy storage sectors, current market trends, and recent energy policies. Additionally, the Company actively gathered customer feedback regarding commercial and industrial energy storage systems and single-sided anti-dust accumulation modules. In the "Dragon Roar Action", the pre-sales team of Trinasolar China engaged extensively across more than ten key provinces and cities with distributed PV and energy storage projects nationwide, conducting over 110 visits and in-depth exchanges with medium and large customers.



# External Exchange and Cooperation

Trinasolar recognizes the vital importance of effective communication and collaboration within the industry. We actively foster cooperation and innovation, relentlessly advancing the frontiers of new energy technology, and spearheading the establishment of an innovative, open, and collaborative ecosystem for the industry.

#### **R&D** Cooperation

The Company fully harnesses the innovative potential of external cooperation by leveraging precise insights into market trends and application demands, alongside the foundational and theoretical research strengths of institutes and universities. We strive to promote industry-academia-research cooperation and innovation, integrate R&D capabilities, and accelerate breakthroughs in photovoltaic technology. During the reporting period, the Company undertook a total of 22 R&D innovation and technology cooperation projects.



ase

The Joint Laboratory Achieved New Progress in Perovskite/Crystalline Silicon Tandem Solar Cells



State Key Laboratory of Photovoltaic Science

In June 2024, Trinasolar's State Key Laboratory of Photovoltaic Science and Technology, in collaboration with Nanjing University, successfully published a groundbreaking research paper in the prestigious journal Nature Communications. The paper was the first to propose a solvent engineering method for scalable preparation of perovskite/crystalline silicon tandem solar cells in the air. The method was validated by a third party and achieved a solar cell efficiency of 28.7%. The large-size pyramid structure (2–3  $\mu$ m) and the photoelectric conversion efficiency on a 16-cm² light aperture area reached 26.3%. The outstanding findings further proved the commercial viability of commercial perovskite/crystalline silicon tandem solar cells.



Case

## Collaborating With Universidad Politécnica de Madrid to Develop Cutting-edge Photovoltaic Technology



Agreement with Institute of Solar Energy at Universidad Politécnica de Madrid In July 2024, the Company signed a long-term cooperation agreement with Institute of Solar Energy at Universidad Politécnica de Madrid to jointly promote the development of cutting-edge industrial technologies and mass production technologies. The collaboration focuses on enhancing the efficiency of photovoltaic modules, researching the structural reliability of trackers, and managing the efficiency of photovoltaic power stations. The partnership will further strengthen the Company's industry-academia-research innovation efforts in Europe, aiming to deliver tailored, localized solutions for the European market.





Case

Collaborating with the Agency for Science, Technology and Research of Singapore to Lead Cutting-edge Technological Innovation in the Energy Storage Cell Industry



Signed a Research Cooperation Agreement with the Agency for Science, Technology and Research in Singapore

In August 2024, the Company signed a research cooperation agreement with the Agency for Science, Technology and Research in Singapore. The partnership will facilitate in-depth collaboration in the research and development of advanced energy storage cell technologies, energy industrialization, and related fields. Together, both parties will work on developing innovative energy storage solutions and jointly promote the optimization and enhancement of energy storage cell manufacturing technologies. The collaboration aims to contribute significantly to the global transition toward green and low-carbon energy.



Case

Partnering with Brazil's Facens University to Promote Local Smart Photovoltaic Development



Formed the Partnership with Facen

In December 2024, Trinasolar and Facens University in Brazil formed a strategic partnership to establish a high-level training center. The collaboration aims to drive innovation and advance academic research, while offering professional training to local project development and construction companies across Brazil. Through the partnership, Trinasolar will deliver practical methodologies to improve the reliability of photovoltaic system installations in the Brazilian market. Moreover, the Company is committed to nurturing skilled professionals to meet the growing demands of the renewable energy sector, thereby playing a pivotal role in advancing Brazil's smart photovoltaic industry.

#### **External Cooperation**

As the leading enterprise in the photovoltaic industry chain, the Company has long been committed to building a closer, more efficient, and sustainable industry ecosystem. By forging strong partnerships with industry stakeholders, we wish to spearhead the journey toward a future defined by shared innovation and mutual benefits.



Case | Invited to Attend Several Meetings at the Summer Davos Forum



Attended the Opening Ceremony of Summer Davos Forum

The 15<sup>th</sup> Annual Meeting of the New Champions of the World Economic Forum (also known as the "Summer Davos Forum") was held in Dalian, Liaoning Province, from June 25 to 27, 2024. Gao Haichun, Director of Trina Solar and Chairman of Trina Power was invited to attend the opening ceremony, the thematic discussion session titled "Understanding Nature's Ledger", and other activities, as well as deliver a speech to communicate with others. During the forum, Gao Haichun proposed four recommendations for collaborating with small and medium-sized enterprises to achieve a carbon-neutral future, including increasing the use of green energy, strengthening green supply chain development, promoting joint innovation between enterprises, financial institutions, and governments, and enhancing global cooperation.

#### **Standard Construction**

The Company proactively leads and contributes to the formulation and revision of international, national, industry, and group standards. Leveraging our leadership position, the Company actively promotes the establishment and implementation of industry standard systems, providing technical support to facilitate high-quality industry development. The Company has played a leading role in developing several key industry standards, including Recycling and Utilization of Waste PV Modules, Cell Sheet Treatment Method, Wet Chemical Method, and PV Tracker Intelligent Tracking Performance Test Method. These standards have now been officially released for implementation. As of the end of the reporting period, the Company has cumulatively led or participated in the formulation of 230 standards, with 155 already published.



Case

| Selected as a Member Unit of the Second National Facility Management | Standardization Technical Committee

In December 2024, Trinasolar was selected as a member unit of the National Facility Management Standardization Technical Committee, signifying our noteworthy contribution to the advancement of the standardization process in the facility management industry. As a member of the Committee, Trinasolar will be deeply involved in the development of national standards for facility management. By leveraging our technological strengths, the Company will promote standardization in low-carbon operations and sustainable management in facility management.



#### Case | Leading the Development of the First Domestic Smart Tracker Standard



In September 2024, the group standard T/CPIA 0082–2024 Test Method for Intelligent Tracking Performance of Photovoltaic Trackers, led by Trinasolar, was released. This marks a significant milestone in the field of intelligent tracking technology, as it is the first domestic standard for trackers. It provides valuable guidance for power plant owners, paving the way for the standardized development of the tracker field.





#### **Sustainability Issues**

Environmental Compliance
Biodiversity Conservation
Response to Climate Change
Green Lifecycle Management
Water Management
Energy Use and Management
Hazardous Materials, Pollutants & Waste Management

#### **SDGs**













#### **Key Performance Indicators in 2024**

**30.71**<sub>tCO<sub>2</sub>e/MW</sub>

GHG emissions intensity of cell

intensity of module

**7.34** tce/MW

Comprehensive energy consumption intensity of cell

**8.32** tCO<sub>2</sub>e/MW

GHG emissions **2.01** tce/MW

Comprehensive e

Comprehensive energy consumption intensity of module

**223,794**<sub>MWh</sub>

On-site renewable electricity generated

**135.73** tonnes/MW

Water consumption intensity of cell

**27.41** tonnes/MW Water consumption intensity of module



## **Environmental Management**

The Company strictly complies with the Environmental Protection Law of the People's Republic of China, the Soil Pollution Control Law, the Water Pollution Prevention and Control Law, the Law on the Prevention and Control of Environmental Pollution by Solid Waste, the Environmental Impact Assessment Law, as well as the EU REACH regulations and other relevant domestic and international laws and regulations. By adhering to these high standards of environmental practice, the Company is committed to minimizing our environmental and ecological impact to the greatest extent.

The Company has established environmental management systems, including the Environmental, Occupational Health & Safety, and Energy Management Policy. The relevant systems clearly define environmental management objectives and continuously monitor and control environmental impacts and risks. The Company is committed to the continuous improvement of our environmental management system, implementing a systematic and standardized approach to environmental matters. As of the end of the reporting period, 32 of the Company's sites have obtained ISO 14001 environmental management system certification. The Company has established a comprehensive environmental management system to identify and assess environmental factors in our production and operational activities on an annual basis, subsequently implementing effective measures to control these factors. During the reporting period, the Company did not experience any sudden major environmental incidents or face penalties due to environmental violations.

The Company extends environmental management requirements to our upstream and downstream value chain, requiring suppliers to fulfill environmental compliance and protection responsibilities in accordance with the CSR Code of Conduct of Trinasolar Supplier. The Company conducts supply chain due diligence and implements full lifecycle management of our suppliers to ensure compliance with environmental standards in raw material procurement, production processes, and product delivery, which further reduces environmental risks across the value chain.

The Company continuously strengthens environmental emergency management by establishing and implementing the Emergency Response Plan. Through regular training and drills, the Company enhances employees' environmental awareness and emergency response capabilities. Our management measures ensure a rapid and effective response to environmental risk factors during emergencies, thereby minimizing potential environmental impacts.



#### Case | Environmental Protection Knowledge Training for All Employees

In June 2024, the Company launched an online course titled "Trinasolar Environmental Protection Knowledge Training for All Employees". The training covered a range of topics, including environmental compliance management, knowledge of environmental pollution prevention and control, management of environmental emergencies, and requirements for clean production. The course taught employees how

to save energy and reduce emissions in their work, efficiently use water resources, and dispose of solid waste in compliance with environmental regulations. We aimed to enhance environmental awareness among employees, clarify regulatory requirements, strengthen environmental emergency response capabilities, and reduce environmental risks associated with the Company's production and operations.



#### Case | Environmental Safety Compliance Training on Chemical Management

In April 2024, the Company conducted an environmental safety compliance training program focused on chemical management. The training covered relevant regulations, chemical classification and labeling, safe storage and transportation, proper usage, emergency response to spills, personal protective equipment, and chemical injury treatment. Through this program, employees gained a thorough understanding of the potential environmental hazards associated with chemicals, thereby enhancing their environmental awareness and emergency response capabilities. By understanding the properties of chemicals, proper storage requirements, and spill response procedures, employees are better equipped to take proactive preventive measures in their daily work to reduce the risk of environmental



Environmental Safety Compliance Training on

pollution caused by chemical leaks, volatilization, or improper disposal. This training ensures that employees understand and comply with environmental requirements, helping to prevent pollution incidents resulting from non-compliant operations.





## **Response to Climate Change**

#### **Climate Governance**

Trinasolar integrates climate action into the Company's overall sustainability strategy, clearly designating the Board of Directors as the primary responsible body. We have established a three-tiered (decision-making, management, and executive) carbon management structure composed of the Board of Directors, the ESG Management Committee, and the ESG Working Group, which convenes at least once a year to address climate management issues. Within the management structure, the ESG Management Committee is responsible for overseeing and supervising all climate-related matters. The Company incorporates core operational management, various departments, and business units into the carbon management system, assigning specific responsibilities to each relevant department to maximize the effectiveness of carbon management. By integrating both top-down and bottom-up approaches, the Company ensures that low-carbon development is pursued in a comprehensive, systematic, and effective manner.

The Company is committed to adhering to the United Nations Framework Convention on Climate Change and the Paris Agreement. In alignment with our commitment, the Company has developed a series of policies, including the Environmental, Occupational Health & Safety, and Energy Management Policy, Climate Change Policy, and Product Stewardship Policy, which were formulated in accordance with relevant laws, regulations, and the national "carbon peak, carbon neutrality" strategy. The Company is dedicated to implementing global emission reduction initiatives, advancing carbon reduction efforts throughout its operations and value chain, enhancing its capacity to address climate change risks and capitalize on related opportunities, strengthening climate resilience, and supporting the global transition to net-zero emissions.

### **Climate Strategy**

The Company is committed to the corporate vision of "Leading the way in smart solar energy and storage solutions and facilitating the transformation of new power systems for a netzero future" guided by the long-term goal of "achieving netzero emissions by 2050". The Company is committed to strengthening the focus on global climate governance by continuously reassessing our current climate management practices. We regularly review and evaluate our climate goals and progress in light of business strategy, market dynamics, and production management plans. Looking ahead, the Company plans to further optimize our climate strategy and goal-setting processes to ensure ongoing alignment with evolving global standards and internal objectives.

#### **Climate Risk Management**

The Company aligns our climate-related financial disclosures with the frameworks established by the Task Force on Climate-related Financial Disclosures (TCFD) and the International Sustainability Standards Board (ISSB). Through policy research, peer benchmarking, and consultation with experts, the Company identifies and assesses climate change risks and opportunities that may impact our business development and operations. Regular assessments are conducted to evaluate the potential impact of these risks and opportunities on financial performance, with a focus on key areas such as physical risks, transition risks, and transition opportunities. The Company is committed to integrating these considerations into the overall operational risk management framework. During the reporting period, the Company completed the assessment of climate risks and opportunities, with the results as follows:

Risk/Opport unity Type	Category	Risk Factor	Potential Financial Impact	Impact Period	Value Chain Segment	Response
Physical risks	Acute Risk	Climate disasters, including typhoons, hurricanes, and floods, have the potential to result in safety accidents or forced production suspensions	Transportation difficulties and supply chain disruptions affect normal production, leading to reduced revenue Company property loss Fluctuations in production resource prices lead to increased operating costs Insurance expenditures increase	Mid-term Long-term	Logistics Operation	Establish emergency plans and conduct emergency drills annually     Consider local climate and future climate change impacts when selecting the location for new factories
	Chronic risk	Continuous high temperatures increase high-temperature control costs; rising sea levels necessitate relocation or structural changes for production facilities located along the coast	• Increase in operational costs (such as employee high temperature fees, increased cooling equipment, and energy consumption) • Changes in asset structure, increase in capital expenditures (such as relocation or new construction)	Long-term	Operation	Improve energy efficiency     Strengthen the management of factory location selection
Transition risks	Policy and legal risk	With the continuous issuance of climate-related regulations and standards at home and abroad, countries are strengthening requirements for greenhouse gas emissions reductions, and international low-carbon trade rules have gradually been established and implemented, such as carbon trading, carbon border tax, and carbon disclosure	Increase in operational costs (such as increased compliance costs and insurance premiums)     Write-offs, asset impairment, and early decommissioning of existing assets due to policy changes	Short-term	Operation	Monitor global climate-related laws and regulations, monitor and manage greenhouse gas emissions data annually to effectively respond to policy changes



Risk/Opport unity Type	Category	Risk Factor	Potential Financial Impact	Impact Period	Value Chain Segment	Response
	Technology risk	Update technical risks caused by customer demand for low-carbon requirements, including increased operating costs associated with investing in low-carbon equipment and technology	Write-offs and early decommissioning of existing assets, leading to property losses for the Company     Increase in research and development of low-carbon new technologies, leading to increased research and development investment     Increased low-carbon operational costs	Mid-term Long-term	Procurement Operation	Adopt     departmental     responsibility     system, enhance     equipment     utilization     efficiency, and     improve product     production     efficiency         • Establish an     internationally     recognized energy     management     system, phase     out high-energy-     consuming     equipment, and     optimize and     transform existing     equipment
Transition Risk	Reputational risk	Capital markets, customers, and other stakeholders are increasingly concerned about corporate climate actions; poor environmental and climate performance will affect the Company's reputation and performance	Decline in customer demand for goods and services, leading to reduced revenue     Damage to corporate reputation, resulting in increased financing costs and reduced market value	Medium- term Long-term	Procurement Operations Sales	• Treat climate change as a key issue, communicate climate management progress with stakeholders through sustainability reports, stakeholder surveys, and official website disclosures
	Market risk	With the enhancement of low-carbon awareness, the Company faces market risks from changes in consumer behavior. Customers prefer sustainable, climate-friendly products, and the environmental performance of the Company's products will affect its competitiveness among similar products	Further increase in consumer demand for low-carbon products, leading to the selection of better-performing environmental alternatives and reduced revenue     Company's efforts to improve product environmental performance lead to increased production costs	Medium- term Long-term	Procurement Operations Sales	Develop more low-carbon and environmentally friendly photovoltaic products, and continuously promote green production and operations     Strengthen product carbon footprint management, and promote more products to obtain green product certifications

Risk/Opport unity Type	Category	Risk Factor	Potential Financial Impact	Impact Period	Value Chain Segment	Response
	Technology opportunity	As climate risks intensify, the advantages of clean energy over traditional energy continue to grow, and cleaner, more efficient energy acquisition methods and related products will be more favored by the market	Technologically-driven photovoltaic products improve energy conversion efficiency, promoting market share and revenue growth An increase in clean technology and product variety drives the Company's R&D innovation, enhancing market share and revenue	Short-term Medium- term Long-term	Operations	Increase investment in scientific research and innovation, improve product production and efficiency, and enhance the Company's market share by providing cleaner photovoltaic products  Utilize the Company's resources and R&D advantages to develop more types of clean technology, offering clients a richer selection of clean energy choices
Transition opportunities	Market preference opportunities	Meet the demands of capital markets, clients, and stakeholders for clean energy-related products and services through R&D innovation; carry out green life cycle management of products, respond to clients' low-carbon requirements for products, and enhance the Company's market competitiveness, market coverage, and market share	Meet clients' demand for highefficiency products, provide products and services that align with client preferences, consolidate the Company's product competitiveness, and boost revenue and profits     Reduce product carbon footprint, form a low-carbon advantage, and enhance market share and revenue	Short-term Medium- term Long-term	Procurement Operations Sales	• Actively promote innovation incentives, increase R&D investment, improve photovoltaic cell conversion efficiency, and provide clients with more efficient photovoltaic products • Proactively manage product carbon footprint, obtain green product certification, and provide clients with cleaner, low-carbon products • Continuously improve product quality, enhance product life cycle, strengthen market and client recognition, and strengthen the market competitiveness of products and services

 $Note: The \ Company's \ division \ of \ short-term, medium-term, and \ long-term \ time \ ranges \ within \ the "impact period": \ short-term: 0 \ to 5 \ years; medium-term: 5 \ to 10 \ years; long-term: over 10 \ years.$ 



#### **Climate Metrics Management**

The Company consistently promotes carbon inventory, verification and carbon footprint tracking management by setting targets for GHG emissions intensity and closely monitoring related performance indicators. The Company has revised the GHG Data and Quality Management Procedures, rigorously adhering to the ISO14064-1:2018 standard for conducting annual GHG inventories at production sites and securing GHG emissions data verification statements issued by BSI. Additionally, the Company's global manufacturing factories purchased 1,420 tonnes of carbon credits and offset 112,771 MWh of emissions through green certificate acquisitions during the reporting period.

#### **Trinasolar GHG Emission Intensity Reduction Targets**



#### Cell

Reduction in GHG emissions intensity (tCO<sub>2</sub>e/MW) of cell in Scope 1 and Scope 2 by 2025 against the 2020 baseline



**50%** 



#### Module

Reduction in GHG emissions intensity (tCO<sub>2</sub>e/MW) of module in Scope 1 and Scope 2 by 2025 against the 2020 baseline



**50%** 

#### **2024 GHG Emmisions Intensity Performance**

Cell

Scope 1 and Scope 2 GHG emissions intensity

**↓36.44%** 

Decrease compared to the base year of 2020

#### Module

Scope 1 and Scope 2 GHG

emissions intensity

**↓ 65.55%** 

Decrease compared to the base year of 2020

#### 2021-2024 Trinasolar GHG Emissions Key Performance

Metrics	2024	2023	2022	2021
Operational Scope Emissions - Location-based (10,000 tonnes of CO <sub>2</sub> e)	289.65	213.50	118.79	87.96
Operational Scope Emissions - Market-based (10,000 tonnes of CO <sub>2</sub> e)	289.60	209.74	-	-
Of which: Scope 1 Emissions (10,000 tonnes of CO₂e)	7.94	10.77	1.93	2.94
Of which: Scope 2 Emissions - Location-based (10,000 tonnes of CO₂e)	281.71	202.73	116.86	85.02
Of which: Scope 2 Emissions - Market-based (10,000 tonnes of CO <sub>2</sub> e)	281.66	198.97	-	-
Scope 3 Emissions (10,000 tonnes of CO <sub>2</sub> e)	2,276.94	2,143.84	1,594.79	-
Value Chain Emissions - Location-based (10,000 tonnes of CO <sub>2</sub> e)	2,566.59	2,357.34	1,713.58	-
Value Chain Emissions - Market-based (10,000 tonnes of CO <sub>2</sub> e)	2,566.54	2,353.58	-	-

## **Energy Management**

### **Energy Management Mechanism**

Trinasolar prioritizes energy management, striving to achieve efficient energy use and low-carbon transformation through technological innovation and system optimization. The Company has established systems such as the Energy & Resource Management Procedure, Energy Measurement and Management Procedure, and Energy Review Management Procedure to standardize the Company's energy management mechanism. The Company regularly conducts online energy-saving and emission-reduction training. As of the end of the reporting period, Trinasolar has conducted energy audits at 17 production bases, with 18 production bases passing third-party audits of energy management system and obtaining ISO 50001 Energy Management System certification.

#### **Trinasolar Energy Management Targets**



#### Cell **Production**

Reduction in comprehensive energy consumption intensity of cell (tce/MW) by 2025 against the 2020 baseline



#### Module **Production**

Reduction in comprehensive energy consumption intensity of module (tce/MW) by 2025 against the 2020 baseline



#### Global **Production** Operations

Cumulative savings in electricity consumption in global production operations from 2021 to 2030





1 billion kWh

#### 2024 Comprehensive Energy Consumption Performance of Products

Cell

Comprehensive Energy Consumption Intensity **↓ 39.51%** 

Decrease compared to the base year of 2020

Module

**2.01** tce/MW Comprehensive Energy

Consumption Intensity

**40.19%** Decrease compared to the

base year of 2020



#### 2021-2024 Trinasolar Energy Consumption Key Performance

Metrics	2024	2023	2022	2021
Comprehensive Energy Consumption (tce) <sup>[1]</sup>	796,949	515,868	264,804	176,233
Direct Energy Consumption (tce) <sup>[2]</sup>	9,536	-	-	-
Indirect Energy Consumption (tce)	787,413	-	-	-
Gasoline (liters)	64,637	-	-	-
Diesel (liters)	88,870	-	-	-
Natural Gas (10,000 cubic meters)	409	289	89	69
Electricity (MWh)	6,406,939	4,141,524	2,026,872	1,433,209
Of which: Municipal Electricity Purchased (MWh)	5,416,337	3,348,871	2,026,872	1,433,209
Of which: On-site PV Self-generated (MWh)	223,794	136,398	-	-
Of which: Off-site Renewable Electricity Purchased (MWh)	766,808	656,255	-	-

<sup>[1]</sup> Since 2024, the comprehensive energy consumption data of Trinasolar includes water, electricity, gasoline, diesel, and natural gas. [2] The direct energy consumption includes water, gasoline, diesel, and natural gas.

#### **Optimizing Energy Use**

Trinasolar adopts a multifaceted approach to energy conservation, encompassing technological innovation, process optimization, and energy-saving management. The Company undertakes equipment optimization and upgrades, employs energy-efficient technologies, and installs solar photovoltaic power generation facilities to improve energy utilization efficiency and optimize the energy consumption structure. During the reporting period, Trinasolar implemented 47 energy-saving projects across 32 production bases, achieving a total electricity reduction of 55,496.48 MWh. Since 2021, cumulative electricity savings have reached 168,176.48 MWh.



#### Photovoltaid **Power Generation**

The Company has constructed photovoltaic power generation facilities on the roofs of multiple manufacturing bases, achieving an annual increase in photovoltaic power generation of **87,396 MWh**. The electricity generated is primarily used to power the bases, with any excess electricity helping to transform the site's energy through grid connection.



#### **Energy-saving Retrofit**

The Company implemented energy-saving retrofits on facilities within production bases, including fans, water pumps, air compressors, and chilled water units, and equipped them with corresponding control systems. These upgrades have resulted in annual electricity savings of **11,060.6 MWh**, equivalent to **1,359.35 tonnes** of tce and a reduction of **924.36 tonnes** of CO<sub>2</sub> emissions per year. Additionally, the Company has implemented several projects to enhance equipment and system efficiency, such as a one-click cooling and frequency reduction initiative for coating equipment and an automatic frequency adjustment project for the chilled water system. These projects aim to optimize automatic control processes to prevent high-frequency operation during periods of low production and standby. All the measures have contributed to an additional annual electricity saving of 3,626.8 MWh in total.

During the reporting period, the Company's total investment in energy conservation and environmental protection amounted to RMB 997,275,500, with a year-on-year increase of 41.14%.

#### 2024 Energy-saving and Environmental Protection Investment Performance

997,275,500

Total Investment in Energy-saving and Environmental Protection (RMB) **759,989,200** Capital Expenditure (RMB)

**237,286,300** Operating Expenditure (RMB)





# **Water Resource Management**

# **Water Risk Management**

The Company places a high value on water resources and is committed to continuous improvement in water resource management. The Board of Directors serves as the highest responsible body for water resource management, incorporating related decision-making and supervisory functions into the responsibilities of the ESG Management Committee. The Board of Directors oversees the implementation of water resource management performance, while execution is carried out by various departments across the Company. The Company strictly complies with all relevant water resource management laws and regulations in our operational regions, including the Water Law of the People's Republic of China and the Water Pollution Prevention and Control Law of the People's Republic of China. To support effective management, the Company has established systems such as the Prevention and Control Management Procedure of Water Pollution and the Standard for Uniform EHS Performance Data Reporting. The Company has implemented a comprehensive strategy to reduce its product water consumption intensity, including conducting water balance tests, water use assessments, and product water consumption intensity control measures. During the reporting period, the Company maintained full compliance with all water resource-related laws and regulations, with no violations reported.

The Company prioritizes water risk management by employing a comprehensive approach that combines internal expertise with external analytical tools. During the reporting period, the Company utilized the World Resources Institute (WRI) Aqueduct Water Risk Atlas to assess water stress levels across 32 production facilities around the world. The assessment results are as follows:

WRI Water Risk Level	Number of Production Bases
Extremely High (4-5)	3
High (3-4)	27
Medium-High (2-3)	2
Low-Medium (1-2)	0

For factories located in areas with extremely high water risk, the Company has implemented measures to enhance water intake and usage efficiency, aiming to control and minimize our own water risk. As of the end of the reporting period, there were no incidents of production disruption due to water shortages that occurred at any of the factories.

# Measures for Water Resource Management in Factories with Extremely High Water

Vietnam Thai Nguyen Factory	Implementing concentrated water recovery and utilization project; Adjusting the opening of manual valves, optimizing overflow methods and volume, and reducing the pure water usage for monocrystalline cells
Vietnam Wafer	Enhancing the reuse rate of concentrated water in the pure water system;  Adding a concentrated water reuse process, including cooling tower makeup water, fire pool makeup water, and irrigation for greening

The Company adopts a systematic approach to evaluating and managing water risks through comprehensive water balance testing. The Company has entrusted a third-party institution to carry out water resource assessments and water balance tests at two production bases in Qinghai. The assessments and tests confirmed that water usage at both sites is reasonable. Key indicators including the rates of industrial water recycling, indirect cooling water circulation, water metering, new water usage per ten thousand RMB of output, water facility loss, popularization rates of water-saving devices, and compliance discharge rates were all found to meet established benchmarks.

To further efficiently utilize water resources, the Company has set water resource management goals and initiated various water-saving projects based on the characteristics and needs of each base. All efforts have significantly improved water use efficiency and conservation outcomes, delivering a balanced achievement of both economic gains and environmental benefits.

# **Trinasolar Water Management Targets**

Reduction in the water consumption intensity (tonnes/ MW) by 2025 against the 2020 baseline



Reduction in the water consumption intensity of cell (tonnes/MW) by 2025 against the 2020 baseline



The water consumption intensity of modules (tonnes/MW) by 2025 against the 2020 baseline



### **Water Conservation Measures**

### **Qinghai Optoelectronics**

Implementation of a dilute acid and alkali wastewater recovery project aimed at treating wastewater generated during solar cell production. The process purifies the acid and alkali wastewater to produce clean water, which is then reused in production processes and for effluent dilution, enabling a daily reuse volume of 5,400 tonnes

# **Suqian Optoelectronics**

By implementing a three-phase recycling process for dilute acid and alkali, the Company has reduced raw water consumption in the pure water preparation system and lowered overall workshop water usage, resulting in annual cost savings of 2.54 million RMB. Additionally, increased utilization of concentrated water has saved 126,000 tonnes of tap water annually, equivalent to cost savings of 403,000 RMB

### Qinghai Technology

Actively pursuing certification as a provincial-level water-saving enterprise, they have completed the submission of required materials, including water-saving plans, promotional activities, training programs, and facility documentation. Relevant initiatives lay a solid foundation for accessing preferential policies and financial support, while further optimizing the Company's water resource management



# **2024 Water Consumption Performance of Products**

Cell

intensity

onnes/MW **486.85%** 

Decrease compared to the base year of 2020

Module

Water consumption intensity

**↓67.68%** 

Decrease compared to the base year of 2020

### 2021-2024 Trinasolar Water Management Key Performance

Metrics	2024	2023	2022	2021
Total water withdrawal (10,000 tonnes)	4,062.49	2,768.70	-	-
Of water withdrawal: municipal and lake water supply (10,000 tonnes)	4,029.45	2,709.38	-	-
Of water withdrawal: withdrawals from alternative water sources (10,000 tonnes)	33.04	59.32	-	-
Alternative water sources proportion (%) <sup>[1]</sup>	95.95	60.05	-	-
Ultra-pure water usage (10,000 tonnes)	1,927.32	-	-	-
Total water consumption (10,000 tonnes) <sup>[2]</sup>	1,236.10	1,177.42	1,444.95	1,402.00
Water recycling rate (%)	95.92	59.18	-	-

<sup>[1]</sup> Ratio of alternative water sources = (Alternative water source withdrawal+Reused water volume)/(Total water withdrawal+ Reused water volume); where the reused water volume includes the volume of reclaimed water and the process cooling water (PCW).
[2] Total water consumption = Total water withdrawal - Total water discharge



# **Pollution Prevention** and Control

# **Wastewater Treatment**

The Company consistently and methodically implements water pollution prevention measures in accordance with the established Prevention and Control Management Procedure of Water Pollution. We strictly enforce wastewater discharge standards to ensure full compliance with environmental regulations. Annual inspections are conducted to update the inventory of water pollution sources. The Company regularly monitors wastewater discharge, systematically collects and analyzes data on total wastewater volume and pollutant levels and prevents firefighting wastewater and chemical waste liquids from being directly discharged into rainwater drainage systems or natural water bodies. All types of wastewater are managed and disposed of in strict accordance with relevant regulatory requirements.

The Company implements classified management of industrial production wastewater and domestic sewage. Recyclable industrial wastewater is treated and reused within the production process, while non-recyclable wastewater undergoes comprehensive treatment to meet discharge standards. Domestic sewage is processed through conventional treatment methods to ensure full compliance prior to discharge.

# 2021-2024 Trinasolar Wastewater Management Key Performance

Metrics	2024	2023	2022	2021
Total Wastewater Discharge (10,000 tonnes)	2,826	-	-	-
Total Industrial Wastewater Discharge (10,000 tonnes)	2,619	1,591	1,075	833
Total Domestic Wastewater Discharge (10,000 tonnes)	207	-	-	-
Total Chemical Oxygen Demand Emissions (tonnes)	1,845	1,119	780	-
Total Ammonia Nitrogen Emissions (tonnes)	198	125	133	-
Total Phosphorus Emissions (tonnes)	6	5	-	-
Total Suspended Solid Emissions (tonnes)	422	269	202	-



# Case | Huaian Optoelectronics Three-Level Deep Defluorination System

Huaian Optoelectronics has upgraded its wastewater treatment system with a three-level deep defluorination process. The upgrade has effectively reduced the fluoride concentration in discharged wastewater from below 8 ppm to less than 1.5 ppm, which significantly alleviated the treatment load on downstream wastewater facilities and substantially lowered the fluoride content in the wastewater, thereby minimizing its environmental impact.





# **Exhaust Gas Management**

Trinasolar has adopted a range of management and control measures to regulate particulate matter, nitrogen oxides and other exhaust gas emissions, ensuring compliance with emission standards and minimizing environmental impact. The Company enhances exhaust gas treatment efficiency by implementing monitoring systems, upgrading treatment facilities, and optimizing treatment technologies. These efforts reduce dust exposure and dispersion while effectively controlling pollutant emissions. The Company also regularly engages third-party institutions to conduct environmental inspections, verifying the effectiveness of waste gas treatment and ensuring continued compliance.

# 2021-2024 Trinasolar Exhaust Gas Emissions Key Performance

Metrics	2024	2023	2022	2021
Total exhaust gas emissions (billion m³)	78.04	46.00	-	-
Total NOx emissions (tonnes)	18.59	19.35	2.70	6.53
Total SOx emissions (tonnes)	0.06	0.17	1.99	0.02
Total Volatile Organic Compounds (VOC) emissions (tonnes)	83.12	-	-	-



# Case | Trinasolar Changzhou Module Workshop Exhaust Gas Treatment Facility Upgrade Project

Trinasolar Changzhou Module Workshop implemented an upgrade project for VOCs treatment using Regenerative Catalytic Oxidation (RCO) technology. The upgrade project enhances the performance of the treatment facilities while reducing operational costs. We replaced four sets of activated carbon adsorption units with two advanced combined systems featuring spray towers, dry filtration, activated carbon adsorption-desorption, and catalytic oxidation (CO) for exhaust gas treatment. As a result, annual waste activated carbon generation is expected to decrease to 12 tonnes, yielding cost savings of approximately RMB 420,000. This upgrade not only lowers treat-



Exhaust Gas RCO Treatment Upgrade Project

ment expenses but also significantly boosts environmental performance.

# **Waste Management**

The Company is dedicated to the principles of "3Rs" (Reduce, Reuse, and Recycle), and has developed systems including the Waste Management Procedure and Circular Economy Policy. We continuously improve our waste management and disposal processes by implementing strict classification and handling of both general industrial solid waste and hazardous waste. Our practices ensure compliance with all relevant laws and regulations, minimizing the environmental impact of waste generated through the Company's operations.

# **Waste Disposal Methods**

## **General Industrial Solid Waste**

Managed through classified collection, temporary storage, and subsequent recycling or safe disposal by qualified contractors, ensuring full compliance with environmental protection regulations

# Hazardous Waste

Subject to strict management measures, including mandatory declaration on government platforms, storage in dedicated sealed containers, and compliant transfer and treatment by qualified disposal contractors

The Company strictly complies with the EU's Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS) and the REACH regulations, rigorously controlling the use of hazardous substances and chemicals in our products. We enforce stringent storage and monitoring protocols for chemicals that pose explosion or toxicity risks, as well as for hazardous waste. Additionally, the Company maintains a dedicated inspection list targeting major hazard sources, conducting regular checks to effectively prevent the release of harmful substances and ensure environmental safety.

# 2021-2024 Trinasolar Waste Management Key Performance

Metrics	2024	2023	2022	2021
Non-hazardous waste generation (tonnes)	199,192	201,786	118,783	35,000
Of which: recycled (tonnes)	190,295	190,634	113,114	-
Of which: landfill (tonnes)	1,186	5,550	279	2,233
Of which: incinerated (tonnes)	7,711	5,680	-	-
Non-hazardous waste recycling rate (%)	96	94	95	-
Hazardous waste generation (tonnes)	6,149	9,743	3,679	5,300
Hazardous waste transported for disposal (tonnes)	6,094	9,640	3,677	-

# **Packaging Material Management**

The Company adheres to the principles of circular economy, incorporating the 4R approach (Reduce, Reuse, Recycle, and Resource) into our packaging material management strategy. We specify requirements for green packaging design and recycling in regulations such as the Specification for Circular Use of Photovoltaic Module Materials and the Circular Economy Policy. These guidelines expand the recycling scope of packaging materials like wooden boxes and pallets, set targets for packaging material recycling quantities, and enhance recycling efficiency to minimize resource consumption.

2024
Packaging
Material
Management
Key
Performance

2,200

Packaging

Material

Recycled

Amount (tonnes)

# **Packaging Material Management Initiatives**

Adhering to the principle of reduction in product design, systematically considering the impact of each link on resources and the environment, optimizing packaging design to minimize packaging material usage

Clearly defining the use and reuse requirements for various materials in photovoltaic module production, setting recycling targets and methods for glass, profiles, edge sealing tape, pallets, etc., to enhance material utilization

stablishing recycling categories and processes for materials such as paper packaging, wooden boards, plastic pipes, welding strips, and cell turnover packaging, pallets, etc., and setting recycling volume targets

Resource Utilization

Reduce

Reuse

Establishing Yancheng Heshengliu Environmental Technology Co., Ltd., specializing in pallet production and resource recycling, and conducting specialized management of the recycling, utilization, and resourceful disposal of packaging materials



# **Biodiversity Conservation**

Trinasolar's business development is fundamentally rooted in and dependent upon nature. The Company is dedicated to safeguarding ecosystems and biodiversity by strictly adhering to international regulations and conventions, including the United Nations Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, and the Opinions on Further Strengthening the Protection of Biodiversity, to maintain ecosystems and protect biodiversity. The Company's ESG Management Committee has reviewed and issued the Biodiversity Conservation Policy, which outlines our commitment to continuously manage and mitigate the negative impact on ecosystems, ensuring no net loss of biodiversity in the surrounding environment, and striving to achieve a net positive impact.

# **Compliance in Project Construction**

The Company conducts thorough assessments for the site selection of power plants and other projects, ensuring that construction areas and methods comply fully with legal requirements. We strictly implement relevant provisions of the ecological protection redline management, avoid ecological protection redlines and areas for water ecological and water environment protection. We also protect areas with important ecological functions, ecologically fragile and sensitive areas, as well as special protection areas. The Company is committed to understanding and mitigating the dependencies and impacts of its operations and the various segments of the industrial chain on biodiversity. We incorporate biodiversity factors into the environmental impact assessment of projects, including predicting, analyzing, evaluating, and monitoring the impact of projects on the atmospheric environment, water environment, soil environment, as well as noise levels and ecosystems, thereby effectively minimizing ecological impacts.

# **Ecological Protection**

The Company strategically utilizes the benefits of photovoltaic products, including their effectiveness in windbreak, sand fixation, and water collection. We provide efficient clean energy products and services, and participate in the process of ecosystem governance and restoration. We use innovative green technology to promote the synergy of ecological harmony and economic development.



### Case | New Green Energy Landmark in Kubugi Desert

The Kubuqi Desert Base Ordos New Energy 1.1 million kW Photovoltaic Power Generation Project, developed and constructed by Trinasolar, is a pioneering photovoltaic sand control initiative. Covering an area of over 33,000 mu with a total investment of approximately RMB 5.8 billion, the project boasts a total installed AC capacity of 1,100 MW and includes two 220kV booster stations. The project uniquely integrates desert control with photovoltaic power generation, serving as a model for sustainable energy development. The initial phase has been completed, treating 18,000 mu of desert through measures such as planting sand willows and cypresses, alongside installing dense mesh. These efforts have significantly improved the desert's ecological envi-

ronment, creating a positive synergy between economic growth and ecological preservation. Upon full operation, the project is expected to supply 2 billion kWh of green electricity to the Beijing-Tianjin-Hebei region per year, equivalent to reducing standard coal consumption by 800,000 tonnes per year and cutting emissions of sulfur dioxide, carbon dioxide, and other pollutants by over 4.1 million tonnes annually. The project will contribute substantially to the ecological management of the Kubuqi Desert and support the "Three North" shelterbelt project. Moreover, the project will spearhead innovation and the application of new technologies and methods in the governance of the "Three North" desert region.

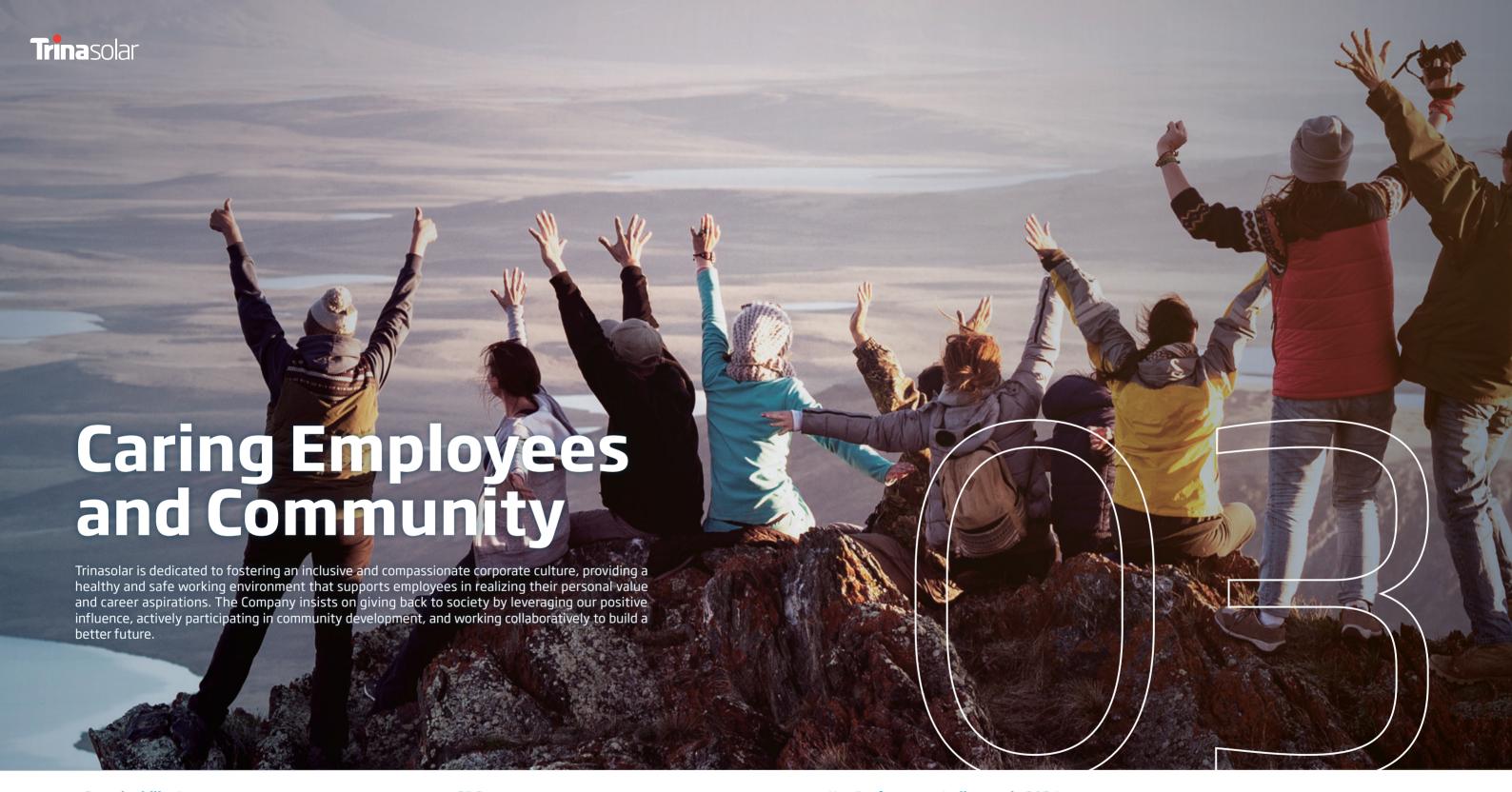


# Case | Trina Forest

In December 2024, Trinasolar partnered with the Spanish environmental organization ReTree to launch the "Trina Forest" public welfare program. Supported by ReTree, the Company planted 1,500 trees in the northern mountains of Madrid and Teruel to advance local ecological protection efforts. The project emphasizes biodiversity by prioritizing native species to safeguard the region's natural heritage. It is anticipated to restore 14,016 square meters of degraded soil and absorb approximately 44,358 kilograms of urban CO<sub>2</sub> emissions. By the end of the reporting period, the initial 500 trees had been planted, laying the foundation for the revitalization of the local degraded soil and forests.



"Trina Forest" Public Welfare Program



### **Sustainability Issues**

Diversity, Equity, and Inclusion
Labor Practices
Occupational Health and Safety
Human Capital Development
Social Engagement and Community Contribution

# **SDGs**













# **Key Performance Indicators in 2024**

29,975

Total number of employees

90.64 million RMB

Occupational health and

safety investment

**27.14%** 

Percentage of female employees

**15.64** million RMB

Total community contribution and charity investment

**46.69** hours

Annual training hours per employee an increase of **24.6 hours** compared to 2023



# **Diversity, Equity, and Inclusion**

Trinasolar is committed to building a workplace culture of diversity, equity and inclusion. The Company promises to provide equal employment and career development opportunities for all job seekers and employees globally, to attract and retain diverse talents from different regions and backgrounds, bring broad perspectives and professional strength to the Company. To this end, the Company optimizes our employment management system continuously, conducts recruitment management activities based on the four principles of legality, standardization, equity, and professionalism, and resolutely eliminates employment discrimination due to gender, age, region, ethnicity, and other social or personal factors, and gives all candidates fair opportunities to be hired. At the same time, the Company develops a comprehensive talent development mechanism, adopts fair and objective evaluation criteria in performance appraisal, promotion, selection, and training, and gives all employees equal development opportunities, creating a fair and non-discriminatory workplace environment.

During the reporting period, the Company officially became a global signatory to the United Nations Women's Empowerment Principles (WEPs), continuing to promote gender equity and build a diverse and inclusive workplace culture. As of the end of the reporting period, the Company had a total of 29,975 employees, including 7,604 new employees; the proportion of female employees reached 27.14%, the total number of foreign employees was 2,164, and the total number of ethnic minority employees was 789.

24.70%

Women in management\*

**16.88%** 

Women in senior

21.82%

26.72%

Women in ordinary

Women in mid-level

Women in STEM-related positions

**18.91%** 

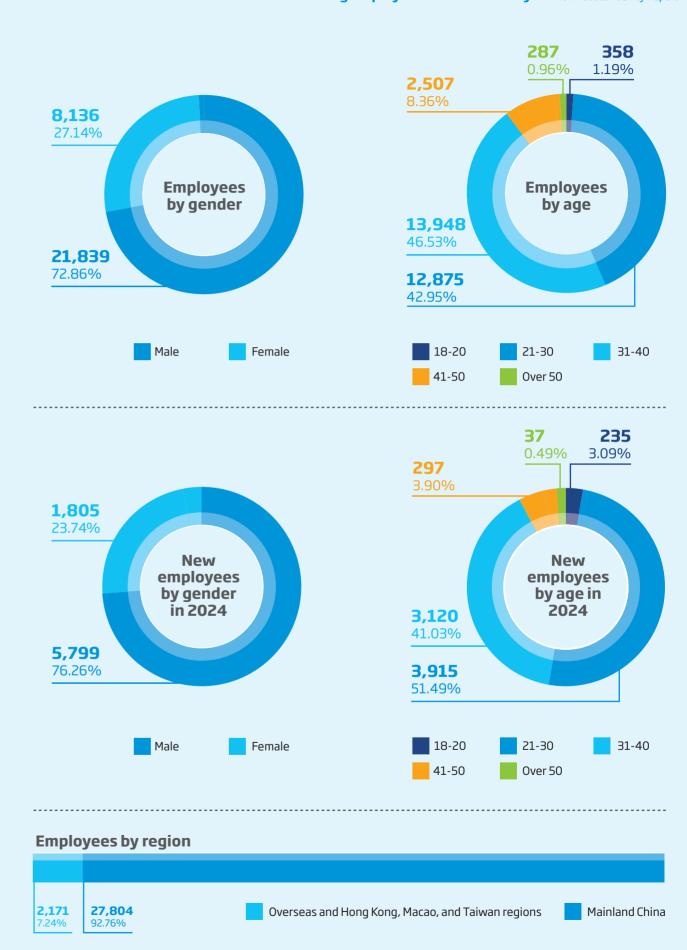
21.54%

77

Women in revenue-generating leadership

\*Including ordinary, mid-level, and senior management







The Company incorporates the principles and requirements related to diversity and equity into the Trinasolar Global Human Rights Principles, Code of Business Conduct and Ethics for Employees, and Employee Handbook. We explicitly regulate any discriminatory behavior, speech, and harassment based on race, nationality, ethnicity, color, religious belief, gender, age, physical or mental disability, marital status, fertility status, political affiliation, sexual orientation, or any other personal characteristics protected by local laws, regulations, or ordinances. The Company strictly adheres to a "zero tolerance" attitude towards discrimination and harassment, and violators will face severe penalties, including termination of employment contracts. In addition, the Company provides training to employees and strengthens the dissemination of diverse and inclusive systems and culture, ensuring that employees fully understand and comply with the Company's requirements. During the reporting period, there were no incidents of discrimination and harassment violations.

The Company strives to provide equal employment opportunities to socially vulnerable groups, such as the disabled, and arranges specific positions that are suitable for their physical conditions, to ensure that they are able to unleash their potential in appropriate roles, receive fair compensation, benefits, training, and promotion opportunities, and realize their personal value. As of the end of the reporting period, we employed a total of 14 people with disabilities.

### Case | "Silent Dialogue Session" for Deaf and Non-Speaking Employees

In March 2024, the Company held a "Silent Dialogue Session" tailored for deaf and non-speaking employees. The event focused on addressing the communication needs of this specific group through customized interaction methods (e.g., sign language interpreters, visual aids, real-time captioning), actively capturing their perspectives and requests. This initiative helped bridge communication barriers, enabling better team integration and empowering participants to contribute meaningfully in specialized roles.



The Silent Dialogue Session





The Company adheres to relevant laws and regulations, provides employees with competitive compensation and benefits, and carries out various activities to ensure employees work in a dignified manner and enjoy work-life balance.

# **Labor Rights Protection**

The Company respects and safeguards the legal rights and interests of all employees. The Company signs labor contracts with employees in accordance with the law, and strictly complies with national laws and regulations such as the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, and the Provisions on Prohibiting the Use of Child Labor, as well as respecting and referring to internationally recognized human rights principles including the Universal Declaration of Human Rights, the International Bill of Human Rights, the ILO's Declaration on Fundamental Principles and Rights at Work, and the United Nations Guiding Principles on Business and Human Rights. The Company has formulated and continuously improved Trinasolar Global Human Rights Principles and the Employee Handbook, integrating internationally recognized human rights principles into the Company's strategy and policies to ensure that the rights and interests of all employees are not infringed upon.

The Company firmly prohibits the employment of child labor or forced labor, implementing a robust mechanism outlined in the Employee Handbook that includes multiple rounds of identity verification to ensure no child labor is employed. The Company strictly regulates working hours and overtime approval processes, respects employees' rights and choices, and forbids any use of deception, intimidation, or coercion in compelling workplace. The Company ensures the effective implementation of relevant management regulations through combination of internal reviews and third-party audits. Any detected cases of



100%

Percentage of Labor Contract Signing



100%

Percentage of Collective Agreement Signing child labor or forced labor will be handled and remediated thoroughly. Furthermore, the Company integrates the prohibition of child labor and forced labor into its Supply Chain Due Diligence Manual, conducting regular assessments and audits of suppliers to strengthen labor rights risk management across the supply chain. During the reporting period, Trinasolar was not engaged in any incidents of child labor or forced labor. Additionally, two factories of the Company have obtained the SA8000 Social Accountability Management System Certification, SSI certification against the ESG standard, and one factory has obtained the Business Social Compliance Initiative (BSCI) certification.

To further strengthen management, the Company has incorporated the protection of human rights and the safeguarding of labor rights into the Code of Business Conduct and Ethics for Employees and the Supplier Performance Management Code. The Company strives to prevent any potential human rights violations arising from our business activities, products, or supply chain, and enable stakeholders to report or inquire about possible human rights violations via our various complaints mechanisms that can be accessed publicly and in an anonymous manner. The Company will conduct appropriate investigations based on the Whistleblowing Management Policy and protect whistleblowers's information. Moreover, the Company has incorporated human rights-related risks such as forced labor, child labor, harassment, and abuse into the Company's risk assessment and management system, continuously enhancing preventive measures to strengthen the identification, prevention, and control of various human rights risks..





According to the UN Guiding Principles (UNGP) and ILO's Declaration on Fundamental Principles and Rights at Work, the Company fully respects employees' rights to freedom of association and collective bargaining, implementing democratic management through the employee representative assemblies and trade union committee. The Company regularly convenes the employee representative assemblies, negotiates with the trade union committee to sign the Collective Contract. The contracts cover key matters such as labor management, labor remuneration, working hours, rest and vacation, labor safety and health, special protection for female employees, social insurance and benefits, modification, rescission and termination of the contract, etc. effectively safeguarding various rights and interests of employees.

# **Compensation and Benefits**

## **Compensation System**

The Company has established a Human Resource Management Committee to coordinate employment management, compensation benefits, and other human resource management matters. The Company continuously optimizes the salary structures and incentive mechanisms, and insists on equal pay for equal work regardless of gender, ensuring the fairness and rationality of the remuneration system. The Company regularly conducts surveys on the basic living needs of its employees, guaranteeing that labor income not only meets but exceeds these requirements. Furthermore, the Company offers market-competitive compensation packages to attract and retain exceptional talent.

Employee compensation consists of basic salary, performance-based pay, allowances, overtime pay, and bonuses, which are adjusted according to the employees' position level, work experience, competency level, job performance, and the Company's overall performance. To further motivate employees, the Company has formulated the Management Policy of Equity Incentive Scheme, which promotes mutual growth and shared interests between the Company and its employees.

### **Employee Benefits**

In compliance with legal requirements, the Company provides all employees with statutory holidays, paid annual leave, parental leave, maternity leave, endowment insurance, medical insurance, unemployment insurance, employment injury insurance, maternity insurance, public housing funds, and supplementary commercial insurance. To accommodate diverse job functions and business needs, the Company implements standard working hours, flexible working hours, and other other adaptable schedules to enhance work flexibility reasonably. The Company has enhanced educational support programs

for employees' children and established comprehensive guidelines for assistance programs for employees facing family hardships. Both statutory social insurance and supplementary commercial insurance have achieved full coverage (100%) across the workforce. The Company provides multidimensional non-monetary benefits designed around employee needs, including annual health checkups, seasonal care packages (e.g., holiday and highwave subsidies), and summer youth camps for employees' children. During the reporting period, these care initiatives reached over 200,000 beneficiaries.



2024 Mid-Autumn Festival Employee Care Initiative

The Company cares about the physical and mental health of employees. The Company organized breast health seminars for female employees, which enhanced their health awareness and self-care capabilities. In addition, we set up the Carnation Care Stations, providing privacy-protected lactation rooms, hygienic nursing facilities, and rest areas tailored for pregnant and breastfeeding employees.

# **Health E-Station**

- Online Video Consultation
- Physical Fitness Assessment Service
- Quick Prescription Refill Service

## **Diverse Activities**

- Mental Health Workshops
- Medical report Interpretation Sessions
- Health Education Sessions
- Walking & Running Events
- Weight Loss Bootcamp

# Physical Examination Services

- Extended Medical Checkup Window (6 Months) for Expatriate Employees
- Expanded Coverage: More Cities and Healthcare Providers

Note: All our physical and mental health services are offered on a free and voluntary basis.

The Company has developed an Intelligence Union Service Platform to deliver more convenient and seamless services to employees. The platform features seven core functions, including membership enrollment, health check-up appointments, and welfare benefit applications, continuously expanding the scope of inclusive employee services. Since its launch, the platform has served over 30,000 employees, accumulating more than 110,000 service instances.



Trinasolar Intelligence Union Service Platform

# Case | Targeted Support for Vulnerable Employees

Ahead of the 2024 Spring Festival, the Company's trade union collaborated with Jiangsu Trina Public Welfare Foundation to launch a targeted relief program for employees experiencing financial hardships due to sudden accidents, critical illnesses,

or other crises.. The initiative spanned 16 branch unions, providing direct assistance to 20+ affected households through personalized visits and disbursement of RMB 30.000 in relief funds..



Employees who utilized parental leave benefits

**1,499** employees

397







Employees who utilized parental leave benefits and have returned in their positions for over one year post-leave

1,152 employees

344 Female



**808**Male



## **Employee Activities**

The Company continuously enriches employees' leisure activities by organizing diversified activities, which enhance their workplace experience and strengthen the Company's cohesion and attractiveness. The Company operated a total of 14 clubs and successfully held over 310 events in 2024, attracting more than 110,000 participants.



Case

"Lead the Light, Energize for Health" Wellness Month

In May 2024, the Company launched the "Lead the Light, Energize for Health" Wellness Month, encouraging employees to adopt active lifestyles through initiatives including 28-day Fat Loss Wellness Bootcamp, online Fitness Competitions, Eco-Forest Health Runs, etc.. In addition, the Company provided diverse wellness services such as health check-ups, seminars, and traditional Chinese medicine consultations for holistic care, to support the physical and mental health of employees.



Rural Nature Education & Family Bonding Activities



**Eco-forest Wellness Run** 



Autumn Sports Meet & 13<sup>th</sup> Annual Badminton Championship



Union-Led Film Screening Series

In 2024, Trinasolar's voluntary turnover rate among employees with 1+ years of tenure was 16.59%. The gender- and agespecific turnover rates for this employee group with extended tenure are detailed in the table.

Trinasolar Vol	untary Turnover Rate	2024
Pu Condor	Male	15.53%
By Gender	Female	19.52%
	18-20	1.35%
	21-30	16.88%
By Age	31-40	17.65%
	41-50	14.81%
	Over 50	3.66%

# **Employee Communication**

The Company actively listens to the voices of employees and encourages them to express their needs and provide suggestions for the improvement of internal management through diversified channels, including employee communication sessions, the T-Link platform, and union mailboxes. During the reporting period, the Company held 44 multi-format communication sessions, covering 5,755 participants. The Company also implemented 2,708 innovative improvement proposals and received 3,500 inquiries from employees via the T-Link, email and other channels. The inquiries addressed topics such as accommodation, catering, and management practices, with 100% resolved and feedback provided.

The Company conducts annual organizational engagement and employee satisfaction surveys to gather employee feedback, improves employee satisfaction, and ensures the healthy development of the Company.

The Company values feedback from all stakeholders, including employees, and has established a complaint and whistleblowing mechanism under the Whistleblowing Management Policy to ensure thorough investigations and timely follow-up. Employees are encouraged to report or appeal work-related concerns—such as rights violations, discrimination, harassment, or working conditions—directly to supervisors, department managers, the HR department, or the trade union. The Employee Handbook clearly defines grievance procedures, resolution timelines, and communication mediation mechanisms. For each reported case, the Company provides a preliminary explanation and investigation report within 10 working days of receiving the complaint, adjusted based on case complexity. A final resolution or mutually agreed solution is issued within 30 calendar days. Strict confidentiality is maintained throughout the entire process, with all information securely protected. To address identified risk, Trinasolar applies a UNGP-aligned remediation framework, ensuring accountability through transparent redress measures such as compensation and policy reforms.



# **Case** | Trade Union Service Survey

In 2024, the Company conducted a comprehensive survey on trade union service needs, covering areas such as caring activities, benefits, and skill enhancement. Over 7,000 valid responses were collected from employees across all employee

tiers, with 92% from trade union members and 83% from frontline employees. The insights gained from this survey will guide improvements in employee services, including health care and recreational activities, helping to foster a more harmonious and proactive workplace.





Focusing on four key areas including talent acquisition, employee empowerment, value exploration, and talent incentives, the Company has developed a comprehensive and systematic strategy for human capital development and talent pipeline building. With an emphasis on tech talent and international talent, the Company has strengthened university-industry collaboration to attract high-quality talent worldwide. Diverse programs are implemented to empower employees at all levels, while the development of an internal talent market promotes the efficient allocation of human resources. In addition, through a comprehensive performance appraisal system, the Company links performance with compensation, promotion and other factors to stimulate employee enthusiasm, promote the construction of the talent pipeline, and contribute to the long-term development of the Company.

# **Talent Attraction and Cultivation**

The company places high priority on the recruitment and cultivation of specialized talents, conducting standardized social recruitment, campus recruitment, and internal recruitment initiatives. We have strengthened partnerships with universities to deepen talent reserves and enhance industry-academia-research partnerships. In the reporting period, the Trinasolar-Fudan University Advanced Photovoltaic Technology Joint Laboratory was inaugurated, serving as a platform for talent development, research project applications, and high-level scientific studies. Concurrently, Trinasolar is expanding long-term collaborations with international universities to bolster its global talent network and fuel overseas growth.

The Company provides all employees with clear career development paths, formulates the Professional Qualification Management Regulations, and constructs a systematic qualification certification mechanism to ensure fair and transparent selection and appointment of talents. To further promote internal mobility and development of talents, the Company has formulated the Rehiring System for Former Employees, encouraging former employees to return to the Company with new experiences and perspectives. Additionally, the Company specifies criteria for frontline employees to transfer to managerial roles in the SAL Voluntary Internal Transfer Management System, which provides equitable policy guidance for employees' career development, aligns individual career aspirations with organizational needs, thereby facilitating rational role transitions.

To fully leverage internal talent, the Company has established an internal talent market and effectively expanded the promotional channels for internal recruitment. By leveraging multiple channels for visibility, the Company not only provides employees with more global-oriented opportunities but also opens new talent acquisition pathways for overseas operations, driving the globalization of its human capital strategy. During the reporting period, 306 employees transitioned through internal mobility, filling 3.87% of vacant positions across the organization.

# **Employee Training and Empowerment**

The Company is attentive to the development needs of our employees. Leveraging the Training Management System, we have established an efficient talent training and development framework. By designing multi-level and personalized training programs, the Company aims to fully unlock employee potential and support their career advancement.

# **Trinasolar Talent Cultivation System**

### General Training Curriculum

Aimed at all employees, covering core values, business ethics, IT, compliance, EHS, etc.

# Trinasolar Talent Development System

### Professional Skills Development

Aimed at technical staff, conducting training on 6S standards and production management, cell material knowledge dissemination, lean manufacturing principles, 8D problemsolving framework, QC seven tools certification, etc.

### Fresh Graduate Development

Aimed at fresh graduates, offering training programs including the new talent accelerator Sunrise Program, industry-aligned capstone projects, executive mentorship scheme, and cultural immersion initiatives.

### Leadership Development Pipeline

Aimed at management, conducting programs such as the Youth Talent Acceleration Initiative, Frontline Leader Development Program (FLDP) for Middle and Junior Management Empowerment, and General Management Development Program (GMDP) for Middle and Senior Leadership Development

# External Training Partnerships

Aimed at all employees, subsidizing their participation in legal and regulatory compliance training, public workshops on professional knowledge and technical skills, as well as domestic and international professional conferences and exchange forums.

### During the reporting period

**29,975** users

visited the learning platform averaging **13,598** monthly logins

**337,386** hours

cumulative course engagement duration

### By the end of the reportin

1,441

online courses

5,943

courseware materials

The Company has deployed a digitalized learning platform, offering employees a diverse course library and flexible, convenient learning pathways accessible via mobile/web interfaces. During the reporting period, the platform recorded a total of 29,975 active users, averaging 13,598 monthly logins, with cumulative course engagement reaching 337,386 hours. By the end of the reporting period, the platform hosted 1,441 online courses and 5,943 courseware materials.





### Case | Featured Training Programs

### **100-Day Engineer Growth Camp**

In 2024, the Company organized the "100-Day Engineer Growth Camp" offline training event for department heads and engineers at the Dongtai Base. The camp covers a variety of topics, such as professional skill improvement, project management, teamwork, and innovative thinking, significantly improving engineers' professional capabilities through systematic training and practice.

# Yancheng Dafeng Gold Team Leader Training Camp

In 2024, Yancheng Dafeng carried out the Gold Team Leader Training, which covered key contents such as team leadership, operational efficiency enhancement, and quality assurance systems, aimed to comprehensively strengthen the management skills of team leaders, and promote production efficiency and quality improvement.

### 2024

Total training

expenditure



**11.91** million RMB

**397.23** RMB Annual training

expenditure per FTE

19,853

Total number of training sessions held

1,704,309

Total training

# 2022-2024 Trinasolar Employee Training Key Performance

Metrics		2024	2023	2022
Average hours of training per employee		46.69	22.09	7.65
	Senior Management	11.69	13.27	116.04
Training hours nor ampleyed by tier	Mid-level Management	18.90	15.91	74.96
Training hours per employee by tier	Ordinary Management	22.31	12.67	26.32
	Ordinary Employees	51.66	22.66	5.52
Tuelining having non-analysis a his gooden	Male Employees	45.85	22.35	7.59
Training hours per employee by gender	Female Employees	49.03	21.39	7.81
Percentage of employees trained		100%	-	-

To support employees in advancing their core competencies and career pathways, the Company has developed and refined policies for degree program and certification support. Employees are encouraged to participate in professional qualification assessments through initiatives such as tuition reimbursement and subsidies, helping them further their educational qualifications and advance their careers.

The Company places great emphasis on nurturing fresh graduates and has developed an onboarding training system, the Sunrise Program, which is specifically tailored for new recruits. This program is designed to help graduates quickly transition into professional roles and enhance their skills. Through a combination of training courses, practical projects, mentorship, and cultural activities, the program supports the holistic development of employees, fostering both their overall quality and professional competence. During the reporting period, 521 graduates successfully onboarded through the Sunrise Program.

# Case | 2024 Sunrise Program

In 2024, Trinasolar's Sunrise Program Training Camp was successfully held in Changzhou, attracting 329 new employees from different departments. Through diversified training forms, such as product roadshows, debate competitions, and closing showcases, the camp holistically enhanced the participants' comprehensive competencies. The participants actively engaged in the training and demonstrated a high learning engagement and teamwork spirit. The camp also set up a strict assessment and scoring mechanism to accurately identify high-po-



Sunrise Program 2024

tential talents, thereby strengthening the Company's strategic talent pipeline.

To cultivate a management team with strategic vision and outstanding leadership, the Company has formulated a management training program, setting personalized courses for management talents at different levels to assist in their career development.

# **Leadership Development Pipeline**

# FLDP Training for Middle and Junior Management Empowerment

- •10 personalized and customized online courses
- Hands-on sessions such as internal learning sharing, practical discussions, and action plans
- •Continuous contribution of knowledge and experience by a team of senior experts

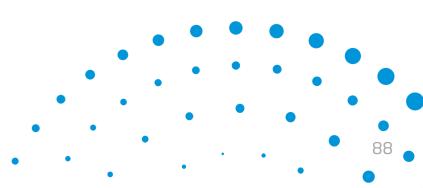
By the end of the reporting period, the FLDP program had opened 6 specialized classes, covering 323 participants with a 100% passing rate

# GMDP Training for Middle and Senior Leadership Development

• Promote the formation of role and responsibility awareness among mid-level and senior management

By the end of the reporting period, the GMDP program had covered 187 participants with a 100% passing rate

The Company focuses on the cultivation and development of young talents according to the needs of the Company's strategy and business development, and carries out the Sunrise Program, Sunrise Pro Program, and Fiery Sun Project to help young talents to continuously improve their business ability and professionalism in job practice, and to build up momentum for the Company's long-term development.



### Youth Talent Acceleration Initiative

### Sunrise Program

Through frontline rotations, mentorship programs, and competency empowerment in role-specific knowledge and professional skills, we empower young talents to achieve three strategic objectives: cultural alignment with Trinasolar's values, role transition, and team integration.

### Sunrise Pro Program

We empower young talents to excel in their roles through a structured development ecosystem comprising challenging stretch assignments, hands-on execution of mission-critical projects, cross-functional job rotations, global mobility opportunities, and dualmentorship partnerships.

# Fiery Sun Project

We identify motivated highpotential talents from the youth talent pool to support the construction of a complex cadre and talent team through immersive leadership simulations and cross-functional rotational assignments.

# **Performance Appraisal and Evaluation**

The Company objectively and fairly evaluates the performance and contributions of employees, formulates the Personal Performance Management System, establishing and continuously improving the linkage mechanism between performance and compensation and benefits such as bonuses, salary adjustments, promotions, and equity. We conduct performance appraisals every six months to provide regular feedback and guidance, supporting employee growth and development. 100% of Trinasolar employees receive performance evaluations regularly.

# **Trinasolar Individual Performance Management Process**

Goal decomposition

Individual goal setting

Individual performance coaching and

performance appraisals and Communication of performance Application of performance

To ensure optimal resource allocation, the Company has established the Organizational Performance Management System, setting organizational performance goals that drive the formulation of individual objectives and support the effective implementation of the Company's Strategic Planning (SP) and Business Planning (BP). We have integrated indicators related to organizational talent atmosphere such as individual development and core value practice into personal performance appraisals, reinforcing a value assessment system oriented to the organic combination of responsibility results, employee management, and personal development.

To strengthen individual performance management, the Company has established mechanisms for goal setting, performance process guidance, and result communication, stipulating that each direct superior must conduct at least one performance coaching communication with subordinates during each assessment cycle. All employees participating in the assessment can give feedback on the performance communication process and provide suggestions through the performance management platform within the specified time. If employees have objections to their performance rating results, they can appeal to the next-level superior or HRBP, and the complaint will be processed within 5 working days from the date of acceptance, with the processing opinion promptly fed back to the appellant.

# **Occupational Health and Safety**

The Company attaches great importance to safety management, deeply integrates safety considerations into every aspect of Company operations, continuously improves the safety management system, enhances employees' safety awareness, and safeguards their occupational health and safety.

# **Safety System Construction**

The Company strictly adheres to laws and regulations such as the Labor Law of the People's Republic of China, Fire Protection Law of the People's Republic of China, Occupational Disease Prevention and Control Law of the People's Republic of China, and Work Safety Law of the People's Republic of China. The Company ensures continuous improvement and effective operation of the work safety management system through systems such as the Safety Standard Manual, Work Safety Management System, and Occupational Health Management Procedure. As of the end of the reporting period, Trinasolar has obtained ISO 45001 Occupational Health and Safety Management System certification at 32 sites. With its continuous efforts and innovative practices in enhancing workplace health standards, the Company was awarded the CHW Healthy Workplace Certification and the title of Diamond Standard Certified Company for 2025-2026.

To promote, implement, and supervise the responsibility system for work safety and environmental protection at each manufacturing base/factory globally, and to solidify EHS management and accident prevention activities to ensure the "Five Nos" are achieved and to prevent and reduce various EHS incidents. At the EHS group level, a total of 62 cross-inspections and internal audits of the EHS management system were implemented, while a total of 46 quarterly comprehensive inspections were carried out at the level of each business department.

The Company has set work safety management objectives and incorporated them into the 2024 Environmental Protection, Occupational Health, and Safety Target Management Responsibility Letter, requiring the Company and its subsidiaries to gradually break down and implement these objectives to improve the performance of work safety management continuously. Meanwhile, the Company updated the EHS Responsibility System Management Procedure to refine the work safety management responsibilities of the persons-in-charge at each level and put work safety management into practice.

The Company has formulated the Policy on Safety Risk, Clarification and Control by Risk Level, the Safety Golden Rules Management Procedure, and other systems to identify and



2025-2026 Diamond Standard Certified Company



"10+1" Safety Golden Rules Promotion

In 2024, Trinasolar's Lost Time Injury Rate (LTIR) is

0.809



assess safety risk factors in production and operation. The Company also reinforces safety management of individual behavior through the "10+1" safety golden rules to ensure that risks of each link are fully identified and controlled.

The Company has established a long-term accident management mechanism for global safety and formulated systems such as the EHS Accident/Event Investigation and Management Procedure, which requires all global factories to report safety accidents within the specified timeframe, analyze the causes of accidents, and take targeted corrective and preventive measures in a timely manner, so as to reduce the occurrence of safety accidents. In addition, the Company continuously refines the EHS Accident/Event Investigation and Management Procedure by clarifying criteria for classifying accidents and incidents, and by enhancing the processes for reporting, investigating, and managing such events to implement the EHS accountability system and prevent and reduce the occurrence of EHS accidents and events.

# **Occupational Health and Safety Assurance**

To effectively manage occupational health and safety risks in the production and manufacturing process, the Company comprehensively improves the level of safety production management by improving facilities and equipment, perfecting operational specifications, strengthening behavioral safety, and ensuring occupational health, thereby effectively safeguarding the health and safety of employees.

# **Trinasolar Occupational Health and Safety Initiatives**

Facility Equipment Improvement

- Install protective fences on forklift charging docks and rectify electrical equipment
- Install safety interlock sensors on the side doors of the material feeding machine
- Install protective fences and light curtains on the small material feeding machine
- Improve mechanical protection on the cutting machine's material feeding platform
- Visualize the management of flammable and explosive gas detection in the factory area

Operation
Standardization
Enhancement

- Develop procedures such as Energy Lockout Management, Hazardous Operation Management, and Traffic Safety Management
- Standardize safety management and design construction guidelines for standardized workshops
- Implement Lockout-Tagout (LOTO) requirements
- Clarify requirements for photovoltaic roof projects
- Develop EHS digital platform construction

Strengthening Behavioral Safety

- Promote and implement the "10+1" Safety Golden Rules and systematize its implementation
- Promote and incentivize Behavior-Based Safety (BBS)
- Identify and improve safety hazards
- Manage traffic safety behavior inside and outside the factory
- Conduct training on the six principles of safety behavior

Occupational Health Protection

- Improve Occupational Health Management Procedure and Personal Protective Equipment Management Procedure, establish personal labor protection management mechanisms, and strengthen the management of labor protection products for positions with chemical, noise, and dust hazards
- Conduct occupational health assessments, regularly entrust third parties to conduct occupational health factor testing, and improve the management of job rotation and transfer
- Strengthen "one person, one file" management of occupational health
- Conduct occupational health management, conduct noise level monitoring, reduce heat and noise hazards, and reduce employee exposure to occupational hazards

# 2022-2024 Trinasolar Occupational Health and Safety Investment Performance

Indicators	2024	2023	2022
Occupational Health and Safety Investment (million RMB)	90.64	67.63	49.76

# 100%

Production Personnel Employer Liability Insurance Coverage

# 100%

Work Injury Insurance Coverage

The Company has developed the Emergency Response Plan for Safety Production Accidents and actively carried out emergency drills across various scenarios, including fire evacuation, chemical leakage emergency response, first aid training and assessment. These drills are designed to simulate the real events and emergency response processes and to ensure that the employees are familiar with the necessary safety procedures and escape routes. During the reporting period, the Company organized a total of 1,157 emergency drills at all of our manufacturing bases.

# **Occupational Health and Safety Training**

The Company actively implements safety training and education, carries out diversified internal safety training and activities such as Quality Month and Safety Month, and also offers pre-job specialized training for employees engaged in special positions such as fire fighting, high-voltage electricians, and forklift operators, and requires employees to obtain special operation qualifications before starting work. During the reporting period, the Company conducted a total of 7,160 training sessions on work safety and occupational health, covering 192,782 employees and outsourcing suppliers, with a total duration of 16,935,45 hours.

To continuously enhance employees' safety awareness and emergency response capability, the Company regularly releases EHS-related knowledge and information through the T-Link platform, integrating safety awareness and capability improvement into employees' daily work. During the reporting period, the Company released a total of 74 EHS information newsletters through the T-Link EHS subscription account, which further strengthened the safety, occupational health, and environmental protection capabilities of employees.



# Case | Trinasolar "10+1" Safety Golden Rules Training

In October 2024, the Company launched the online course "Trinasolar '10+1' Safety Golden Rules Training" for all employees, deeply interpreting the "10+1" safety golden rules, combined with actual typical cases of the Company, the industry and beyond, to visualize the consequences of violations. The Company observes and implements the "safety golden rules" as a guideline to improve individual safety bottom-line thinking, red line awareness and emergency response capability, prevent potential risks and dangers in the workplace, and prevent and control the occurrence of accidents.







# **Case** | Specialized Training for First Aiders

The Company organized a special training session for first aiders, which adopted a teaching mode combining theoretical lectures and practical exercises, so that the employees mastered first aid theories and became familiar with common first aid techniques. After passing

the examination, all the participating employees successfully obtained the primary first-aider certificate issued by the local Red Cross, which greatly enhanced the first-aid ability and awareness of employees at each base



### Case | Safety Accident Alert Training and Education

The Company's factories organized relevant departments, workshops, and contractors to focus on recent safety incidents and accident cases, and carried out training and education activities to warn of accident cases. The training content is comprehensive and targeted, covering various accident cases such as confined space operation, fire, fall from height, electric shock,

and mechanical injury, etc. It enhances the sense of responsibility and accountability of management, strengthening the safety awareness of frontline workers, and trains employees to consciously abide by the safety regulations, laying a solid foundation for the Company's safe production.



# Social Engagement and Community Contribution

Trinasolar actively supports the construction of communities where we operate, leverages our industrial and technological advantages, and carries out social welfare in the areas of energy saving and carbon reduction, ecological protection, and social engagement through business innovation, public welfare donations and employee volunteer activities, contributing to the creation of sustainable livelihoods and a better life. The Company established the Jiangsu Trina Public Welfare Foundation in 2016 to provide a series of public welfare and charitable services, such as assistance for disadvantaged groups, disaster relief, education support, etc., in a standardized and efficient manner, and to actively contribute to society with a big heart of love. During the reporting period, the Company invested a total of RMB 15.64 million in community contributions and public welfare. In 2024, the Company was honored with the "Social Group Donation for Education Award" by the People's Government of Sandu Shui Autonomous County.



### Case | Trinasolar and Spain's Universidad Politécnica de Madrid partner on solar research

On June 26, 2024, Trinasolar announced the signing of a long-term collaboration agreement with the Institute of Solar Energy at Universidad Politécnica de Madrid (IES-UPM). The agreement is a milestone in Trinasolar's involvement with leading universities, highlighting a shared commitment to education, research and innovation in solar energy. The Company and IES-UPM will pool our expertise to advance research in PV sciences and technologies to innovate in areas such as solar panel efficiency, the resilience and robustness of solar trackers and improving solar energy management.

Beyond the joint research project, Trinasolar will establish a state-of-the-art training centre at IES-UPM, providing the latest solar products and systems. The centre will be equipped with solar technologies, including solar modules, trackers and there is potential to include storage systems



insight Sharing Session with Students at IES-UP

in the future. This initiative is Trinasolar's first in conjunction with a university in Spain, the aim being to support solar energy development in the region.

# **Community Engagement**

The Company embraces the philosophy of "Trina for Good," actively contributing to overseas communities by supporting local education and economic development. Through initiatives such as participating in community events, the Company continues to build a sustainable future and positively contributes to the local area through job opportunities and community engagement.





## Case | Trinasolar US Strengthens Community Ties at Dallas ISD Back to School Event

Trinasolar US was honored to participate in the Dallas Independent School District's Back to School event in Wilmer, Texas. Several members of Trina's Wilmer facility team hosted a table at the event to demonstrate Trina's commitment to using solar energy that benefits everyone and express the company's dedication to giving back to the community. Dallas ISD Assistant Principal Jessica Walker and City Administrator Rona Stringfellow were among the attendees who visited Trina's table, along with approximately 140 parents and students. This event marks an important step in building a strong partnership with the Wilmer community. Attendees were able to learn more about Trina and inquire about job opportunities the company is bringing to the Wilmer area. Trina's ongoing efforts to connect with the Wilmer



Back to school over

community are paving the way for a brighter, solarpowered future, reinforcing its commitment to both sustainability and local development.

# Trinasolar US Supports Local STEM Education with Donation to Eddie Bernice Johnson STEM Academy

Trinasolar US was proud to visit Eddie Bernice Johnson STEM Academy in Wilmer, Texas, and donate school supplies to contribute to the school's achievements in STEM education. During this event, Trinasolar US donated nearly 700 books and over 1,000 headphones to support Wilmer students' learning and development. Trina's commitment to the community extends beyond education, creating economic opportunities through its manufacturing facility in Wilmer which will support more than 1,300 local jobs. By fostering economic growth and engaging in initiatives that empower the next generation, Trina continues to underscore its dedication



Local STEM Education Support

to building stronger, more resilient communities through meaningful partnerships and environmental stewardship.

# **Co-creating a Green Future**



"Clean Energy for Earth" Campaign



Clean Energy-themed Children's Painting Competition for "PV Low-Carbon Eco-Farming"

We recognize that creating a cleaner and more beautiful Earth demands collective action across all sectors of society. Since 2022, the Company has partnered with the World Wide Fund for Nature (WWF) and the One Earth Nature Foundation (OPF) to launch the "Clean Energy for Earth" campaign. Introduced in China as part of the global "Earth Hour" environmental initiative, this campaign encourages individuals, communities, businesses, and governments to actively participate in and promote the adoption of clean, renewable energy sources.

Over the past three years, Trinasolar has successfully held a series of thematic activities under the "Clean Energy for Earth" initiative, such as Climate Action Week and the construction of a green and low-carbon textile industrial park. These activities have expanded the clean energy ecology, solidified a broader social consensus, and encouraged individuals, institutions, and communities to practice a green and sustainable lifestyle. In 2024, the Company launched a children's painting competition with a clean energy theme for "PV Low-Carbon Eco-Farming," contributing to post-disaster reconstruction while conveying hope for environmental protection and sustainable development.







# **Sustainability Issues**

Corporate Governance Compliance and Risk Management Sustainable Supply Chain Anti-Corruption and Business Ethics Information Security and Assurance **SDGs** 



33.33%

Percentage of independent directors Percentage of annual audit plan achievement

100%

**Key Performance Indicators in 2024** 

100%

Anti-bribery and anticorruption training coverage for employees 100%

Case closure rate for business ethics reports



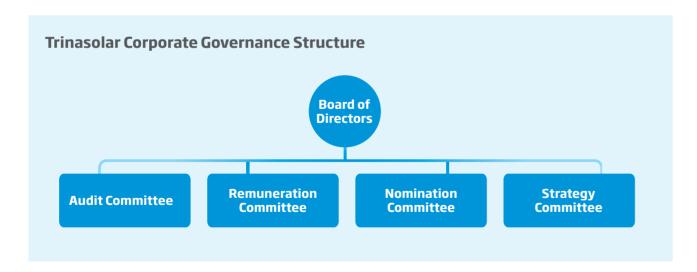
# Corporate Governance

The Company has established a comprehensive governance structure and effective management processes, continuously strengthening oversight and management while enhancing the transparency of information disclosure. Through all these efforts, the Company endeavored to deliver long-term value to all stakeholders.

# **Governance Structure and Board Effectiveness**

The Company strictly complies with the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, and the Rules Govering the Listing of Stocks on the Science and Technology Innovation Board of SSE and Other applicable laws, regulations, and regulatory requirements, establishing a clear structure and well-defined responsibilities within its corporate governance framework.

The Company's Board of Directors, as the core of the governance structure, is responsible for participating in and deciding all significant matters related to corporate operations, including policy affairs, strategies, budgets, internal controls, and risk management. There are four Board Committees, which are appointed and authorized by the Board of Directors to function effectively in accordance with their terms of reference, as the supervisory and executive bodies of the governance structure.



The Company strictly complies with the Measures on the Administration of Independent Directors of Listed Companies, the Code of Corporate Governance for Listed Companies, and Trinasolar's Articles of Association, maintaining an Independent Director Working Policy, which clearly defines the eligibility criteria and independence requirements; nomination, election, and removal procedures; rights, obligations, and performance evaluation mechanisms. As of the end of the reporting period, the Board of Directors of the Company consists of 3 independent directors and 6 non-independent directors, achieving 33.33% independent director representation.

The Board of Directors has adopted a policy on diversity to improve the effectiveness and governance maturity. The Company enacted the Board Diversity Policy and revised the Board Nomination Committee Working Rules to balance factors such as gender, age, nationality, ethnicity and cultural background, in addition to educational background, professional experience, skills, knowledge, and service tenure, in the nomination and selection of directors, so as to ensure that there is a diversity of perspectives, skills and experience on the Board of Directors. As of the end of the reporting period, Trinasolar had 3 female directors, accounting for 33.33% of the total and 1 female supervisor in the Supervisory Committee.

## During the reporting period, Trinasolar convened

General meetings of shareholders 5 Special meetings of independent directors

18 Board meetings

**100%** Average attendance rate of board members

12 Special Committee meetings

Audit committee meetings: 5
Remunation Committee meeting: 3

Strategy Committee meeting: 2
Nomination Committee meeting: 2

# **Investor Relations Management**

The Company maintains good communication with investors through various channels, including the investor hotline, the Shanghai Stock Exchange's "SSE E-Interaction" portal, and roadshow activities, fostering a transparent dialogue ecosystem. In 2024, the Company conducted over 300 investor engagement activities, resolved over 700 hotline inquiries, and provided 87 detailed responses on the SSE platform, which continued to enhance two-way engagement with investors.



Case | Investor Research on the TOPCon Cell Technology Advancement of Dongtai Technology

In August 2024, the Company hosted the "Investor Research on the TOPCon Cell Technology Advancement of Dongtai Technology" event, and invited numerous investment funds and securities institutions to participate. During the event, investors toured the 10GW TOPCon high-efficiency photovoltaic cell production line, gaining firsthand insights into the Company's technological research and development capabilities as well as its cost control advantages. The Company's chairman and senior management provided detailed introductions and addressed investor questions, fully showcasing the Company's strengths in the photovoltaic sector and further enhancing investor confidence.



Investor Research on the TOPCon Cell Technology
Advancement of Dongtai Technology



Best Practice in Investor Relations Management of Listed Companies

During the reporting period, the Company was awarded the "Best Practice in Investor Relations Management of Listed Companies" by the China Association for Public Companies, and was awarded the highest grade of A in the information disclosure work of the Shanghai Stock Exchange for the year 2023-2024.



# Risk Management

Amidst a complex and volatile global macroeconomic and trade environment, the Company has continuously strengthened its comprehensive risk management system. This includes upgrading and iterating the risk management assessment and evaluation system, risk and compliance management process, and the digital risk management system 2.0 for each division. Additionally, the Company has enhanced its internal control and supervision mechanisms to ensure the effective implementation and operation of comprehensive risk management across all business areas and global regions. These efforts have become a powerful support and a core competitive advantage in advancing the Company's globalization strategy.

# **Risk Management Target**

Guided by the goal of delivering value to both internal and external customers, we ensure robust compliance and risk control of the Company internally and externally, supporting sustainable and high-quality development.

# **Risk Management Organizational Capacity**

The Company's Risk Control and Management Department integrates the COE (Center of Excellence) organizations, resources, and expertise of risk management, internal control, compliance, and ESG risk compliance. It empowers business departments by providing risk management methodologies and best practices. Through the identification of risks and opportunities in the new energy sector, recognition of significant strategic and operational risks with diligent tracking of response measures, and targeted authorization and oversight, the Department ensures compliance with regulatory standards. The management system supports business growth and the achievement of the Company's operational objectives, as well as simultaneously fostering and strengthening organizational resilience and management capabilities, to deal with medium- and long-term uncertain risks and ensure stable, sustainable development.

# **Risk Management Policies**

The "Three Lines of Defense" of risk management constructed by the Company clearly define the roles and responsibilities of risk management at all levels and in all departments. At the ideological level, we have issued the Enterprise Risk Management Outline, which clearly defines the principles, objectives, concepts, cultures and responsibility systems of risk management, so as to enhance the cognition of the management level. At the rule level, under the framework of the Enterprise Risk Management Policy, we have issued the Implementation Rules for Enterprise Risk Management, Evaluation Standards for Enterprise Risk Management, Crisis Management Policy, and Risk Management Guidelines of Overseas Joint Venture Business and other risk management rules or guidelines, enhancing the risk management level of the Company and the business units, and promoting the safe, stable, and sustainable development of overseas joint venture business. At the operational level, a comprehensive risk assessment and reporting mechanism has been formed, including quarterly risk management meetings, regular meetings to report on risk management and control to the management, as well as Governance Risk Compliance (RC) Committee meetings and risk thematic reports to strengthen the risk management process and ensure business continuity.

# "Three Lines of Defense" on Risk Management

Board of	Directors	Supervisory Board		
	Senior Executive Management			
First Line of Defense Business department	Risk management department and related risk supervision functional departments	Third Line of Defense Audit and Supervision		Government and
Risk owners manage and control risk   Assumes direct responsibility for risk management and internal control  Responsible for involving, developing and implementing appropriate controls(processes, policies, etc.) and maintainging effective internal controls	Assist management in monitoring the risk and internal control system and formulating risk management rules  • Establish risk management and internal control system  • Develop risk management and internal control management rules  • Provide methodology support or empower operations  • Provide risk and internal control guidance and supervise the work of first line of defense  • Compliance management and system building	Independent supervising, assessing control effectiveness, and providing risk assurance  •Independently supervising, assessing control effectiveness, and providing risk assurance  • Reporting to corporate governance	External Audit	ent and other regulatory agencies

# **Risk Management Process**

The Company has built a comprehensive risk management process, including risk management strategic planning, business operations, appetite and objectives, activities, early warning monitoring, evaluation, and reporting, which enhances the systematization and standardization of risk management. To ensure efficient implementation, the Company has updated the digital risk management system 2.0, equipped with a comprehensive risk database, risk early warning monitoring, risk tracking and control, and risk report generation. This system enables management to obtain key risk information dynamically and rapidly, supporting data-driven decisions and ensuring proactive risk response and control.

By integrating the international general risk framework with internal and external risk intelligence and the Company's operational realities, we have established a three-tiered risk panorama. This comprehensive framework encompasses strategic, market, compliance, financial, operational, and ESG risk domains. It systematically addresses both critical operational risks impacting business continuity and sustainable development exposures - particularly climate-related risks that have remained a persistent focus area - the system enables proactive risk anticipation and formulation of strategic response protocols.



# **Risk Management Culture**

The Company attaches importance to the cultivation of risk management culture, and carries out various empowerment programs to strengthen employees' risk awareness and mitigation capabilities. The Company has completed the first session of training and assessment for risk management qualifications.

Risk managemen training Organize training on risk management policies and operational mechanisms, risk management processes, digital systems, new energy industry trade policy topics, and new employee risk management training, etc.

Risk culture development

Managers at all levels organize business reviews to promote risk management awareness, capabilities, methods, and processes among their teams

Risk case study learning

Compile significant risk cases to form a risk management case database, and promote internal communication and learning



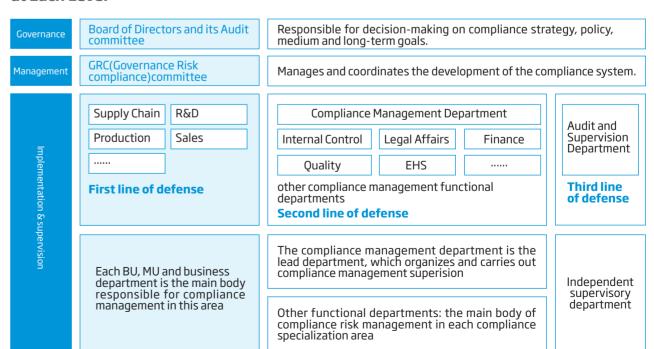
# **Compliance Management**

The Company strictly complies with the laws and regulations of the countries where it operates and the countries where our products are put on market, while actively strengthening its global compliance capabilities. Adhering to the compliance policy of "sound governance, compliant operation, steady development, and value creation", the Company has embedded compliance management into its business processes and clarified it through internal management and process management systems, to ensure the deep integration of business development and compliance control through systematic process management and oversight.

# **Compliance Management System**

The Company has established a three-tier compliance management organizational structure of "Governance-Management-Implementation & Supervision". The governance layer is represented by the Board of Directors and its subordinate Audit Committee, responsible for decision-making on the Company's compliance strategy, policies, and medium to long-term goals. The management layer consists of the Governance Risk Compliance (GRC) Committee, which manages the compliance management system. The GRC holds meetings monthly to review regulations and major issues in the compliance field. The implementation & supervision layer is composed of business departments, compliance management functions, and the Audit and Inspection Department, which represent the "three lines of defense" of the Company. Business departments, as the first party responsible for compliance, strictly implement the Company's rules and regulations. Every compliance management functional departments formulate compliance management policies, and conduct daily compliance monitoring, supervision, and training. The Audit and Inspection Department implements independent auditing supervision and investigations.

# Organizational Structure of Trinasolar Compliance Management System and Functions at Each Level





The Company has established a compliance management system based on the PDCA (Plan-Do-Check-Act) principle, which specifies the overall objectives of compliance management and organizational responsibilities. We have formed mechanisms for compliance risk identification, response, auditing and consultation, inspection and rectification, performance evaluation, whistleblowing investigation, and accountability. We formulate and adhere to the Compliance Management Policy, Compliance Management System, and supporting procedural documents, conducting a compliance management system construction and certification program in accordance



Award Ceremony of ISO 37301 Compliance Management System Certification

with ISO 37301:2021 Compliance Management System Requirements and Guidelines. As of the end of the reporting period, the Company has obtained ISO 37301 Compliance Management System Certification.

Under the overarching compliance management system, the Company has further developed a targeted compliance framework for specialized domains adopting a risk-based approach, with prioritized focus on key areas including listing compliance, anti-bribery compliance, intellectual property compliance, environmental protection compliance, trade compliance, labor and employment compliance, tax compliance, and data compliance. Each specialized compliance domain is overseen by professional functional departments for risk control, having implemented enhanced management systems and control processes, while conducting regular compliance training and awareness campaigns to strengthen employee competency in domain-specific requirements. Furthermore, the Company has continuously optimized the Management System for Related Party Transactions, clarifying the processes for the declaration, identification, approval, decision-making, and monitoring. The Company added a supervisory mechanism for related party transactions, as well as a reporting and accountability protocols, to ensure the compliance of all related party transactions.

# **Trinasolar Compliance Management in Specialized Domains**

Trinasolar Compli	iance Manageme	nt in Specialized I	Domains	
Employee Rights	Tax Compliance	Listing Compliance	Integrity and Business	
Salary and benefits  Anti- discriminati on  Health and safety	Financial reporting compliance  Tax compliance  Anti-money laundering	Disclosure compliance Insider trading Related party transaction compliance	Environmental compliance and health and safety  Anti-bribery and corruption  Business partner	
Prohibition of forced labor  Anti-harassment		Conflict of interest	Anti-unfair competition  Trade compliance  Anti-monopoly  Data compliance and informantion security	

Guided by risk governance principles, the Company has further strengthened key control processes and checkpoints, embedding compliance mandates into operational workflows through digital integration. The Company regularly conducts supervision, and evaluation of compliance and internal control assessments to comprehensively evaluate system integrity, validate implementation efficacy, and drive corrective actions for continuous process enhancement.

The Company has incorporated compliance performance metrics into departmental KPIs, and formulated scoring rules from perspectives of regulatory adherence, litigation exposure, and internal policy breaches. Concurrently, the Company has formulated a number of compliance management objectives to monitor and evaluate the effectiveness of the Company's compliance management system, all of which were achieved during the reporting period.

### **Overall Compliance Objective of the Company**

- Enhance Compliance Management Competency
- Comply with Laws and Regulations
- Protect Corporate Reputation and Brand Value

### **General Compliance Indicators**

- Compliance Training Participation Rate Over 90%
- Compliance Commitment/Conflict of Interest Declaration Completion Rate 100%
- $\bullet$  Tracking and Rectification Completion Rate 90%

# **Compliance Team Empowerment**

Recognizing the strategic imperative of compliance competency cultivation, we implemented a structured Internal Auditor Development Program targeting high-potential personnel from risk, audit, and legal functions. Through multi-phase professional development aligned with the ISO 37301 standards, we have successfully equipped 100 employees with ISO 37301 Compliance Management System Internal Auditor Certification as of the reporting period closure. This initiative has effectively enhanced the professional capabilities of the compliance internal audit



Compliance Management System Internal Auditor Training

# **Enhancement of Compliance Awareness**

To further improve the quality and effectiveness of compliance management, the Company offers targeted compliance training courses, compliance quizzes, and compliance forum lectures for general staff, new employees, executives, and high-risk position holders. Courses are meticulously designed around position-specific risk exposure, covering critical domains such as related-party transaction governance, global trade compliance, data privacy frameworks, ethical procurement protocols, and internal control. During the reporting period, over 15,448 participants actively engaged in compliance training through digital learning and in-person sessions.

Additionally, the Company proactively disseminates real-time regulatory updates through dedicated compliance portals and enterprise-wide alerts, covering legislative amendments, policy advisories, operational framework guidelines, redacted risk incident analyses, and global governance benchmarks. This knowledge-sharing initiative systematically elevates employees' compliance competency across risk-sensitive roles, particularly enhancing frontline staff's ability to operationalize regulatory mandates into daily workflows.



# **Tax Responsibility**

The Company has published the Tax Guiding Principles on the official website, committing to fulfilling tax responsibilities in accordance with the law, and formulating and adhering to relevant policies and management measures such as the Tax Management Policies, Tax Planning Guiding Principles, Tax Compliance Management Measures, and Tax Risk Management Measures. Through the establishment of a trinity tax management organization, the tax health check mechanism, the tax audit synergetic mechanism, and the tax risk accountability mechanism, the Company continuously strengthens tax management. We also actively promote digitalization in tax management.

Establish trinity tax management organization We have established a trinity tax management organization consisting of Tax Center of Excellence (COE), Tax Business Partner (BP), and Tax Shared Service Center (SSC) and implemented four fundamental tax management principles (i.e., tax compliance principle, tax planning principle, tax risk control principle, and enterprise-tax authority communication principle.) The Company attaches great importance to tax risk control and has taken multiple measures, including conducting tax health check, assessing tax risk exposures, and developing effective risk mitigation plans, so as to drive the continuous improvements of various business processes.

Establish tax health check mechanism Establish an effective tax health check process/mechanism to regularize routine tax risk management matters through risk identification, risk assessment, risk mitigation, risk clearance, etc

Define tax risk management responsibilities Define the responsibilities for tax risk management in different regions (MUs) and business units (BUs). Ensure continuous reduction of the tax risk exposures at source and from mechanism via collaborative cooperation.

Establish a synergetic mechanism for tax audit Establish a synergetic mechanism for tax audit, effectively close all types of tax audit, and promote improvements based on the findings in each of tax audit

# **Internal Audit**

The Company has established an independent internal audit governance structure, with an Audit Committee under the Board of Directors and a dedicated Audit and Supervision Department. The Audit and Supervision Department conducts audit work independently under the guidance of the Audit Committee of the Board of Directors, and regularly reports to the Audit Committee on audit work, including but not limited to the implementation of audit plans, audit findings and rectification.

The Audit and Supervision Department closely aligns with the Company's development strategy, incorporating historical high-risk areas such as fraud, bribery, and corruption, as well as current key business domains, into the annual audit plan. This ensures systemativ audit coverage of all business areas over a three-year cycle. We conduct priority audits on ethics-related domains and fraud investigation to guarantee annual reviews of critical sectors, effectively utilizing the supervisory and investigative functions of internal audits in critical areas such as asset management and business ethics.

The Audit and Supervision Department employs digital tools, conducts a comprehensive and independent review of the Company's internal control processes to ensure compliance with policies and procedures. It identifies potential risk points and internal control deficiencies, proposes specific improvemen recommendations, and supervises rectification and enhancement. This supports the Company in refining its internal control system, assisting in operational cost reduction and efficiency improvement, safeguarding overall risk management, and fulfills audit oversight responsibilities.

The Audit and Supervision Department actively expanded internal and external collaboration, fully advancing the rectification of identified deficiencies, achieving a 100% audit plan completion rate during the reporting period. It facilitated systemic improvements to 55 procedural frameworks, ensuring closed-loop implementation of audit findings and corrective actions.







The Company upholds the highest standards of business ethics and maintains a "zero tolerance" attitude towards corruption, bribery, and ethical violations. We also encourage and require business partners to align with equivalent ethical benchmarks, resolutely resist unfair competition practices, and actively foster an transparent, equitable, and value-driven commercial ecosystem. During the reporting period, the Company did not engage in any violation of business ethics such as corruption, conflicts of interest, fraud, money laundering, insider trading, or unfair competition.

# **Business Ethics Management**

The Company strictly adheres to the anti-corruption and anti-bribery policies outlined in the United Nations Convention against Corruption. To ensure robust compliance, the Company has formulated and regularly updates several key documents, including the Code of Business Conduct and Ethics for Employees, the Anti-Bribery Compliance Management Policy, the Implementation Rules for Anti-Bribery Compliance Management, the Management System on Receipt of Gifts and Benefits, and the Management System on Gifts and Hospitality. All these pol-



Award Ceremony of ISO37001 Anti-Bribery Compliance Management System Certification

icies are reviewed and approved by the Governance, Risk, and Compliance (GRC) Committee, providing a clear framework and guidelines for employees' daily conduct. The Company also conducts regular anti-corruption and anti-bribery training, and periodically carries out investigations into potential violations in accordance with supervisory procedures. As of the end of the reporting period, the Company has obtained the ISO 37001 Anti-Bribery Compliance Management System Certification.

The Company also extends business ethics requirements to its supply chain, ensuring suppliers adhere to the same high standards as Trinasolar. Through signing the Supplier Integrity Commitment Letter and CSR Code of Conduct of Trinasolar Supplier, we manage anti-corruption and business ethics, including human rights, with partners in terms of management requirements, assessment and supervision, training and incentives.

# **Trinasolar Business Ethics Management Mechanism**

Sunshine Supervision The Company selects employees from each production base to serve as Sunshine Supervisors, assume responsibility for educational supervision of integrity and compliance, and build a supervision network linking the headquarters and bases

# Audit and Inspection

The Company conducts business ethics-related audits in its operational locations on a three-year cycle, with full coverage of operating sites planned every three years. The Company also carries out specialized inspections in areas of gifts and hospitality, commercial sponsorship, business partnerships, and procurement transactions, thoroughly identifying issues in terms of breadth and depth, and completing rectifications on schedule

# Training and Communication

The Company conducts several online and offline anti-bribery compliance trainings for all employees, including the Board of Directors, management at all levels, and key position holders. Business partners with medium and high risks (including outsourcing partners) are also required to participate in and complete annual regular or irregular anti-bribery compliance and anti-fraud training

- •Provide anti-bribery compliance training for all members of the Board of Directors, the president, and the co-presidents
- •Organize anti-corruption and anti-bribery compliance training for all management
- •Conduct targeted trainings for key position holders in the areas of procurement, sales, finance, HR, etc., covering prohibited requirements and control measures of anti-bribery compliance
- •During the reporting period, a total of 29,975 employees participated in training on integrity in business operations, with a training coverage rate of 100%

### Industry Governance

In March 2024, the Company joined the Enterprise Anti-Fraud Alliance (Guangdong Enterprise Institute for Internal Control, GEIIC) and the anti-fraud exchange platform "Sunshine Circle" in the new energy photovoltaic industry, to build a PV anti-fraud ecosystem together with external companies

# **Performance of Anti-Bribery and Anti-Corruption Training**

100%

Coverage rate of directors' anti-bribery and anti-corruption training
Coverage rate of management personnel's anti-bribery and anti-corruption training
Coverage rate of ordinary employees' anti-bribery and anti-corruption training
Coverage rate of new employees' anti-bribery and anti-corruption training

# **Anti-Unfair Competition**

The Company strictly complies with applicable domestic and international laws and regulations regarding anti-unfair competition, anti-monopoly, etc. The Company has formulated and updated the Compliance Management System, which prohibits disrupting the order of market competition by violating the principles of voluntariness, equity, fairness, and integrity, as well as laws and business ethics, soliciting trading opportunities or destroying the competitive advantages of other operators. The Company forbids activities in its operations such as counterfeiting, false advertising, collusive bidding, bribery, and infringement of business secrets.

The Company advocates healthy competition and prohibits the use of market position to commit acts that hinder trade, restrict and exclude fair competition. The Company has formulated the Regulations on the Review and Management of Abusing Market Dominance and the Regulations on the Review and Management of Monopoly Agreements, which clearly define the responsibilities for the management of abusing market dominance and monopoly agreements. We strictly



regulate the scope of the review, the triggering event, the determination of violation, document management, and other management requirements and processes, so as to proactively identify risks and avoid monopolistic behaviors.

During the reporting period, there were no litigation or significant administrative penalties due to unfair competition.

# **Whistleblower Management**

The Company has made clear provisions on whistleblowing management in the major internal management systems such as the Code of Business Conduct and Ethics for Employees, Compliance Management System, and Employee Handbook, encouraging internal and external stakeholders including employees, customers, and partners to report on any suspected violations of laws, regulations, or business ethics. The Company revised the Whistleblowing Management Policy to clarify the requirements for accepting and managing whistleblowing information, whistleblower protection and confidentiality policies, and the whistleblower rewards mechanism, to standardize the Company's whistleblowing management process and ensure the transparency and effectiveness of the system.

The Company provides whistleblowers with the option to report either anonymously or with their real names and maintains an attitude of "zero tolerance" against retaliation, stipulating that no individual or unit may obstruct or retaliate against whistleblowers for any reason. If such behavior is discovered, the Company will investigate and verify the facts, and depending on the severity of the case, take the following measures: for minor offenses, the matter will be referred to the relevant department within the company for handling; for serious offenses, the case will be transferred to judicial authorities for legal prosecution. During the reporting period, the Company's whistleblowing and complaint platform received a total of 51 actionable reports, with a case resolution rate of 100%.

# **Trinasolar Whistleblowing Handling Process**

### **Submit suggestions** or appeals

Telephone, email, letter, or faceto-face reporting can be adopted to give suggestions or make requests to the Company's Audit and Supervision Department

### Receive whistleblower materials

Upon receiving the report materials, the Audit and Supervision Department will classify them as "confidential" and manage them by designated personnel, strictly keeping the identity of the whistleblower confidential.

### Generate investigation report

The Audit and Supervision Department will investigate violations and prepare an investigation report. It is then handed over to the HR department for processing

We have clarified and publicized the whistleblowing channels in our anti-bribery, anti-corruption, and Employee Handbook training. The Company has updated the internal and external whistleblowing and complaint platform systems to receive whistleblowing and complaint information. Whistleblowing and complaint reporting channels:



**Hotline:** 0519-8517 6933







Address: No. 2 Tianhe Road, Trina PV Industrial Park, Xinbei District, Changzhou City, Jiangsu Province, Postal Code 213031, P.R. China

# **Supply Chain Management**

Trinasolar plays the role of the chain leader in the PV supply chain, effectively promotes responsible procurement, permeates the ESG concept into the full lifecycle management of suppliers, maintains in-depth synergy with suppliers, and is committed to building a transparent, efficient, and sustainable industrial ecosystem.

# **Supplier Management**

The Company has formulated the Supplier Full Lifecycle Management System to carry out supplier full lifecycle management in four stages: selection and entry, classification management, assessment and evaluation, and exit management.

# **Trinasolar Supplier Full Lifecycle Management**

Selection and **Entry** 

Issue a Supplier Pre-qualification Application Form to potential suppliers to investigate their compliance, relevant qualifications, and environmental and social performance

Classification Management Classify suppliers into strategic suppliers, preferred suppliers, optional suppliers, and restricted suppliers based on business impact and market complexity

Assessment and **Evaluation** 

Based on the supplier's category, use different weighting criteria to comprehensively assess their technology, quality, delivery, service, cost, innovation, social responsibility, safety, and environmental impact

**Exit Management** 

For suppliers who are not able to meet the requirements in agreed timeline after taking corrective and preventive actions, Trina takes measures e.q. restriction of the procurement, freezing of cooperation or phasing out.

The Company actively applies digital means to improve management efficiency, utilizes the SRM supplier management system and big data analytics to develop supply chain mapping and an ESG digital platform. This integrated ecosystem consolidates multi-tier supplier classification data, providing real-time decision intelligence for business operations. During the reporting period, our pioneering initiative - "Precision Digital Supply Chain Control via Production-Marketing Synergy Integration" - has been successfully recognized as a national-level digital supply chain excellence case.



# **Sustainable Supply Chain**

The Company includes environmental and social sustainability performance in the supplier evaluation system, develops ESG risk due diligence procedures, and passes on business communication, audit and evaluation, supervision and rectification, and exchange training. It also, transmits responsible concepts, requirements, and experiences to suppliers to ensure responsible management of the supply chain.

# **Supply Chain ESG Management**

The Company integrates ESG concepts into the full lifecycle management of suppliers and actively carries out relevant training to enhance employees' skills in supplier relationship management, project management, and strategic procurement. The Company has commissioned professional institutions to conduct ESG-related training for suppliers, which covers topics such as full lifecycle management of suppliers and supplier ESG due diligence management. The trained suppliers accounted for 98% of the core suppliers, with over 300 participants providing feedback on the training.

# **Supplier ESG Management Requirements**

# **Entry Phase**

- Require suppliers to sign the Corporate Social Responsibility Code of Conduct of Trina Solar Supplier, Supplier ESG Commitment, Conflict Minerals Commitment, and Legal Labor Commitment
- Complete the ESG Risk Due Diligence Survey Form and conduct risk assessments based on ESG issues, focusing on the country of origin, industry, and product characteristics
- Conduct on-site due diligence management audits, and for suppliers violating the "zero tolerance", make a one-vote veto decision

### **Performance Evaluation**

- Establish the Corporate Social Responsibility Code of Conduct of Trina Solar Supplier
- Develop the Supplier Due Diligence Manual and record the assessment results in the Supplier ESG Risk Due Diligence Survey Form
- Conduct due diligence management performance evaluations, communicate assessment results and related incentive measures, and conduct supplier due diligence management training
- If suppliers disclose ESG reports, have their reports audited, or receive ESG ratings, they may be given additional points at discretion during the annual performance evaluation
- For suppliers with significant ESG negative impacts, an exit mechanism will be triggered

### **Incentive Clause**

 Climate Change Policy has been developed and published, we encourage suppliers to use green energy, improve energy efficiency, reduce greenhouse gas emissions, and actively participate in climate change response

	Main Requirements of the CSR Code of Conduc	t of Trinasolar Supplier
	Obtain ISO system certification  Also a statement of problems of systems.	Improve resource utilization efficiency
EHS Management	<ul> <li>Issue a statement of prohibited substance</li> <li>Employee health and safety risk assessment, job site facilities, and promotion</li> <li>Reduce greenhouse gas emissions and energy</li> </ul>	<ul> <li>Implement biodiversity, forest, and land protection initiatives</li> <li></li> </ul>
	consumption	
	<ul> <li>Prohibit the use of child labor and forced labor</li> <li>Clearly define working hours and voluntary</li> </ul>	Respect employees' freedom of association and collective bargaining rights
Labor Law Compliance	<ul><li>overtime principles in policies</li><li>Employees should be paid no less than the</li></ul>	Commit to protecting employees from harassment and discrimination
	local minimum wage standard and are entitled to statutory benefits	<ul> <li>Impose environmental and human rights requirements on suppliers</li> </ul>
	Commit to fair trade and anti-unfair competition	Intellectual property protection
Business	Avoid conflicts of interest	Community activities and contributions
Ethics	Anti-corruption for the Company and employees	•
	Trinasolar Supplier ESG Risk Due Diligenc	e Key Audit Points
	• ISO 14001, ISO 50001, and other management system certifications	Factory land, groundwater, and surrounding biodiversity management
Environmental	<ul> <li>ISO 14001, ISO 50001, and other management system certifications</li> <li>Environmental impact and risk assessment management</li> </ul>	<ul> <li>Factory land, groundwater, and surrounding biodiversity management</li> <li>Record of greenhouse gas emissions and reduction plans</li> </ul>
Environmental	<ul><li>system certifications</li><li>Environmental impact and risk assessment</li></ul>	<ul> <li>biodiversity management</li> <li>Record of greenhouse gas emissions and</li> </ul>
Environmental	<ul> <li>system certifications</li> <li>Environmental impact and risk assessment management</li> <li>Wastewater, waste gas, waste material, and</li> </ul>	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant</li> </ul>
Environmental	<ul> <li>system certifications</li> <li>Environmental impact and risk assessment management</li> <li>Wastewater, waste gas, waste material, and</li> </ul>	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> </ul>
Environmental	System certifications     Environmental impact and risk assessment management     Wastewater, waste gas, waste material, and waste management      ISO 45001 management system certification     Healthy, safe, and hygienic working environment	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> </ul>
Environmental	Environmental impact and risk assessment management      Wastewater, waste gas, waste material, and waste management      ISO 45001 management system certification	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> <li>Health and safety training</li> <li>Emergency medical personnel and first-aid</li> </ul>
	Environmental impact and risk assessment management     Wastewater, waste gas, waste material, and waste management      ISO 45001 management system certification     Healthy, safe, and hygienic working environment     Prevention, reporting, and handling of safety	Record of greenhouse gas emissions and reduction plans     Pollution discharge permit or relevant approval documents       Health and safety training     Emergency medical personnel and first-aid kits
Environmental	Environmental impact and risk assessment management     Wastewater, waste gas, waste material, and waste management      ISO 45001 management system certification     Healthy, safe, and hygienic working environment     Prevention, reporting, and handling of safety accidents	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> <li>Health and safety training</li> <li>Emergency medical personnel and first-aid kits</li> <li>Prohibition of child labor</li> </ul>
	Environmental impact and risk assessment management      Wastewater, waste gas, waste material, and waste management      ISO 45001 management system certification      Healthy, safe, and hygienic working environment      Prevention, reporting, and handling of safety accidents      Emergency preparedness and response	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> <li>Health and safety training</li> <li>Emergency medical personnel and first-aid kits</li> <li>Prohibition of child labor</li> <li>Prohibition of forced labor</li> <li>Working hours, wages, and welfare benefits</li> <li>Freedom of association and collective</li> </ul>
	• Environmental impact and risk assessment management  • Wastewater, waste gas, waste material, and waste management  • ISO 45001 management system certification  • Healthy, safe, and hygienic working environment  • Prevention, reporting, and handling of safety accidents  • Emergency preparedness and response  • Fire permit, building permit	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> <li>Health and safety training</li> <li>Emergency medical personnel and first-aid kits</li> <li>Prohibition of child labor</li> <li>Prohibition of forced labor</li> <li>Working hours, wages, and welfare benefits</li> <li>Freedom of association and collective bargaining</li> </ul>
	• Environmental impact and risk assessment management  • Wastewater, waste gas, waste material, and waste management  • ISO 45001 management system certification  • Healthy, safe, and hygienic working environment  • Prevention, reporting, and handling of safety accidents  • Emergency preparedness and response  • Fire permit, building permit  • Inspection and maintenance of fire facilities	<ul> <li>Record of greenhouse gas emissions and reduction plans</li> <li>Pollution discharge permit or relevant approval documents</li> <li></li> <li>Health and safety training</li> <li>Emergency medical personnel and first-aid kits</li> <li>Prohibition of child labor</li> <li>Prohibition of forced labor</li> <li>Working hours, wages, and welfare benefits</li> <li>Freedom of association and collective</li> </ul>



Trinasolar Supplier ESG Risk Due Diligence Key Audit Points					
Business Ethics	<ul> <li>Business ethics and code of conduct system</li> <li>Business ethics audit or self-audit</li> <li>Record of violations of business ethics</li> </ul>	<ul> <li>Business ethics training</li> <li>Whistleblower and whistleblower protection mechanism</li> <li></li> </ul>			
Sustainable Procurement and Material Traceability	Sustainable procurement management     Communication of ESG-related requirements to upstream suppliers	<ul> <li>Record of information related to key material suppliers</li> <li>Conflict minerals management</li> <li></li> </ul>			

Note: The above points will be reviewed from three dimensions, which are policies and processes, practices, assessment and appeal mechanisms

**98.41%** 

Proportion of core suppliers who have signed the CSR Code of Conduct of Trinasolar Supplier in 2024

Note: Trinasolar's core suppliers include PV Products Business Unit, Mounting System Business Unit and Energy Storage Business Unit

### **Supply Chain Due Diligence**

To ensure supply chain resilience and compliance in environmental and labor practices, the Company formulated and implemented the Supply Chain Due Diligence Manual, in accordance with the requirements of the Corporate Sustainability Due Diligence Directive (EU) 2024/1760, German Act on Corporate Due Diligence in Supply Chains (LkSG), and the EU's new battery regulation (EU) 2023/1542, among other relevant regulations and rules, clarified the Company's due diligence management policies and strategies, and integrated supply chain due diligence into the sustainability governance system. The Strategy Executive Committee, as the highest management representative of the supply chain due diligence system, provides full commitment and guarantee for the implementation and execution of the system.

## **Trinasolar Supply Chain Due Diligence System**

Personnel Allocation Identify and allocate the necessary management, assessment, review, and recording personnel, and enhance employees' professional knowledge and skills in due diligence investigations

Procedure Construction

Use the Supplier ESG Risk Due Diligence survey Form and the Supplier Risk Form to support the development and deployment of ESG risk identification and analysis tools, ensuring the transparency and traceability of the supply chain

System Construction Establish and maintain an information management system for supplier review, collection, analysis, and reporting of supply chain data to ensure data accuracy and timeliness

Mechanism Establishment Establish a supply chain risk appeal and rectification mechanism to ensure timely handling and satisfaction of related appeals

The Company actively promotes the implementation of the supply chain due diligence system, dynamically adjusts supply chain and supplier management objectives based on business needs and overseas policy changes, classifies and categorizes main and auxiliary material suppliers for each business unit, screens core and key material suppliers, assesses risks around ESG core content, and initiates due diligence. We selected 25 employees from various core departments, provided them with due diligence training, and formed a supplier due diligence task force to ensure professional capabilities in supplier due diligence. The Company has invited a third party to conduct online and on-site supplier due diligence, issued audit reports by the Company, communicated with suppliers for rectification, and continuously tracked the rectification progress to urge suppliers to strengthen management.

### **Supply Chain Traceability System**

The Company has comprehensively upgraded the supply chain management system and conducted supply chain due diligence through a systematic traceability system, carbon footprint platform, and SRM system. We have integrated data such as carbon values, due diligence results, and traceability material information, built an SRM system supply chain map covering 100% of the Bill of Materials (BOM), and managed key materials and conflict element materials through the traceability system, achieving comprehensive optimization of supply chain management.

The Company sets management objectives such as the completion rate of traceability for key materials from core suppliers, plans to achieve 100% traceability coverage of major raw materials within three years, and will continue to track the achievement of objectives in future years.

### **External Certifications Obtained**

# **AA-level**

The pilot cell and module pilot factory has been certified with an AA level in traceability capability by TÜV Rheinland

# **AA-level**

Main Material Business Unit (MMBU) has achieved AA level in external audits for wafer traceability

# **AA-level**

MMBU has achieved AA level in external audits for ingot traceability



Trinasolar has been awarded the highest "AA" rating for outstanding achievement in PV supply chain traceability. 🖡



# **Supply Chain Stability Assurance**

The Company strengthened source control and formulated the Supplier Full Lifecycle Management System. It conducts supplier risk assessment before supplier access and front-ends supply chain risk control.

To prevent risks in advance, the Company has developed an AI software capable of collecting industry information, photovoltaic data, and policy regulations. By analyzing supply chain anomalies such as price fluctuations and market changes triggered by political events, geopolitical conflicts, and policy movements, the Company issues timely early warnings to assist business departments in planning and formulating response strategies in advance.

Additionally, to achieve price risk management, the Company relies on the machine learning capabilities of the Matrix platform. Based on material characteristics, we use decision trees or vector autoregression models to predict key material prices, combined with business logic to enhance accuracy, thereby supporting strategic procurement and comprehensively implementing effective category procurement strategies.

# **Conflict Minerals Management**

The Company is committed to controlling the risk of conflict minerals at source and has formulated the Conflict Minerals Management Framework. New documents such as the Conflict Minerals Management System and the Key Material Traceability Template were developed during the reporting period, incorporating the requirement of not using conflict minerals in the supply chain management. The Company firmly does not purchase or support the use of conflict minerals for 100%. As of the end of the reporting period, the amount of conflict minerals used by Trinasolar was 0, and the revenue from the use of conflict minerals was 0.

# **Trinasolar's Conflict Minerals Management Target**

Resolve to neither procure nor support the use of conflict minerals by 100%

The Company continues to strengthen the management of conflict minerals in the supply chain by conducting research based on the Product Raw Material Mineral Element Research Report, which is identified and listed by the Central Research Institute according to product types, and uses the Critical Material Tracking Table to screen and identify suppliers. In addition, the Company utilizes the Conflict Minerals Reporting Template (CMRT) to determine whether supplier materials contain conflict minerals and conducts due diligence audits on them. To further ensure the compliance of the supply chain, Trinasolar requires suppliers to sign the Commitment on Non-Use Conflict Minerals to strengthen the management and responsibility traceability of suppliers. During the reporting period, the Company had a total of 18 suppliers involved in tin mining business, all of whom have completed the the CMRT questionnaire.

### **Trinasolar Conflict Minerals Management Processes**

Identify Products and Suppliers within Scope

Review the product material list to identify products containing 3TG and their suppliers

Responsible Country of Origin Inquiry (RCOI) Suppliers fill out CMRT. Each business unit of the company identifies the origin of 3TG based on the information provided by suppliers and uses a risk control matrix to categorize suppliers into high/medium/low risk groups

Conduct Due Diligence Investigation

Each business unit of the company conducts due diligence investigations on suppliers identified as high/medium risk

Confirm Completion of RCOI and Due Diligence Investigation

Each business unit uploads the annual RCOI results and due diligence investigation reports to the SRM system

Continuously Improve the Process

Review and refine each step, continuously improving the conflict mineral management process

**Junction box** 

100%

The proportion of suppliers signed Non-Conflict Minerals Statement

Soldering strip

100%

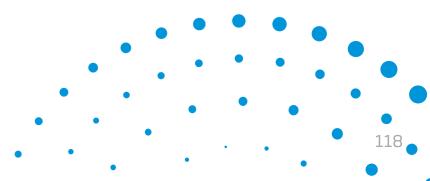
The proportion of suppliers signed Non-Conflict Minerals Statement

# **Green Supply Chain Finance**

The Company has established the integrated model of "Supply Chain Finance + Green Finance", which supports banks in providing green credit services for small and micro enterprises through green supply chain finance, and promotes the flow of funds to green industries.

The Company's self-developed "Trinasolar Financing" platform and the electronic debt payment voucher "Trinasolar Credit Chain" feature characteristics such as divisibility, transferability, financiability, and instant settlement, providing a new channel for low-cost, highly convenient financing for enterprises on the chain. In addition, the Company has continuously optimized the service system, providing services to over 1,800 enterprises on the chain, alleviating the operating capital pressure faced by suppliers, and guiding the precise allocation of credit funds.

As of the end of the reporting period, the Company's financing services have covered nearly 600 suppliers in more than 10 industries including film, backsheet, photovoltaic glass, including listed companies, specialized and innovative enterprises, as well as small, medium, and micro enterprises. Meanwhile, more than 20 financial institutions have cooperated with the Company's platform, with a total payment amount of 26.40 billion RMB and a total financing amount of 15 billion RMB for the year; the cumulative payment has reached 39 billion RMB, and the total financing amount exceeds 20 billion RMB.





# Information Security and Privacy Protection

Trinasolar is committed to building a comprehensive information security system, continuously improving the information security management mechanism in accordance with laws and external standards, conducting information security risk assessment and control, formulating business continuity plans, and fully safeguarding the information security and privacy of employees, partners, customers, and other stakeholders. As of the end of the reporting period, the Company has obtained ISO27001 Information Security Management System certification and the Jiangsu Provincial Department of Industry and Information Technology's "Four-Star Industrial Information Security Protection Enterprise" rating. During the reporting period, the Company did not experience any information or data security incidents, nor any incidents related to customer privacy breaches.

# **Information Security System**

In accordance with the principle of "highest decision-making guidance, management support and guarantee, effective implementation, and active participation of all employees", the Company has established the Governance, Risk, and Compliance Committee as the highest decision-making body for information security, which is responsible for leading the strategic direction of information security. The Information Security Department is set up under the Committee to handle daily management and operations, and information security liaisons are appointed in each department to assist and cooperate with information security management.

The Company upholds the core philosophy of "serving the business and integrating into the business", adhering to the legal and regulatory requirements of operating regions such as the Cybersecurity Law of the People's Republic of China, Data Security Law of the People's Republic of China, and the European Union's General Data Protection Regulation (GDPR). We continuously update a series of standardized documents including the Information Security Management Regulation and Information Secrecy Management Regulation, integrating security requirements into business processes. While the information security management work is being carried out in a comprehensive manner, the framework of the system is being continuously improved to comprehensively strengthen the integrated management of industrial control security, data security, development security, and confidentiality management, and other areas.

To actively respond to the European Union's Cyber Resilience Act (CRA), the Company continuously advancing the security of its products, both in hardware and software. In 2024, by benchmarking against international standards such as IEC 62443 and ISO 27001, and through in-depth regulatory observations as well as close collaboration with external experts, we have established a clear direction for compliance management in response to a diagnosis of compliance with the EU Cybersecurity Legal Framework. Additionally, we plan to implement security controls across our value chain and conduct audits in accordance with the IEC 62443 standard, remaining committed to providing reliable, sustainable, and secure products.

With reference to the ISO27001 management system standard, we regularly carry out internal information security audits, mobilize information security specialists from various departments to cooperate in the implementation, covering multiple core departments. Through audits, we identify existing risks and issues, and take corrective, preventive, and improvement

measures to maintain and improve the management system. We have also undergone a number of external information security audits, including ISO27001 routine external audits, ISO37301 audits, U.S. IT audits, European GDPR audits, and customer audits, among other unscheduled audits, all of which have verified the compliance and effectiveness of the information security management system.

# **Information Security Management and Technical Measures**

We conduct risk assessments, strengthen technical construction, build a secure operation system, establish emergency mechanisms, and enhance employee awareness, taking multiple measures to comprehensively safeguard the Company's information security.



The Company continuously optimized the Information Security Risk Assessment Process and conducted comprehensive risk assessments of core business systems. The assessments encompass asset value analysis of business systems, identification of potential threats and vulnerabilities, estimation of security incident probability and impact, and critical risk response activities. Risk assessment ensures robust system operations and reinforce enterprise-wide information security governance capabilities.



To enhance the security and stability of industrial production digitalization systems, the Company has proactively implemented industrial cybersecurity infrastructure upgrades. Initiating from production base risk profiling, we have deployed industrial firewalls and enforced machine security via application whitelisting. Multilayered controls including peripheral device restrictions, network ingress filtering, port lockdowns, and access governance have effectively mitigated security incidents. Coupled with refined industrial security policies and operational protocols, we maintain persistent cybersecurity across all manufacturing facilities.



The Company has established a security operation system to comprehensively control information security risks. The Company invited third-party professional institutions to carry out offensive and defensive exercises and vulnerability scanning, real-time follow-up and analysis of threat intelligence, and regularly organized internal vulnerability scanning work and took remedial measures. The Company integrates security controls into the whole process of digital system development, enabling proactive risk mitigation that reduces remediation costs, and enhancing system reliability. In addition, the Company has designed an information security operations dashboard that visualizes threat landscapes, incident response metrics, and control effectiveness, empowering data-driven security posture enhancement.





To effectively respond to various types of information security emergencies, the Company has established an emergency response mechanism for information security incidents, and mandates annual cross-functional drills simulating ransomware attacks, phishing campaigns, and data breach scenarios.. Through efficient cross-departmental linkage, it significantly improves the ability of risk identification and emergency response, reducing potential security risks



The Company actively promotes information security training and adopts a combination of "online + offline" modes to popularize information security-related knowledge among employees through posters and journals, online courses and assessments. During the reporting period, the Company produced and delivered 4 online courses and conducted 15 workshops. Additionally, the Company carried out phishing email drills targeting all employees to simulate real attack scenarios, assess and enhance their ability to guard against such threats. Employees who showed deficiencies due to inadequate training were given further training and retested to ensure compliance with information security requirements

The Company has established an information security feedback channel to promptly detect and address potential information security issues.

Trinasolar Information Security Feedback Channel: Email: SRC@Trinasolar.com

# **Privacy Protection**

The Company establishes a comprehensive privacy and personal information protection system, set up an assessment team consisting of personnel from the compliance, information security and legal departments to be responsible for all data compliance matters relating to cross-border data and personal information protection. We have formulated policies such as the Cross-Border Data Compliance Management Policy and the Personal Information Protection Management Policy to provide solid safeguards for the protection of privacy and personal information of employees, customers, suppliers, and other stakeholders at the institutional level. We have integrated privacy and information protection into the Company's risk and compliance management system, and commissioned third-party institutions to audit information security and cybersecurity, including privacy policies, to achieve all-round and dynamic risk monitoring and prevention.

To strengthen overseas data compliance management, the Company leverages external experts to clarify local compliance requirements, identify and handle privacy and personal information protection risks, build a safeguard system, and establishes Data Protection Officers (DPOs) in Europe, Singapore, and other places to coordinate the management of local affairs and ensure overseas compliant operations.

The Company also protects the security of customer information in all aspects, and collects personal information in strict compliance with the principles of openness, legality, and necessity, and ensures that client authorization or consent is

obtained before collecting personal information. When collecting personal information through web pages, mobile apps, official social media advertisements, online meetings, questionnaires, and other channels, users can authorize the Company to use their personal information through client authorization or consent clauses in user agreements and separate privacy agreements.

Those who violate privacy and information protection regulations will be subject to given appropriate disciplinary actions according to relevant provisions, so as to effectively safeguarding the legitimate rights and interests of customers and employees.

# Trinasolar's Basic Principles of Personal Information Protection

Principle of Consistency of Rights and Responsibilities

Bear responsibility for any damage to the rights and interests of personal information subjects that may be caused by the information processing activities carried out

Principle of Clear Purpose

Have legitimate, justifiable, necessary, and clear purposes for personal information processing

Principle of Informed Consent

Clearly inform the personal information subject of the purpose, method, scope, and rules of personal information processing, and seek their authorized consent or have other legal basis

Principle of Minimum Necessity Except as otherwise agreed with the personal information subject or having other legal basis, only process the minimum types and amount of personal information necessary to achieve the purpose authorized by the personal information subject; after the purpose is achieved, promptly delete or anonymize the personal information in accordance with the agreement

Principle of Openness and Transparency Publicly disclose the scope, purpose, and rules of personal information processing in a clear, understandable, and reasonable manner, and accept external supervision

Principle of Ensuring Security

Possess capabilities matching security risks and take sufficient management measures and technical means to ensure the confidentiality, integrity, and availability of personal information

Principle of Subject Participation

Provide personal information subjects with methods to access and correct their personal information, as well as to withdraw consent and cancel accounts





# **Index of Indicators**

# **Sustainability Key Performance Indicators**

Indicator	Unit	2024	2023	2022
Corporate governance performance				
Violations of business ethics and illegal events	cases	0	0	0
Percentage of annual audit plan achievement	%	100	100	-
Coverage rate of employees' anti-bribery and anti-corruption training	%	100	100	100
Percentage of female directors on the board	%	33.33	-	-
Product and service performance				
Total R&D investment	0.1 billion RMB	55.58	55.30	-
Percentage of R&D investment to total operating income	%	6.92	4.88	-
Number of events recalling sold or shipped products for safety and health reasons	cases	0	0	-
Number of marketing violation events	cases	0	0	-
Number of product labeling violation events	cases	0	0	-
Cumulative patents and software copyrights obtained	cases	2,966	1582	-
Cumulative trademark license obtained	cases	827	771	-
Environmental performance				
Total investment in energy saving and environmental protection	10,000 RMB	99,727.55	70,658.00	40,487.60
Comprehensive energy consumption <sup>[1]</sup>	tce	796,949	515,868	264,804
Electricity	MWh	6,406,939	4,141,524	2,026,872
Of which: municipal electricity purchased	MWh	5,416,337	3,348,871	2,026,872
Of which: on-site PV Self-generated	MWh	223,794	136,398	-
Of which: off-site renewable electricity purchased	MWh	766,808	656,255	-
Comprehensive energy consumption intensity of cell	tce/MW	7.34	6.37	5.55

		2024	2022	2022
Indicator	Unit	2024	2023	2022
Environmental performance				
Comprehensive energy consumption intensity of module	tce/MW	2.01	2.07	1.96
Total water withdrawal	10,000 tonnes	4,062.49	2,768.70	-
Of water withdrawal: municipal and lake water supply	10,000 tonnes	4,029.45	2,709.38	-
Of water withdrawal: withdrawals from alternative water sources	10,000 tonnes	33.04	59.32	-
Alternative water sources proportion	%	95.95	60.05	-
Water recycling rate	%	95.92	59.18	-
Operational scope emissions - location-based	10,000 tonnes of CO₂e	289.65	213.50	118.79
Operational scope emissions - market-based	10,000 tonnes of CO₂e	289.60	209.74	-
Of which: scope 1 emissions	10,000 tonnes of CO₂e	7.94	10.77	1.93
Of which: scope 2 emissions - location-based	10,000 tonnes of CO₂e	281.71	202.73	116.86
Of which: scope 2 emissions - market-based	10,000 tonnes of CO₂e	281.66	198.97	-
Scope 3 emissions	10,000 tonnes of CO₂e	2,276.94	2,143.84	1,594.79
Value chain emissions - location-based	10,000 tonnes of CO₂e	2,566.59	2,357.34	1,713.58
Value chain emissions - market-based	10,000 tonnes of CO₂e	2,566.54	2,353.58	-
GHG emissions intensity of cell	tCO₂e/ MW	30.71	27.66	23.76
GHG emission intensity of module	tCO <sub>2</sub> e/MW	8.32	9.30	9.20
Total industrial wastewater discharge	10,000 tonnes	2,619	1,591	1,075
Total chemical oxygen demand emissions	tonnes	1,845	1,119	780
Total ammonia nitrogen emissions	tonnes	198	125	133
Total phosphorus emissions	tonnes	6	5	-
Total suspended solids emissions	tonnes	422	269	202
Total waste gas discharge	billion cubic meters	78.04	46.00	-
Total NOx emissions emissions	tonnes	18.59	19.35	2.70
Total SOx emissions	tonnes	0.06	0.17	1.99
Non-hazardous waste generation	tonnes	199,192	201,786	118,783





ı	ndicator	Unit	2024	2023	2022
Environmental performar	nce				
Of which: recycled		tonnes	190,295	190,634	113,114
Of which: landfill		tonnes	1,186	5,550	279
Of which: incinerated		tonnes	7,711	5,680	-
Non-hazardous waste recy	cling rate	%	96	94	95
Hazardous waste generation	on	tonnes	6,149	9,743	3,679
Hazardous waste transport	red for disposal	tonnes	6,094	9,640	3,677
Employee and community	performance				
Total number of employees	;	people	29,975	43,031	23,077
Number of new employees		people	7,604	27,810	/
Total number of foreign em	ployees	people	2,164	3,429	2,592
	Number of female employees	people	8,136	11,215	6,954
Total number and	Number of male employees	people	21,839	31,816	16,123
percentage of employees by gender	Percentage of female employees	%	27.14	26.06	30.13
	Percentage of male employees	%	72.86	73.94	69.87
	Percentage of employees aged 18-20	%	1.19	3.30	2.32
	Percentage of employees aged 21-30	%	42.95	50.02	43.28
Percentage of employees by age	Percentage of employees aged 31-40	%	46.53	40.67	45.91
	Percentage of employees aged 41-50	%	8.37	5.28	7.40
	Percentage of employees aged over 50	%	0.96	0.73	1.09
	Percentage of employees in mainland China	%	92.76	-	
Percentage of employees by region	Percentage of employees in overseas, Hong Kong, Macau, and Taiwan regions	%	7.24	-	
	Percentage of senior management	%	1.30	-	-
Percentage of employees by level	Percentage of mid-level management	%	7.46	-	
	Percentage of ordinary management	%	14.64	-	-

	Indicator	Unit	2024	2023	2022
Employee and community	y perrormance				
Percentage of employees by level	Percentage of ordinary employees	%	76.60	-	-
Total number of minority e	mployees	people	789	1,875	308
Percentage of new	Percentage of female employees	%	23.74	22.47	-
employees by gender	Percentage of male employees	%	76.26	77.53	-
	Percentage of employees aged 18-20	%	3.09	4.78	-
	Percentage of employees aged 21-30	%	51.49	57.06	-
Percentage of new employees by age	Percentage of employees aged 31-40	%	41.03	35.64	-
	Percentage of employees aged 41-50	%	3.90	2.36	-
	Percentage of employees aged over 50	%	0.49	0.16	-
Employee voluntary turnover rate		%	16.59	17.00	-
Social insurance coverage rate		%	100	100	100
Percentage of collective contract/agreement signing		%	100	100	-
Average hours of training p	per employee	hours	46.69	22.09	7.65
	Senior management	hours	11.69	13.27	116.04
Training hours per	Mid-level management	hours	18.90	15.91	74.96
employee by tier	Ordinary management	hours	22.31	12.67	26.32
	Ordinary employees	hours	51.66	22.66	5.52
Training hours per	Male employees	hours	45.85	22.35	7.59
employee by gender	Female employees	hours	49.03	21.39	7.81
Proportion of employees re evaluations	eceiving regular performance	%	100	100	100
Occupational health and safety investment		10,000 RMB	9,064.08	6,762.95	4,975.86
Number of emergency drills at manufacturing bases		times	1,157	446	-
Lost Time Injury Rate (LTIR)		/	0.809	0.841	0.324
Total community contribut	ion and charity investment	10,000 RMB	1,563.63	1,096.84	479.50



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# **GRI Index Table**

Statement of use: Trinasolar has reported in accordance with the GRI Standards for the period from January 1, 2024, to December

GRI 1 used: GRI 1: Foundation 2021

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417-3	Incidents of non-compliance concerning marketing	No such incidents occurred during the reporting period	-
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418-1	complaints concerning breaches of customer privacy and losses of customer data	No such incidents occurred during the reporting period	-

# **Independent Verification Statement**



Verification Statement: EIV2 070321 0173 Rev. 00

### To the management and stakeholders of TrinaSolar Co., Ltd.,

TÜV SÜD Certification and Testing (China) Co., Ltd. (hereinafter referred to as "TÜV SÜD") has been engaged by TrinaSolar Co., Ltd. (hereinafter referred to as "TrinaSolar" or "the Company") to perform an independent third-party verification on TrinaSolar (hereinafter referred to as "the Report"). During this verification, TÜV SÜD's verification team strictly abided by the contract signed with TrinaSolar 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 TrinaSolar and provided to TÜV SÜD. The scope of verification is limited to the given information. TrinaSolar shall be held accountable for authenticity and completeness of the provided data and information (contains assumptions, projections, and/or historical facts)

### **Scope of Verification**

Time frame of this verification:

The Report contains the data disclosed by TrinaSolar during the reporting period from January 1st, 2024 to December 31st, 2024, including environmental, social and governance information and data, methods for management of material issues, actions/measures and the Company's sustainability performance during the reporting period.

Physical boundary of this verification:

The on-site verification sampling took place at below listed location: Trina PV Industrial Park, No.2 Tianhe Road, Xinbei district, Changzhou city, Jiangsu, China

Scope of data and information for the verification:

\* The scope of verification is limited to the data and information of TRINASOLAR and all companies 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 TrinaSolar'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 in the above scope and places. Sampling and verification are adopted for the data and information in the Report by TÜV SÜD, and only the stakeholders within the Company 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, 2024 are beyond the scope of this verification.
- TÜV SÜD's verification conclusions are based on the analysis of the data and information collected by TÜV SÜD and may not identify all problems and conditions, nor constitute a guarantee of the credibility or status of the subject of verification.

### **Basis for the Verification**

TÜV SÜD Certification and Testing (China) Co., Ltd. No.151 Heng Tong Road, Shanghai 200070

Tel: +86 21-61410123 Fax: +86 21-61408600 Web: www.tuvsud.com

# **Independent Verification Statement**



Verification Statement: EIV2 070321 0173 Rev. 00

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

- International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, Limited Assurance
- Sustainability report verification programme operation rule (CCB\_EIV\_GR\_002E Rev02)

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;
- On-site review of all supporting documents, data and other information provided by TrinaSolar; tracing and verification of key performance information;
- Special interview with the representative of TrinaSolar'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 data and information presented in TrinaSolar's report are objective, factual and reliable, without systematic problems, and can be used by stakeholders.

The verification team has drawn the following conclusions on this Report:

TrinaSolar has identified the internal and external stakeholders such customers, shareholders and investors, governments and regulators, employees, suppliers and partners, etc., and established a stakeholder communication mechanism to collect the demands of stakeholders on a regular basis.
TrinaSolar has established the prioritization process of material topics determination, identified and assessed the priority of the ESG topics which are highly related to the industry, the Company disclosed the strategy, management approach as well as sustainability performance in corporate operation, therefore the Report's adherence to materiality principle is guaranteed.
Regarding the topics of concern to stakeholders, TrinaSolar has clearly disclosed its management approach and performance on high material topics issues such as clean technology opportunities, innovation and technology leadership, product safety and quality, compliance and risk management, and has established a communication mechanism to fully respond to the demands and expectations of stakeholders.
TrinaSolar's Board of directors leads the formulation of the Company's ESG strategic planning, policies and work plans, reviews and approves the Sustainability Report, regularly evaluates the implementation of the Company's ESG work, and continuously promotes the sustainable development of the company. At the same time, TrinaSolar has established an ESG

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committee to implement the work plan proposed by management in the areas of environment, social responsibility and corporate governance.

### **Recommendations on Continuous Improvement**

The verification team has passed the promotion proposal to the management of TrinaSolar during the on-site implementation process.

### Statement on Independence and Verification Capability

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specializes in testing, certification, auditing and advisory services. Since 1866, the company 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. Through expert teams represented by more than 26,000 employees, it adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

TÜV SÜD Certification and Testing (China) Co., Ltd. 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 TrinaSolar are two entities independent of each other and both TÜV SÜD and TrinaSolar 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. All the data and information in the Report are provided by TrinaSolar. TÜV SÜD has not been involved in preparation and drafting of the Report, except for the verification itself and issuance of the verification statement.

# Signature:

### On Behalf of TÜV SÜD Certification and Testing (China) Co., Ltd.



Zhu Wenjun

TÜV SÜD Sustainability Authorized Signatory Officer

March 24th, 2025

Shanghai, China

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

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# Power Beyond Solar





# Trina Solar Co., Ltd

No.2 Tianhe Road, Trina PV Industrial Park, Xinbel District, Jiangsu, China https://www.Trinasolar.com/

Trinasolar reserves the right of final interpretation of the Report.