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SUSTAINABILITY REPORT 2024

TCL Zhonghuan Renewable Energy Technology Co., Ltd.

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Steering Towards a New Era of Great Navigation for TZE

Currently, global scientific and technological competition is intensifying. A new wave of technological revolution and AI-driven industrial transformation is advancing deeply, profoundly reshaping the global economic landscape and future development patterns. As we navigate this critical juncture of global energy transition, we aim to position ourselves as global leaders in driving sustainable energy transformation by developing a more robust smart manufacturing ecosystem. This involves driving the deep transformation of the manufacturing industry toward high-quality and high-end, intelligent, and low-carbon development, continuously leading technological innovation in the photovoltaic (PV) industry, and injecting fresh momentum into global energy transformation and sustainability through China's smart manufacturing innovation.

Commit to long-termism, Pursue what's difficult yet right

We are keenly aware of the intensifying competition in domestic manufacturing, as the industry enters a new development phase where challenges and opportunities coexist. We remain committed to open collaboration, accelerating the iteration of core technologies and product upgrades. By collaboratively building a shared technological innovation ecosystem with upstream and downstream partners in the industry chain, we deepen the integration of technology, capital, talent, and operational capabilities to create sustainable multidimensional competitive advantages. As of Q1 2025, TZE had successfully completed strategic adjustments and upgrades to its module business, with product lines covering mainstream scenarios comparable to competitors. The Company has established a comparative advantage in 210mm silicon wafer technology and its ecosystem, consistently maintaining leadership in both technology and sales. Cumulative global shipments of 210mm silicon wafers have exceeded 200GW, with the expected export market share reaching 60%.

Amid cyclical fluctuations in the PV industry, we remain steadfast in pursuing our global leadership strategy, accelerating the expansion of local manufacturing overseas. This approach ensures the Company's long-term and robust growth through globalization, and navigating breakthroughs during challenging times. We are continually driving the transformation of our business concepts, expediting organizational changes, and optimizing management practices. Our goal is to establish development strategies that align with global industrial competition landscape and trends, thereby enhancing our globalization capabilities. Additionally, we prioritize the cultivation of management talent with international perspectives, laying a strong foundation for our global presence while actively engaging global stakeholders to promote sustainability.

With the deepening of global policies and the increase in market demand, Environmental, Social and Governance (ESG) has become a vital measure for evaluating global corporate value. We persist in advancing sustainability milestones, with our ESG achievements receiving widespread acclaim from international organizations. In 2024, TZE's MSCI-ESG rating rose to BBB, with key issue scores ranking among the global leaders. The Company earned a leadership-level "A-" score in water security, as assessed by CDP, and was included in S&P Global's Sustainability Yearbook 2025, ranking in the top 1% of the Semiconductors & Semiconductor Equipment industry. Moreover, TZE received special recognition as the "Industry Mover".

Lead by braving currents, Prevail by forging ahead

Looking ahead, the global transition to green and low-carbon development is poised to enter a new era. In February 2025, TCL officially became a global Olympic partner, marking a new chapter in its corporate globalization journey. TZE, standing at a new starting point, embraces the Olympic motto of "Faster, Higher, Stronger – Together" to navigate cycles in a rapidly evolving world, collaborate with more partners to advance more sustainable global development, and chart a course towards a better future.

TCL Zhonghuan Renewable Energy Technology Co., Ltd.
Li Dongsheng, Chairman

Letter from the CEO

Driving High-Quality Sustainability through Technological Innovation and Global Strategy

In 2024, the global energy revolution entered a critical phase of in-depth decarbonization. As the PV industry navigates accelerated technological disruption, global supply chain restructuring, and urgent upgrades driven by carbon neutrality commitments, TZE steadfastly advances its sustainable globalization strategy, upholding prudent corporate governance and operational principles. The Company continues to drive technological innovation, accelerate Industry 4.0 manufacturing transformation, and expand competitive green production capacities, building resilience through proactive adaptation to change. Through these efforts, we reinforce our leadership in driving sustainable high-quality development of the new energy sector.

Reshaping industrial competitiveness through technological innovation

We uphold the concept of intensive, integrated, collaborative, and coordinated innovation. By leveraging Industry 4.0 and AI-driven digital twin systems, we are reshaping new quality productive forces in the PV industry. The Company has introduced ultra-thin silicon wafers for large-size display screens in intelligent PV systems, maximizing product quality and benefits. These silicon wafers cater to the high-power demands of modules while supporting low-carbon goals, effectively driving the green transformation of the PV value chain and unlocking the full potential of the industry.

Responding to global changes with green resilience

Addressing climate change is a shared mission for all humankind. We embed the “green gene” into the heart of our enterprise, crafting a comprehensive carbon reduction strategy that spans the entire product lifecycle—from green design and manufacturing to recycling. Through carbon footprint management, green financial tools, and climate-related disclosures, we drive the industry toward transparent and traceable carbon neutrality benchmarks. In 2024, renewable energy accounted for 38% of the Company’s total energy mix, with Scope 1 and 2 greenhouse gas emissions reduced by over 30% compared to 2023. Additionally, the intensity of power consumption and freshwater intake for new energy PV products decreased by 15% and 19%, respectively, exceeding established targets.

Advancing sustainability with a sense of responsibility

We firmly believe that the true essence of technology lies in showing respect for humanity and delivering value to society. We are creating a “global talent symbiosis system” that transcends regional and disciplinary boundaries, seamlessly integrating engineering culture, entrepreneurship, and sustainability. By transforming complex PV technology into accessible carbon reduction solutions, every employee, user, and resident becomes a participant and beneficiary of the green revolution—positioning PV as an inclusive energy source offering sustainable solutions for rural revitalization, ecological protection, and energy equity. We leverage green and sustainable supply chains to build an “industry value chain collaborative innovation platform” with upstream and downstream enterprises. This approach allows TZE’s technology to benefit the entire industry value chain, redefining competitive dynamics and value creation through ecological synergy, and elevating PV technology from “China’s advantage” to a “global shared benefit”. The Company was awarded ISO 20400 Sustainable Procurement Certification in March 2025, marking another outstanding achievement in sustainable supply chain management.

Looking ahead, TZE will continue to embrace the concept of sustainability and champion long-termism, with technology innovation as the core engine. We aim to fulfill our mission with a broader perspective, striving not only for commercial success but also for addressing contemporary challenges of “development” and “sustainability”. leading the PV industry with a commitment to high-quality, sustainable growth. Let’s use light as the bridge to embark on an everlasting journey of advancing civilization.

TCL Zhonghuan Renewable Energy Technology Co., Ltd.
Wang Yanjun, Chief Executive Officer (CEO)

Board Statement

As the highest leadership and decision-making authority on ESG matters, the Board of Directors continues to refine the ESG governance framework, deepen the integration of sustainability strategies into business operations, and promote a balanced development of economic benefits, social value, and environmental responsibilities. We are committed to creating long-term sustainable value for all stakeholders.

ESG Governance Framework and Responsibilities

The Board of Directors has established a Strategy and Sustainable Development Committee, which is responsible for studying and making relevant recommendations on the Company's long-term development strategy, major investment decisions, sustainability initiatives and ESG-related matters. Additionally, the Sustainable Development Steering Committee has been established under the Committee as a standing body responsible for implementing the Board's ESG resolutions, identifying and managing ESG risks, formulating ESG strategies, overseeing strategy implementation and progress toward objectives. This approach ensures that ESG management is integrated throughout the Company's entire operational process.

Material Issue Management and Risk Control

In 2024, the Board of Directors systematically assessed the materiality and priority of ESG issues through specialized interviews, surveys, and meetings, focusing on key areas such as combating climate change, adopting a circular economy, protecting employee rights, enhancing supply chain sustainability, and boosting governance efficiency. These issues have been fully integrated into the Company's risk management system, with tailored response strategies developed by analyzing the probability, impact, and trends of each risk. The Audit Committee, as part of the Board of Directors, is responsible for strengthening compliance review oversight, enhancing risk assessment supervision, and ensuring the effective implementation of control measures.

ESG Strategic Objectives and Implementation Oversight

During the reporting period, the Sustainable Development Steering Committee under the Strategy and Sustainable Development Committee of the Board of Directors deliberated on and approved an ESG strategic plan guided by quantitative goals. It clearly outlined phase targets for areas such as carbon emission intensity, resource utilization efficiency, renewable energy use, occupational health and safety, and sustainable supply chain management. Special meetings were held regularly to monitor progress towards these goals, analyze implementation gaps and improvement paths, and ensure a dynamic equilibrium between ESG performance and business growth.

Information Disclosure and Responsibility Commitments

The Company strictly complies with domestic and international regulatory requirements and disclosure standards, upholding the principles of openness and transparency by regularly publishing ESG policies, actions, and performance outcomes. The Board of Directors will continue to optimize the ESG management system and enhance the timeliness, accuracy, and comprehensiveness of information disclosure.

This report was reviewed and approved by TZE's Board of Directors on April 24, 2025.

Company Overview

Company Profile

Founded in 1958, TZE is one of the world's leading manufacturers of PV wafers and a technology leader in the global PV materials industry. The Company embraces a green ecological philosophy aimed at creating a world where everyone lives under blue skies and white clouds. We are committed to the vision of "leading technology for harmonious coexistence" while promoting our core values of Change, Innovation, Responsibility, and Excellence.

In 2024, TZE fully integrated Industry 4.0 with intelligent manufacturing, consistently leading the way in the adoption of advanced technologies and manufacturing methods within the industry. By leveraging innovation to drive growth, we enhanced our strengths, addressed our weaknesses, and accelerated our global footprint, all while contributing to the high-quality, sustainable, and transformative development of the global green energy sector.

Main Business

The Company's main business centers around silicon materials, focusing on the R&D and production of monoIngotline silicon. Starting from monoIngotline silicon, the Company ploughs into the high-tech, asset-heavy, long-cycle national strategic science and technology industry, and develops in the direction of deepening and extending.

Our main products include renewable photovoltaic wafers, photovoltaic cells and modules, other silicon materials and high-efficiency photovoltaic power plant project development and operation. The application areas of the products include integrated circuits, consumer electronics, grid transmission, wind power generation, rail transportation, renewable automobiles, 5G, artificial intelligence, photovoltaic power generation, industrial control and other industries.

TZE is actively promoting the globalization of its various industrial segments, and has set up investment platforms, marketing centers, and production bases at home and abroad, gradually expanding its presence in the United States, Singapore, Malaysia, the Philippines and Mexico.

Contributing to the Global Net-Zero Transition

As a global leading photovoltaic material and technology solution provider, TZE produces high performance silicon wafers, cells and modules, which effectively improve photovoltaic conversion efficiency, reduce the cost of electricity and help popularize the application of clean energy around the world through continuous innovation and technology iteration.

Business Performance

In 2024, shipments of PV materials reached approximately **125.8** GW, a year-on-year increase of **10.4%**.

In 2024, silicon wafers held a top market share of **18.9%** in the industry, with a year-end production capacity of **190** GW.

In 2024, TZE's self-sustained distributed and centralized power plants generated **696,388.90** MWh of renewable electricity. This brought the total power generation to **8.144** billion kWh, reducing carbon dioxide emissions by **5.0372** million tons—equivalent to planting **460** million trees globally.

Spotlight: Accelerating Globalization and Tracking Net Zero Progress

"I have always believed that globalization is an inevitable question of our times. The current complex situation will not hinder the movement towards globalization but will compel determined individuals to advance their international ambitions in a more mature, responsible, and resilient manner."

Li Dongsheng, Chairman of TZE

In the critical phase of global climate change response and energy transition, TZE focuses on technological innovation while adhering to its strategic approach of "differentiated and long-term development." We leverage an open and collaborative innovation ecosystem to deepen global industrial partnerships, accelerate the expansion of overseas production capacity, and drive down the levelized cost of energy (LCOE) for PV systems through continuous advancement in technologies. By offering low-carbon transition solutions to over 120 countries and regions, TZE showcases Chinese companies' commitment to global green development through tangible actions.

TZE's Journey to Globalization

Overseas M&A

- In 2019, TZE took a forward-looking approach to globalizing and securing intellectual property rights in the PV industry. We enhanced Industry 4.0 manufacturing, technological innovation, intellectual property management, and ESG capabilities, while actively addressing localization and the challenges of trade deglobalization.
- In 2024, the Company acquired a controlling stake in Maxeon[1], a leader in IBC technology with a distribution network spanning over 100 countries. This strategic move enhanced our production capacity for high-efficiency modules and secured ownership of its BC patents, ensuring a competitive edge in technological upgrades.
- In February 2025, the Company acquired 100% equity in Maxeon's non-US sales subsidiary to expand its overseas sales channels and resources.

Factory Investment

- In 2024, the Company announced a partnership with the Saudi Public Investment Fund (PIF) and Vision Industries[2] to invest in establishing a renewable energy PV ingots and wafers factory in Saudi Arabia. This initiative aims to advance the 20GW silicon wafer project and enhance the global "technology–capacity–market" closed-loop.
- In early March 2025, the Company acquired Maxeon's wholly-owned subsidiary SPML[3] in the Philippines to strengthen overseas manufacturing and channel integration, boost global business growth, and enhance the global competitiveness and international presence of its products.

Brand Renewal

- In February 2025, TZE successfully acquired the rights and interests of its subsidiary Maxeon in specific non-US registered trademarks and trademark applications, including the "SunPower" trademark, to further expand overseas sales channels, strengthen the global influence of its products, and optimize its global operations.
- The module brand has been renamed TCL Solar. By leveraging TCL's global advantages and TZE's leadership in the ecological sectors of 210 and N-type silicon wafers, along with SunPower's shingled technology and the innovative patented BC technology, the brand provides customers with world-class, high-value PV products and versatile solutions.

[1] Maxeon: A Singapore-based solar panel manufacturer that was spun off from SunPower Corporation in 2020 and controlled by TZE in 2024.
[2] Vision Industries, founded in 2021 by two leading Saudi groups—Abunayyan Holding and Al Muhaidib Group—focuses on developing and localizing supply chains for solar PV, wind energy, energy storage, and green hydrogen energy.
[3] SPML, fully known as SunPower Philippines Manufacturing Ltd., is Maxeon's sole cell module manufacturing facility in Southeast Asia.

Technical Collaboration to Drive Market Innovations

TZE views "technological innovation" as its core competitive advantage. In the context of globalization, we embrace the philosophy of "M&A and independent growth empowerment." By integrating top-tier global technology resources and enhancing our R&D capabilities, we continually strengthen our core competencies and provide robust momentum for the transformation and advancement of the global PV industry.

TZE Partners with Maxeon to Develop a BC-Focused Ecosystem

In 2024, TZE achieved global integration of leading IBC cell technology patents by strategically holding Maxeon, a trailblazer in PV technology, significantly bolstering its influence in the international renewable energy sector. As the original developer of IBC technology, Maxeon has accumulated over a thousand core technology patents and achieved large-scale global mass production, thereby helping TZE enhance its global industry framework. The two parties have joined forces to further innovate next-generation IBC technology and establish an ecosystem leveraging the BC sector's integrated industry chain advantages. Building on its semiconductor technology expertise, TZE has made key technological advancements in PV materials through strategic partnerships, extended its focus on cell module technology, created a comprehensive technical advantage extending from material R&D to product manufacturing, and delivered more efficient PV solutions to the global market.

Global Operations to Enhance Production Capacity

Global industry chain coordination is evident in corporate collaborations on a micro level, fostering mutual benefit and win-win outcomes among nations on a macro level. Globalization promotes not only market expansion but also technological innovation and industrial upgrading. In July 2024, TZE officially signed the *Shareholders Agreement* with PIF and Vision Industries to jointly establish Saudi Arabia's first localized PV ingots and wafers manufacturing base. By harnessing technological, resource, and market strengths, the partnership will pursue in-depth collaboration in R&D innovation, local talent cultivation, and industry standards development. Together, they aim to build the Middle East's first world-leading PV industry chain, accelerating regional energy transformation.

TZE leverages its core technology and manufacturing expertise in PV, combined with partner resources and market strengths, to further solidify its leadership in the global PV ingot and silicon wafer sectors. It enhances the influence of process standards and intellectual property while advancing strategic upgrades from product output to technical standards output.

Global Business Distributions

Headquarters
Tianjin, China

Management Center
Tianjin, China; Singapore

R&D Center
Tianjin, China

Manufacturing Base
Tianjin, China; Inner Mongolia, China; Ningxia, China; Jiangsu, China

Sales Center
Jiangsu, China; Hong Kong, China

Collaborating with Partners for Shared Sustainability Goals

Global cultural differences pose a significant challenge for businesses pursuing internationalization. TZE prioritizes respect for ecological partners, guided by inclusivity and mutual benefits, to enhance cross-cultural collaboration and establish a shared consensus on sustainability.

We continue to strengthen strategic cooperation with suppliers, explore diverse cooperation models, and enhance the security and competitiveness of ecological supply chains. The Company integrates green supply chain practices into localized operations, establishes an ESG management system for the supply chain, and formulates the *ESG Code of Conduct for Partners* to regulate suppliers' behavior across areas such as environmental protection, labor rights and interests, and business ethics, creating a sustainable supply chain for the PV industry. In 2024, TZE's MSCI ESG rating improved from BB to BBB, ranking first domestically in key issue supply chain labor standards. This indicates that TZE's initiatives in promoting the joint construction of a green supply chain and enhancing labor protection within the supply chain have received widespread recognition.

The overseas employment policy emphasizes balancing legal compliance with operational efficiency, fostering a stable and inclusive global team through equal employment policies, diverse team development, and career advancement support. Supported by mechanisms such as mental health services, these measures effectively enhance employees' sense of belonging, underpinning the execution of the global talent strategy.

We continually engage professional lawyers and consulting teams, collaborate with foreign customers, and work to establish a robust compliance management system (encompassing global procurement, risk and quality management, and trade compliance-related regulations). We remain attuned to regulatory changes, devise response strategies, and adhere to both domestic and international compliance requirements, particularly in areas like customs, trade, foreign exchange, and financial regulations, ensuring the Company's sustainable and stable growth. Customer-centric and leveraging information systems, we integrate online compliance prevention and control measures, dynamically identifying and addressing risk points through "operational + support process" collaboration.

Amid cyclical adjustments and intensifying competition in the global PV industry, TZE emphasizes the strategic core of "Technology Sharing for Value Symbiosis," pursuing globalization as a central pathway and building competitive advantages across three dimensions: reinforcing resilient supply chains, achieving technology-driven breakthroughs, and strengthening localized value symbiosis.

Looking ahead, the Company plans to strengthen the industrial chain resilience through a diverse supply chain layout and regional production capacity synergy. It will solidify its global technological leadership by leveraging N-type silicon wafer and IBC technology R&D, deeply embed ESG governance into localized operations, and foster alignment between brand culture and regional market demands. We aim to establish a sustainable model of technological sharing and ecological collaboration, thus driving the high-quality advancement of the global PV industry.

Cross-Cultural Integration Workshop

2024 Highlights

Economic Performance

CNY **28.419** billion
Revenues

CNY **22.79** billion
Revenue from the renewable energy PV industry

CNY **125.598** billion
Total assets

3.88%
R&D investment to revenue ratio

80.20%
Percentage of revenue generated from clean technologies to total revenue

Social Performance

22.22%
Percentage of female directors

604,768.5
Total staff training hours

6%
Increase in average hours per FTE of training compared to 2023

25%
Share of women in middle and top management

100%
Percentage of new suppliers completing environmental and social audits

100%
Rate of desktop and on-site audits for high-risk critical suppliers

Environmental Performance

37.52%
Percentage of renewable energy in power generation

98%
Comprehensive utilization rate of solid waste

27.41 MWh/MW
Annual electricity intensity of renewable energy PV products

15%
Decrease from 2023

46.73 m^3/MW
Annual fresh water withdrawal intensity of renewable energy PV products

19%
Decrease from 2023

CNY **352.15** million
Environmental protection investment

0
Major environmental violations

102
The number of energy and water conservation projects to remain operational by the end of 2024

ESG Ratings

MSCI

In December 2024, TZE achieved an upgrade of MSCI ESG rating from **BB to BBB**—the highest in China's PV industry—while also leading globally in key issues such as opportunities in clean tech, supply chain labor standards, and corporate behavior.

CDP

In February 2025, TZE earned an **A-** (Leadership Level) rating for the CDP's water security questionnaire and a **B** (Management Level) rating for the CDP's climate change questionnaire, marking the highest ratings in **China's PV industry**.

S&P Global

In February 2025, TZE scored **73** in the S&P Global 2024 CSA Score, **ranking in the top 1% of China's semiconductors and semiconductor equipment industry**.

国证指数 CNI Index

In 2024, TZE received an **AAA** rating in the CNI ESG Index by the Shenzhen Stock Exchange.

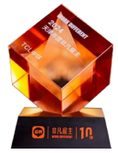
Wind ESG TCL中环 2024评级

In 2024, TZE received an **A** rating from WIND ESG.

ESG Awards

Won the **"National May 1st Labor Award"** from the All-China Federation of Trade Unions

Featured in S&P Global's **Sustainability Yearbook 2024 (China Edition) and Sustainability Yearbook 2025**, earning special recognition as the **"Best Improved Enterprise in the Industry"**



Awarded **"China's Best Learning Organization Benchmark"** by the American Association for the Certification of Training Program (AACTP) and "Extraordinary Employer of the Year" by Liepin, along with several other employer brand recognitions

Awarded **"Best Carbon Neutral Practictioner within Solar & Energy Storage Industry"** by TÜV SÜD and the PV Committee of China Green Supply Chain Alliance

Selected as one of the **"Top 100 Pioneers among China's ESG Listed Companies"** and ranked first in the PV industry

Won the **"Sustainable Brand Model Award"** and **"ESG Information Disclosure Award"** from Huxiu

Included in the **2024 Excellent Practice Cases of Green and Low-carbon Development of Enterprises by the China Enterprise Confederation**

6th China Best Managed Companies (BMC)

Huansheng Solar was recognized in BloombergNEF's **"Global Tier 1 PV Module Manufacturers List"**, and won the **"Solarbe Award"** of Most Influential PV Module Enterprise

Sustainability Management

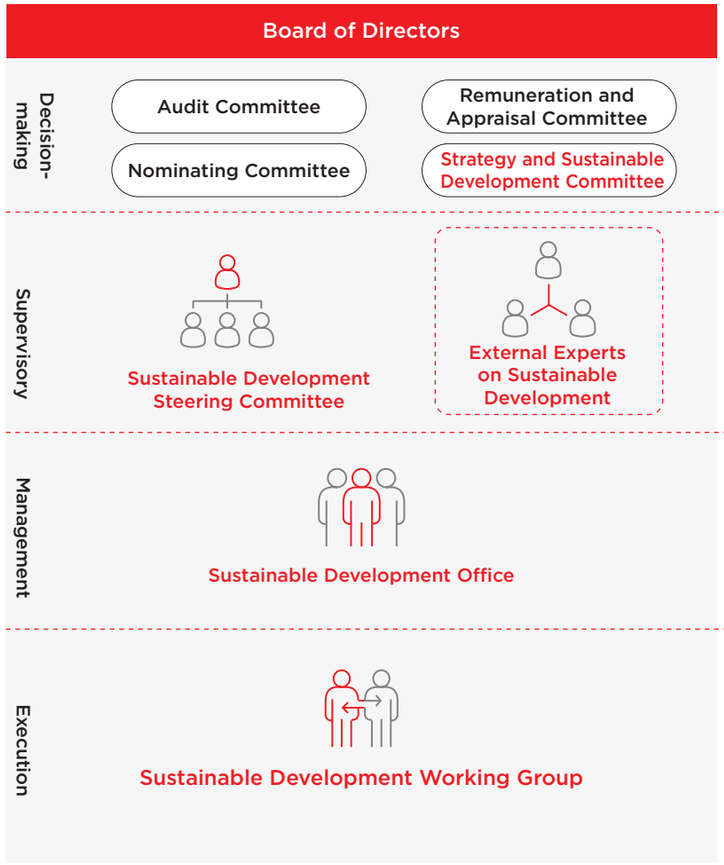
Sustainability Governance

TZE has elevated its sustainability governance to Board-level oversight, establishing a top-down governance structure with clear responsibilities, defined working mechanisms, and measurable performance management goals.

TZE has established a four-tier ESG governance framework that spans "decision-making, supervision, management, and execution," systematically integrating the Board of Directors' Strategy and Sustainable Development Committee, the Sustainable Development Steering Committee, the Sustainable Development Office, and the Sustainable Development Working Group. By employing a governance mechanism that combines vertical integration with horizontal coordination, the Company facilitates two-way interaction between the top-down breakdown of strategic goals and bottom-up feedback on implementation results, with the Execution level submitting quarterly specialized reports to the Sustainability Steering Committee for review prior to escalation to the Board's Strategy and Sustainability Committee. As the central coordinating body, the committee oversees the development of medium- and long-term strategic plans, establishes risk identification and mitigation mechanisms, coordinates cross-departmental resource integration and innovation practices, ensures ESG management is integrated into all aspects of corporate operations, and enables effective implementation and systematic advancement of the sustainability strategy.

The Company has developed a comprehensive ESG indicator system to systematically drive the execution of the sustainability strategy and enhance performance. To reinforce the responsibility transmission mechanism, we have integrated core ESG indicators into the executive performance evaluation system. This covers key issues such as water management, compliance, risk management, workplace safety, technological innovation, human capital development, and supply chain business ethics, driving comprehensive implementation of sustainability goals.

TZE's Sustainability Governance Structure



Board of Directors - Former Strategy and Investment Committee, renamed Strategy and Sustainable Development Committee

- Conduct research and provide recommendations on the Company's sustainability and ESG matters

Sustainable Development Steering Committee

- Be responsible for developing ESG strategies and goals, and supervising their implementation
- Be responsible for the guidance and supervision of annual plans and major ESG projects
- ESG risk identification and coordination of cross-functional ESG cooperation
- Report to the Board of Directors on significant situations

External Experts on Sustainable Development

- Introduce domestic and international ESG development trends
- Advise on ESG strategies, targets, issue policies and risk management
- Assist in developing ESG strategies and targets

Sustainable Development Office

- Develop a plan for ESG strategy implementation, regularly gather information, and facilitate the Sustainable
- Development Working Group to advance strategy implementation
- Develop annual sustainability report and other ESG-related information disclosure
- Regularly report the work progress to the Sustainable Development Steering Committee

Sustainable Development Working Group

- Segment specialized working groups by material ESG issues to represent the department and industry at ESG meetings
- Learn about departmental and industry goals and develop work plans
- Coordinate departmental and industry resources to implement relevant ESG work
- Regularly report work progress to the Sustainable Development Office

Sustainability Strategy

Sustainability Strategic Framework and Medium- and Long-term Goals

Sustainability is a core principle of TZE's business philosophy and corporate culture. We are committed to a strategic vision of sustainability centered on renewable energy technology products. TZE have developed the "SMART" sustainability strategy with the vision of "becoming a globally respected company specializing in renewable energy technologies". Guided by the five strategic pillars—Sustainable, Motivated, Accountable, Reliable, and Transformational—we comprehensively assess and manage the economic, environmental, and social impacts of our business operations, enhancing sustainability governance and integrating sustainability deeply into every operational process.

Under the sustainability strategy framework, TZE has set phased goals for 2025 and 2030, outlined the core focus areas of the five strategic pillars, and provided measurable objectives to ensure orderly progress in sustainability management[1].

Five Long-term Commitments to Sustainability	Course of Action	2023 Baseline	2024 Progress	2024 Target	2025 Target	2030 Target
Sustainable	Continuously improve the energy efficiency of factories and offices, and reduce the power consumption intensity of products	• Renewable energy PV products: 32.43 MWh/MW	• Decrease by 15% ↓	• 3% ↓	• 8% ↓	• 15% ↓
	Reduce the unit water consumption of products in the production process and the overall fresh water intake intensity of the Company	• Renewable energy PV products: 57.69 m^3/MW • Other silicon material products: 8,028.29 m^3/MSI • Water recycling rate: 43% • Percentage of water use from alternative water sources: 53%	• Decrease by 19% ↓ • Decrease by 25% ↓ • 40% • 51%	• 5 % ↓ • 3 % ↓ • 46% • 56%	• 10% ↓ • 5% ↓ • 49% • 59%	• 20% ↓ • 15% ↓ • 60% • 70%
Motivated	Ensure employee safety, strengthen the safety culture, reduce work-related injuries, and create a secure environment for all employees	• LTIFR (lost time injury frequency rate): 0.23	• Decrease by 52% ↓	• 3% ↓	• 5% ↓	• 8% ↓
	Provide training resources and promotion opportunities for employees to unlock their potential and develop a strong talent pipeline	• Have established training courses for employees of different ranks, businesses and departments • Annual average training hours per employee: 37.2 hours	• Optimize leadership, talent training and development systems ↓ • Rise by 6% ↓	• Optimize leadership, talent training and development systems • 5% ↑	• Build a talent training and development system for overseas bases • 10% ↑	• Implement a global talent training and development system • 35% ↑
	Comply with national and local employment laws both domestically and internationally, support diverse talent development, address the needs of employees, respect local customs, and foster an inclusive culture	• Share of women in middle and top management positions	• 25% ↓	• 25%	• Not less than 25.5%	• Not less than 26%

[1]The annual progress of each goal is detailed in the text.

Five Long-term Commitments to Sustainability	Course of Action	2023 Baseline	2024 Progress	2024 Target	2025 Target	2030 Target
Accountable	Create a culture of corporate business ethics with integrity as a core principle and extend this influence across the supply chain	• Establishment of an ISO 37301 system • 100% coverage of business ethics training for employees	• ISO 37301 certification achieved • Maintain 100% coverage	• ISO 37301 certification achieved • Maintain 100% coverage	• Encourage subsidiaries to achieve ISO 37301 certification • Maintain 100% coverage	• Obtain certification for the ISO 37001 anti-bribery management systems • Maintain 100% coverage
	Safeguard data and information security for enterprises, customers, supply chain partners, and employees, while enhancing data governance resilience and management mechanisms	• 2 entities with ISO 27001 certification	• 4 newly added entities	• 4 newly added entities	• Facilitate subsidiary certifications	• Ensure all company information security management system certifications remain valid
Reliable	Establish an effective hierarchical management system to address weak points in supply chain ESG management and enhance annual due diligence on high-risk suppliers	• Establishment of an ESG risk assessment and management mechanism for suppliers • Coverage rates for on-site and desktop audits of high-risk critical suppliers	• On-site audit coverage rate: 61% • Desktop audit coverage rate: 39% • ISO 20400 certification achieved	• On-site audit coverage rate: 60% • Desktop audit coverage rate: 40%	• On-site audit coverage rate: 60% • Desktop audit coverage rate: 40%	• The system will fully comply with the ISO 20400 Sustainable Procurement standard100% • 100% of suppliers with conflict mineral risk will provide third-party “conflict mineral-free” certification
	Implement a global customer research mechanism and localized communication strategies tailored to local customer needs to boost global customer satisfaction	• Customer satisfaction: 93%	• 94.35%	• 95%	• 95%	• Global customer satisfaction will remain above 95%
Transformational	Innovate in PV and semiconductor technology R&D, and low-carbon product R&D	• Number of IP patents: 1,739	• An increase of 150% over 2023[1]	• 20% ↑	• 40% ↑	• Industry leader

[1]In 2024, the cumulative number of intellectual property rights is consistent with TZE's 2024 Annual Report, including data from the overseas subsidiary Maxeon within the reporting scope.

Stakeholder Engagement

TZE places a high priority on stakeholder needs and expectations, continually enhancing effective communication with a range of stakeholders—including investors, clients, employees, suppliers, communities, NGOs, media, financial institutions, and government entities—to ensure the decision-making process considers the interests of all parties. To thoroughly address stakeholder needs and comprehensively identify and manage ESG risks, we have developed and publicly released nine[1] more targeted sustainability-related policies by referencing international standards, such as the *OECD Due Diligence Guidance for Responsible Business Conduct*, while further integrating stakeholder communication and due diligence. We have effectively incorporated these policies into our management systems and formulated countermeasures to prevent and minimize impacts on all parties to the greatest extent possible.

Key Stakeholders, Issues of Concern and Communication Channels

Stakeholders	Employees	Clients	Stakeholders from Industrial Parks[2]	Suppliers	Investors	Government and Regulatory Agencies
Issues of Concern	• Occupational health and safety • Data security and privacy protection • Product management • Human capital and development	• Opportunities and innovation in clean tech • Product management • Sustainable supply chain	• Occupational health and safety • Human capital and development • Data security and privacy protection • Opportunities and innovation in clean tech	• Opportunities and innovation in clean tech • Sustainable supply chain • Compliance and risk management • Business ethics	• Opportunities and innovation in clean tech • Community contributions	• Climate change response and energy management • Compliance and risk management • Corporate governance • Opportunities and innovation in clean tech
Communication Channels	• Labor union/employee congress • Employee symposiums • Mailbox of the factory manager • Survey on employee satisfaction and engagement	• Client satisfaction survey • Regular seminars • Client service hotline	• Regular communication mechanism with stakeholders from industrial parks • Stakeholder training • On-site work and research of stakeholders	• Regular communication mechanism with suppliers • Supplier training • On-site research and visits of suppliers	• Shareholders' meeting • Regular reports • Performance briefings • Daily investor communication sessions	• Formulation of standards • Participation in policy briefing • Regular reports and audits • Government affair platform
Communication Highlights	• Employee satisfaction survey involving 14,000 participants	• Overall client satisfaction: 94.35%	• A total of 509 safety training sessions were conducted for stakeholders from the parks, reaching 36,279 participants	• Two training sessions were held for suppliers, covering 301 participants	• Over 150 roadshows were held, with more than 3,000 investors engaged, achieving an almost 100% response rate from small and medium-sized investors	• Participation in the development and revision of international standards for semiconductor and PV silicon wafers

[1]For details on the relevant policies, please visit our official website at https://www.tzeco.com/esg/policy/
[2]Including park management agencies, logistics service groups, and more.

Sustainability Materiality Assessment

TZE regularly assesses material issues, identifying and analyzing the impacts, risks, and opportunities of sustainability topics. By examining their current and expected impacts on the Company's financial state, this helps evaluate the adaptability of the Company's strategy and business model to sustainability-related risks, enabling better risk and opportunity management.

Double Materiality Issues Determination Process

In 2024, we partnered with an external expert team to assess material issues. In accordance with *Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange—Sustainability Report*, we used the double materiality assessment method for the first time, focusing on "impact materiality" and "financial materiality" to analyze the importance of sustainability issues. Compared to the qualitative ranking based on stakeholder research in 2023, this update uses quantitative analysis to identify the core issues of high external impact and high financial relevance.

Analysis Process for Double Materiality

Contextual Analysis of Business Activities and Relationships

- Analyze Business Activities and Relationships
- Analyze objective factors of the external environment
- Analyze the latest regulatory requirements
- Understand the main stakeholders affected

Formation of an Issue List

- Identify a long list of potential sustainability issues based on sustainability regulatory requirements, standard systems and rating indicators in a deep combination with industry characteristics
- Identify the impacts, risks, and opportunities associated with each issue and compile a short list of sustainable development issues

Assessment and Ranking of Material Issues

- Conduct surveys with stakeholders and internal and external experts to assess whether each issue on the list is material or financially material
- Integrate the impact materiality and financial materiality assessment results, rank them by importance, and submit them to the Board of Directors for decision

Final outcome of the review

- The Board of Directors selects a list of dual-importance issues for this year based on the ranking of issues and comprehensive consideration of the Company's strategic goals

Impact Materiality Assessment

We conducted a survey among a wide range of stakeholders, including government and regulatory agencies, shareholders, investors, directors, supervisors, senior managers, employees, clients, suppliers and contractors, partners, ESG experts, industry associations, communities, and the public. This survey helped us evaluate whether TZE's performance on sustainability issues could have actual or potential material impacts on the economy, society, or environment.

Additionally, we invited partners, industry associations, employees, clients, and other key stakeholders to participate in TCL Technology Group's[1] impact materiality assessment and on-site workshop. Together, we aimed to identify the Company's top ten and top three issues of greatest impact materiality.

Financial Materiality Assessment

Considering the professionalism required for financial materiality assessment, this survey focuses on the following key stakeholder groups: shareholders and investors, directors, supervisors, senior managers, as well as strategic investment and treasury management personnel. All parties conducted a detailed assessment of whether each issue is expected to have a significant impact on the Company's business model, operations, development strategy, financial position, performance, cash flow, financing methods, and costs.

To enhance the scientific rigor of the assessment, TZE utilized TCL Technology Group's financial materiality assessment tool for ESG issues, integrating risks, opportunities, and relevant financial indicators specific to our business context. This process allowed us to summarize and evaluate the financial materiality of each issue within a defined threshold range, resulting in a preliminary identification of ESG issues with financial materiality.

Review and Confirmation of Material Issues

Based on a cross-analysis of impact materiality and financial materiality assessment results, and combined with input from stakeholder assessments, we finalized the issues with double materiality. These issues were then reviewed and confirmed by the Sustainable Development Office and submitted to the Board of Directors for approval.

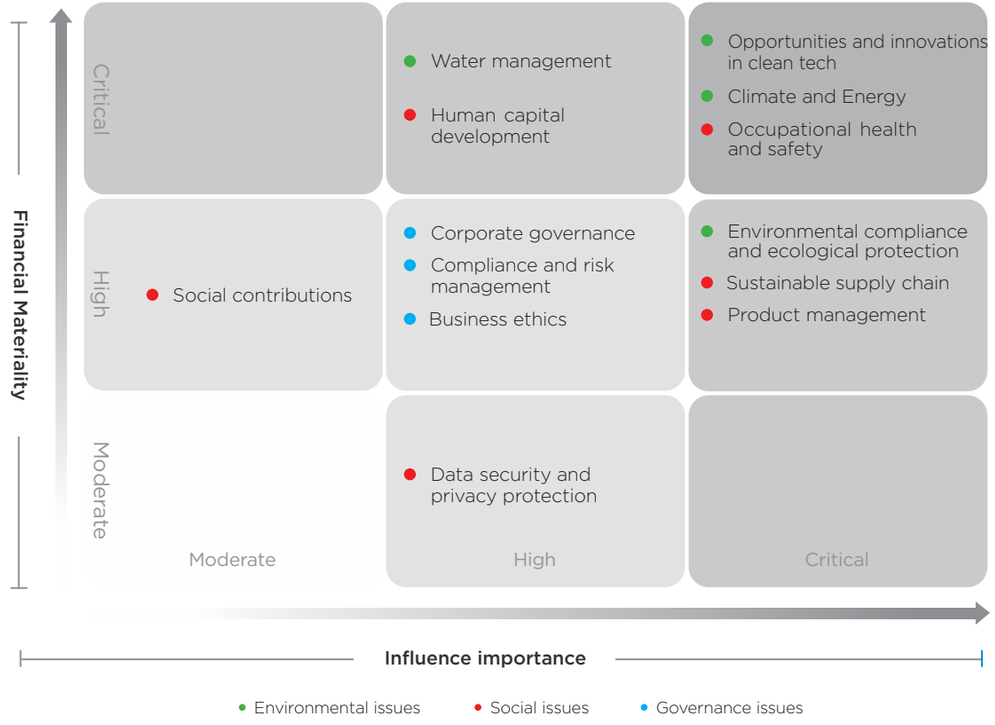
[1] TZE's controlling shareholder is TCL Technology Group Corporation ("TCL Technology Group").

Materiality Matrix

Matrix and List of Material Issues

In order of double materiality, the top five material issues are climate change and energy management, water management, opportunities and innovation in clean tech, human capital development, and occupational health and safety, driving TZE to advance its sustainability strategy.

2024 Materiality Matrix of TZE



TZE's Material Issues for Sustainability

	Issues	Impact Materiality	Financial Materiality
1	Opportunities and innovations in clean tech	Critical	Critical
2	Climate and Energy	Critical	Critical
3	Environmental compliance and ecological protection	Critical	High
4	Water management	High	Critical
5	Product management	Critical	High
6	Occupational health and safety	Critical	Critical
7	Data security and privacy protection	High	Medium
8	Social contributions	Medium	High
9	Human capital development	High	Critical
10	Compliance and risk management	High	High
11	Sustainable supply chain	Critical	High
12	Corporate governance	High	High
13	Business ethics	High	High

Changes in the issues matrix of double materiality compared to 2023's highly material issues:

- Newly added issues: environmental compliance and ecological protection, data security and privacy protection
- Merge "clean tech innovation", "industry 4.0", and "intellectual property" into "opportunities and innovation in clean tech"
- Merge "product liability" and "customer relationship management" into "product management"
- Merge "employee well-being" and "training and development" into "human capital development"
- Incorporate "carbon emission management" into "climate change response and energy management"

Risks and Opportunities Related to Financial Materiality Issues

In 2024, TZE conducted a materiality assessment to identify key issues with financial materiality. These included climate change response and energy management, water management, clean opportunities and technological innovation, occupational health and safety, and human capital development. Please refer to the table below for a detailed analysis of risks and opportunities related to each issue.

Risks and Opportunities Related to Financial Materiality Issues[1]

Issues	Definition	Impact Period	Impacted Value Chain Links	Risks	Opportunities
Climate and Energy	To reduce greenhouse gas emissions, enhance climate resilience, actively engage in climate risk and opportunity management, develop strategies to combat climate change, improve energy efficiency, and promote the production and use of renewable energy.	Short, medium, and long-term	Upstream, self-operation, and downstream	**Physical Risks:** Extreme weather events result in operational shutdowns and decreased production capacity, leading to reduced revenue. Long-term climate change contributes to rising energy prices and increased operating costs. **Technical Risk:** The development, investment in, and adoption of clean tech results in higher short-term costs. **Policy and Legal Risks:** Developed nations impose "carbon tariffs", necessitating increased investment in green products. Stricter information disclosure requirements may result in penalties for future non-compliance with regulations. **Market and Reputation Risk:** Without transitioning to low-carbon products, changes in consumer preferences may result in market share losses.	**Business Continuity:** Implementing preventive measures against physical risks, such as extreme weather, enhances enterprise resilience, mitigating risks and ensuring uninterrupted production and operations. **Efficiency Improvements and Cost Savings:** Employing clean tech and embracing digital transformation enhances production and operational efficiency. **Policy Incentives:** Government subsidies or tax benefits related to "dual carbon" goals can support companies in advancing low-carbon transformation and fostering business growth. **Opportunities in Clean Tech:** As the transition to a low-carbon world accelerates, the development and application of clean technologies present new opportunities for business growth. **Market Competitiveness:** There is a chance to expand into new markets by developing low-carbon products and sustainable services that meet both domestic and international demands.
Water Management	Measures to prevent water shortages, manage water risks, and implement water management practices.	Short, medium, and long-term	Upstream, self-operation, and downstream	**Resource Scarcity Risk:** In regions with limited water resources, excessive use or waste may lead to insufficient supply, detrimentally affecting project operations and development. **Environmental Compliance Risk:** Failure to meet wastewater discharge standards may result in environmental penalties or production license restrictions, damaging the Company's reputation. **Supply Chain Disruptions**: Extreme weather, such as drought, or stricter policies may compromise the stability of supply chains.	**Technological Innovation Driving Efficiency Gains:** Invest in water recycling technology to reduce product water consumption intensity and achieve cost advantages. **Policy Benefits:** Governments promote water-saving technologies by offering subsidies or tax benefits.

[1]Note: For risk and opportunity analysis related to issues on climate change response, please refer to the "Climate Change Response" section.

Issues	Definition	Impact Period	Impacted Value Chain Links	Risks	Opportunities
Opportunities and Innovation in Clean Tech	Integrate green and low-carbon measures throughout the product life cycle to explore opportunities in clean tech and create green products.	Short, medium, and long-term	Upstream, self-operation, and downstream	**Technology Iteration Risk:** The rapid evolution of PV technology means a lack of strategic foresight may erode product performance and cost competitiveness, reducing market share. **Green Standards Risk:** With increasingly stringent carbon footprint and clean tech-related standards, companies that lag may be excluded from premium markets.	**Circular Economy Business Model:** Innovate recycling technologies to establish a circular economy model, cutting costs for raw materials. **Differentiated Competitiveness:** Lower the carbon footprint of products via low-carbon technology to cater to high-premium markets, such as those in Europe.
Occupational Health and Safety	Through its safety production management system, the Company prioritizes and safeguards employee safety and health, implementing measures to mitigate and prevent accidents and occupational diseases.	Short, medium, and long-term	Self-operation	**Production Accidents:** Mishandling mechanical equipment or chemicals can easily lead to safety incidents and work-related injuries. **Occupational Diseases:** Exposure to chemicals, equipment noise, and similar factors may pose health risks to employees and result in occupational diseases.	**Organizational Efficiency Improvement:** By systematically optimizing the production safety process and leveraging intelligent technologies to minimize human operation risks, enhance production consistency, indirectly stabilize capacity and operational efficiency, and support large-scale expansion.
Human Capital Development	Establish avenues for employee growth and career progression, nurture a team of high-caliber professionals, and build a talent reserve to ensure the Company's sustainability.	Short, medium, and long-term	Self-operation	**Technical Talent Gap:** The rising demand for highly skilled talents in the PV sector, if met with an outdated training system, could hinder technological breakthroughs. **Knowledge Loss:** The departure of core technical staff may result in the leakage of critical technologies or disruption of projects.	**Corporate Vitality:** A diverse and multi-skilled talent pool enhances corporate productivity, fosters innovation, and drives business growth. Skills training enables employees to master new technologies and concepts, fostering continuous innovation within the enterprise and adapting to market dynamics. **Efficiency Improvement:** Lower employee turnover reduces recruitment and training costs, ensuring consistent work efficiency. **Talent Reserve:** Ongoing employee development programs help cultivate internal talent, meet the needs of corporate development, and lessen reliance on external recruitment. **Employee Engagement:** An effective training system offers employees a clear career development roadmap, encourages internal promotion, and boosts enthusiasm.

Environmental

A New Journey to Net Zero

Green and low-carbon development are the new pillars of corporate philosophy, and they form TZE's strategic approach to fulfilling its role as a global citizen. Guided by the ecological vision of "creating a world where everyone lives under blue skies and white clouds", we utilize technological innovations to drive environmental governance and integrate carbon neutrality goals throughout the entire product lifecycle. We actively develop a zero-carbon intelligent manufacturing system, promote carbon reduction across the supply chain, enhance water management, and explore integrated innovations in biodiversity conservation and industrial applications. We collaborate with global partners through an open ecological network to build a climate-resilient future, making clean energy the foundation for harmonious coexistence between humanity and nature.

Issues addressed in this section according to SZSE's Sustainability Report

- Climate change
- Pollutant emissions
- Waste management
- Ecosystem and biodiversity protection
- Environmental compliance management
- Energy consumption management
- Water utilization
- Circular economy

UN SDGs addressed in this chapter

Spotlight: Intelligent Manufacturing of Low-carbon Products for a Zero-carbon Future

In line with the global consensus on carbon neutrality, TZE employs "technology as a spear and sustainability as a shield", embedding low-carbon initiatives throughout product lifecycles to drive the PV industry toward alignment with a zero-carbon society. By driving clean energy product innovation and a zero-carbon revolution in production scenarios, we create a circular ecosystem spanning from green design to zero-carbon delivery, transforming each PV module into a "green energy block" for Earth's sustainability.

Recognized as national pilot projects and enterprises

TZE has three major PV projects, along with several subsidiaries, that have been officially recognized as national pilot projects and enterprises for intelligent PV, covering the entire PV industry chain and innovative application scenarios. These projects include: the 50 GW PV solar monoIngotline silicon materials intelligent manufacturing demonstration factory by Ningxia Zhonghuan; the rooftop distributed PV power generation demonstration project at the National Exhibition and Convention Center (Tianjin), developed by Zhonghuan New Energy; and the Tianjin Haijing PV power station with a capacity of 1 GW, a salt-light complementary project which utilizes Huansheng PV's high-efficiency shingled modules.

Creating a garden-style ecosystem

TZE establishes a garden-style factory to enhance the park's greenery and biodiversity, fostering a harmonious coexistence between people and nature in the workplace.

Establishing a zero-carbon factory

- Huanzhi New Energy participated in piloting the construction of Tianjin's zero-carbon factory and was recognized as a "low-carbon factory";
- In 2024, Zhonghuan PV achieved 100% utilization of renewable electricity and will begin construction on its first zero-carbon factory in 2025.

Carbon Footprint Certification Achieved for All Products Across All Production Processes in 2024

Certification Type	Evaluation Carbone Simplifiée (ECS)	Life Cycle Assessment (LCA)	ISO 14067 Product Carbon Footprint Certification
Types and quantities of certified products	Ingot Product: 1 solar PV modules: 100%	Ingot Product: 1 silicon wafer product: 1 solar PV cell: 1 solar PV module: 1	Ingot Product: 1 silicon wafer product: 3 solar PV cell: 1 other silicon material products: 2

Climate and Energy

Addressing climate change is central to TZE's sustainability strategy. Using "Technological Innovation for Emission Reduction and Institutional Management for Risk Control" as dual engines, the Company systematically implements full-chain practices, from top-level governance frameworks to carbon reduction across the value chain. By conducting climate scenario analyses, setting scientific carbon targets, and implementing risk controls, the Company actively addresses climate risks and capitalizes on opportunities for low-carbon transformation.

Governance

TZE has set up a four-tier governance structure of "decision-making, supervision, management, and execution"—to address climate change. The Board of Directors and the Strategy and Sustainable Development Committee, as the highest authorities, convene annually to review climate-related initiatives and clarify responsibilities across all levels, integrating climate change issues into daily operations and corporate governance systems. The Company incorporates quantitative indicators and goals related to climate action, such as energy conservation, emission reduction, efficiency improvement, and renewable energy utilization, into the annual performance evaluations for management and subsidiaries. Through incentive mechanisms, it fully engages all levels of personnel, ensuring the achievement of its climate goals.

The members of the Strategy and Sustainable Development Committee possess both business acumen and extensive experience in the PV industry. Their expertise spans three core areas: semiconductor material R&D, electronic information engineering, and innovation in renewable energy technologies. They also have strong, practical experience in corporate governance and risk management. With a profound understanding of the industrial ecosystem, the committee is capable of systematically evaluating climate risk transmission pathways, precisely identifying strategic opportunities in green transformation, and providing scientific decision-making support for the Company's sustainability initiatives.

Governance Framework for Climate Change

Board of Directors

As the highest climate change governance body, the Strategy and Sustainable Development Committee under the Board of Directors reviews climate strategy, objectives, policies, risk management, implementation performance and information disclosure.

Sustainability Steering Committee

The Committee is responsible for assistings in climate strategy and target setting, climate risk identification and coordination of cross-sectoral work, and reports to the Board of Directors when necessary.

Sustainable Development Office

The Office formulates the implementation plan for the climate strategy, collects information on a regular basis, and coordinates with the Climate Action Working Group to promote the implementation of the climate strategy.

Climate Action Working Group

Strategic Investment Center leads each department and industry to coordinate resources and implement relevant climate management work.

Climate Governance Initiatives

The Company continues to enhance its climate governance system, refine its risk management framework, coordinate innovative response measures among internal teams, and strengthen the climate governance capacities of all employees. We proactively communicate the progress of climate issue management through climate information disclosures, showcasing rating outcomes, and conducting awareness campaigns. Simultaneously, we actively leverage our industry influence and cooperate with external stakeholders to collectively tackle climate change challenges, infusing green energy into shaping a sustainable development model for the industrial ecosystem and fostering the global economy's high-quality growth.

Capacity Building

The Company deeply embeds climate change response efforts into its entire operational process, enhancing the strategic understanding and action capabilities of management and relevant functional teams. The team's expertise in identifying climate risks and making low-carbon transition decisions have been systematically enhanced by organizing specialized training sessions with external experts on climate strategies, action plans, and related topics. In 2024, the Company conducted three specialized training sessions on climate change response for senior management as well as full-time and part-time staff.

Strategy

Carbon Reduction Pathway

Aligned with the national goals of carbon peaking and carbon neutrality, TZE upholds the principles of green development through practical actions. The Company continues to explore pathways for green and low-carbon transformation, establishing a three-tier carbon reduction pathway of "carbon neutrality in self-operations – carbon neutrality across the value chain – promoting global green energy transformation".

Carbon Reduction Pathway		Key Performance Highlights
Promoting global green energy transformation	Guided by technological innovation, efforts are directed at increasing production capacity of PV products, enhancing product efficiency, reducing the LCOE of PV products, improving lifecycle power generation capacity, and promoting global green energy transformation.	Product efficiency has been enhanced with the introduction of the TCL SOLAR N-type BC module G12R-66R, which achieves a maximum output power of **665W** and a peak efficiency of **24.6%**.
Carbon neutrality across the value chain	Through upgrading the green supply chain, we aim to enhance large-size display and thinning of silicon wafer products, analyze and manage carbon emissions throughout the product lifecycle, and actively develop zero-carbon products, covering manufacturing, transportation, sales, usage, recycling, and disposal, to contribute to a zero-carbon society.	Zero-carbon products have been introduced, with full carbon footprint certification across all production stages in 2024. All module products from Huansheng Jiangsu have obtained carbon footprint certifications and are actively involved in piloting product carbon footprint management systems and label certification programs in various regions.
Carbon neutrality in operations[1]	**By implementing seven carbon reduction strategies—energy-saving technical transformation, green transportation, rooftop PV, source-grid-load storage, self-owned power stations, renewable electricity procurement, and carbon credit offsets—we aim to minimize fossil energy usage, increase the proportion of renewable electricity, and achieve carbon neutrality in our operations.**	In 2024, by optimizing the energy structure, the consumption of renewable electricity reached **37.52%**, with **100%** of PV systems installed in industrial parks and factories. Additionally, energy-saving technical transformation, combined with self-owned power station projects, have propelled emission reduction technologies, leading to a significant drop in carbon emissions from operations.

[1]Operation: refers to the facilities, equipments and business activities owned or controlled by TCL Zhonghuan, including all subsidiaries within the scope of this report.

TZE Leads the Creation and Revision of International Standards

In March 2024, TZE officially joined SEMI's Semiconductor Climate Consortium (SCC) and the PV Committee of China Green Supply Chain Alliance (ECOPV). As the leader of SEMI's silicon wafer group, TZE plays a pivotal role in drafting and revising international standards for semiconductor and PV silicon wafers. By leading the formulation of critical international standards, such as carbon emission accounting for the PV industry, we have effectively advanced the global supply chain's low-carbon transition process.

The establishment of the "SEMI SCC & ECOPV" collaboration alliance

Energy Management

TZE has established an energy management system centered on “compliance and advancement”, improving energy efficiency across the value chain through combined efforts in institutional norms, digital empowerment, and capacity building.

System and Management Guarantee

The Company strictly complies with the *Energy Conservation Law of the People’s Republic of China*, the *Regulations on Industrial Energy Conservation and other laws and regulations,* and other relevant laws, regulations, and standards, formulating an internal Energy Management System to define processes for energy procurement, usage monitoring, energy efficiency optimization, and internal auditing. During the reporting period, all 11 of TZE’s factories that met certification requirements successfully obtained ISO 50001 certification.

Energy management initiatives

- Based on the energy usage characteristics of each factory, we adopt the “one factory, one policy” model to formulate differentiated ESG environmental data collection tables, unify data statistical methods, calibrations, and calculation rules, build a standardized data management system, and effectively ensure data quality.
- The industry holds energy analysis meetings every quarter to work with factories in various regions to diagnose the current status and gaps, promote quantitative management of indicators, promote the deep integration of ESG indicators with daily operations, and continuously improve management efficiency.
- Each factory has established a special energy management department to undertake core functions such as the implementation of energy-saving projects, ensuring the stable operation of energy systems, and monitoring and analyzing energy data. Relying on the fine management model, departments continuously optimize energy processes, improve energy utilization efficiency, and help promote energy management effectiveness.
- Based on the different production conditions of each factory, we dynamically optimize the energy supply model, formulate equipment operation strategies that accurately match the production load, and build a standardized system.

Energy Management Training

The Company guides and encourages its subsidiaries to conduct annual energy management training, promoting participation among all employees, fostering energy conservation awareness and habits, enhancing energy efficiency, and supporting its sustainability goals. In 2024, we actively organized energy management training for all employees to ensure a deep understanding and execution of core principles of energy conservation, consumption reduction, and energy control, applying them effectively in daily operations.

Digital Support

The Company has developed an intelligent energy control management platform based on ISO 50001 standards, enabling real-time monitoring, correlation analysis, and intelligent counter-control of energy consumption data, thereby achieving the dual goals of improved energy efficiency and energy conservation.

Energy Management System in the Wafer Industry

In the wafer industry, we have developed a smart energy carbon system consisting of six core functional modules—“monitoring visualization, alarm management, reporting and analysis, AI-assisted decision-making, daily energy management, and dual carbon business”—to create a full-scenario digital energy management system, effectively facilitating energy system upgrades and improving management efficiency.

DW Phase V Smart Energy Carbon Management System

Energy Efficiency Improvement

Based on the unique production characteristics of each factory, the Company employs a dual approach of precise process optimization and advanced equipment upgrades to enhance energy efficiency, significantly lower energy consumption per unit of product, and support the transition to green manufacturing.

Segment	Measures (partial)	Achievements[1]
Ingot	• Dry pump frequency conversion retrofit • Circulating water system functionality improvement	Electricity savings: 77,587,100 kWh
Wafer	• Optimization of the waste heat recovery project for cleaning machines • Staged air supply of air compressors • Heat pump system recovering heat from ice maker return water • Flocculation and aeration transformation of sewage station integrated equipment • Overflow cleaning optimization • Optimization of startup conditions for process water pumps	Electricity savings: 67,962,400 kWh Natural gas savings: 982,800 m^3
Cell and Module	• Cooling tower free cooling • Retrofit of air compressor blast dryer • Standards optimization for circulating water pumps • Zoning-based fuel and power management for workshops • Workshop lighting, PV street lamp upgrades, and PV canopy installations	Electricity savings: 9,916,200 kWh
Other Silicon Materials	• Cold source system intelligent retrofit • Cold source system energy-saving renovation • Air compressor waste heat recovery	Electricity savings: 11,611,200 kWh Natural gas savings: 175,300 m^3

By the end of 2024, the Company and its subsidiaries have completed **63** energy conservation and consumption reduction projects, requiring an investment of CNY **196** million.

In 2024, **26** new energy-saving projects and **2** gas-saving projects were added, saving a total of **167,076,900** kWh of electricity and **1,158,100** cubic meters of natural gas throughout the year.

This equates to a reduction of **89,653.45** tons of carbon dioxide equivalent.

The renewable energy PV product saved **1,300,995.80** MWh of electricity[2].

Ice machine heat and air compressor waste heat recovery project

Renewable energy forklift in the park

[1] These savings are based on theoretical estimates.

[2] Electricity savings achieved by the Company's products across various sectors in 2024. Product electricity savings = Σ product type (electricity consumption per unit in previous year - electricity consumption per unit in this year) × product output in this year.

Utilizing Renewable Energy

The Company identifies accelerating the transition to alternative energy as a cornerstone for advancing low-carbon transformation and building a new energy infrastructure. It has set a long-term goal of achieving “100% renewable electricity” and is advancing through three strategic initiatives: full coverage of distributed PV, development of a green power trading system, and operations of environmental rights and assets.

Full coverage of distributed PV

In 2023, rooftop PV systems were fully installed across all production bases. In 2024, these systems generated **130,724** MWh of self-produced renewable electricity, establishing a robust energy supply network.

Development of a green power trading system

In 2024, we procured **2,804,395.31** MWh of renewable electricity through market-based mechanisms, enabling external clean energy supplementation and creating a dual-drive model of “self-generation + procurement”.

Operations of environmental rights and assets

In 2024, a total of **350,217.02** MWh of renewable electricity generated by self-owned power stations were traded in the carbon market. Through internationally recognized environmental rights certification systems (e.g., green certificate mechanisms), tangible renewable electricity were converted into quantifiable, tradable low-carbon assets, forming a financial support framework for energy transformation.

Achieved **100%** coverage of rooftop PV systems across all production bases, generating **130,724** MWh of electricity annually

Annual renewable electricity procurement totaled **2,804,395.31** MWh, combining with self-generated electricity to reach **2,935,119.31** MWh, accounting for **37.52%** of total electricity consumption

Self-owned PV power stations engaged in environmental rights trading with **350,217.02** MWh of renewable electricity

Risk Management

The Company integrates the identification, evaluation, and management of dependencies, impacts, and opportunities related to climate and environmental issues into its overall risk management process. This aims to mitigate climate vulnerability, capitalize on green opportunities, and strengthen its long-term strategic resilience.

Risk Identification

TZE conducts systematic climate risk assessments to identify relevant risks and opportunities across the entire value chain.

Coverage

- Upstream supply chain, direct operations, and downstream customer demands.

Stakeholder Engagement

- Gather feedback through interviews and research with customers, employees, investors, and suppliers to assess the impact of climate transition on market confidence and financing costs.

Professional Tool Support

- Utilize tools such as RBA (Responsible Business Alliance) and Sedex (Supplier Ethical Data Exchange) to conduct periodic screening of the supply chain.
- Leverage authoritative data sources, such as IPCC AR6, IEA energy scenarios, and WRI's Aqueduct Water Risk Atlas , to identify physical risks (e.g., extreme heat and precipitation) and transition risks (e.g., carbon price fluctuations and policy tightening).

Risk Assessment

Qualitative Analysis

Expert consultations and scenario analyses are used to determine risk probabilities and impacts, generating a heatmap matrix to prioritize management of critical risks.

Risk Probability Classification

Grade	Occurrence Probability Range
Unlikely	<5%
Low likelihood	5%-20%
Possible	20%-50%
Very likely	50%-80%
Almost certain	>80%

Impact Severity Classification

Grade	Scope of Impact on Assets and Income
Low	0.001%-0.01%
Medium-low	0.01%-0.1%
Medium	0.1%-1%
Medium-high	1%-2%
High	2%-5%

Quantitative Analysis

- Use parameters such as the number of extreme weather events and carbon prices, along with industry and regional sensitivity models, to calculate asset exposure and carbon risk value.
- Scenario analysis supports a more scientific assessment by simulating physical and transition risk scenarios, ensuring comprehensive coverage of policy and technical uncertainties under varying temperature rise targets.

Risk Response

Based on the evaluation results, TZE has developed a tiered response strategy.

Physical Risk Response

- Optimize asset geographical layout, enhance disaster prevention facilities, create emergency response plans for extreme weather, improve operational resilience, and ensure business continuity.

Transition Risk Mitigation

- Prioritize investments in low-carbon technologies and green financial instruments, promote low-carbon transformations in supply chains, and select suppliers adhering to carbon management standards.

Market Opportunity Exploration

- Address downstream customer demands through green product innovations, minimize policy compliance pressures, and explore emerging market opportunities.

Risk Supervision

TZE operates a strategic climate risk supervision system.

Dynamic Monitoring

- Real-time tracking of critical climate-related indicators, such as carbon emission intensity, supply chain carbon footprint, and extreme weather events, ensures timely risk identification and management.

Transparent Reporting

- Annual risk management reports are published to fully disclose climate risk exposure, adopted solutions, and their financial impacts.

Adherence to the TCFD Framework

- Corporate governance, strategies, and progress on goals are communicated in line with the Task Force on Climate-related Financial Disclosures (TCFD) framework.

Regular Updates

- Climate scenario assumptions are updated every three years, incorporating the latest IPCC scientific research and stakeholder feedback, optimizing risk assessment models.

Climate Scenario Creation

TZE utilizes the IPCC AR6 and IEA roadmap to create climate scenario analysis models. In 2024, the Company comprehensively identified and evaluated climate dependencies, impacts, risks, and opportunities across all production bases based on their locations, production chains, supply chains, and customer demands. It assessed the financial impacts of various risks and opportunities under different scenarios from short-, medium-, and long-term perspectives to inform climate-related decisions and bolster climate resilience.

Overview of Physical Risk Scenarios

SSP2-4.5 (Inter-medium Emissions Scenario)

Assuming global carbon dioxide emissions remain roughly stable, the global average temperature is projected to rise by 2.7°C by 2100 compared to the pre-industrial era (1850–1900).

SSP5-8.5 (High Emissions Scenario)

Assuming continued reliance on fossil fuels leads to a sharp increase in greenhouse gas emissions, the global average temperature is estimated to rise by 4.4°C by 2100 compared to the pre-industrial era (1850–1900).

Transition Risks and Opportunities

IEA NZE 2050 (NZE Scenario)

This scenario outlines a global pathway to achieve net zero emissions by 2050, with the aim of limiting the rise in global average temperature to 1.5°C, while ensuring universal access to modern energy by 2030.

IEA APS (Announced Pledges Scenario)

This scenario assumes that all ambitious goals announced by governments, including long-term net zero emissions and universal energy access, are achieved on schedule.

IEA STEPS (Stated Policies Scenario)

This scenario reflects the growth trajectory suggested by current policy frameworks. It illustrates how the future trajectory of carbon dioxide emissions and global temperature increase could shift if current policies and measures are consistently implemented.

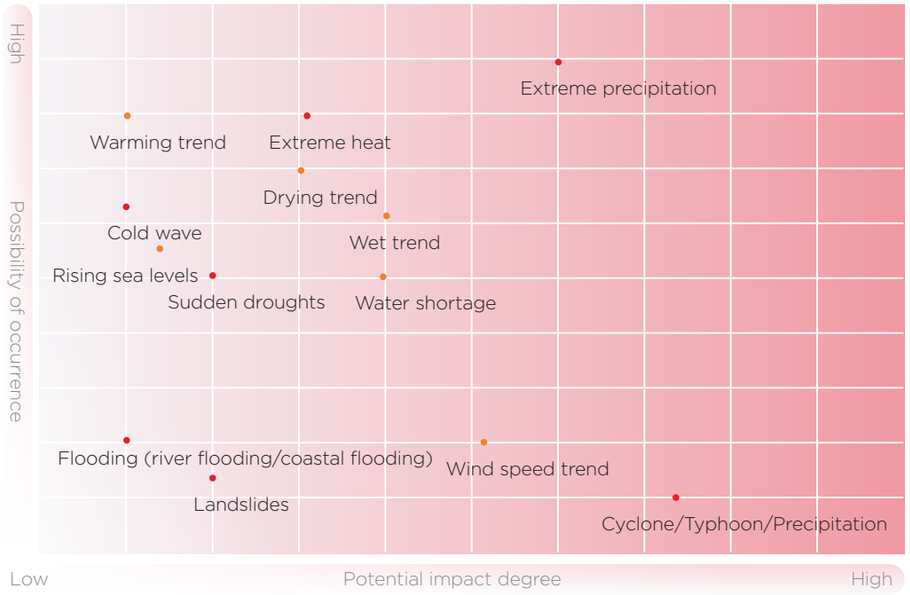
Analysis of Climate Risks and Opportunities

Considering industry and business traits, the Company systematically identifies 32 types of climate risks and opportunities, prioritizing 7 acute physical risks and 6 chronic physical risks, developing a matrix that ranks the likelihood of risk occurrence and potential impact severity, enabling dynamic risk evaluation and strategic prioritization.

TZE's Climate Risks and Opportunities

Period	Physical Risks	Transition Risks	Transition Opportunities
Short term (2024-2025)	• Cyclone/Typhoon/Hurricane/ Wind speed trends • Flooding (river flooding/coastal flooding) • Cold wave	• Energy consumption control • Replacement of high-energy-consuming equipment	• Renewable electricity certificate trading
Medium term (2026-2030)	• Extreme heat • Trends in extreme precipitation/ humidity • Landslides • Flooding (river flooding/coastal flooding)	• Mandatory carbon compliance risk • Recycling technologies for waste modules	• Trends in renewable energy development • Green finance • Enhancing energy efficiency • Investor attention
Long term (2031-2050)	• Sudden droughts • Rising sea levels • Warming trends (elevated average temperatures)	• Clean energy technology • GHG emission requirements in overseas markets • Increase in costs related to raw materials, storage, and transportation (climate-induced) • Fossil fuel prices • Stakeholder demands for climate risk disclosures	• Low-carbon product technology R&D • Optimization of energy consumption structure • Renewable energy • Low-carbon products and services • Market demand for voluntary emission reductions and carbon assets • Industry and public concerns • Industry engagement

2024 TZE Physical Risk Importance Matrix



Acute Risks

Landslides Cold wave Sudden droughts
Extreme heat Extreme precipitation
Cyclone/Typhoon/Precipitation
Flooding (river flooding/coastal flooding)

Chronic Risks

Water shortage Drying trend
Rising sea levels Wet trend
Warming trend Wind speed trend

Financial Impact Analysis

Physical Risk and Financial Impact

Using foundational data on domestic climate disasters, geographic distribution, asset operation locations, industry details, and asset valuations, combined with climate models and datasets, the Company selected representative climate risks, including extreme precipitation, extreme heat, and river flooding, to calculate physical risk scores and determine risk exposure across different periods and scenarios.

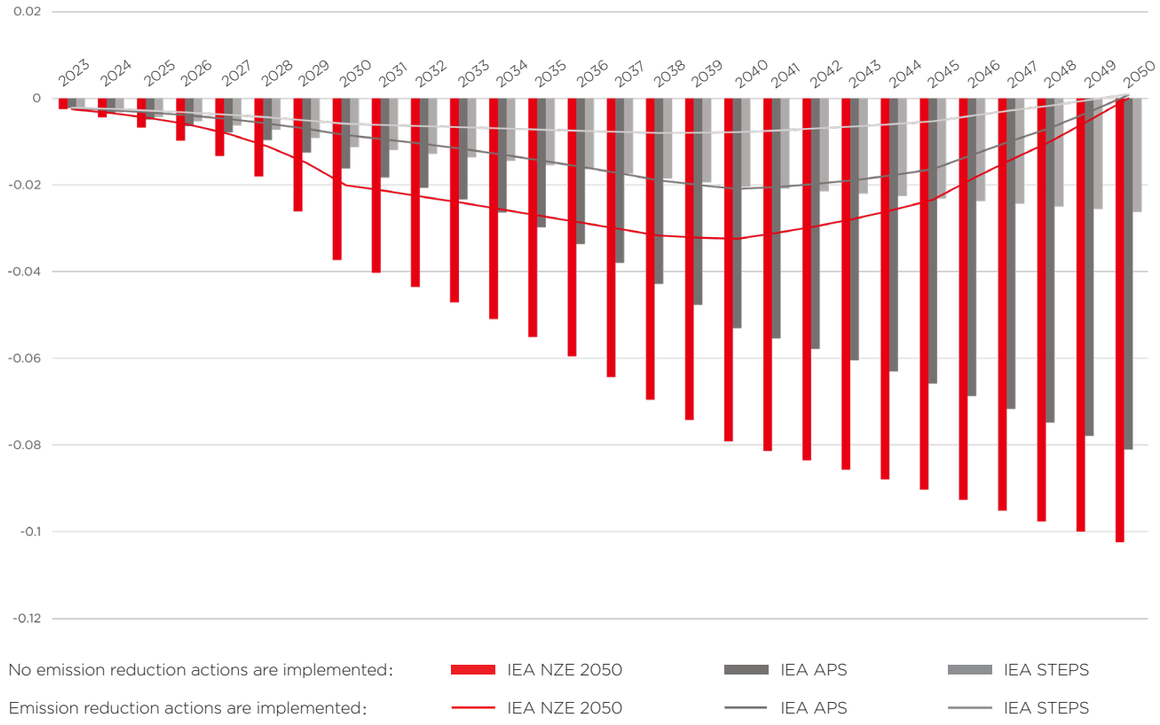
The findings indicate that extreme precipitation and extreme heat pose significant potential risks to corporate asset values across various periods and scenarios. Under the SSP2-4.5 scenario, by 2050, the proportion of the Company's assets exposed to high-risk extreme precipitation and high-risk extreme heat events is projected to be 88.04% and 0.01%, respectively. Under the SSP5-8.5 high-emission scenario, by 2050, the high-risk exposure of assets to extreme precipitation remains stable at 88.04%, while the proportion of assets facing high-risk extreme heat increases significantly to 28.43%.

Transition Risk and Financial Impact

Based on 2021 emission benchmark data, the Company's primary objective is operational carbon neutrality by 2050. Using IEA's carbon budget and price prediction models, enterprise transition risks are systematically assessed under the conditions of fully functional carbon markets and free operations.

Studies show that based on the Company's existing emission reduction target pathways and transformation measures, under the low (IEA NZE 2050), medium (IEA APS), and high (IEA STEPS) emission scenarios, the Company's carbon reduction costs will peak in 2040, 2040, and 2038, respectively, and then decline annually. Under the three scenarios, by 2040, the Climate Value-at-Risk (CVaR) caused by the Company's emission reduction costs will account for 3.24%, 2.09%, and 0.78% of the enterprise value, respectively. If no emission reduction actions are implemented, under the three scenarios, the emission reduction costs will increase annually, and by 2050, the proportion of CVaR will reach 10.24%, 8.10%, and 2.62%, respectively. Quantitative analysis indicates that accelerating low-carbon technology deployment and climate strategy transformation will effectively enhance the Company's adaptability to carbon policy constraints and strengthen long-term operational resilience.

TZE's CVaR in Different Scenarios



Climate Transition Plan

TZE's strategic direction for addressing climate change

Low-carbon operations	Continuously enhance energy management capabilities, improve energy efficiency, and increase the proportion of renewable energy usage.	Integrate the concept of sustainability throughout the Company's operations. Incorporate sustainability into daily activities, production, manufacturing, supply chain management, and other processes to actively reduce operational carbon emissions.
Green and low-carbon products	Actively foster research, development, and application of green and low-carbon products, further diversify the green product portfolio, and minimize the environmental impact of products.	Integrate sustainability across all product life cycle stages, including R&D, packaging, manufacturing, and testing, to consistently provide lower-carbon product solutions.
Sustainable supply chains	Strengthen strategic partnerships with suppliers to collaboratively build a sustainable network of relationships.	Develop a unified strategic framework for the low-carbon transformation of the supply chain. Transition the value focus in supplier partnerships from passive compliance to proactive carbon reduction, leveraging shared insights, aligned actions, and collaborative mechanisms to systematically advance emission management across the supply chain.

Physical Risk Response Plan

To address physical risks such as recurring extreme weather events and intensified chronic hazards caused by global warming, TZE has devised a comprehensive risk mitigation strategy focusing on physical risk management:

- **Climate adaptability planning:** Incorporate assessments of climate-related physical risks into preliminary feasibility studies during the site selection of PV power stations and manufacturing bases. Consider critical factors like terrain elevation and historical flood data to ensure new project locations meet climate-resilience design criteria.
- **Infrastructure strengthening measures:** Enhance waterproofing standards in core production zones (workshops/warehousing/distribution systems), improve plant drainage network monitoring systems, and mitigate potential operational disruptions due to extreme precipitation.
- **Equipment maintenance:** Establish a lifecycle-based equipment reliability management system for its entire lifecycle, integrating high-temperature resistance, moisture resistance, and cold resistance during the equipment procurement phase. Strengthen care and maintenance during operation to enhance the durability and stability of production and public auxiliary equipment in extreme environmental conditions.
- **Early warning and emergency response:** Develop a dynamic mechanism to update extreme weather emergency plans regularly and conduct routine emergency drills.

Transition Risk Response Plan

- To address the financial impacts of transition risks, TZE has committed to a more ambitious carbon reduction path, implemented additional carbon reduction measures, and plans to invest more in carbon reduction efforts before 2030 to prepare for stricter future carbon budgets. It also works to strengthen equipment care and maintenance to enhance the durability and stability of production and public auxiliary equipment in extreme environmental conditions.

Transition Opportunity Response Plan

As a key driver of the global energy transition, TZE will align with market demand, monitor market dynamics, and continuously accelerate growth to seize industry opportunities and achieve sustainability.

- **Technology-driven market expansion:** Based on climate scenario analyses, particularly under a low-emission pathway, the demand for solar energy installations continues to grow. The Company will leverage its technological advantages to further penetrate the market.
- **Global operational layout:** In response to the multipolar growth pattern of the PV industry, the Company has established an agile network integrating local R&D, regional manufacturing, and global services. It has enhanced its low-carbon product certification system, localized production capabilities, expanded BIPV solutions, and achieved coordinated gains in global market share and pricing power by aligning geopolitical policy differences with tailored product offerings.
- **Strategic focus on power station business:** The Company plans to integrate renewable energy power station deployments. Cost-benefit analyses indicate that the benefits of distributed PV self-generation and self-consumption outweigh the costs. In the long term, the renewable electricity trading mechanism can bring benefits to enterprises.

Strategies for Climate Risks and Opportunities

Physical Risk Case – Power Stations

TZE's self-owned PV power stations are primarily located in northern and high-altitude regions like Inner Mongolia, where modules face pollution challenges from extreme weather events such as blizzards and sandstorms. The Company ensures power station efficiency through a comprehensive approach. This includes establishing a dynamic operation and maintenance system, conducting regular inspections and safety audits, and updating meteorological disaster contingency plans every three years; engaging third-party professionals for module cleaning and maintenance to optimize power generation; actively monitoring weather changes and deploying response strategies and resources in advance to ensure modules operate safely, efficiently, and stably in challenging environments.

Transition Risk Case – Carbon Emissions Trading System (ETS) Policy Compliance and Regulatory Risk Management Strategy

In 2024, TZE's four factories—Tianjin Zhonghuan Advanced, Tianjin Huansheng, Huanou New Energy, and Huanzhi New Energy—were incorporated into the Tianjin carbon market. To effectively mitigate performance risks associated with the Tianjin ETS, TZE actively procures renewable electricity, deeply explores the potential for energy-saving technical transformation in its factories, and evaluates the feasibility of distributed PV power generation at its facilities. These efforts aim to reduce the Company's operational carbon emissions and compliance risks within the Tianjin ETS.

In 2024, the aforementioned four factories carried out 24 energy-saving technical transformation projects in total, conserving 175,287 m^3 of natural gas and 39,556 MWh of electricity. Additionally, each factory maximized the distributed PV power resources within their premises. The PV systems generated 19,622 MWh of electricity, leading to the purchase of 124,781 MWh in green certificates. As a result of these measures, the four factories reduced emissions by 143,269.73 tons of carbon dioxide equivalent in 2024.

Transition Opportunity Case – Expanding Green Finance

In 2024, TZE signed an ESG cooperation agreement with Industrial Bank to collaboratively advance green finance initiatives. The agreement aims to encourage TZE to optimize key indicators such as "annual electricity intensity of renewable energy PV products" and "annual fresh water withdrawal intensity of renewable energy PV products", promoting the principle of sustainability. If the Company meets its annual targets for reducing electricity consumption and water withdrawal, it will qualify for preferential loan interest rates, providing significant support and encouragement for its green development initiatives.

Metrics & Targets

TZE translates its climate strategy into measurable emission reduction targets and key performance indicators (KPIs), seamlessly integrating these into its operational management system. Based on the TCFD framework, the Company employs digital tools to dynamically track strategic progress, conduct periodic reviews, and transparently disclose updates to ensure its action plan aligns with its carbon neutrality goal, thus achieving full-cycle closed-loop management.

TZE's Zero Carbon Commitment

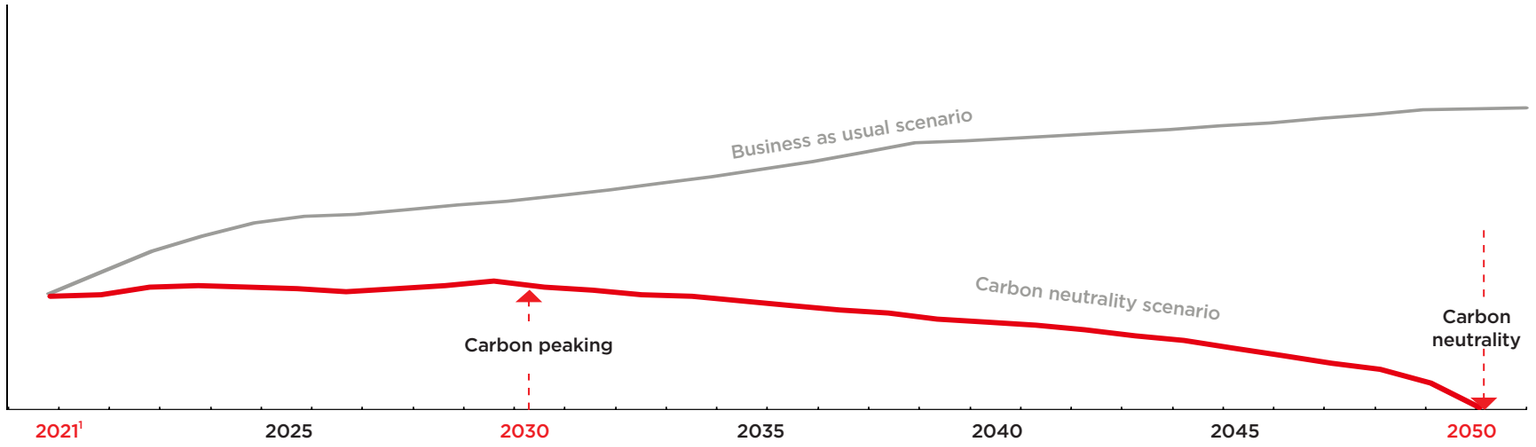
Own operations:

Achieving carbon peaking no later than **2030**

Achieving carbon neutrality no later than **2050**

Target for Renewable Energy Utilization

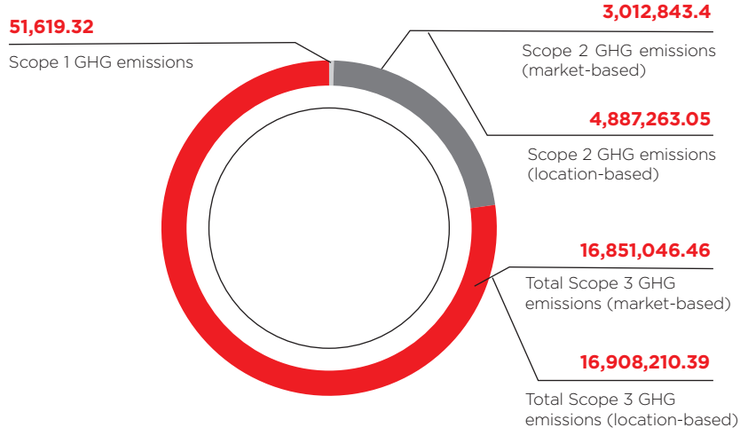
Achieving **45%** of the electricity used in domestic factories generated from renewable sources by 2030



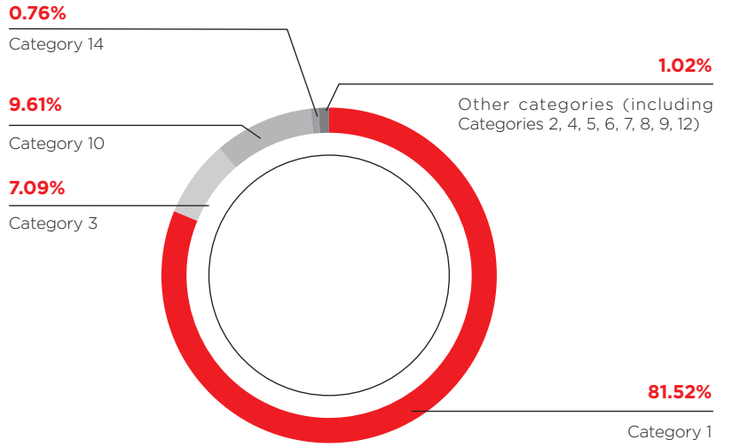
TZE carbon emissions scenario projections

[1]Note: Taking 2021 as the base year, the company proposes carbon emission projections for the "business as usual scenario" and the "carbon neutrality scenario", considering market demand, production capacity planning, industrial distributions, corporate responsibility requirements, supply chain and national policies.

2024 GHG Emissions Performance (tCO_2e)



2024 Share of Each Category in TZE Comprehensive Scope 3 GHG Emissions[2]

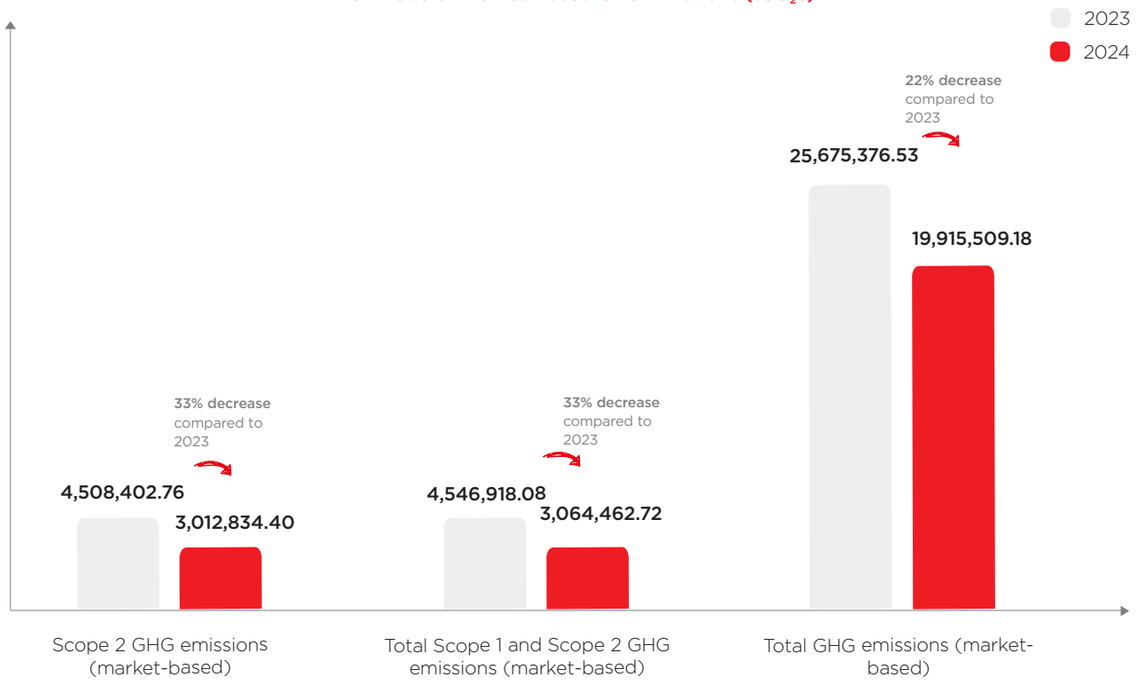


[2]Scope 3 GHG accounting follows the Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Based on the specific industry characteristics and operations of TZE, 12 key categories were selected from 15 in Scope 3 (with appropriate exclusions for unrelated categories). Data collection and calculations were conducted through three methods: supplier data collection, internal stakeholder data collection, and estimations based on general industry data.

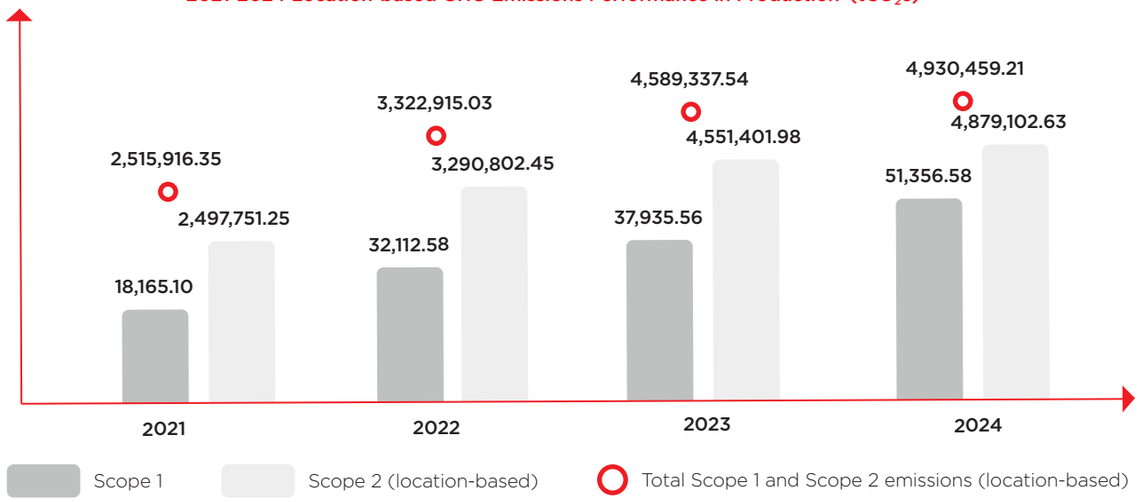
GHG Emissions Performance

Since 2020, TZE has conducted regular corporate carbon inventories, engaged authoritative third-party entities for verification, publicly disclosed GHG verification and approval statements, actively embraced public scrutiny, and reaffirmed its commitment and actions in addressing climate change.

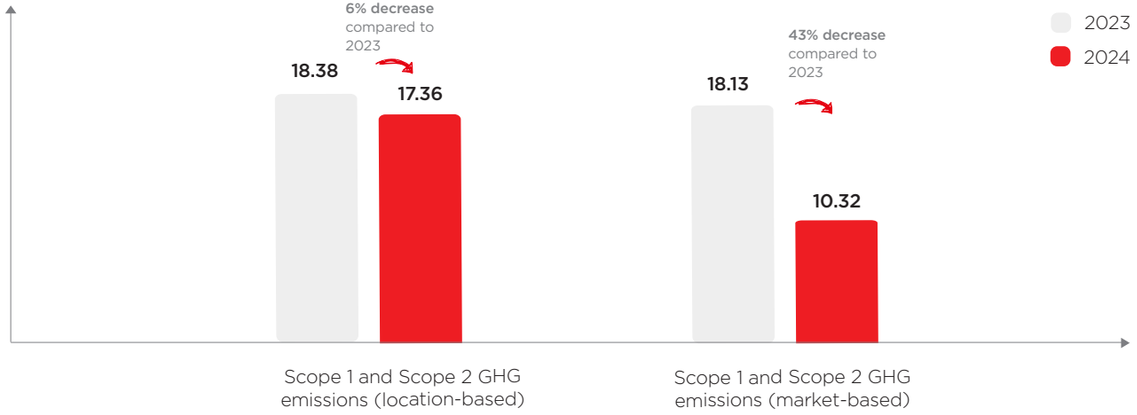
2024 Overall Market-Based GHG Emissions (tCO_2e)



2021-2024 Location-based GHG Emissions Performance in Production[1] (tCO_2e)



2024 GHG Emissions Intensity Performance for Renewable Energy PV Products[2] (tCO_2e/MW)



[1]The production encompasses the complete process, from raw material processing to finished product delivery, covering all production facilities and power stations within the scope of this report.
[2]Product greenhouse gas emission statistics are limited to the factory level.

2024 TZE Comprehensive GHG Emissions Performance[1]

Indicator	UoM	2024
Scope 1 GHG emissions	tCO_2e	51,619.32
Scope 2 GHG emissions (location-based)	tCO_2e	4, 887,263.05
Scope 2 GHG emissions (market-based)	tCO_2e	3,012,843.40
Scope 3 GHG emissions (location-based)	tCO_2e	16,908,210.39
Scope 3 GHG emissions (market-based)	tCO_2e	16,851,046.46
Total GHG emissions (location-based)	tCO_2e	21,847,092.76
Total GHG emissions (market-based)	tCO_2e	19,915,509.18

2024 TZE Comprehensive Scope 3 GHG Emissions Performance

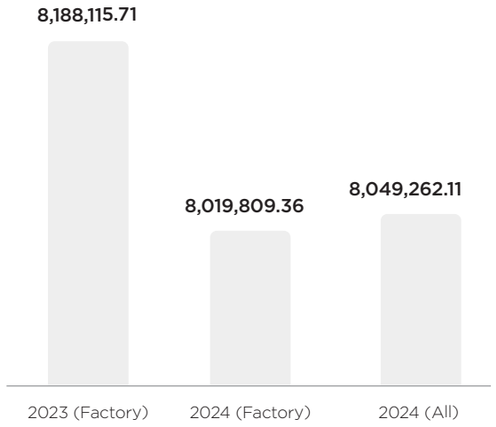
Indicator	UoM	2024	Proportion in Scope 3
Category 1	tCO_2e	13,737,096.43	81.52%
Category 10	tCO_2e	1,618,676.33	9.61%
Category 3	tCO_2e	1,194,959.59	7.09%
Category 14	tCO_2e	128,521.50	0.76%
Others	tCO_2e	171,792.61	1.02%

[1]According to third-party greenhouse gas verification, TZE's process produces no perfluorocarbons (PFCs), yielding zero PFC emissions.

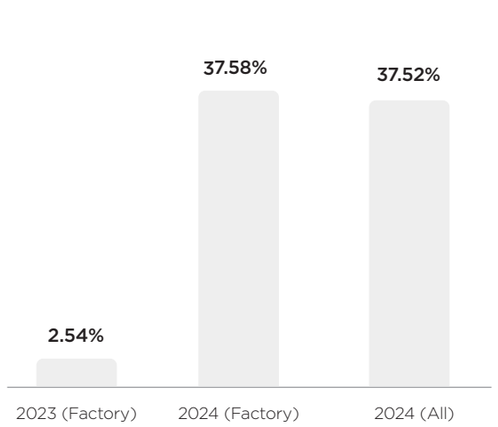
Energy Consumption Performance

Indicator	UoM	2022 (Factory)	2023 (Factory)	2024 (Factory)	2024 (Total)
Total energy consumption	MWh	/	8,188,115.71	8,019,809.36	8,049,262.11
Natural gas	m^3	/	5,512,615.72	7,916,678.19	8,082,379.19
Steam	tons	/	169,015.10	203,986.51	210,485.11
Petrol	Liter	/	21,215.95	17,200.80	80,843.30
Diesel	Liter	/	73,486.29	55,070.08	63,468.37
Total electricity consumption	MWh	5,268,918.42	7,990,386.01	7,801,529.32	7,823,396.24
Purchased renewable electricity	MWh	/	99,336.98	2,803,636.35	2,804,395.31
Purchased non-renewable electricity	MWh	5,229,462.76	7,787,694.66	4,869,580.47	4,888,275.93
Electricity generated by rooftop PV systems	MWh	39,455.66	103,354.38	128,311.51	130,724.00

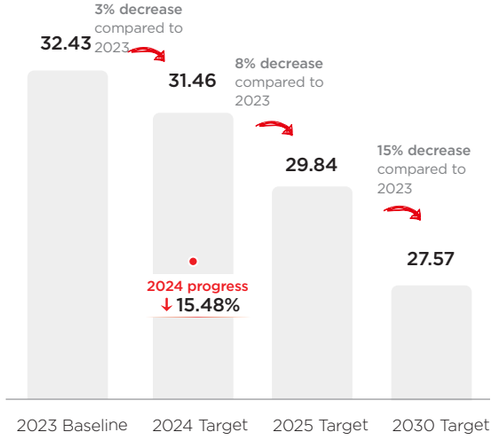
Total energy consumption (MWh)



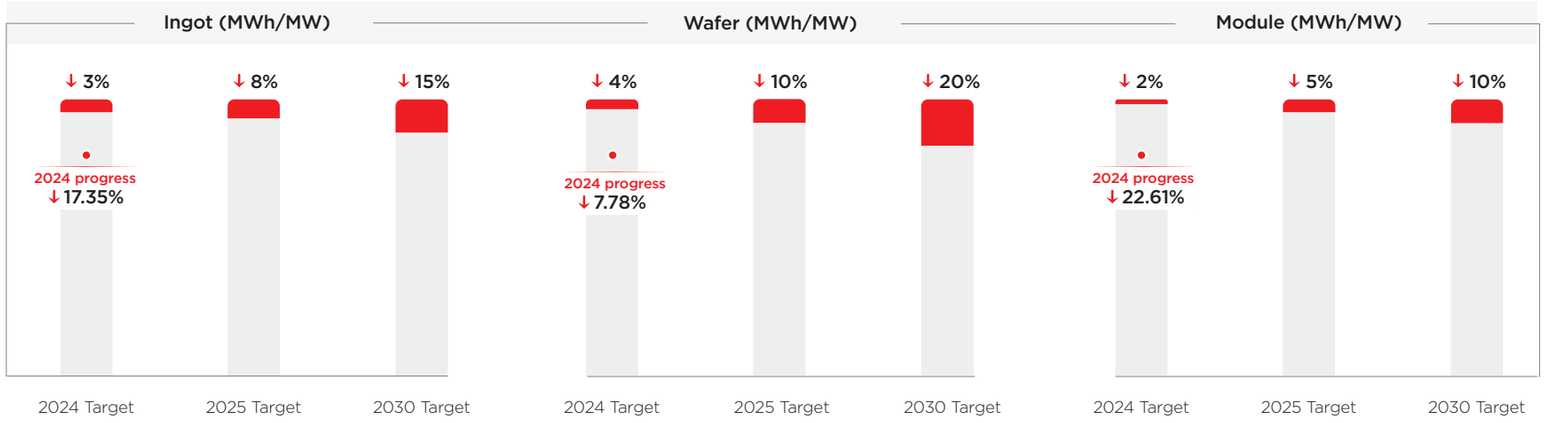
Total electricity consumption - proportion of renewable electricity



The electricity consumption intensity of renewable energy PV products(MWh/MW)



Targets and Progress of Electricity Consumption Per Unit Product



Water Management

Global water scarcity and pollution have become critical challenges to economic and social sustainability. As an advanced manufacturing enterprise that heavily relies on water resources, TZE incorporates water management into its sustainability strategy framework, taking various measures to enhance water efficiency, establish water-saving production systems, and promote sustainable water usage.

Governance

TZE incorporates diverse water management requirements into its *Environmental Management Policy*, conducts regular water risk assessments across all factories, actively implements water risk response measures, and mitigates the impact of production and operation on the water environment. In 2024, the Company's production and operational water withdrawal, consumption, and discharge have no significant impact on water resources in its operating regions.

TZE continues optimizing its water governance structure. The CEO of the Company, the Strategy and Sustainable Development Committee under the Board of Directors, along with the Sustainable Development Steering Committee (consisting of senior executives), are collectively responsible for driving the implementation of water management strategies and achieving performance goals. The Company incorporates water management indicators into the performance assessment of all levels of its ESG governance structure and factory managers, linking water resource management with the remuneration system. This fosters self-motivation among personnel at every level to execute water management tasks and supports goal achievement.

Water Management Structure

Strategy and Sustainable Development Committee under the Board of Directors	Supervising and evaluating water management strategy, goals and progress, while regularly conducting performance reviews
Sustainable Development Steering Committee	Developing water management strategy, plans and goals; regularly tracking water related performance
Sustainable Development Office	Facilitating the execution of water management plans and related performance evaluations
Heads of subsidiaries/factories	Implementing water management initiatives
All employees	Participation

Strategy

Overall Strategy

We have established a comprehensive water management system spanning the entire value chain, supported by a systematic water risk assessment and management framework. This approach helps achieve water conservation, efficiency improvement, cost reduction goals, and advances corporate sustainability initiatives.

Identification, Assessment, and Management of Water-related Risks and Opportunities	• **Governance first:** Establish a top-down management structure for the effective implementation and continuous improvement of water management. • **Management guarantee:** Develop water-risk management strategies and implement water-saving measures. • **Assessment tools:** Utilize the WRI water risk assessment tool to evaluate factory water-source pressure and water consumption risks.
Strategic Planning	• **Cost management:** Scientifically manage water resources to reduce usage costs. • **Promote collaboration:** Strengthen cooperation with suppliers to drive the R&D and application of water-saving technologies. • **Increase investment:** Increase investment in water management to reduce the water footprint of products.
Capacity Building	• **Organize training:** Conduct water publicity and training programs to enhance the awareness of water conservation among all employees. • **Incentive systems:** Develop incentive schemes to encourage water conservation initiatives and feedback.
Goal Setting	• **Set goals:** Set water-related emission targets and systematically track progress.

Water Conservation Management and Measures

TZE has increased the share of alternative water sources by developing a diversified water sourcing system, improving water efficiency, and reducing dependence on primary water resources.

Alternative Water Sources

The Company is actively expanding water sources, replacing fresh water withdrawal and reducing the environmental impact of water resources by collecting rainwater and condensate water, increasing the volume of purchased reclaimed water, and improving the rate of water reuse. In 2024, TZE's fresh water (tap water) withdrawals were **23.7433** million m^3, with water use from alternative water sources accounting for **50.69%**.

2024 TZE Alternative Water Sources Performance

Rainwater and condensate water	Purchased reclaimed water	Recycled water
122,900 m^3	**4.9893** million m^3	**19.3005** million m^3

Total **24.4126** million m^3

Rainwater and Condensate Water

TZE's factories thoroughly analyzed the climate characteristics of their operating regions and established rainwater and condensate water collection and treatment systems, effectively expanding water sources at various process stages and thereby reducing fresh water withdrawals. In 2024, the consumption of condensate water and rainwater was 122,900 m^3.

Purchased Reclaimed Water

TZE's **four** factories—Zhonghuan Crystal, Zhonghuan PV, Inner Mongolia Zhonghuan Advanced, and Ningxia Zhonghuan—located in areas with extremely high water risk, used reclaimed water instead of fresh water for production operations. In 2024, the total volume of purchased reclaimed water reached **4.9893** million m^3, making up **45.60%** of the total water withdrawal of these **four** factories.

Recycled Water

TZE's factories have integrated and optimized recycled water treatment systems tailored to the characteristics of their water consumption processes, encompassing pure water preparation, production wastewater discharge, and public auxiliary wastewater discharge. This has enhanced internal water reuse and minimized fresh water consumption. In 2024, the recycled water volume reached **19.3005** million m^3, achieving a water recycling rate of **40.08%**.

Improving Water Efficiency

In 2024, the Company advanced its efforts on water conservation along its supply chain. During the year, it added **21** new water-saving projects with a total investment of CNY **1,915,200**, resulting in an additional water saving of **5.5107** million m^3. By the end of 2024, the Company has implemented **39** water-saving projects with a total investment of CNY **16** million.

In 2024, Huanzhi New Energy, a subsidiary of the Company, proactively aligned with ISO 46001 Water Efficiency Management Systems standard. This initiative was aimed at enhancing its water resources management system, systematically establishing comprehensive practices, and standardizing associated processes. The goal was to improve ESG performance and create long-term, sustainable value for the enterprise. By the end of 2024, Huanzhi New Energy has fully completed drafting all management documents related to improving water efficiency, providing a robust institutional framework to support efficient water management efforts.

TZE attaches great importance to the use of ultrapure water, which is only used in the production of PV cells and other silicon materials. The Company has continuously increased its investment in wastewater reuse projects for the ultrapure water preparation process, striving to improve the recycling rate of water resources in this process and reduce freshwater consumption. In 2024, the consumption of ultrapure water was **6.45** million m^3, and the ultrapure water production rate of silicon materials plants reached over **80%**.

2024 Water Savings and Key Conservation Initiatives in Production and Operations

Segment	Ingot	Wafer	Cell	Module	Other Silicon Materials
Total water savings	1,477,900 m^3	1,316,200 m^3	38,800 m^3	9,600 m^3	2,668,200 m^3
Preparation of pure water/ultra-pure water	• Reuse of concentrated water in the preparation of pure water	• Reuse of concentrated water in the preparation of pure water	• Reuse of concentrated water in the preparation of ultra-pure water	• Not involved	• Reuse of concentrated water in the preparation of ultra-pure water, sand-containing wastewater
Water consumption in production	• Automatic optimization of the solenoid valve of the flat polishing machine to achieve precise water control	• Conversion of the bonding process from open tap water cooling to closed-loop circulating water	• Cleaning process end sink drainage water reuse to pure water resistivity low grade process	• The space humidification in the welding machine area is changed to precise humidification inside the equipment, reducing the humidification area and saving the humidification water	• Cleaning process end sink drainage water reuse to pure water resistivity low-grade process
Water consumption of public auxiliary system	• Integrated and optimized management of the circulating water system, including the enhancement of medium-temperature cooling water pipelines, to enable intensive supply	• Replacement of cleaning water in large circulation system filter devices with recycled water • Use of deeply purified rainwater for landscaping and environmental water replenishment	• Recycling of condensate water from air-conditioning units	• Optimized management of cooling tower system dosing and wastewater replacement	• Upgrades to landscape pool circulation system with frequency conversion automatic controls to optimize water circulation • Implementation of condensate water reuse by returning it to production pools, conserving raw water and thermal energy. Recycled hot water is utilized in place of sewage biochemical pools to decrease steam consumption.
Wastewater reuse	• Installation of a water island system within the park to treat and reuse particulate wastewater and fluorine-containing wastewater generated during production	• Development of a “zero discharge” wastewater treatment system to reach surface water indicators and enable reuse • Reuse of wastewater produced during operations of insertion machines • 30 COD Water Reuse System	• Ongoing reuse of phosphorus-containing wastewater	• Not involved	• Treatment and reuse of discharged acid wastewater, rinsing water, and drainage water from the tail gas processor of the epitaxial process

Supply Chain Water Management

TZE is actively broadening the scope of its water management, extending these measures to its supply chain operations. The Company integrates water resource protection into the key performance indicators of the *ESG Code of Conduct for Partners*, adopts various measures to guide suppliers in safeguarding water resources, and fosters collaborative management of water resources across the supply chain.

Supply Chain Water Management Coordination Mechanism

- Encourage suppliers to establish water management systems, pursue ISO 46001 certification, set water conservation targets, promote water-saving projects, and minimize wastewater discharge;
- Include water management performance as a a key indicator in the ESG code of conduct for suppliers, both during supplier qualification and annual evaluations;
- Facilitate the development and execution of water-saving plans across the supply chain, track the progress of water conservation initiatives, and pay close attention to suppliers operating in high-risk regions.

Risk Management

To evaluate water source pressure and water consumption risks of factories, TZE utilizes a water risk assessment tool developed by the World Resources Institute (WRI) to determine the water risk levels of all its factories.

According to the assessment, four of the Company's overseas factories are in areas with low water risk. However, three factories in the Inner Mongolia Autonomous Region (Zhonghuan Crystal, Zhonghuan PV, and Inner Mongolia Zhonghuan Advanced), two factories in the Ningxia Hui Autonomous Region (Ningxia Zhonghuan and Ningxia Huanou), and one factory in Tianjin (Huansheng Tianjin) are situated in regions with extremely high water risk. The remaining nine domestic factories are located in high-risk areas. Based on the water risk assessment results, we have developed targeted water risk management strategies and implemented specific measures to optimize water withdrawal and consumption, taking into account the factory's total water usage and water use structure.

Water Risk Assessment and Solutions

WRI Water Risk Index

Physical Risks – Quantity and Frequency
- Water shortage
- Water depletion
- Interannual change
- Seasonal change
- Declining groundwater levels
- River flood risk
- Coastal flood risk
- Drought

Physical Risks – Water Quality
- Coastal eutrophication
- Untreated waters

Regulatory and Reputational Risks
- Drinking water conditions
- Sanitation conditions
- ESG reputation risk assessment

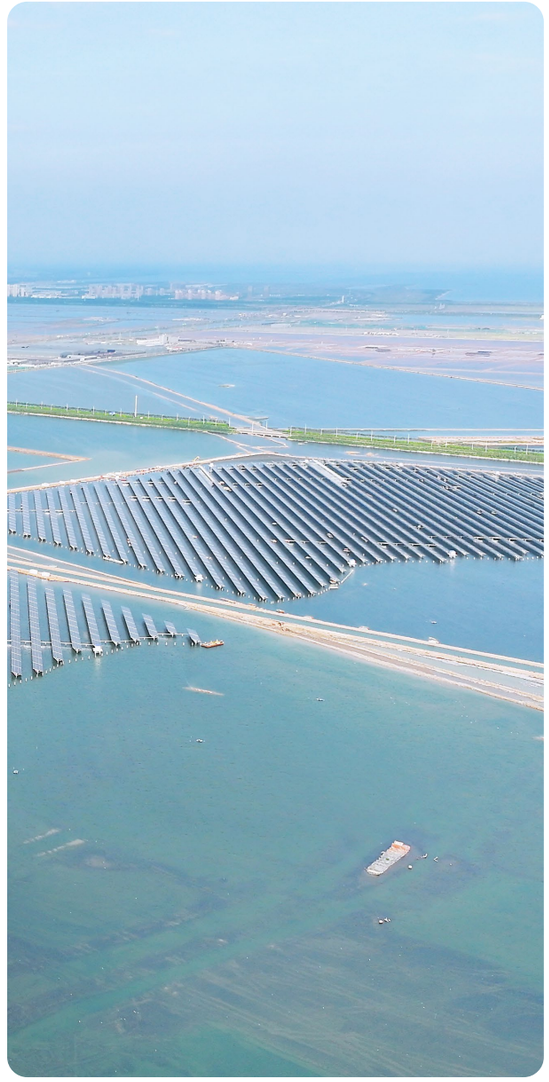
TZE Assessment

Water Use Risk
- Water shortage
- Water depletion

Water Quality Risk
- Sanitation facilities condition

TZE Targeted Risk Response and Inputs

Water Risk Handling Measures			Extremely High Risk Areas (6 Factories)	High Risk Areas (9 Factories)
Management measures	Evaluation and monitoring	Regularly evaluate water resource risks, enhance water use analysis, identify major water use/water saving points, and develop annual water management targets and plans	★★	★★
	Emergency and response	Develop and improve the emergency response mechanism for water environment risk incidents, and carry out emergency response in a scientific and reasonable manner	★★	★★
	Publicity and incentives	Arrange water conservation publicity as well as training and education, improve the awareness of water saving across the Company, set up positive incentive programs for energy saving and consumption reduction, and guide all employees to contribute to water conservation in each business process	★★	★★
Technical measures	Increasing alternative water sources	Implement diversified water withdrawal, thus reducing the usage of freshwater	★★★	★★★
	Improving water efficiency	Improve the water production rate of pure water preparation and lower the total water withdrawal	★★★	★★★
		Optimize water saving in process and reduce waste in use	★★★	★★★
		Increase wastewater reuse and improve water use efficiency	★★★	★★★
	Preventing and controlling water pollution	Optimize the wastewater treatment process and strictly control the drainage index	★★★	★★★
		Improve sewage reuse rate and reduce sewage discharge	★★★	★★★



Metrics and Targets

2024 Water Management Key Performance

Total water withdrawal	Total water discharge	Total water consumption
28.8554 million m^3	**20.606** million m^3	**8.2494** million m^3
Fresh water withdrawal	**Fresh water consumption**	**Recycled water consumption**
23.7433 million m^3	**6.0385** million m^3	**19.3005** million m^3

Social costs avoided through water conservation

In 2024, TZE reduced wastewater discharge by purchasing reclaimed water externally, avoiding social costs of CNY 6.985 million[1]. Furthermore, 51% of production water was sourced from alternative water sources, conserving an equivalent amount of fresh water and saving social costs of CNY 73.23 million[2].

Product Water Savings [3]

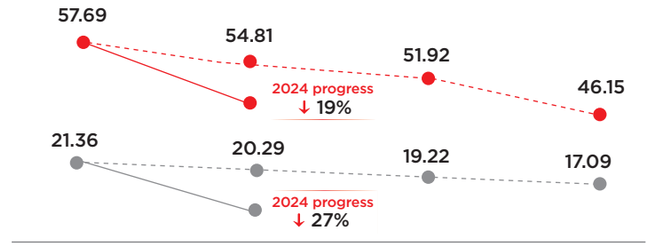
Water savings from renewable energy PV products	Water savings from other silicon material products
1,263,890.71 m^3	**518,822.62** m^3

[1] Average social sewage discharge fee * reclaimed water volume
[2] Average social water charges * alternative water consumption
[3] Product water savings = Σ product type (unit water consumption in the previous year - unit water consumption in the current year) × product output in the current year
[4] Percentage of water use from alternative water sources = (purchased reclaimed water + rainwater + condensate water + water reuse) / total water use; where total water use = total water withdrawal + water reuse.
[5] Water recycling rate = water reuse / total water use; where total water use = total water withdrawal + water reuse.

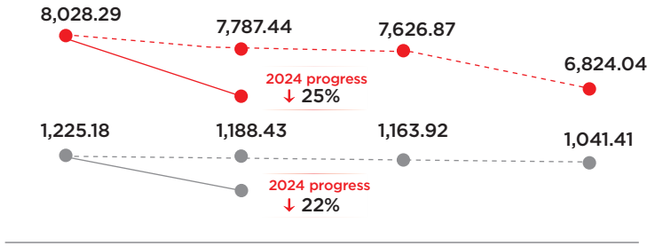
Progress on Water Management Targets

Target	2023 Baseline	2024 Progress	2024 Target	2025 Target	2030 Target
Percentage of water use from alternative water sources[4]	53%	50.69%	56%	59%	70%
Water recycling rate[5]	43%	40.08%	46%	49%	60%

Renewable Energy PV Products Water Usage Reduction Target (m^3/MW)

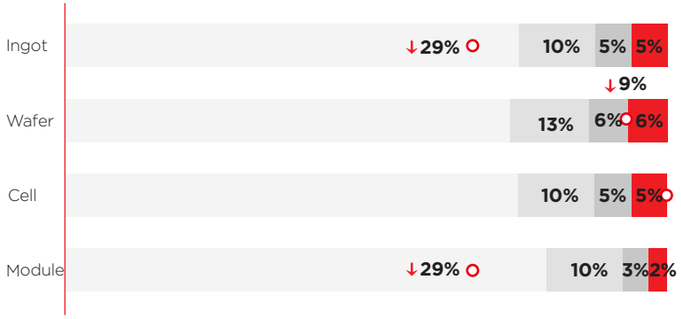


Other Silicon Materials Water Usage Reduction Target (m^3/MSI)

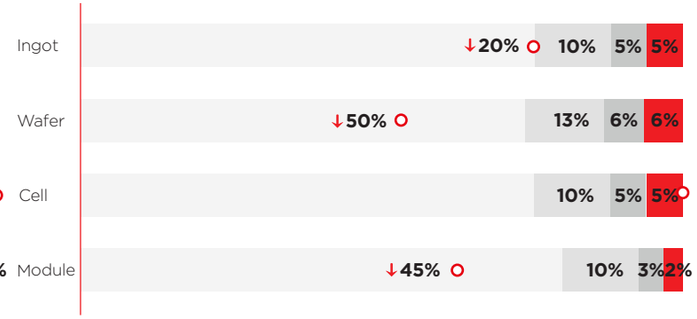


Fresh water withdrawal target | Actual fresh water withdrawal intensity | Target of fresh water consumption intensity | Actual fresh water consumption intensity

Renewable Energy PV Products Water Withdrawal Intensity Target (by segment)



Renewable Energy PV Products Water Consumption Intensity Target (by segment)



2030 Target | 2025 Target | 2024 Target | 2024 Progress

Environmental Compliance and Ecological Protection

TZE recognizes "sustainability" as one of the core strategies for corporate development, creating a comprehensive life cycle management system addressing climate change, efficient energy and resource use, pollution control, and biodiversity protection. Through institutional innovation, technological advancements, and value chain collaboration, the Company is dedicated to achieving green manufacturing and ecological integration while continually enhancing environmental governance transparency and industry leadership.

TZE is committed to promoting an eco-friendly manufacturing and developmental model, rigorously controlling pollutant and waste emissions, and minimizing the environmental impact of its production operations. We consistently adhere to the "3R (Reduce, Reuse, Recycle)" principle, integrating the concept of circular economy into how we operate and striving to create diverse economic and environmental benefits.

Green Factory Construction

As of the end of the reporting period

TZE's **10** subsidiaries have been recognized as "Green Factory", including Tianjin Zhonghuan Advanced, Tianjin Huanzhi, Zhonghuan Crystal, and Zhonghuan PV, all of which have received national green factory certifications

9 subsidiaries have been certified as "Zero Waste Factory"

The Company plans to secure "Zero Waste Factory" certification **for all factories** by 2030

Environmental Management System

With "system as the foundation, certification as the framework, and goals as the guide" as its core principles, the Company has established an efficient environmental management system and strives to set a global benchmark in green manufacturing through international standard certifications and digital technology empowerment.

Establishment of Environmental Management System

TZE has implemented a three-pronged environmental management system encompassing "strategic coordination, institutional assurance, and full execution", integrating international standards such as ISO 14001 into all operational processes. We have 11 domestic factories and 4 overseas factories that have obtained ISO 14001 Environmental Management System Certification. Our environmental management system is guided by quantitative goals, driven by both dynamic risk control and transparent disclosure to ensure the traceability and verification of the entire process—from production carbon reduction to supply chain green transformation. This comprehensive approach builds a robust foundation for environmental compliance and facilitates the creation of a global zero-carbon value chain.

Top-level Governance Framework	Institutional Assurance	Strategy	Transparency and Continuous Improvement
Three-tier management framework: Board of Directors–Management–Execution	*Environmental Management Policy* and other supporting systems	ISO certification, goal setting, annual environmental assessment, training, and supply chain	Regular disclosure and policy revision mechanism

Environmental Management Framework

TZE has established a three-tier environmental governance framework: the Board of Directors provides top-level strategic direction, the management system delegates and consolidates responsibilities, and grassroots units ensure swift responsiveness. This closed-loop mechanism effectively aligns environmental management strategy coordination with execution efficiency. The Board of Directors is tasked with overseeing sustainability matters, including environmental management. It reviews policies and goals related to environmental efforts, while the CEO conducts routine reviews and supervises associated affairs. This includes but is not limited to carbon emission management, energy management, pollutant control, and water management.

Environmental Management Policy

TZE has enacted an *Environmental Management Policy* applicable to TZE and its subsidiaries, and encourages partners to comply with it jointly. This policy explicitly states the Company's commitment to proactively reduce environmental impact and enhance environmental performance across all production operations, business facilities, products and services, distribution, logistics, waste management, commercial activities, as well as in cooperation with suppliers, service providers, contractors, and other key business partners. We continuously develop a robust environmental management structure, defines responsibilities at all levels, and establishes a management system aligned with national laws, regulations, and international standards such as ISO 14001 and ISO 50001. This ensures compliance and drives continuous improvement.

Risk Management

TZE actively conducts risk assessments and management processes for unexpected environmental incidents to prevent, address, and mitigate potential environmental risks. During the reporting period, the Company did not record any significant environmental incidents.

Environmental Risk Assessment

TZE has developed a systematic process for environmental risk assessment and management, starting with hazard identification and risk evaluation. This enables precise identification of potential risk points and the formulation of targeted management plans and control measures based on risk levels. By clearly defining responsibilities, allocating resources, and maintaining continuous monitoring, we ensure the effective implementation of various control measures. Additionally, leveraging information management and early warning systems enhances our ability to anticipate and effectively respond to environmental incidents. This approach minimizes environmental risks and establishes a robust defense for the sustainable development of employees, the environment, and the enterprise.

Emergency Plan System

TZE has designed a hierarchical and multi-tier environmental emergency response system, including the *Emergency Plan for Sudden Environmental Pollution Incidents*, which outlines detailed response procedures from the corporate level to various production and operational sites.

Hierarchical response mechanism	Emergency resource preparedness	Regular emergency drills and training
Based on the nature, severity, and impact scope of sudden environmental incidents, response levels are categorized, and responsibilities and action plans for each level are clearly defined.	Equipped with emergency materials (such as emergency equipment and protective supplies) and trained professional teams to ensure swift mobilization and utilization in emergency scenarios.	Conduct regular emergency drills and training sessions for all employees, simulating various sudden environmental incidents. These activities aim to enhance employees' emergency response skills and teamwork capabilities.

Environmental Management Strategy

Exhaust Gas Management

TZE pledges in the *Environmental Management Policy* to comply with emission standards and ensure the proper disposal of exhaust gases. In accordance with *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, along with industry standards such as the *Integrated Emission Standard of Air Pollutants* and the *Emission Standard of Pollutants for Battery Industry*, we identify the types of environmental pollutants related to operational activities. We deploy high-efficiency purification equipment for the effective treatment of acid exhaust gas, alkaline exhaust gas, organic exhaust gas, and dust produced during the manufacturing process. Additionally, we continuously monitor the concentration of purified gases to ensure all air pollutants meet the emission standards.

2022-2024 TZE Exhaust Gas Emissions

Indicator	UoM	2022	2023	2024
Exhaust gas pollutants	tons	-	52.26	32.56
Nitrogen oxides (NO_X)	tons	30.91	7.50	5.67
Sulfur dioxide (SO_2)	tons	2.11	0.15	0.20
Particulate matter (PM)	tons	-	19.17	6.52
Volatile organic compounds (VOC)	tons	-	16.41	18.19
Other exhaust gas pollutants[1]	tons	-	9.03	1.97

2024 Key Cases of Exhaust Gas Management

	Zhonghuan Applied Materials	Huansheng Tianjin	Huansheng Jiangsu
Measures	Increase the use of low-volatile raw and auxiliary materials to decrease VOC emissions.	As part of the Huansheng Phase II project, VOC treatment facilities were upgraded to catalytic combustion technology, and the anisotropic conductive film (ACF) process replaced mobile dust collectors with gas hoods for collection, followed by catalytic combustion treatment. This upgrade increased the gas hood collection efficiency to 95%.	Replace diesel forklifts entirely with electric forklifts.
Achievements	Total reduction of VOC emissions: 855.35 kg[2]	Exhaust gas treatment efficiency improved to 87.3%.	Compared to 2023, diesel consumption has decreased by 64 tons. By 2025 and beyond, there is an expectation of zero diesel usage, resulting in further reductions in VOC emissions.

[1]Other exhaust gas pollutants include ammonia, hydrogen chloride, and fluoride.

[2]Calculated based on a VOC content of 0.9%.

Wastewater management

TZE strictly adheres to the *Water Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, and other relevant laws and regulations. We have developed and implemented the *Environmental Protection Management Regulations* to ensure standardized processes for wastewater collection, treatment, reuse, and discharge. All factories adhere to environmental impact assessments and design, construct, and operate wastewater treatment systems in compliance with standards. They are equipped with online wastewater monitoring systems to track drain water quality in real-time, ensuring discharge complies with local environmental regulations. Additionally, factories regularly engage third-party testing agencies to assess and track wastewater quality over the long term to maintain compliance. In 2024, the Company did not have any incidents of wastewater discharge exceeding the standards and environmental pollution.

TZE is dedicated to minimizing the impact of water pollution by increasing its investment in R&D and the application of wastewater treatment and reuse technologies, effectively reducing water pollution load. Huanzhi New Energy, a subsidiary of TZE, has established a "zero-discharge" wastewater treatment system. After advanced treatment, the wastewater meets direct discharge surface water standards, significantly reducing its impact on the surrounding environment.

2022-2024 TZE Wastewater Management Performance1

Indicator	UoM	2022	2023	2024
Wastewater discharge	10,000 m^3	1,433.52	2,013.44	2,040.02
Chemical oxygen demand (COD)	kg	1,268,896.00	2,015,983.17	2,470,901.22
Ammonia nitrogen	kg	57,961.54	61,338.16	110,355.96
Suspended solids (SS)	kg	728,761.30	442,282.75	653,179.23

[1]Maxeon recorded 258,000 m^3 water withdrawal with 41 m^3 recycled water consumption and 205,800 m^3 water discharge, while third parties (with 0 intake from water-stressed regions) withdrew 257,300 m^3 and consumed 52,000 m^3.

Zhonghuan PV and Zhonghuan Crystal Achieve "Zero-Waste Factory" Certification and National Green Factory Certification

Zhonghuan PV and Zhonghuan Crystal have embraced "sustainability" by building a systematic full-chain clean production system: utilizing clean energy and eco-friendly raw materials, upgrading advanced processes and smart equipment, and achieving "double reductions" in pollutant generation and emissions throughout the production process. In 2024, leveraging their achievements in environmental governance, they received both the "zero-waste factory" and national green factory certifications, representing a significant milestone in their transition to green manufacturing while setting an industry benchmark.

Waste Management

TZE strictly complies with relevant laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes* and the requirements of the TZE *Environmental Management Policy* on waste management, adheres to the principles of industrial waste reduction, recycling and decontamination, and has developed a comprehensive management system covering solid waste generation, collection, storage, transportation, utilization, and disposal. By adopting pollution prevention measures and complying with international standards such as RoHS and REACH, the Company promises to and systematically promotes plans to reduce and eliminate hazardous substances in its products, continuously mitigating the environmental risks associated with solid waste and making progress toward achieving its "zero-waste enterprise" goal. Across the value chain, the Company also continuously strengthens collaboration with suppliers, partners and other stakeholders to jointly build a waste management model for the whole chain.

2022-2024 TZE Solid Waste Performance

Indicator	UoM	2022	2023	2024
Total amount of hazardous waste	tons	1,050.21	1,637.02	4,193.13
Amount of general solid waste disposed	tons	136,859.69	236,264.23	317,011.80
Comprehensive utilization of solid waste	tons	130,182.86	229,501.78	313,390.17
Comprehensive utilization rate of solid waste	%	95.12	97.14	97.57

2024 TZE Solid Waste Performance

Waste Category	UoM	Comprehensive Utilization	Landfill	Incineration	Other disposal methods[1]
Hazardous Waste	tons	2,548.77	531.59	957.70	154.65
General Solid Waste	tons	310,841.40	6,101.86	68.73	0.00

[1]Including physical disposal and co-disposal in cement kilns.

Key Measures for Waste Management

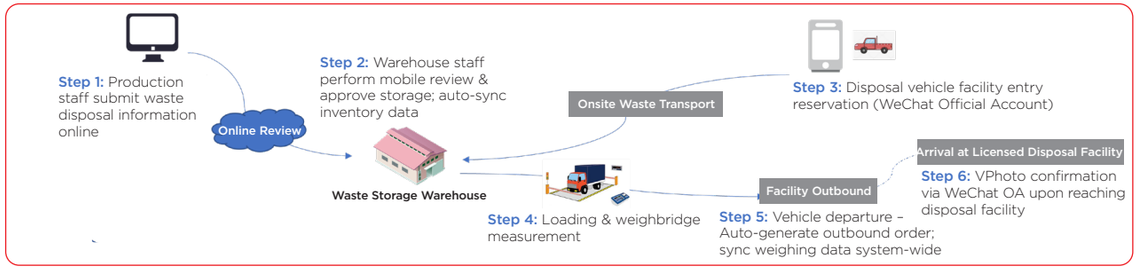
Reduce pollution at the source
- Select non-toxic and harmless raw and auxiliary materials that can be efficiently utilized for production
- The workshop actively introduces advanced technology to reduce the amount of hazardous waste generated

Whole-process control of solid waste
- Formulate a full-process responsibility system for solid waste and assign dedicated personnel to be responsible for the generation, collection, storage, transportation, treatment and disposal of solid waste
- Carry out professional trainings to ensure the standardization and greening of solid waste management process

Principle of priority for resource reuse
- For unqualified products such as head and tail materials, wooden pallets and other general solid waste in production, reuse is first considered to reduce the generation of waste

Legal and compliant disposa
- Other general solid waste and hazardous waste shall be handed over to a qualified third-party company for 100% legal and compliant disposal
- In 2024, Wuxi Zhonghuan Applied Materials changed the treatment method of waste activated carbon from incineration to activation, achieving 35 tons of activated waste activated carbon throughout the year

Solid Waste Control Flowchart of Huanzhi New Energy



Ningxia Zhonghuan Fully Establishes a "Zero-Waste Enterprise"

Ningxia Zhonghuan has fully integrated ESG standards into the factory design phase, adhering to principles of industrial solid waste reduction, recyling and decontamination. The Company has fostered a green development management philosophy, persistently advanced energy conservation and emissions reductions, and promoted green manufacturing to successfully build a "zero-waste enterprise" in all respects.

Green Operation Management Process of Ningxia Zhonghuan

Green factory construction	The factory follows principles of reduction, recycling and decontamination in design to encourage energy conservation, emission reduction, and sustainable production.
Zero-waste enterprise management	The factory is dedicated to becoming a "zero-waste enterprise" by ensuring traceability and tracking of industrial solid waste through source reduction and improved resource utilization.
Organizational guarantee	Form a leading group to implement the "zero-waste city" initiative, establish relevant institutional standards, and develop a scientific and effective organizational framework.
Production link optimization	Implement clean production processes to enhance product quality and lifespan while minimizing waste generation at the source.
Resource utilization rate	The comprehensive utilization rate of solid waste reaches 98%, with a 100% recycling rate for waste silicon leather materials and renewable solid waste.
Information management	Develop an information system to record and monitor industrial solid waste data in real-time.
Training and publicity	Enhance employee training, promote awareness of the "zero-waste city" concept, encourage household waste sorting, and support the "clean your plate" campaign.

Circular Economy

The Company has incorporated circular economy management practices into its *Environmental Management Policy*, striving to minimize the environmental impact of raw material use, working closely with upstream suppliers, and advocating for recycled, renewable, and third-party verified raw materials.

During procurement, we have implemented a raw material traceability system to prevent sourcing from critical global or national biodiversity areas, avoid environmental destruction, and safeguard local rights and resources. During use, we increase the share of recycled raw materials while reducing water usage, energy consumption, and waste generation in production processes. Additionally, we enhance joint innovation with upstream and downstream partners, actively advancing R&D and implementation of raw material recycling projects to collaboratively promote value chain circularity.

In 2024, renewable materials accounted for **98.35%** of the packaging materials used in the Company's main products

100% of environmentaly friendly materials are used for cells and modules packaging

Key Cases of Circular Economy in 2024

	Zhonghuan Applied Materials	Huansheng PV	Huansheng Jiangsu
Measures	Establishing a foam box recycling agreement with select customers	Discarded packaging materials for raw products are reused to package defective products, which are then transported back upstream for recycling	Recycling of waste foam boxes, cartons, pallets, filters, glass, and other packaging materials
Results and Benefits	Throughout the year, 294,000 foam boxes were recycled and reused, accounting for 15%	A total of 59,080 packaging materials were recycled over the year, resulting in annual cost savings of more than CNY 300,000	Achieving 100% recycling of solid waste, and recycling approximately 13,510.74 tons of waste

Environmental Protection

"People depend on biodiversity in many ways". Biodiversity is vital to human well-being and is a cornerstone for survival and development. TZE fully supports the UN Sustainable Development Goals (SDGs), the *Convention on Biological Diversity*, and the *Kunming Declaration*; strictly adheres to environmental and biodiversity protection laws and regulations such as the *Environmental Impact Assessment Law of the People's Republic of China*. The Company rigorously manages the potential negative impacts of production operations on the environment and considers ecological and environmental resources as a crucial boundary for project investment.

The Company has formulated the *Biodiversity Conservation Policy*, to conduct comprehensive risk assessments during project construction, optimize site selection to avoid sensitive areas, and minimize negative impacts. Once the project is completed, ecological restoration will be carried out in the affected areas. The Company is committed to the development of environmentally friendly power stations, supports ecological restoration efforts, promotes green manufacturing, develops garden-style factories, and enhances biodiversity. Additionally, we promote the construction of green supply chains, reduces environmental impact, and safeguards biodiversity. The Company also prioritizes education to raise employees' environmental awareness, advocates for sustainable production and consumption, and aims to build a harmonious coexistence between man and nature within the Earth's community of life.

Ningxia Shizuishan Photovoltaic and Energy Storage Integration Project Achieves Full-capacity Grid Connection

TZE Huansheng presents innovative sand and wasteland management solutions at the Conference of the Parties to the United Nations Convention to Combat Desertification

The sixteenth Conference of the Parties to the United Nations Convention to Combat Desertification (COP16) was held in Riyadh, Saudi Arabia's capital. Government officials, international organization representatives, experts, scholars, and entrepreneurs convened to discuss global strategies for combating desertification. As a leading global supplier of photovoltaic modules, TZE, taking our module brand, attended a side event at this conference and delivered a keynote titled "Advanced Manufacturing Helps Energy Transformation", sharing its experiences and achievements in applying PV in desertified areas.

Participation of TZE in the Conference of the Parties to the United Nations Convention to Combat Desertification

Volunteering Activities for the World Environment Day by Overseas Subsidiary Maxeon

Environmental - Targets & Performance

Issues	Indicator	2023 Baseline	2024 Target	2024 Progress	2025 Target	2030 Target
Climate and Energy	Absolute Carbon Emissions from Own Operations (Scope I and Scope II)	/	/	Market-based:3,064,462.72 tCO_2e	Growth rate capped at 10%	Carbon dioxide peaking
	Annual electricity intensity of renewable energy PV products	32.43 MWh/MW	Decrease by 3%	Decrease by 15% over 2023 ✓	Decrease by 8% over 2023	Decrease by 15% over 2023
Water Management	Annual freshwater withdrawal intensity of renewable energy PV products	57.69 m^3/MW	Decrease by 5%	Decrease by 19% over 2023 ✓	Decrease by 10% over 2023	Decrease by 20% over 2023
	Annual freshwater withdrawal intensity of other silicon materials	8,028.29 m^3/MSL	Decrease by 3%	Decrease by 25% over 2023 ✓	Decrease by 5% over 2023	Decrease by 15% over 2023
	Water recycling rate	43%	46%	40%	49%	60%
	Percentage of water use from alternative water sources	53%	56%	51%	59%	70%
Waste Management	Comprehensive utilization rate of solid waste	97.14%	/	97.6%	97%	
	Amount of general solid waste generated	/	/	317,011.80 t	Decrease by 2%	Decrease by 10%
Circular Economy	Cradle to Cradle Certification (Maxeon Products)	Copper level (2020 baseline)	Silver level	Cradle to Cradle Certification (Silver level) obtained ✓	Silver level	Gold level

In the future, TZE will anchor its strategy on global energy transformation, integrate deeply with the “carbon peaking and carbon neutrality” goals and the national green manufacturing framework, establish a sustainable ecosystem for the PV industry, and advance the industry from isolated technology innovation to comprehensive green transformation. By building zero-carbon factory clusters, implementing water-energy-materials collaborative management, fostering a circular economy ecosystem, and exploring models of industry-nature symbiosis, we aim to create harmony between the manufacturing of PV and the Earth’s ecology.

Social

Value Co-Creation for a Shared Future

Social value represents a new aspiration for corporate development and serves as a guiding principle for TZE to fulfill its corporate citizenship responsibilities. Motivated by responsibility, we ensure quality control and create value across the product life cycle, strengthen collaboration and mutual development along the industry chain, and explore innovative routes for employee growth and corporate advancement.

Issues addressed in this section according to SZSE's Sustainability Report

- Rural revitalization and social contribution
- Product and service quality and safety
- Innovation and technology ethics
- Data security and privacy protection
- Supplier safety
- Employees
- Equal treatment of small and medium-sized enterprises (SMEs)

UN SDGs addressed in this chapter

Spotlight: Strengthening supply chain resilience and advancing towards full-chain transformation

Amid the progress of global economic integration, managing supply chains has become essential for enterprises to compete internationally. In the face of increasingly complex international regulations and market access requirements, companies must urgently address how to ensure supply chain compliance, traceability, and fulfill necessary social responsibilities. TZE actively engages in supply chain management practices, enhancing the resilience and security of its supply chain continuously.

In March 2025, TZE's Supply Chain Management Center was awarded the ISO 20400 sustainable procurement guidelines performance evaluation statement, being recognized for its excellence in sustainable procurement by the British Standards Institution (BSI).

The cells and modules sector thoroughly analyzes EU market demands and collaborates with recognized third-party certification agencies to verify traceability capabilities. Through internal systems, we precisely identify cell information, collaborate closely with upstream suppliers to gather original evidence, achieve traceability from modules to polysilicon, obtain the "Supply Chain Traceability Capability Report", and further solidify and expand our presence in the European market.

In 2024, Zhonghuan Advanced was awarded the RBA Silver Certification, achieving an overall score of 181.5 for outstanding performance in labor, ethics, environment, and safety. The Company ensures supply chain compliance, safeguards product quality and corporate reputation, and significantly bolsters its international competitiveness.

Huanrui's Green Supply Chain Certification

ISO 20400 Certification for TZE Supply Chain Platform

In 2024, Zhonghuan Advanced was awarded the **RBA** Silver Certification, achieving an overall score of **181.5** for outstanding performance in labor, ethics, environment, and safety.

RBA Silver Certification for Zhonghuan Advanced's Excellent Labor-focused Practices

Opportunities and Innovations in Clean Tech

Matrics and Targets

TZE upholds "engineer-respected" culture and actively capitalizes on opportunities in clean technology. Driven by innovation, the Company continues to scale up its R&D investments in clean technology, aiming to contribute scientific and technological expertise to global carbon emission reductions. Leading in the industrial application of advanced technological and manufacturing methods, TZE leverages its scientific and technological innovation capabilities to promote global energy sustainability and high-quality development. In 2024, the Company invested CNY 1.1 billion in R&D, with R&D investment accounting for 3.88% of the sales revenue.

TZE's Performance in Clean Technology Development for 2022-2024

Indicator	UoM	2022	2023	2024
Revenue derived from clean tech activities	CNY 10,000	-	5,356,314.14	2,278,994.98
Revenue derived from clean tech activities to total revenue	%	-	90.56	80.20
R&D expenses	CNY 10,000	292,282.38	212,500.36	74,851.20
R&D expenses to revenue	%	4.4	3.59	2.63
R&D investment	CNY 10,000	377,052.09	284,811.81	110,191.01
R&D investment to revenue	%	5.63	4.82	3.88

Governance

TZE continues to consolidate R&D resources and is dedicated to building a scientific and technological talent system tailored for the Innovative Technology Talent System. As the central technology incubation hub for R&D innovation, the TZE Research Institute, a subsidiary of the Company, upholds the concept of intensive, integrated, collaborative, and coordinated innovation. It prioritizes "Technology R&D" while being bolstered by "Strategic Guidance" and "Resource Aggregation." The Institute encompasses several specialized research institutions and centers, with a focus on R&D of advanced technology.

In 2024, the Company continued refining its intellectual property management structure, enhancing its capabilities to create, apply, and protect intellectual property rights, as well as strengthening centralized management and strategic planning for intellectual property. The Company proactively collaborated with external intellectual property service providers to secure its industry-leading position in technological innovation and intellectual property protection, thereby bolstering its competitiveness and global influence.

TZE R&D Team

Total number of R&D employees

1,400 Person

Proportion of R&D employees in total employees

9.99%

Strategy

TZE has consistently regarded technological leadership as a fundamental strategic pillar of its development. It upholds the concept of intensive, integrated, collaborative, and coordinated innovation, while maintaining close cooperation with the upstream and downstream sectors of the industry chain. Through ongoing technological innovation and product R&D, the Company delivers environmentally friendly products and solutions that provide significant economic benefits for customers, contributing to the global transition to green energy.

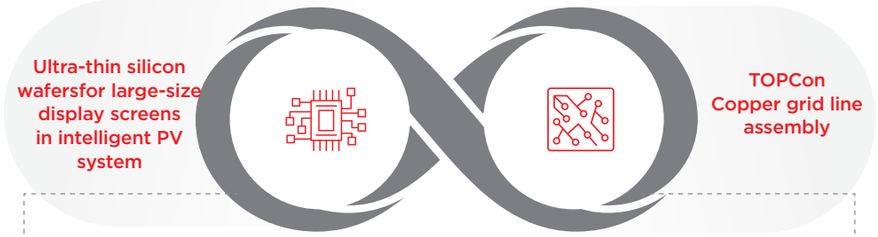
By the end of 2024, TZE has 12 high-tech enterprises, 8 provincial and ministerial-level R&D centers, 1 national technology center and 1 national technology innovation demonstration enterprise.

> "Chinese companies should champion technological breakthroughs, achieve preeminence and leadership, and eschew low-level competition by embracing the ethos of 'Innovation Breaking Through Ten Thousand Volumes'."
>
> For enterprises, there is no shortcut to technological innovation. Only through independent R&D, a strong talent pool, and sustained investment—accompanied by continuous technical advancements and enhanced core competitiveness—can they seize the upper hand in future competitions."
>
> Li Dongsheng, Chairman of TZE

R&D and Innovation

As a pioneer in the PV industry, TZE continues to make strides in technological innovation. The Company pioneered the release of ultra-thin silicon wafers for large-size display screens in intelligent PV and continually enhanced product quality and efficiency through Industry 4.0 and Quality 4.0 advancements.

To address the high carbon emissions in silicon material production, TZE employs silicon wafer thinning technology to optimize material utilization and significantly reduce the carbon emission intensity of silicon materials. Thanks to its advantages in boosting efficiency and lowering costs, the Company's N-type silicon wafer has emerged as the core development focus succeeding PERC technology, attracting domestic and international manufacturers to accelerate relevant production capacity layouts. TZE has capitalized on market opportunities by continuously advancing its thin slicing technology. While meeting the high-power demands of modules, the Company also pursues cost reduction, efficiency enhancement, and low-carbon objectives, effectively driving the green transformation of the PV industry chain.



12-inch technology platform

190GW capacity layout, ranking first worldwide in overall strength.

Expand platform advantages, develop cutting-edge technologies and high-end products

700W+ PV development and innovation eco-alliance

N-type product R&D platform

25.6% photoelectric conversion efficiency
Leading global market share in N-type monoIngotline

G12-TOPCon technology platform

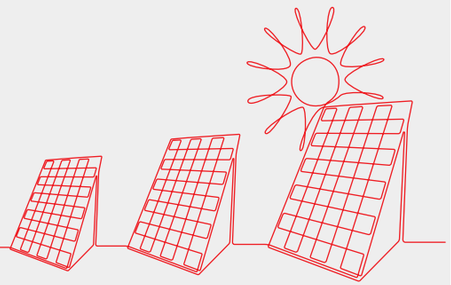
Conversion rate of 26.7%, Tier-1 level in the industry

Copper process R&D platform

TOPCon copper grid pilot platform
Zero-silver-content TOPCon cell process

TZE advances thin wafer technology for cost reduction and efficiency enhancing of N-type cells

As the PV industry progresses towards grid parity and electricity costs continue to decline, high-efficiency and high-power N-type products are witnessing explosive growth. Leveraging its G12 product technology and optimized process flow, TZE enhances the yield and efficiency of downstream cells, collaborating with partners to accelerate the R&D and application of thin and ultra-thin wafers. The mass production of T110 half-wafer silicon wafers is underway, T100 half-wafer silicon wafers are ready for mass production, and the R&D of 80μm ultra-thin silicon wafers has been completed. This progress significantly lowers the cost of N-type technology and establishes a solid foundation for the sustainable development of N-type cell technology.



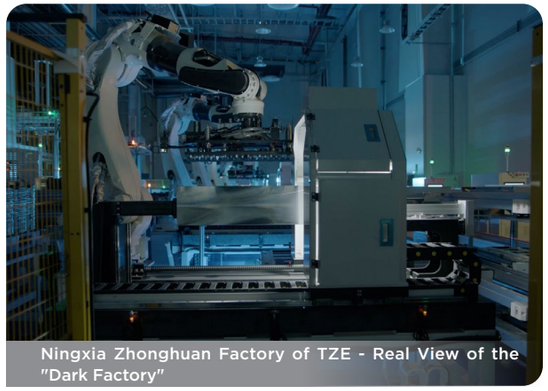
Leadership in Intelligent Manufacturing

As a leader in innovation within the PV industry, TZE has consistently focused on the sector's development, working closely with upstream and downstream players in the industry value chain to drive the rapid industrialization and scaling of new technologies and processes, thereby promoting high-end, intelligent, and green advancement.

Industry 4.0 Drives the Growth of "New Quality Productivity"

The Company remains steadfast in its strategic commitment to Industry 4.0, building an intelligent management and control platform, fostering the deep integration of automation and informatization, and utilizing digital technology to replace repetitive labor, thereby reducing manpower requirements. By deeply integrating technological innovation with the Industry 4.0 manufacturing system, the Company has developed an independent, collaborative, and highly efficient dark factory, leveraging its extensive technical expertise and proprietary process know-how to seamlessly integrate advancements into every stage of production.

In February 2024, Ningxia Zhonghuan was listed in the "Fourth Batch of Intelligent PV Pilot Demonstration List" by the Ministry of Industry and Information Technology, achieving an 80% dark rate in its intelligent factory. Through the digital twin's big data intelligent analysis system, collaborative operation between humans and machines has been realized. A single operator can remotely control up to 384 furnaces, continuously advancing the development of monoIngotline furnaces toward fully automated Ingot pulling and achieving ongoing improvements in production efficiency and flexible manufacturing capabilities. In the future, the Company will continue to drive the shift from the export of product to the export of technical standards, empowering TZE's localized manufacturing operations globally and strengthening its leading position in overseas markets.



Ningxia Zhonghuan Factory of TZE - Real View of the "Dark Factory"

In 2024, TZE Huanzhi New Energy Factory in Tianjin was awarded the title of "Exemplary Smart Factory" by the Ministry of Industry and Information Technology, becoming the first enterprise in the PV Silicon Wafer sector to achieve this distinction

AI + Digitalization: Inspiring Wisdom Through Intelligence

The Company has established a "Deep Blue" + AI deep learning fixed-model solution that seamlessly integrates big data analysis, intelligent data applications, and deep learning technology into the production process. This enables the creation of an expert experience repository and a big data knowledge base across supply, production, and sales chains, achieving closed-loop management of independent monitoring, analysis, decision-making, and process optimization to meet customer demand for high-quality, differentiated, and customized products.

In 2024, the Deep Blue Platform for the wafer sector, leveraging AI-powered digital technologies, significantly boosted production efficiency and silicon wafer yield. By integrating large-scale model analysis for tracing abnormal auxiliary materials, multi-factor synthesis, and process simulations with intelligent cutting, it made great contribution to the establishment of Industry 4.0+ intelligent factory.

Deep Blue Dashboard for Intelligent Quality Analysis

Innovation Incentive and Intellectual Property Management

To strengthen the Company's independent scientific and technological innovation capabilities, enhance its core competitiveness, and encourage the enthusiasm and creativity of technical personnel in innovation, the Company has set up a multi-tiered Science and Technology Innovation Incentive Mechanism. This initiative aims to stimulate internal innovation, drive technological advancements, enable product upgrades, and lay a solid foundation for the company's sustainable growth.

Technological Innovation Award

Each year, the Company participates in the selection process for the Technology Innovation Award organized by TCL Technology. This initiative is designed to further inspire and guide continuous independent innovation, foster creativity and proactivity among technical staff, and create a positive cycle of interaction.

Technical Project Award

Technical project award is issued annually. The reward amount is determined by the technical committee based on the evaluation level of the completed project, and the bonuses are distributed in accordance with the contribution rates of team members for the project.

Intellectual Property Award

Annual rewards are allocated to inventors, designers, or contributors to the development of inventions, proprietary technologies, and various industry standards.

In view of product characteristics and based on relevant laws and regulations such as the *Patent Law of the People's Republic of China* and the Specifications for the *Administration of Intellectual Property Rights of Enterprises*, the Company has formulated and implemented the *Intellectual Property Management System* and *Patent Management Regulations* applicable to the headquarters and the subsidiaries, ensuring their effective implementation. The Company actively engages in intellectual property training, enhancing the awareness and managerial capabilities of technical personnel and patent engineers, improving the quality of international patent applications, and supporting the establishment of a global intellectual property management system.

In 2024, the Company further refined and optimized its *Intellectual Property Management System*. Improvements were made to the overseas patent review process, patent reward rules, and risk prevention and control measures, encompassing areas such as overseas patent evaluations and related procedural details. Meanwhile, the Company initiated the development of the ***Technical Guide for Patent Mining*** and introduced the Eureka patent management system.

Using the number of intellectual property patents in 2023 as a baseline, the Company has set intellectual property management objectives. By 2024 and 2025, the cumulative number of intellectual property rights is planned to increase by 20% and 40% respectively compared to 2023, aiming to reach an industry-leading level by 2030. As of December 31, 2024, the Company holds a total of 4,342 valid authorized intellectual property rights, including 483 domestically authorized patent inventions, 1,639 utility models, 24 designs, 248 trademarks, 21 software copyrights, and 1,927 foreign authorized patents.

2022-2024 TZE Intellectual Property Performance

Indicator	2022	2023	2024[1]
Cumulative number of intellectual property rights	1,223	1,739	4,342

[1] The data for 2024 aligns with the annual report, including contributions from the overseas subsidiary Maxeon.

Promotion of Industry Development

Cooperation with Upstream and Downstream of the Industry Chain

TZE actively collaborates with suppliers to carry out joint innovation projects, and continually improves the compatibility between suppliers and the Company. In this way, TZE endeavors to strengthen the partnership with suppliers in the industrial chain and work with them to iterate and upgrade products and technologies.

TZE and Suppliers Conduct Joint Advancement for Localization of Quartz Crucibles

TZE continues to engage in technical R&D collaborations with suppliers, forming joint R&D teams to focus on critical materials such as quartz crucibles. Through the reverse IPD process, we precisely identify Zhonghuan Crystal's requirements for quartz crucibles and utilize Zhonghuan Crystal's process technology to guide suppliers in developing raw materials, ensuring that the products meet market demands effectively. This collaboration has significantly lowered the unit cost of quartz crucibles, enhanced their technical advancements and market competitiveness, reduced external dependency, and provided robust support for the independent and sustainable development of the PV industry chain.

Industry-University-Research Cooperation

TZE actively fosters cooperation among industries, universities, and research institutions, undertaking more than 20 collaborative science and technology innovation projects with a total investment exceeding CNY 400 million. These cooperative projects span cutting-edge technological fields such as semiconductor materials, ultra-thin silicon wafers for large-size display screens, N-type solar silicon wafers, and offshore PV, encompassing national and municipal R&D initiatives as well as internal corporate objectives. Collaborating organizations include prestigious universities such as South China University of Technology, Zhejiang University, and Nankai University, along with research institutions like the Institute of Microelectronics of the Chinese Academy of Sciences.

TZE's Innovative R&D in Mineral Composite Processing Technology Drives Green Manufacturing

The mineral composite material processing research project, jointly undertaken by TZE and China University of Mining and Technology, has been incorporated into the national key R&D program. Through this project, an in-depth exploration of the properties of organic pollutants in solar silicon wafer-cut organic wastewater was conducted. By leveraging mineral composite materials with interfacial regulation, a multi-field coupling synergistic treatment technology for organic wastewater was successfully developed, integrating corresponding technical solutions and optimizing process conditions. The project centers on addressing critical technical challenges in the industry, driving advancements towards high-quality technological development.

Industry Exchange and Standard Development

TZE actively spearheads the refinement and advancement of industry standards to enhance standardization and technological competitiveness across the sector. TZE is a member of several trade associations and industrial alliances, such as China PV Industry Association and China Federation of Electronics and Information Industry. We actively fulfill our responsibilities as a leader in the PV industry, including leading or participating in the formulation of 1 national standard, 2 group standards, and multiple industry reports in 2024. These include:

- Taking the lead in revising the national standard *MonoIngotline Silicon for Solar Cell*, in which core silicon wafer parameter standard was updated, to align with advancements in distributed photovoltaic technology. This effort promotes the standardization of silicon wafers for larger-size display screens, addresses outdated traditional standards, and establishes a unified technical threshold and evaluation system for the industry.
- Participating in formulating the group standard *Half-Cut Single Ingot Silicon Wafer for PV*, proposing quantitative specifications related to half-cut technology. This contributed to resolving issues of inconsistent product compatibility and quality, enhancing efficiency across the industry's supply chain and addressing gaps in standards within niche areas.
- Participating in formulating the group standard *Technical Specifications for High-Purity Polysilicon Process of Photovoltaics Materials* by the China Electronic Energy Saving Technology Association. The standard incorporates total energy consumption limits per unit product, aiming to reduce the industry's overall environmental impact.
- In 2024, TZE collaborated with the China Photovoltaic Industry Association to prepare the *2023-2024 China PV Industry Annual Report* and the *2023-2024 China PV Industry Development Roadmap*. Based on a strong technical foundation and market data, these publications outline technological development trends across the industry chain, serving as authoritative references for technological R&D and investment strategies.
- In 2024, TZE took the lead in drafting the national standard GB/T 44334-2024 *Silicon Epitaxial Wafers with Buried Layers* and was honored with the Technical Standard Excellence Award by the Subcommittee on Materials of the National Technical Committee for Standardization of Semiconductor Equipment and Materials. This standard was formulated for regulating the production and application of silicon epitaxial wafers with buried layers, enhance product quality and technical standards, and support the sustainable growth of the semiconductor materials industry.

Product Management

TZE adheres to product responsibility, steadily promotes the global leading strategy of PV Materials, continuously improves product quality and flexible manufacturing level, insists on innovation-driven development, deepens smart manufacturing, and leads industrial innovation.

Product Quality and Safety

TZE explores and practices the internationally leading quality management concept, establishes a quality management system covering the entire life cycle of products, and actively promotes flexible manufacturing to meet customers' requirements for different technical routes and application scenarios of products through "standardization + customization" methods.

Quality Management System

We have established a quality management system throughout the product life cycle of "raw material procurement - process quality - finished product acceptance quality - product recall" in all production bases. Moreover, we have obtained ISO 9001 quality management system certification. In this way, we integrate the quality culture into the product life cycle.

By the end of 2024

100% of TZE's **12** qualified companies have passed ISO 9001 quality management system certification

4 overseas factories and **1** R&D center have passed ISO 9001 certification

Quality Management Measures and Achievements

Quality 4.0

Quality 4.0 is a comprehensive quality management model driven by big data. The model facilitates lean and intelligent decision-making capabilities based on informationization, intelligence and digital twin technology. Oriented toward client value, our Quality 4.0 system strives for the best balance between quality and cost, and incorporates risk standards into product and service development. By fully meeting the growing demand of clients for high quality, customization and flexibility, we can continuously enhance our core competitiveness, and realize clients value.

In the future, TZE will continue to improve the Quality 4.0 system, explore quality feature analysis and digital simulation training with the help of DeepBlue 3.0 AI platform, further improve production efficiency and quality, promote the deep integration of Industry 4.0 and Quality 4.0, and contribute to the sustainability of the PV industry chain.

TZE Ingot Industry: Optimizing Quality Management Platform and Empowering Flexible Manufacturing

In 2024, TZE Ingot Industry successfully built a data warehouse and data decision-making platform through QMS projects, automated centralized control, 3D printing and other projects to promote the intelligentization, efficiency and flexibility of manufacturing processes and strengthen data-driven in-depth analysis and empowerment.

With quality system management as the core, Ningxia Base integrates QMS platform and MES/WMS platform to open up business data chain and realize online management of quality data of raw materials, auxiliary materials, in-process products and finished products. This not only enhances the effectiveness and practical value of quality data but also provides robust support for quality management, enabling more scientific and timely decision-making.

Launch of the First Quality Talent Class for the Solar Cell Module Industry

Site of Quality Talent Class Training

Quality Management Process

TZE's product standard management process includes three parts: customization, R&D and design, and delivery control, with technology-driven and strict benchmarking to help manufacture high-quality products. In 2024, a QMS quality management system was introduced to the cell component industry, integrating AOI visual inspection technology for process quality control and achieving collaborative operations. Currently, the automated completion rate of visual inspection equipment has reached 85%, and the human-to-production line ratio has been reduced by threefold.

Customer Demand Insight and Technological Innovation

Accurately identify customers' potential product needs to maintain a balance between the Company's operational metrics and product performance.
Based on client quality feedback and peer benchmarking, we introduce new technologies, products and equipment, optimize and update our standards in accordance with the latest changes in policies and regulations.

Product Standard Management and Development Control Procedures

During the design and maintenance of product standards, we share information through our client information platform and external information sharing platforms.
Factory participation in programme standardization assessment for loophole identification and improvement and optimization, to ensure that product standards are both scientific and practical.

Product Delivery Standards and Internal Control Standards

The client quality centre carries out the approval and filing management of the product delivery standards and internal control standards, and each sector is responsible for the implementation of these standards to eventually formulate the product delivery standards and product internal control standards through collaborative cooperation.

Quality Management Training

Adhering to Quality 4.0 requirements and leveraging its strong technical foundation and advanced manufacturing system, the Company provides professional training programs, including Six Sigma, QCC, MSA, and 8D for Quality Department employees. The Company also organizes a series of Quality Month events, fully promoting quality training and a culture of quality awareness.

To enhance quality awareness among all employees, We require all new employees to participate in pre-service quality awareness training and provides quality courses on the online learning platform "Zhonghuan Training" Center for them to engage in self-directed learning, fostering a workplace culture where everyone values and improves quality. In 2024, Zhonghuan Training Center offered 42 quality-related courses, attracting 5,021 participants.

Cell and Module Industry

- A total of 19 quality training courses were organized this year, including 9 offline sessions with 122 trainees and an attendance rate of 94.66%; 10 online sessions with 1,568 trainees.
- We actively responded to the national "Quality Month" event in September 2024; around the theme of "Ensuring product quality must start with me", the official account was read by 3,616 people and the event was attended by 512 people.

Ingot Industry

- We organized quality awareness training and assessment activities for all employees. Through a combination of offline teaching and self-study at the Zhonghuan Training Center, we explained and disseminated basic quality knowledge such as quality management, system awareness, tool application and 5S, and conducted assessments in two dimensions, desktop tests and on-site spot checks. The overall pass rate was 100%.

Wafer Industry

- We organized activities such as "Quality Concept Change (Quality Month)" and "Quality Journey", and focused on carrying out a series of 18 activities for 6 months, such as system process diagnosis, IATF16949 training, five major tools training, key position skills competition, quality data informatization, improvement projects, and quality quiz with prizes. The quality atmosphere has been greatly improved, and direct profits of more than CNY 800,000 have been achieved in stages.

Quality Management Performance

Relying on mature technology and advanced manufacturing system, our excellent quality management and high-quality products have been widely recognized at home and abroad. In 2024, we won honors such as "Leader" certificate of enterprise standard issued by China Electronics Standardization Institute and the Most Influential Brand Award issued by Moore Photovoltaics, the Golden Leopard Award Organizing Committee for Photovoltaics.

Manufacturing Individual Champion

Manufacturing Champion

"Leader" Certificate of Enterprise Standard - Huansheng Jiangsu

"Leader" Certificate of Enterprise Standard - Zhonghuan Crystal

Tips

The Manufacturing Individual Champion is regarded as the "crown jewel of the manufacturing industry." It refers to enterprises that have long specialized in specific product segments within the manufacturing sector, featuring globally leading production technologies or processes and holding a top-ranked global market share in those segments.

Customer Service

To actively pursue the global strategic positioning, the Company maintains a customer-centric approach and implements rigorous quality management throughout the product life cycle. By adhering to standardized processes and continuous improvement, we identify potential risks in advance while enhancing service quality and the customer experience.

Customer Service Core Initiatives

01 Formulate a standardized service process from pre-sales to sales and after-sales. Start with customer consultation and demand exploration, and end with customer satisfaction survey analysis and customer improvement, including key links such as order review, product delivery, product quality management, customer complaints, problem handling, feedback follow-up, and customer satisfaction measurement. In 2024, the Company was not involved in product recalls.

02 Receive abnormal feedback from customers, integrate resources and formulate temporary measures to reply to customers. Then handle anomalies, through data tracing, multi-departmental collaborative analysis and recall of problematic products. Finally, formulate improvement measures and track the results. If they fail to meet the standards, urge rectification until completion. The entire process is strictly implemented to ensure timeliness and closed-loop management. After-sales processing process: receive abnormal feedback - handle anomalies (data tracing, investigation, closed-loop management).

03 Establish a customer feedback system, collect and analyze customer opinions in a timely manner, and conduct regular satisfaction surveys to optimize service processes. Enhance the team's professional capabilities and ensure quality service by conducting regular technical training for employees and encouraging them to participate in industry activities.

PV Industry Customer Service: The "2485" Principle

"2" Provide the initial response within 2 hours

"4" Confirm relevant information, on-site personnel and feedback within 24 hours, to internally implement temporary containment measures and provide a second response

"8" Complete root cause analysis and develop actionable steps within 48 hours, followed by 3 responses

"5" Implement corrective measures, execute the verification plan, confirm internal improvement outcomes, and complete all activities within 5 days

Enhancing Customer Satisfaction Support for Cell Component Products

The cell component division and the global marketing center jointly conducted a customer satisfaction survey focusing on four aspects: product quality, service support, price competitiveness, and delivery performance. In 2024, the client satisfaction score was 97.1, with the highest score achieved in service support. In response to customer feedback, the Company has implemented targeted improvement measures, continuously tracking their progress to boost operational efficiency and optimize customer experience.

Performance of TZE Customer Service

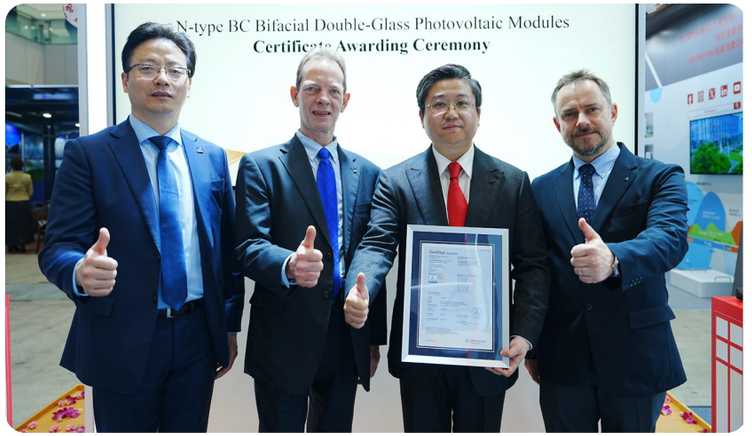
Complaint response rate

100%

Client satisfaction rate

94.35[1] Score

[1]Excluding Maxeon, whose customer satisfaction is assessed using the NPS methodology. In 2024, the Company achieved an NPS score of 62, surpassing its 2025 target ahead of schedule.



Responsible Supply Chain

As an industry leader, ZTE adheres to the development concept of win-win cooperation, relies on a robust supply chain management system, strictly controls supply chain ESG risks, assists suppliers in green transformation, and works with all parties to create a more sustainable and resilient industrial ecology.

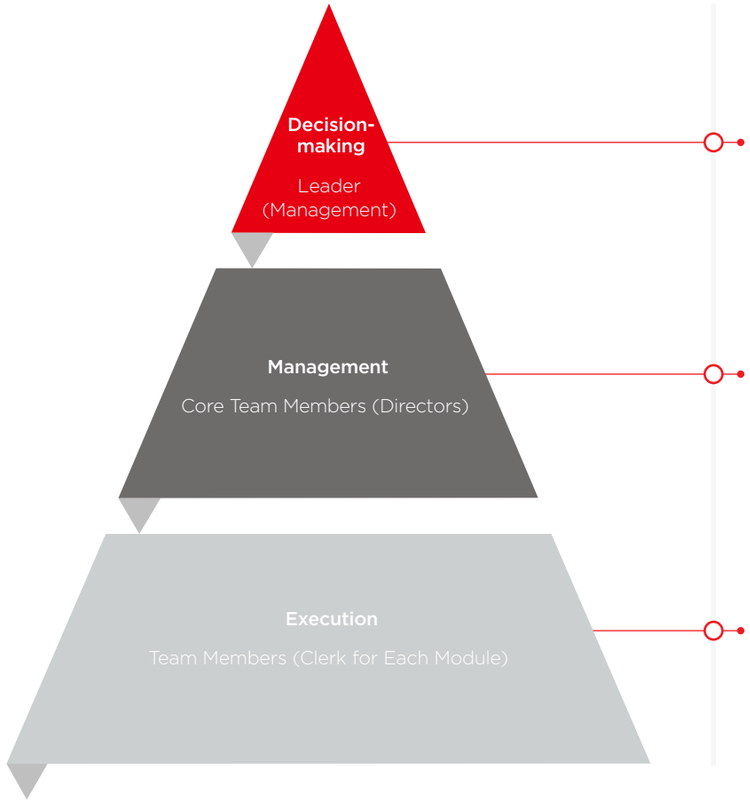
In 2024, TZE acquired Maxeon, and through extending the global layout of the industrial chain downstream, it gathered industrial advantages and achieved positive impacts in many aspects, such as supply chain security. The Company optimizes the supply chain layout, integrates technical resources, expands market channels, strengthens industrial chain collaboration, deeply participates in the development of the industrial chain in silicon materials, insists on independent innovation, breaks through a number of key technologies, participates in global industrial chain competition at a high level, enhances global market competitiveness and risk resistance, and lays a solid foundation for long-term and stable development.

Supplier Management System

TZE Supply Chain Management Center has systematically developed a governance framework and an efficient management and coordination system to maximize resource mobilization, ensuring the effective roll-out of strategies and the achievement of defined objectives[1].

[1] Maxeon independently manages its supply chain, ensuring all 35 of its suppliers undergo environmental and social impact assessments with a 100% compliance rate.

Supply Chain Governance Structure



- Decided on the ESG strategic direction to ensure ESG factors are integrated into the organization's overall strategy and operations.
- Supervise and evaluate the implementation to ensure that the ESG team achieves its targets effectively.
- Allocate necessary resources for ESG-related activities and programs.
- Review and approve key matters such as ESG annual reports.

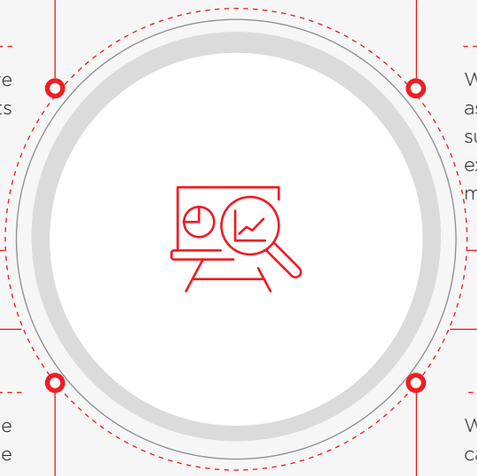
- Identify ESG risks and opportunities, establish ESG policies and targets, and lead cross-departmental cooperation.
- Translate ESG strategies into actionable projects and initiatives.
- Report to leadership regularly on work progress and review and enhance ESG measures.
- Disseminate corporate ESG policies and related knowledge within departments.

- Complete ESG-related tasks specific to its business across various modules.
- Develop an ESG management system and refine ESG management procedures.
- Gather ESG concepts, policies, laws, regulations, and industry trends globally and locally, benchmark these against industry standards, conduct gap analyses, and propose solutions.

Supply Chain ESG Management System

TZE has established and implemented the *ESG Code of Conduct for Partners*, assessed the ESG risk level of suppliers and formulated graded management measures, strictly reviewed and proposed improvement plans based on risk results, enhanced the sustainable development capabilities of suppliers, and actively promoted the construction of a green supply chain. Simultaneously, TZE has actively promoted the concept of sustainability to upstream and downstream enterprises within the supply chain, encouraged suppliers to establish carbon reduction and water conservation goals, and accelerated the development of a sustainable supply chain.

In 2024, TZE Supply Chain Management Platform integrated sustainable procurement management into its full lifecycle procurement practices. In March 2025, it received the ISO 20400 sustainable procurement guidelines performance evaluation statement from BSI. In line with ISO 20400 requirements, the Company revised its institutional documents such as the *Sustainable Procurement Management Manual*, *Sustainable Procurement Risk and Opportunity Assessment*, and *Supplier Management System*, clarified its sustainable procurement policy, continued to implement various risk management and audit initiatives, and built internal and external capacity for sustainable supply chains. By fully implementing the ISO 20400 system, we adhere to the principles of fair, just, open and transparent procurement, jointly build a sustainable and responsible procurement system, ensure the security and sustainability of the supply chain, and achieve win-win results.



Commitment to Code of Conduct

Under the guidance of the *ESG Code of Conduct for Partners*, suppliers are regulated in multiple dimensions such as environmental protection, labor rights and interests, and business ethics.

Risk assessment

We determine critical and non-critical suppliers based on business elements such as the grade of raw and auxiliary materials and procurement amount, re-evaluate suppliers based on the *ESG Information Self-Assessment Form* submitted by the existing suppliers, and rank the ESG risk level of the suppliers, thus shaping a risk matrix, and correspondingly developing management measures.

Measures

In conjunction with the results of risk assessment, we strictly comply with the *Supplier Management System* and the *Supplier Audit Management System* in the admission, audit, incentive and elimination processes, focusing on desktop and on-site audits and improvement plans in the dimensions of the environment, human rights and labor, and business ethics, to achieve an effective improvement in the level of ESG of our suppliers.

Mutual development

We actively build green supply chains, with the means to guide suppliers to set carbon reduction and water saving targets, and to empower the green practice of suppliers.

Awareness-raising activities about sustainable supply chains are organized through multiple channels to continuously improve suppliers' social performance.

Commitment to Code of Conduct

TZE has developed and implemented the *ESG Code of Conduct for Partners* to standardize suppliers' behavior. The Code applies to all partners, including suppliers and service providers, and covers areas such as environmental protection, human rights and labor rights, prohibition of child labor and forced labor, occupational health and safety, business ethics, privacy and information security protection, prohibition of the use of conflict minerals and community inclusion.

Since 2022, while signing the business contract, new suppliers have been required to sign the ESG Code of Conduct for Partners. Violation of the *ESG Code of Conduct for Partners* may result in the termination of its business relationship with TZE. In 2024, no suppliers were found to have business ceased due to violation of the *ESG Code of Conduct for Partners*.

Key Focus of the ESG Code of Conduct for Partners

Environmental protection	Comply with local environmental protection requirements, including energy conservation, water management and strengthened pollution prevention, and waste management; emphasize biodiversity conservation, and actively respond to the national "carbon peaking and carbon neutrality" strategy by managing carbon emissions effectively.
Prohibition of child labor	Comply with the human rights requirements of the International Labor Organization (ILO) and strictly prohibit suppliers from employing or using child labor.
Prohibition of forced or compulsory labor	Comply with the human rights requirements of the ILO and strictly prohibit suppliers from employing or supporting the use of forced and compulsory labor.
Freedom of association and collective bargaining	Respect the right of employees to form, join, and organize trade unions and engage in collective bargaining.
Anti-discrimination and harassment	Do not tolerate or support discrimination based on race, ethnicity, national or social origin, caste, ancestry, religion, disability, gender, sexual orientation, family responsibilities, marital status, trade union membership, political opinion, age etc.
Employee wage and working hours	Ensure that the salary paid to employees can meet the legal minimum wage standard of the country where the operation is located and cannot be lower than the minimum wage standard of the territory where the operation is located. Ensure that the weekly working hours of the employees meet the requirements of the relevant regulations of the country and territory of operation. Ensure employees' rest time, and shall not force employees to work overtime; if overtime work is required due to special circumstances, it shall be negotiated with the employees, and overtime expenses shall be paid in accordance with the law.
Employee health and safety	Ensure compliance with local occupational health and safety regulatory requirements, provide employees with a safe and healthy work environment, conduct occupational disease prevention, and regularly assess and update emergency response plans.
Compliance and business ethics	Ensure compliance with laws and regulations, strictly prohibit any form of corruption, extortion, embezzlement, and other prohibited conduct, refrain from providing or accepting bribes, including inappropriate benefits or any commercially valuable rewards, and oppose any unfair competition and take measures to protect client information.
Privacy and information security	Commit to treating all information obtained during business with TZE as confidential, sensitive, and proprietary. Without specific authorization from TZE or as required by relevant laws and regulations, information must not be disclosed or conveyed to unauthorized third parties, the public, or the media.
Conflict minerals	Do not accept or use "conflict minerals" from conflict areas[1].
Community inclusion	Keep good communication and partnership with the communities where suppliers operate, respect local culture, traditions, and beliefs, and respect the right to informed consent of communities and residents.

[1]Conflict areas are conflict-affected areas as designated by United Nations Security Council resolutions, conflict-affected and high-risk areas as defined by the European Union, and conflict minerals source areas as defined by the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-FrankAct). This definition applies to the full report.

Supply Chain ESG Risk Management

Global supply chain risks encompass uncertainties in trade policies, higher tariffs, rising transportation costs, fluctuating raw material prices, geopolitical risks, and challenges related to ESG compliance and climate change. TZE identifies, evaluates, and addresses potential risks through diversified procurement strategies and a comprehensive risk management system. The Company actively promotes sustainable procurement and the green transformation of the supply chain, aiming for a win-win outcome for both environmental and economic benefits.

In 2024, TZE Supply Chain Platform obtained ISO 37301 compliance management system certification, further enhancing the supplier lifecycle management model from admission to elimination. The Company has built a robust risk monitoring mechanism, regularly evaluating and updating supply chain risks to ensure risk management is timely and effective. Meanwhile, the Company has established and implemented internal systems such as the *Supplier Management System* and the *Supplier Audit Management System* to clarify processes for supplier qualification, performance evaluation, and rankings. Additionally, we developed a traceability management system covering the entire operational process to ensure the safety and traceability of product quality, enabling full-chain visibility from modules to silicon ores.

ESG Risk Management System

The Company has developed a multi-dimensional ESG risk assessment process for suppliers, identifying key suppliers based on criteria including raw and auxiliary material grades and purchase volumes. These suppliers are then reassessed based on the critical elements of the *ESG Code of Conduct for Partners* to determine ESG risk levels and generate a risk matrix. Based on this, we have developed management measures by grade, such as signing a code of conduct, regularly auditing and tracking improvement progress, and conducting empowerment training. In 2024, we identified a total of 31 high-risk critical suppliers.

Supplier Screening	Fiscal Year 2024
Total number of Tier 1 suppliers	1,219
Total number of critical Tier 1 suppliers	153
Percentage of total expenditures by critical Tier 1 suppliers	More than 70%
Total number of critical non-Tier 1 suppliers	/
Total number of critical suppliers (Tier 1 and non-Tier 1)	153

ESG Risk Management Measures by Grade

Management Measures	High-risk critical suppliers	High-risk non-critical suppliers	Low-risk critical suppliers	Low-risk non-critical suppliers
Sign the *ESG Code of Conduct for Partners*	✓	✓	✓	✓
Fill out and submit the *ESG Information Self-assessment Form*	✓	✓	✓	✓
Participate in the awareness-raising training of the *ESG Code of Conduct for Partners*	✓	✓	✓	✓
Desktop audit	✓	✓	✓	-
On-site audit	✓	✓	-	-

Full Life Cycle ESG Management

TZE integrates ESG assessment into the entire life cycle of supplier qualification, audit supervision and exit, and comprehensively evaluates and controls the ESG performance of each link in the supply chain. With the support of a risk analysis matrix, the Company has developed targeted desktop and on-site audit plans alongside improvement initiatives, collaborating with supply chain partners to build a high-quality industrial ecosystem.

Upgrading the SRM system to enable comprehensive digital interaction on suppliers' ESG information

In 2024, we upgraded our Supplier Relationship Management (SRM) system. Building on the original functional modules, new features have been added to meet the ESG online evaluation and re-evaluation requirements for suppliers, supporting business data, quality system data management, and ESG information sharing. This upgrade significantly enhances management efficiency, enables the digital management of the entire supply chain process, streamlines supplier collaboration processes, and improves response speed and transparency.

Supplier Qualification

The Company has formulated and followed the Sourcing, *New Product/New Supplier Management Regulations* to conduct strict qualification review, credit review, and environmental protection investigation and assessment on all new suppliers. When signing the business contract, suppliers are required to sign the *ESG Code of Conduct for Partners*. They should also sign the *Commitment Letter on Non-use of Conflict Minerals* if involved in the risks of conflict minerals. According to the *Supplier Audit Checklist - Access*, the Company screened 317 new suppliers in 2024 based on environmental and social standards, and implemented special access assessments, focusing on key issues such as environmental management, Climate and Energy, labor and human rights, and business ethics, with a coverage rate of 100%.

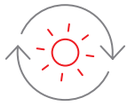
Audit Standards During the Supplier Qualification Phase

Environmental standards

- System certification (ISO 14001)
- Environmental data and responsibility disclosure
- GHG emissions accounting
- Energy transition agenda
- Circular economy
- Emissions and waste management compliance
- Renewable energy use
- Hazardous substances use

Social standards

- System certification (ISO 9001 and ISO 45001)
- Child labor
- Forced and compulsory labor
- Minimum wage
- Discrimination
- Disciplinary behaviors
- Intellectual property
- Employee privacy
- Legitimate requests of different races, beliefs, customs, etc.
- Occupational health and safety
- Conflict minerals



Audit and Improvement

We apply the *ESG Code of Conduct for Partners* in ESG evaluation and audit. ESG evaluation results and quality assessment are included in the annual supplier evaluation results. Additionally, we incorporate suppliers' ESG performance into compliance risk management and utilize relevant tools to assess their compliance thoroughly. Based on the assessment results, the Company develops an audit plan and multiple departments work together to audit suppliers.

In 2024, the Company completed 16 desktop audits and 132 on-site audits, achieving 100% coverage of high-risk suppliers. During audits, we found that 60 suppliers had ESG management issues. The Company promptly worked with these suppliers to develop ESG performance improvement plans, assisted them in improving their ESG management capabilities, and tracked implementation of improvement plans, with a 100% rate of problem rectification. Furthermore, the Company requires that critical suppliers be audited on-site once every three years.

Supplier Assessment	2024
Total number of suppliers passing desktop/on-site audits	148
Percentage of individual critical/high-risk suppliers assessed	65.49%
Number of suppliers identified with significant actual/potential negative impacts	3
Percentage of suppliers with significant actual/potential negative impacts for which corrective actions/improvement plans have been agreed	100%
Number of suppliers terminated due to significant actual/potential negative impacts	2

Results of TZE Supplier Audit in 2024

	High-risk critical suppliers	High-risk non-critical suppliers	Low-risk critical suppliers	Low-risk non-ciritical suppliers
Desktop audit	39%	4%	1%	6%
On-site audit	61%	96%	35%	/

Incentive and Phase-out

TZE is committed to establishing a sustainable supply chain system. By incorporating suppliers' ESG performance into procurement decisions, we aim to enhance supplier sustainability and foster the development of green supply chains.

Procurement decision-making

Embed suppliers' ESG performance (including labor rights and interests protection) into procurement decisions, annual bidding, and year-end performance evaluations to drive suppliers' sustainable transformation.

Green supply chain

Prioritize suppliers with ISO 14001 certification, and assess green environmental performance during evaluations. Given equal conditions, preference is given to green and low-carbon suppliers.

Performance Management

- Increase procurement share for suppliers demonstrating high ESG performance.
- Assist suppliers with low performance in rectification, and eliminate them if they fail to meet the required standards.
- Issue a *Purchase Suspension Notice* to suppliers whose supply has been suspended for over a year, face quality issues, or fail to meet rectification standards.
- Issue a *Notice of Disqualification of Supply* to suppliers whose procurement has been suspended for over two years.

Withdrawal mechanism

Terminate cooperation with suppliers violating the *ESG Code of Conduct for Partners*; blacklist suppliers who breach the *Supplier Blacklist Management System* for two years or permanently, depending on the severity. This year, we eliminated 2 unqualified suppliers through strict evaluations. Relying on a strict withdrawal mechanism, we actively encourage suppliers to enhance their ESG performance.

Whistleblowing

If stakeholders find any supplier that violates the *ESG Code of Conduct for Partners*, they can provide feedback via the following whistleblowing channels. We will strictly keep the whistleblower's personal information confidential, and prohibit any direct or indirect discrimination, harassment, suppression or retaliation against the whistleblower, and effectively protect the whistleblower's legitimate rights and interests. In 2024, the Company received no reports of violations of the *ESG Code of Conduct for Partners*.

Whistleblowing Channels

Tel：022-23789766-8022

E-mail: jubao@tzeco.com

Address: No. 10, Haitai South Road, Huayuan Industrial Zone (outside the ring), Tianjin Binhai High-tech Industrial Development Area

Supply Chain ESG Empowerment

To ensure that suppliers fully understand and abide by the *ESG Code of Conduct for Partners* and the *Code of Business Ethics*, the Company organizes training for suppliers to enhance their awareness of the Code. The training covered topics such as protection of labor and human rights, improvement of working conditions and business ethics, with the aim of raising suppliers' awareness of their social responsibility and ensuring their compliance with our sustainability requirements and international labor standards and other ethical norms.

During the Reporting Period, the Company hosted a three-day ESG-focused workshop on sustainable supply chains, with 300 employees participating. The event featured keynote speakers, ESG experts from the University of Hong Kong, who provided detailed explanations on global ESG trends and corporate strategies, while conducting in-depth discussions on key topics like climate change and sustainable supply chains. Additionally, the Company provided an ISO 20400 introduction and standard training for internal procurement staff.

Support During Corrective Action Plan	2024
Total number of suppliers supported in implementing the corrective action plan	139
Percentage of suppliers identified with significant actual or potential negative impacts and supported in implementing the corrective action plan	100%

Capacity Development Plan	2024
Total number of suppliers engaged in the capacity development plan	301
Percentage of individual critical suppliers involved in the capacity development plan	100%

Green Supply Chain

TZE integrates the concept of sustainable development into supply chain management to promote high-quality, sustainable and leapfrog development of the global green energy industry. While focusing on our own high-quality development, we have promoted the Industrial 4.0 manufacturing transformation of the industrial chain and supply chain stakeholders. The Company deepens its localized and regionalized supply chain layout from five dimensions: green management, green production, green packaging, green logistics and green recycling. We promote the development of the local economy and industrial chain through full-process green transformation, effectively shortening the logistics cycle, reducing operating costs, and strengthening supply chain management.

In 2024, Tianjin Huanrui obtained the green supply chain management system certification for its green supply chain management practices and achieved the five-star standard of Green Manufacturing - Green Supply Chain Management Guidelines for Manufacturing Enterprises GB/T 33635-2017. The Company takes various measures to build a strong and green supply chain, driving carbon neutrality in the value chain while promoting green and sustainable development of the industry.

Reclaimed water reuse helps save water and reduce fees

TZE actively encourages water resource recycling. By constructing a reclaimed water treatment system, it centrally processes pure water and concentrated water discharged by material-washing suppliers and reuses it for cooling tower water replenishment. In 2024, this initiative conserved 130,000 tons of reclaimed water, saving CNY 320,000 in annual costs and achieving a benefit of CNY 182,000 in supply chain water management.

Conflict Minerals Management

"Prohibition of conflict minerals" is a crucial component of TZE's responsible procurement management system. TZE commits to not sourcing minerals from conflict regions, ensuring the exclusive use of certified or reliably sourced non-conflict minerals. Through investigative and traceable validation, we confirm that our products are 100% free from minerals originating from conflict regions.

The Company has established and refined a conflict minerals management mechanism, mandating suppliers to sign the *Commitment Letter on Non-use of Conflict Minerals*. We incorporate provisions prohibiting conflict minerals into the *ESG Code of Conduct for Partners*, requiring all partners, including suppliers, to refrain from purchasing, using, or trading conflict minerals and certify their products as conflict-mineral free. We uphold a principle of "continuous improvement", regularly reviewing and updating the conflict minerals management mechanism and revising the *Conflict Minerals Management Policy* as needed or at least every three years to ensure the effectiveness, scientificity and feasibility of various mechanisms and policies.

We conduct regular due diligence on conflict minerals within the supply chain. In cases where suppliers breach the *Conflict Minerals Management Policy*, measures such as suspending cooperation, terminating contracts, or seeking compensation will be enforced. By the end of the Reporting Period, 100% of suppliers signed the *Commitment Letter on Non-use of Conflict Minerals*. Beginning in 2022, all new suppliers have signed the *ESG Code of Conduct for Partners*. Among these, the nine suppliers associated with conflict minerals underwent the RMI-CMRT controversial material traceability review, with no evidence of procurement or usage of minerals from conflict-affected regions.

Maxeon has hired a third party to conduct conflict mineral traceability and investigation, and will publish a separate conflict mineral report in 2025.

As of the end of the Reporting Period

Suppliers signed the *Commitment Letter on Non-use of Conflict Minerals*

100%

All new suppliers signed the *ESG Code of Conduct for Partners* after 2022

100%

Human Capital Development

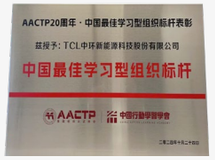
TZE upholds core values of "Change, Innovation, Responsibility, and Excellence". While safeguarding employees' fundamental rights and interests, the Company offers competitive salaries and benefits, establishes diverse development and advancement channels, and strives to foster a supportive and healthy work environment, achieving mutual growth and shared success between employees and itself.

In 2024, TZE received high industry recognition for its excellence in corporate governance, profound corporate culture, innovative management philosophy, and dedication to employee well-being. Its subsidiary Huansheng obtained SEDEX certification, Maxeon won the "SEDEX Audit Company Knight Award", and Zhonghuan Advanced obtained RBA Silver Certification for its excellent labor-focused practices.

TZE won the Employer Brand Honor Awards in 2024

2024 Tianjin Extraordinary Employer
Liepin

2024 Top Graduate Employer Brands
51job.com



China's Best Learning Organization Benchmark
American Association for the Certification of Training Program (AACTP)

Gold Award for Digital Enterprise Learning and Development of Talent
YunXuetang

X Awards 2024 - Best Employer Brand and Outstanding Enterprise Award
KNX

Diversity, Equality and Inclusion

The Company fully embraces the "people-oriented" approach in all aspects of employee recruitment, training, promotion, and separation, attracting top talent globally with principles of diversity, equity, and inclusion, while providing employees with equal opportunities and a broad development platform.

Compliant Employment

People-oriented approach: safeguarding labor rights and interests

The Company strictly abides by the *Labor Law of the People's Republic of China*, the *International Labor Organization Conventions* and other domestic and international labor rights-related conventions and laws and regulations, formulates and publishes the *Human Rights Policy*, updates the *Recruitment Management System*, respects human rights, opposes workplace bullying, and protects the basic rights and interests of employees from the aspects of standardized measures, supervision mechanisms, exchanges and training.

We insist on practicing legal and compliant employment, sign labor contracts with employees in accordance with the law, clearly define work terms, reasonably arrange work and rest time, prohibit forced labor, implement special protection regulations for minors, and avoid employing child labor. The Company improves its human resources compliance system, conducts regular self-inspections and evaluations of employment conditions, enhances awareness of labor management compliance through training, and cooperates with external organizations to optimize labor systems. In the past three years, the company has not had any incidents of discrimination, child labor or forced labor.

Diversity and equality: opposing employment discrimination

We uphold the principles of fairness, justice, and transparency in employment, establish a clear recruitment process, ensure non-discrimination throughout every stage, and provide equitable competition opportunities. The Company eliminates gender discrimination and harassment, implements equal pay for equal work, guarantees equal development opportunities for male and female employees, and pays attention to the rights and interests of female employees. We actively promote disability equality, explore proportional employment for people with disabilities, and improve employment opportunities and quality for them.

Open and inclusive: expanding international talent

We prioritize compliant international talent management and aim to build a stable, inclusive global team. Relying on the group's global legal and compliance framework, the Company tracks the labor laws and regulations of target countries and establishes a labor compliance management model that suits local conditions. We organize relevant training to enhance the ability to identify legal risks in overseas employment, implement equal and non-discriminatory policies in global recruitment, focus on the diversified development of employees, and create an open and inclusive employer brand image.

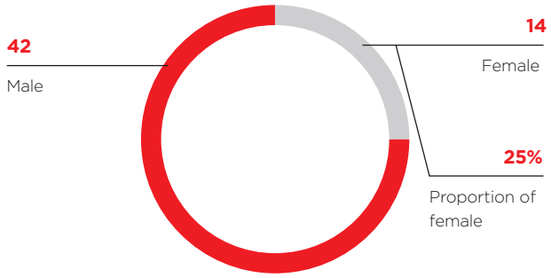
Basic Information of TZE Employees (2022 to 2024)

Indicator		2024	2023	2022
Total number of employees		14,015 [1]	19,489	17,390
By gender	Male	11,455	16,039	14,160
	Proportion of male/%	81.73	82.30	81.43
	Female	2,560	3,450	3,230
	Proportion of female [2]/%	18.27	17.70	18.57
By age	Below 30	5,909	10,347	9,499
	31 to 50	7,984	8,990	7,758
	Above 50	122	152	133
By nationality and ethnicity	Han	12,414		
	Number of management personnel	476		
	Ethnic minorities	1,591	1,992	1,498
	Number of management personnel	33		
	Foreign nationality	10		
Number of senior management employees		56	53	42
Number of middle management employees		280	279	248
Number of junior management employees		176	159	491
Number of general staff		13,503	18,998	16,609
Number of employees in STEM -related positions	Total	13,503		
	Female	2,434		
	Proportion of male/%	18.03		
Number of management employees in revenue-generating functions	Total	170		
	Female	13		
	Proportion of male/%	7.65		

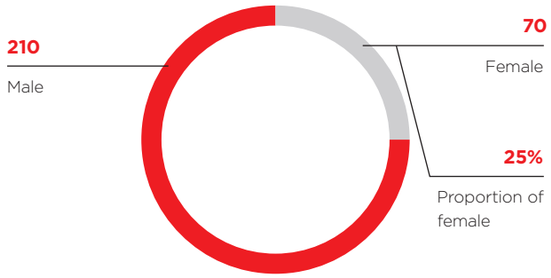
[1]This does not include the number of employees at Maxeon, an overseas subsidiary. As of the end of 2024, Maxeon employed 1,489 individuals.
[2]The proportion of female employees in the management of revenue-generating functional departments is 7.65%.

The proportion of men and women at each level of TZE Central in 2024

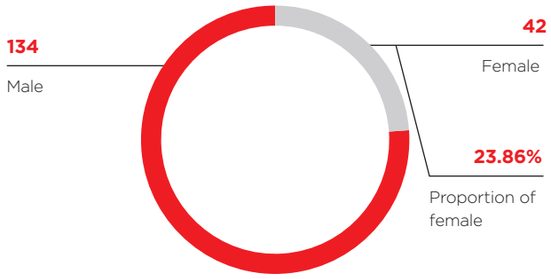
Number of senior management employees: 56



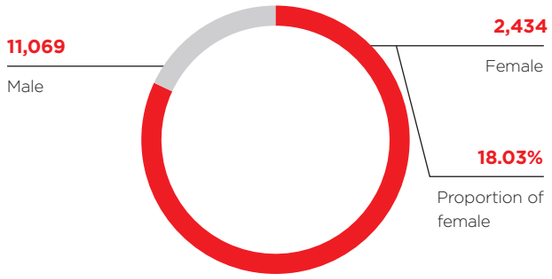
Number of middle management employees: 280



Number of junior management employees: 176



Number of general staff: 13,503



Labor and Human Rights Risk Management

The Company regularly conducts human rights risk assessments and comprehensive internal audits of human and labor rights. These assessments and audits focus on violations such as child labor, forced labor, human trafficking, restricted freedom of association, rights to collective bargaining, equal pay, discrimination, and more. They cover areas like employees' work environments, working hours, health and safety, wages and benefits, and opportunities for training and development, ensuring human rights protection measures cover all employees.

Theme	Policy and Objective	Mitigation and Management Measure
Prohibition of forced labor and human trafficking	The *Human Rights Policy* strictly enforces a 'zero-tolerance' stance on forced labor, ensuring that every employee enjoys statutory rest days in line with national laws, regulations, and company policies. It also explicitly bans all forms of human trafficking and includes human rights protection clauses in contracts with business partners to ensure their compliance	• Develop the *Recruitment Management System* • Develop and publish the *Human Rights Policy* on the official website
Prohibition of child labor	The Company has formulated and implemented the *Regulations on Special Protection Management of Minors* in accordance with the *Law of the People's Republic of China on Protection of Minors* to ensure that minors are not allowed to engage in dangerous and unhealthy or unsafe work, and to protect the rights of minors in accordance with laws and regulations; the *Recruitment Management System* clearly stipulates that it is prohibited to recruit minors under the age of 18	• Confirm the valid identity of applicants through various review methods in stages, such as recruitment, approval, and reporting
Working hours	Adhere to all applicable laws and regulations on working hours to ensure employees have adequate rest	• Establish a dedicated department or appoint personnel to oversee the management of working hours and ensure the effective implementation of related measures • Conduct regular inspections and evaluations of working time management and promptly address identified issues • Encourage employees to participate in oversight, report violations of working hour regulations, and ensure full compliance with statutory working hour rules
Compensation and benefits	The *Employee Handbook* specifies that the Company's compensation to employees must adhere to all applicable laws and regulations, including but not limited to minimum wage standards, overtime pay, and statutory benefits	• Develop management measures for attendance and wages to ensure employees receive legal leave and fair compensation and benefits • Implement an overtime approval system, strictly regulate the duration and frequency of overtime, ensure that overtime complies with legal requirements, and calculate and pay overtime compensation in accordance with national laws and company policies alongside monthly salaries
Humane treatment	Strictly prohibit corporal punishment, coercion, or any form of verbal, physical, psychological, or gender disciplinary measures, as well as threats thereof	• Strengthen training and promotion in all channels, inform employees and managers of relevant disciplinary policies and procedures, and avoid inhumane behavior
Non-discrimination/non-harassment	*Anti-discrimination (Harassment/Retaliation) Behavior Management Policy* Advocate equal employment relationships and resolutely prevent discrimination in employment relationships based on race, ethnicity, skin color, religious beliefs, sexual orientation, gender, age, physical ability, political orientation, community membership or marital status, and other excuses	• Strengthen training and promotion through various channels to convey the Company's zero-tolerance attitude towards harassment to employees, popularize relevant laws and regulations, and guide employees on how to deal with harassment • Provide smooth channels for reporting and appealing
Freedom of association	*Regulations on the Administration of Freedom of Peaceful Assembly and Association* Respect employees' rights to freely associate and engage in collective bargaining in a lawful and peaceful manner	• Standardize the systems of the Employees' Congress and Employee Welfare Committee, and regularly elect employee representatives and trade unions
Complaints and reports handling	The *Human Rights Policy* and *Code of Business Conduct* set out employee reporting channels and relevant policy clauses on whistleblower protection	• To safeguard the rights and interests of employees who can report through internal audit and supervision channels • Upon receiving a complaint, the Company will record it and provide feedback within 24 hours, propose handling measures based on the report's content, and address the involved parties depending on the severity of the issue

Talent Attraction and Retention

TZE pays attention to protecting the rights and interests of employees, and continuously stimulates the enthusiasm and autonomy of employees by building an open, fair and market-competitive salary and benefits system. The Company is dedicated to expanding channels for employee communication, cultivating a democratic and equal corporate culture, and promoting employees' physical and mental well-being through engaging cultural and sports activities, fostering mutual growth between employees and itself. During the Reporting Period, TZE recruited 2,619 new employees, with total expenditure on employee recruitment amounting to CNY 3.17 million.

Diverse Recruitment

TZE upholds the philosophy of sustainable talent development, employs flexible human resource management models, strengthens its strategic talent pool, enhances management effectiveness and adaptability, responds to market and business dynamics, and attracts and retains top-tier talent. The Company places high emphasis on recruiting graduates and management trainees, consistently advancing the Starlight Program, Sparkling Program, and Go Global Program.

TZE "Go Global" Open Day

2024 TZE Campus Talent Special Recruitment Project

Starlight Program

- The recruitment program for domestic university graduates seeks to bring in new talent for "smart manufacturing" and cultivate key talent for the Company.
- We develop personalized career development plans for graduates, provide systematic training and practical opportunities, and enhance their professional skills and overall quality. During the Reporting Period, the program recruited more than 200 fresh graduates.

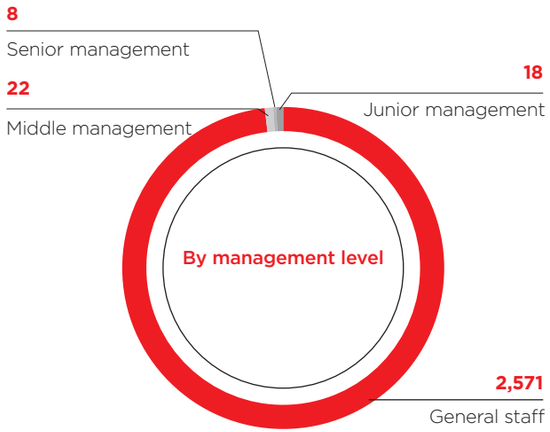
Sparkling Program

- The recruitment program for vocational college graduates focuses on achieving systematic training, practical empowerment, and cultural integration through a joint talent recruitment and training innovation system between schools and enterprises. It provides a link platform from campus to workplace for fresh graduates, and builds a high-quality and sustainable front-line craftsman talent team for the Company.
- To date, the Company has partnered with over 80 domestic colleges and universities, facilitating more than 70 national school-enterprise cooperation projects and over 10 provincial and municipal initiatives. During the Reporting Period, partnerships were formed with more than 15 new institutions, resulting in the recruitment of over 200 college graduates.

Go Global Program

- The recruitment program for overseas university graduates aims to attract outstanding overseas students, foreign students studying in China, and other outstanding talents from around the world to build a global and sustainable talent supply chain.
- During the Reporting Period, the number of international students attracted by the Go Global program accounted for 20% of the university graduate recruitment projects.

2024 New Hires Key Performance



Employee Benefits and Care

Employee Benefits

TZE continues to pay attention to the needs of employees and actively practices humanistic care. The Company strictly abides by the *Labor Law of the People's Republic of China* and other laws and regulations, pays basic pension insurance, basic medical insurance, unemployment insurance, work-related injury insurance, maternity insurance and housing provident fund for all employees, and effectively guarantees employees' rights to statutory holidays, sick leave, marriage leave, bereavement leave, maternity leave and other leave in accordance with the law. On this basis, the Company continues to optimize various non-salary benefits, providing all employees with paid annual leave, nursing leave, parental leave, and holiday benefits.

2022-2024 TZE Employee social insurance coverage rate

100%

In 2024, TZE deployed in advance a multi-dimensional support network covering career development and life security for the support system for overseas dispatched employees, aiming to provide all-round care and support for them and ensure the smooth implementation of the Company's globalization strategy. We also plan to set up localized support groups, mental health support, overseas life security, relatives visiting and residence benefits.

Work-Life Balance

The Company actively responds to Chairman Li's call for fitness for all employees to "dare to be extraordinary and lead the future", practices the Olympic spirit of "faster, higher, stronger - together", advocates the concept of happy work, happy exercise and health, provides diversified care benefits and cultural and sports activities, regularly carries out psychological and health activities, and holds badminton competitions, etc., pays attention to the physical and mental health of employees, enhances communication among them, and creates a healthy and vibrant atmosphere. In 2024, the Company's regional trade unions organized **214** extensive and high-frequency cultural and sports activities for all employees, with an investment of CNY **5.3693** million; more than CNY **992,000** was invested in employee condolences, and **324** employees in need were given condolences.

To support female employees, the Company has established mother-and-child rooms, carried out Women's Day cultural programs, granted maternity leave, provided childbirth benefits and health insurance in compliance with laws, reduced medical expense burdens, and fostered a fair and harmonious workplace environment.

TZE holds Women's Day Themed Event

Meet Badminton Competition - Tianjin Division

TZE Parental Leave Performance in 2024[1]

Indicator		2024
Number of employees entitled to parental leave (including maternity leave, etc.)		4,338
Return rate of employees on leave		100%
By gender	Male	3,543
	Female	795
Number of employees taking parental leave (including maternity leave, etc.)		1,627
By gender	Male	1,209
	Female	418
Number of days for parental leave (including maternity leave, etc.)		36,466
By gender	Male	5,935
	Female	30,531
Number of employees who returned to work during the Reporting Period after parental leave (including maternity leave, etc.)		1,627
By gender	Male	1,209
	Female	418
Number of employees taking paid family leave or care leave other than parental leave		162
By gender	Male	141
	Female	21

[1]Employees attending the Maxeon Women's Development Conference: 300; employees entitled to parental leave: 1,221 men and 891 women; employees who actually took parental leave: 20 men and 42 women; employees who returned to work after taking parental leave: 20 men and 41 women; return and retention rate for employees on parental leave: 100% for men and 98% for women.

Performance Assessment and Incentives

TZE focuses on value creation and continuously improves the salary and benefits management system. We adhere to openness, fairness, equal pay for equal work, effective incentives and sustainability, sharing the fruits of corporate development with our employees.

Performance Assessment

Establishing a fair and transparent performance appraisal mechanism is the basis for effectively motivating employees and protecting their rights and interests. TZE comprehensively considers factors such as job role requirements, indicators and evaluation standards, and sets differentiated assessment dimensions, cycles and evaluation methods for employees at different levels and job natures to help them understand their own performance, working methods and comprehensive qualities.

In 2024, the coverage rate of employee performance assessment is

100%

TZE Employee Performance Assessment Mechanism

Management and Core Members

- Assessment indicators: departmental business performance goals, project strategic breakthrough goals, organizational and personal ability improvement goals;
- Assessment cycle: semi-annual and annual;
- Assessment methods: target completion assessment and All-round evaluation.

General Staff

- Assessment indicators: work execution, learning and growth, teamwork, planning and thinking, and other dimensions;
- Assessment cycle: semi-annual and annual;
- Assessment methods: target completion assessment and All-round evaluation.

Salary Incentive

The Company's salary incentives are evaluated and distributed according to job value and ability, oriented towards pioneering and creating value. We have negotiated with trade unions and employee representatives on an equal footing and reasonably formulated an employee salary system covering all personnel from managers to frontline employees. The system consists of basic salary and variable salary. The variable part is the monthly performance salary and bonus incentive, which fluctuate according to the comprehensive influence, such as the employee's monthly performance appraisal, company performance, and his or her departmental performance results. Specifically, it includes issuing daily rewards, making differentiated salary adjustments, issuing year-end bonuses, and formulating employee stock ownership plans linked to personal performance.

We have gradually improved the performance management system for senior executives to ensure that the Company's overall strategy and operational goals are refined layer by layer, and incorporate water management, safe production, scientific and technological innovation, talent development, business ethics, and other factors into key tasks.

TZE Diversified Incentives

Category	Measures
Daily prompt incentives	Positive and negative incentives
Differentiated salary adjustment	Outstanding performance/job promotion
Year-end bonus	Annual regular payment
Long-term incentives	Employee stock ownership plan
Other honorary awards	Annual outstanding organization and employee selection

In order to continuously promote employee work enthusiasm and improve work efficiency, we regularly conduct market salary surveys and continuously adjust and improve the salary incentive mechanism based on the survey results to ensure that the salary incentive level remains competitive in the industry market. At the same time, the Company insists on equal pay for equal work, establishes an internal salary supervision mechanism, encourages employees to provide feedback on salary issues, and regularly organizes internal salary surveys to ensure the fairness and transparency of the salary system.

Democratic Communication and Employee Satisfaction

The Company listens carefully to employees and pays attention to their true feedback. By continuously conducting employee dedication and satisfaction surveys, we have established and improved democratic management mechanisms, unblocked channels for employees to communicate and appeal, constantly explored pain points in internal management and future improvement, and improved the efficiency of employee management and corporate governance.

Democratic Management

The Company encourages employees to speak out actively, cultivate their sense of ownership, and let them deeply participate in the Company's daily operations and construction. We respect the rights of employees to free association and collective bargaining, and actively build harmonious and democratic labor relations. In 2024, the signing rate of collective bargaining agreements and the membership rate of employee unions are both **100%**.

TZE won the "National May 1 Labor Award"

Multidimensional Initiatives for Democratic Management

Improve the organizational structure

Strengthen government-enterprise assistance, establish a labor and personnel dispute mediation committee, strengthen the construction of grassroots labor and personnel dispute mediation organizations and professional talent teams, and promote harmonious labor relations and social stability.

Conduct multi-channel communication

Build diversified internal communication channels, improve the complaint mechanism, and clarify the complaint process; staff respond quickly, conduct rigorous investigations, formulate rectifications, provide timely feedback, and continuously supervise and follow up.

Organize irregular employee seminars, listen to employee suggestions, improve the working environment, attendance management, employee incentives, etc., and enhance the Company's overall competitiveness.

Employee Engagement and Satisfaction

TZE adheres to the "people-oriented" development concept and regards employee engagement and satisfaction as an important basis for its human resources management. Through measures such as improving salary and benefits mechanisms, optimizing promotion channels, promoting resignation management processes, and implementing employee care and retention plans, we regularly conduct employee engagement and satisfaction surveys every year to improve employee happiness and reduce turnover rates. In 2024, TZE commissioned a third-party organization to conduct online anonymous engagement and satisfaction surveys by using QR codes and emails. They cover dimensions such as job satisfaction, sense of purpose and happiness, equality and inclusive culture. Among them, indicators such as strategic implementation and decision-making mechanisms are ahead of the domestic average. At the same time, we have formulated special improvement plans based on the survey results and continue to track the progress to further improve satisfaction. The voluntary turnover rate in 2024 was 24.49%.

Employee Satisfaction Survey Results

Number of employees covered	Effective response rate	Employee satisfaction
14,000	**95%**	**72%**

Employee Training and Development

An excellent team of talents is the foundation of a company's innovation and sustainable development. The Company has built a comprehensive career development path for professional, technical and management talents, established a matching training system, improved relevant mechanisms, enriched the internatioal talent pool, and attached importance to helping employees grow and creating a broad career development space for them.

Supporting Employee Growth

In 2024, the Company focuses on the talent concept of "achieving global leadership with first-class talents", adheres to the "people-oriented" principle, and builds a sound talent development and cultivation system. By expanding the external talent supply chain and improving the quality of internal talent, we have created a long-term and sustainable employee development system that combines internal and external aspects.

The Company continues to consolidate its talent team, build a professional and systematic curriculum content system, promote the deep integration of training and business, and help implement its internationalization strategy. We develop personalized career plans for college graduates and provide systematic training and practical opportunities; we introduce cross-functional international talents through channels such as international recruitment websites and overseas talent exchange meetings, set up training programs such as key mentors, personal development plan interviews and guidance, online and offline courses, and strengthen the reserve of overseas talents.

2024 TZE Employee Self-ability Improvement Project

Organize academic advancement projects

- Continue to cooperate with local colleges and universities to jointly promote academic advancement projects. In 2024, we added two new partner institutions, for a total of eight, with more than 150 employees enrolled in in-service education and more than 500 new employees registered and admitted. The number of people who received academic subsidies totaled more than 20, and the total subsidy amount reached CNY 330,000.

Provide subsidies for competency certificates

- Issue subsidies for those with skill certificates certified by the Company; in 2024, more than 60 people in the Company received skill certificate subsidies, with an annual subsidy amount of more than CNY 70,000;
- In response to the Company's internationalization strategy, the "Go-link English Proficiency Improvement Program" has been launched for all employees. Those who meet the learning requirements will be given corresponding ability improvement subsidies to encourage them to improve their English proficiency and create an international atmosphere; in 2024, more than 50% of the participants have improved their English by 1 level in terms of CEFR.

The Company has formulated the *Regulations on Employee In-Service Education Management* to guide employees to improve their academic qualifications and deepen their knowledge and skills through academic qualification improvement and skill certificate subsidies. In terms of promoting employee promotion and development, the Company provides fair and diverse promotion opportunities based on work performance and achievements. We implement an internal competition system, establish a standardized competition process, expand competition opportunities, cover multiple types of positions, provide competition training, and improve personal ability and job matching.

Internal Transfer and Competition in 2024

Indicator		2024
Number of employees transferred or recruited internally		1,368
Proportion of vacancies filled through internal competition		34.31%
By gender	Male	1,128
	Female	240
By management level	Middle managers	12
	Junior managers	61
	General staff	1,295

Empowering Employee Training

TZE has formulated and implemented the *Training Management Regulations* to determine a task-oriented talent development strategy around the Company's strategic goals. The Company continues to strengthen the construction of a learning organization, provide personalized and targeted training for managers and employees of different sequences, in different roles and at different levels, help employees' personal career development, and promote a systematic improvement in the quantity and quality of talents.

In 2024, the Company continued to promote Zhonghuan Training Center, formulate long-term talent training programs around the "three major centers", and deeply integrate training end and business. We relied on the "Four Major Colleges" to create a professional and systematic course content classification system that comprehensively covers the knowledge needs of different levels and positions. Based on the "Six Major Platforms", we strengthened the full-process training project operation capabilities, realized the intensive and standardized management of training resources, coordinated in multiple dimensions to jointly consolidate the talent team building, and ensured the comprehensiveness, standardization and effectiveness of employee training.

During the Reporting Period

Zhonghuan Training Center cooperated with more than **10** third-party institutions to carry out more than **10** special training activities

More than **260** new courses were launched, covering a total of more than **15,000** people

2024 TZE Employee Training Project

Industry 4.0 Skilled Talent Training Project

TZE has launched the "Industry 4.0 Skilled Talent Training Project" to deepen school-enterprise cooperation, established a PBSD model (Profession, Basic, Skill, and Digital), outputted career development paths and work manuals for 8 positions, and built a job skills knowledge course system. We have iterated the star-rated employee evaluation standards for all positions, optimized digital management processes, cultivated front-line craftsmen, established a smart manufacturing talent supply chain, promoted the transformation of talent structure, and cultivated high-quality cross-functional talents.

Senior Management Team Building Project

In 2024, in order to enhance the cohesion and combat effectiveness of the senior management team during the transformation phase, TZE carried out a training on the theme of "Building Consensus, Reshaping Capabilities, and Breaking Through the Cold Winter". Through outdoor development and offline discussions, we improved team tacit understanding and collaboration efficiency, reached strategic consensus and formed a code of conduct, strengthened combat effectiveness, laid a solid organizational foundation for coping with changes and challenges and achieving high-quality development, and promoted the implementation of strategic goals.

Key Female Technical Contributor Incentive Award

TZE attaches great importance to stimulating the potential of female employees, commends and rewards outstanding female engineers and technical contributors, and encourages female employees to pursue career development. In 2024, after Zhang *xia, head of the Distributed Photovoltaics Materials Industry R&D Department, joined the Company, she actively innovated based on physical foundations, took root in the front line, carried out work around "technological innovation, quality improvement and efficiency enhancement", improved the team's technical level, and adjusted innovative ideas promptly in response to new problems and challenges in the industry and company's production, so as to achieve mass production, increase production, reduce costs and boost efficiency. In 2024, Zhang *xia won the "Outstanding Manager Award" at TCL's 2024 Global Manager Conference.

2024

Training coverage reached **100%**

Total training hours of employees reached **604,768.5** hours

The average training time per person was **39.45** hours

The total investment in employee training was CNY **8.6982** million

577 staff training sessions were held

"Duty Transfer Program"-New Grassroots Manager Training Project

Employee Training in 2024[1]

[1]The average training hours of employees in overseas subsidiaries throughout the year were 21.6 hours, 67 hours for men and 70.4 hours for women; 11.6 hours for executive management, 20.5 hours for professional managers, and 99.5 hours for technical, production and administrative staff.

Occupational Health and Safety

TZE adheres to the safety management policy of "abiding by laws and regulations, people-oriented, work safety and reducing occupational risks", improves the safe production responsibility system of "full coverage", consolidates the foundation of occupational health and safe production management, strengthens risk classification control and hidden danger investigation and management, curbs all kinds of safe production accidents, and creates a healthy, safe and environmentally friendly working environment for all employees, ensuring the continuous stability of the Company's safe production.

Governance

TZE takes "controlling risks, handling hidden dangers and preventing accidents" as its safety management philosophy. We have established a Safety Production Committee led by the CEO to coordinate the strategic leadership and deployment of safety production. The subsidiary company has established a Work Safety Management Department, with sufficient full-time and part-time personnel to supervise the implementation of safety standards. In 2024, the signing rate of work safety responsibility letters was 100%, and the coverage rate of the work safety responsibility system assessment was 100%. We have achieved the goal of no major work safety accidents during the Reporting Period.

Strategy

In 2024, TZE issued the *Occupational Health and Safety Policy* to implement main responsibilities, improve the guarantee mechanism, and protect the health and safety of employees by setting performance targets, strengthening supervision and management, popularizing education and training. The Company arranges health insurance and work-related injury insurance for employees in accordance with the law, prevents work-related accidents, regularly conducts occupational hazard factor testing and occupational health examinations, protects the health of employees, and achieves zero occupational disease incidents. The Company formulates and implements the "Annual Safety Training Plan" every year, carries out safety training and education for positions at different levels, covers all employees, and ensures accurate learning and mastery of safety knowledge and skills.

In 2024, the Company completed its annual safety training plan through a combination of online and offline methods, conducting **2,048** safety training sessions for a total of **241,427** people, including **205,148** employees and **36,279** suppliers and other relevant partners in the park, for a coverage rate of **100%**.

Risk Management

In 2024, TZE further strengthened its safety production management, using information systems to achieve systematization of confirming risk control measures, efficiency of analyzing the hidden danger management data trend, and timeliness of eliminating safety hazards, effectively controlling the occurrence of safety accidents. Based on the results of risk assessment and emergency resource survey, the Company has established a three-level emergency plan system including comprehensive, special and on-site disposal plans. We update and implement the "Annual Emergency Drill Plan" every year, organize all employees to participate, and improve employees' emergency response and disposal capabilities.

Zhonghuan Advanced Continuously Promotes the Informatization and Intelligent Construction of Safe Production

Zhonghuan Advanced's CMS, emergency rescue linkage command platform, integrates IoT perception equipment and AI algorithms to achieve real-time risk monitoring and intelligent scheduling of emergency resources, and automatically triggers graded warnings.

In 2024

the Company carried out inspections for potential safety hazards for all employees to mobilize their enthusiasm.

1,055 special inspections were carried out throughout the year

16,094 potential safety hazards were eliminated

Dedicated personnel tracked the closed-loop corrective action, with a rectification rate of **100%**

Metrics and Targets

During the reporting period

Number of particularly serious safety accidents: **0** Number of major safety accidents: **0**

Number of work-related injuries: **3** Number of fatalities as a result of work-related injuries[1]: **0**

Lost days due to work injuries: **170** Rate of work-related injuries per 1,000,000 hours worked: **0.10**

[1]During the Reporting Period, there were 3 work-related accidents in the Company, a decrease of 67% compared with 9 in 2023. The total number of working hours is 14,015*2,000+Maxeon1,276,563, and the injury rate per million man-hours is 0.10=3/(14,015*2,000+1,276,563)*1,000,000.
[2]Covers 11 domestic factories and 4 overseas factories.

2024 Safety Production Management Performance

Indicator	2024
Number of factories certified by the ISO 45001 Occupational Health and Safety System	15[2]
Number of factories certified to China's Grade II Work Safety Standardization	6
Number of factories certified to China's Grade III Work Safety Standardization	4
Cost of investment in work safety (CNY 100 million)	1.05
Work safety inspection (times)	1,626
Emergency drills for sudden accidents (sessions)	230
Number of participants in emergency drills	1,826

Employee Occupational Health and Safety Performance in 2024

Indicator	2024
Employee health insurance coverage rate (%)	100
Employee work-related injury insurance coverage rate (%)	100
Coverage rate of occupational hazard health examinations for employees (%)	100
Coverage rate of general health examinations for employees (%)	100
Number of occupational disease cases among employees	0
Safety training (sessions)	2,048
Number of people receiving safety training	241,427
Coverage rate of employees receiving safety training (%)	100

Social Contribution

TZE insists on giving back to society in development. Through a series of public welfare actions and volunteer services, we have practiced national rural revitalization and common prosperity strategy, demonstrated corporate social responsibility, and resonated with national development.

In the future, TZE will continue to uphold the "leading, collaborative, harmonious and cooperative" corporate ethos, work with all sectors of society, gather more forces, jointly write a magnificent chapter in public welfare, and make unremitting efforts to build a better society.

Rural Revitalization

The Company adheres to the practical model of combining photovoltaics development with rural revitalization. By donating photovoltaic rooftop solar power generation systems to schools, we have boosted the use and construction of renewable electricity on campus. In addition, we have invested in photovoltaic projects in remote and underdeveloped areas to facilitate rural green transformation and sustainability. By the end of 2024, we have built **26** photovoltaic campuses across China, with a total installed capacity of **1,548.15** kW. The power generation income over the next twenty-five years is about CNY **17.4057** million. We have supported a total of 6 photovoltaic poverty alleviation projects, covering **7,455** poor households with no ability to work.

Utilize the Good "Sunshine" to Illuminate the Road to Prosperity in Liangshan Yi Autonomous Prefecture

In 2024, Huansheng Photovoltaic Jiangsu assisted China Huadian (Zhaojue) New Energy in building a 100MW photovoltaic power station, providing shingled modules to expand the power generation area and increase power generation. The annual power generation is expected to be 160 million kWh, meeting the electricity needs of nearly 80,000 households in Liangshan Yi Autonomous Prefecture. The project adopts the "photovoltaic + traditional Chinese medicine" complementary model to broaden residents' income channels, empower rural revitalization and sustainable development, and achieve a win-win situation in economic and environmental benefits.

Huansheng Photovoltaic Jiangsu assisted China Huadian (Zhaojue) New Energy in building a 100MW photovoltaic power station

Public Welfare and Charity

On the road of public welfare, TZE has always been moving forward, interpreting its social responsibility and commitment with actions. Over the years, TZE has always integrated public welfare into its corporate development strategy. From poverty alleviation through education to caring for special groups, from helping rural revitalization to promoting a green future, every public welfare project is filled with deep affection for society. In May 2024, TZE generously donated CNY **19.49446** million to the TCL Charity Foundation, injecting strong impetus into public welfare and charity undertakings such as poverty alleviation, student aid, and disaster relief.

In 2024, overseas subsidiaries carried out **12** volunteer activities with **328** participants and **2,160** volunteer hours.

TZE Rainbow Run

Eid Food Box Corporate Social Responsibility Program (Malaysia)

Maxeon helps Lifeline Albury Wodonga effectively save energy and serve more people in need

As part of its global "Maxeon Gives" initiative, the Lifeline Albury Wodonga in New South Wales, Australia, has installed a brand new photovoltaic system donated by Maxeon. The system uses Maxeon's Performance series photovoltaic modules and SunPower Reserve integrated energy storage system. The Maxeon Gives plans to donate the Company's PV solutions to communities and organizations around the world as part of its commitment to making innovative, affordable, reliable and sustainable energy accessible to everyone.

Social - Targets & Performance

Issues	Indicator	2023 Baseline	2024 Target	2024 Progress	2025 Target	2030 Target
Employee training and development	Talent training system	Have established training courses for employees of different ranks, businesses and departments	Optimize the talent training and development system (including leadership, system training at all levels, etc.)	Optimize the talent training and development system (including leadership, system training at all levels, etc.) ✓	Build a talent training and development system for overseas bases	Implement a global talent training and development system
Employee training and development	Annual average training hours per employee	37.2	5% increase compared to 2023	6% increase compared to 2023 ✓	10% increase compared to 2023	35% increase compared to 2023
Diversity, equality and inclusion	Share of women in middle and top management positions	/	25%	25% ✓	Not less than 25.5%	Not less than 26%
Occupational health and safety	Rate of work-related injuries per 1,000,000 hours worked	0.23	3% decrease compared to 2023	52% decrease in 2023 ✓	5% decrease compared with 2023	8% decrease compared with 2023
Clean technology innovation	Cumulative number of intellectual property patents	1,739	20% increase compared to 2023	150% increase compared to 2023 ✓	40% increase compared to 2023	Industry Leader
Responsible Supply Chain	Supplier ESG management	Have establish a supplier ESG risk assessment and management mechanism	For key high-risk suppliers: the coverage rate of on site audit reached 50% the coverage rate of desktop audit reached 50%	For key high-risk suppliers: the coverage rate of on site audit reached 61% the coverage rate of desktop audit reached 39% ✓	For key high-risk suppliers: the coverage rate of on site audit reached 60% the coverage rate of desktop audit reached 40%	The system is fully compliant with ISO 20400 sustainable procurement standards
Client relationship management	Client satisfaction	93%	The domestic client satisfaction rate remains 95%	94.35%	The domestic client satisfaction rate remains over 95%	The global client satisfaction rate remains over 95%

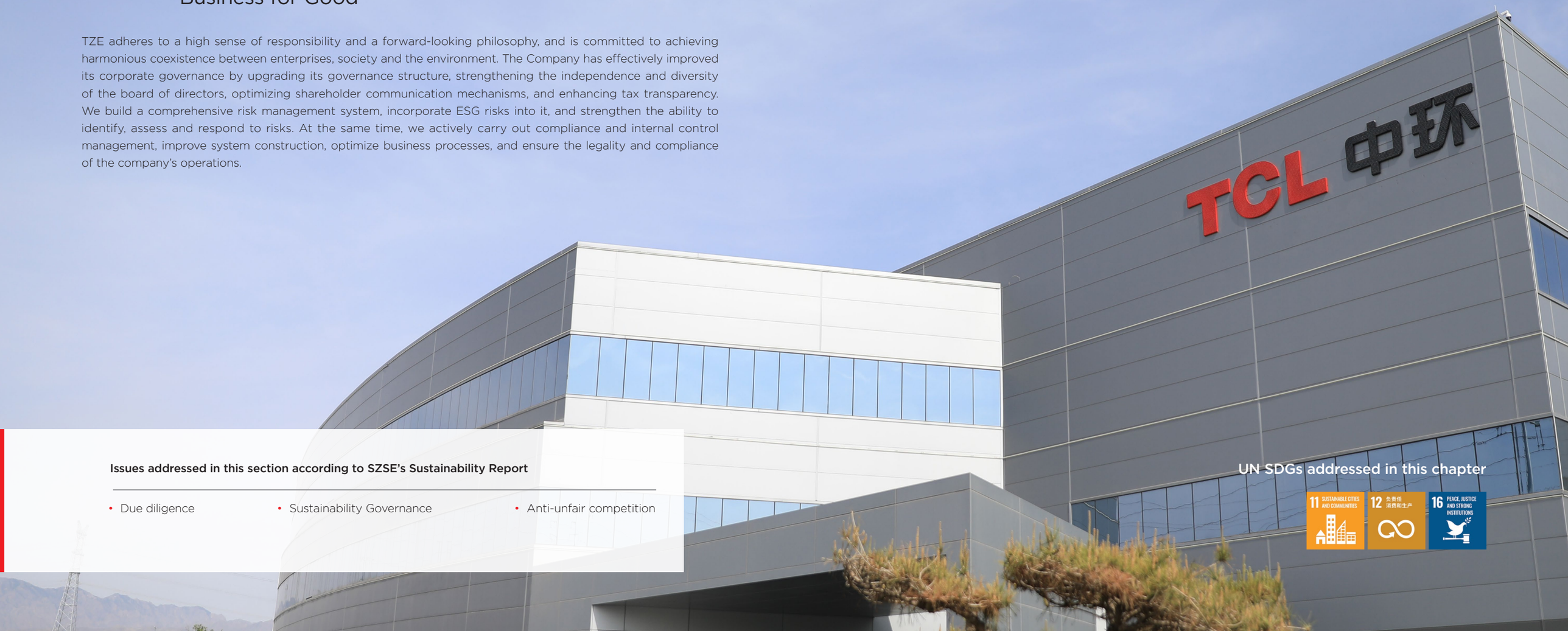
As a leading company in the global photovoltaic industry, TZE has always upheld a sense of social responsibility and is committed to promoting energy transformation through technological innovation and contributing to the sustainable development of society. We are well aware that the value of an enterprise is not only reflected in economic benefits, but also in its positive impact on society and the environment.

In the future, TZE will continue to deepen its photovoltaic technology innovation, accelerate the development and application of new technologies, and launch more efficient and reliable products and solutions. At the same time, we will also actively explore diversified application scenarios of “PV +”, expand the application boundaries of PV technology through cross-field integration and innovation, and provide more comprehensive support for global energy transformation and sustainable development.

Governance

Business for Good

TZE adheres to a high sense of responsibility and a forward-looking philosophy, and is committed to achieving harmonious coexistence between enterprises, society and the environment. The Company has effectively improved its corporate governance by upgrading its governance structure, strengthening the independence and diversity of the board of directors, optimizing shareholder communication mechanisms, and enhancing tax transparency. We build a comprehensive risk management system, incorporate ESG risks into it, and strengthen the ability to identify, assess and respond to risks. At the same time, we actively carry out compliance and internal control management, improve system construction, optimize business processes, and ensure the legality and compliance of the company's operations.



Issues addressed in this section according to SZSE's Sustainability Report

- Due diligence
- Sustainability Governance
- Anti-unfair competition

UN SDGs addressed in this chapter

Spotlight: Steady governance promotes development, and collaborative progress helps open a new chapter

TZE understands that sound corporate governance and effective risk management are key to achieving sustainable development. The Company continues to promote the establishment of "three lines of defense" for systematic risk management, strengthen collaborative management and source control, and lay a solid foundation for steady development. We develop risk management strategies, provide regular risk training for all non-executive directors, foster an effective risk culture, integrate risk standards into daily operations, and link risk metrics to role-based incentives.

First Line of Defense

Members: Functional departments and subsidiaries of TZE

- Identify the risks within their business domains and develop risk prevention and control measures and systems.

Second Line of Defense

Member: Risk Management Office

- Enhance the risk management system at the Company level and conduct internal controls.

Third Line of Defense

Member: Audit Committee

- Conduct internal audit of the effectiveness of risk management.
- Maximize the effectiveness of its supervisory role by rigorously overseeing the Company's compliance review process, meticulously evaluating risk assessment reports, and ensuring the effective implementation of risk management measures.

ESG risk identification and management measures

System construction

Build a comprehensive and efficient risk management and due diligence system, and incorporate ESG into the comprehensive risk management framework.

Risk identification

Identify and assess potential risks, regularly recognize the development trend of emerging global risks and opportunities in combination with ISO 37301 compliance management system construction, climate scenario analysis and risk and opportunity identification, and sort out core ESG risks and countermeasures including transnational operational risks such as compliance, climate change, safety and environmental protection, business ethics and geopolitics.

Key control

Based on the probability of risk occurrence and potential impact, establish a dynamically updated risk priority list, prioritize resource allocation to implement key control, and ensure that business stability and sustainable growth can be maintained in the face of internal and external challenges through a scientific governance structure and comprehensive risk management strategies.

Emerging risk identification and management

In the process of steadily advancing internationalization, TZE has keenly identified important emerging risks such as natural resources and energy transition crises, geopolitics, data security, intellectual property rights, etc. that may be faced, carried out in-depth risk awareness training, and formulated targeted risk management strategies to reduce the probability of risk occurrence and its impact on the Company.

Deploy a multi-party collaborative monitoring network to actively respond to geopolitical risks

The pressure of global supply chain reconstruction and overseas asset security risks may impact the international layout, affecting the stability of overseas business and market expansion space. In response to the identified important emerging risks, such as geopolitics, TZE has built a multi-party collaborative monitoring network to dynamically track changes in the political and economic environment in key regions such as the United States, the Middle East, and Southeast Asia, and build an early warning response system. Based on the risk prediction results, the Company continues to optimize the regional layout of the supply chain and market entry strategies, promotes the diversified layout of the supply chain, ensures the stability of the supply chain and business continuity, and effectively avoids the transmission of geopolitical risks.

Implement the triple mechanism to effectively control patent infringement risks

Since the industry is technology-intensive, TZE actively identifies third-party patent infringement risks in procurement and product development. Effective management and control through the triple control mechanism: set up intellectual property compliance clauses in the Procurement Contract, requiring suppliers to promise patent legitimacy; implement patent compliance review according to the Supplier Management System to ensure compliance of the procurement process; regulate partners' behavior through the Partner Code of Conduct to reduce infringement transmission.

Corporate Governance

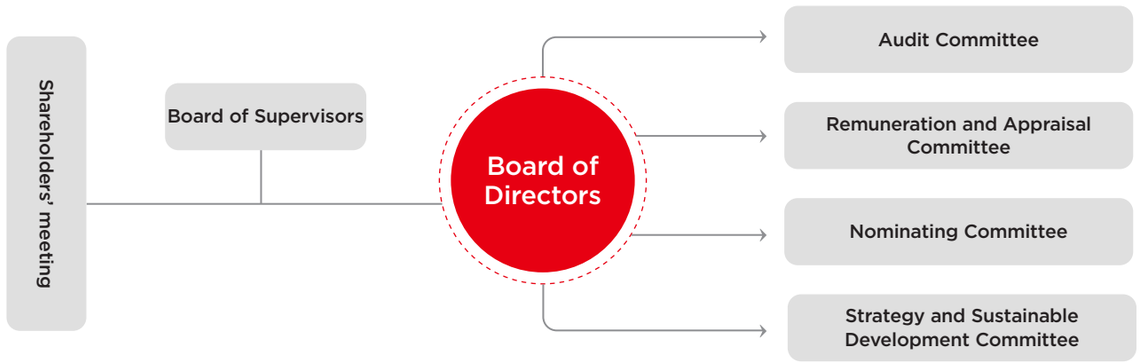
TZE builds and improves its governance structure to protect the legitimate rights and interests of shareholders, continuously deepens the transparency of information disclosed, adheres to the bottom line of compliance management, and promotes high-quality development of enterprises.

Governance

TZE has established a governance system with the Shareholders' Meeting, Board of Supervisors, Board of Directors and its subordinate committees as the core. As the highest decision-making body, the Shareholders' Meeting is responsible for reviewing major affairs and protecting shareholders' rights and interests; the Board of Directors is responsible for making daily major business decisions and achieving strategic goals; the Board of Supervisors, as the company's supervisory body, is responsible for supervising the operation of the Board of Directors and management. In addition, each special committee has established rules of procedure to ensure the full performance of its functions and independent and efficient operation.

The Company attaches great importance to the suggestions and feedback of investors, strictly follows the relevant regulations and requirements such as the *Articles of Association* and the *Rule of Procedures for Shareholders' Meetings*, standardizes the convening of shareholders' meetings, and effectively protects the equal rights and interests of all shareholders, especially small and medium-sized shareholders. During the Reporting Period, the Company held 1 shareholders' meeting in total

Corporate governance structure



Independence and Diversity of the Board of Directors

The Company strictly abides by various governance systems such as the *Articles of Association*, *Rules of Procedure for the Board of Directors,* and *Detailed Rules for the Implementation of Special Committees of the Board of Directors*. All directors perform their duties faithfully and diligently to ensure the professional decision-making and efficient operation of the Board of Directors, further improve the corporate governance structure and promote standardized operations. During the Reporting Period, 14 board meetings were held, with the attendance rate of directors reaching 100%.

In 2024, the Company revised the *Rules for Independent Directors Work System* and other relevant systems to clearly define the qualifications, scope of responsibilities and performance guarantee mechanism of independent directors, further improve the corporate governance structure and promote standardized operation. In addition, we revised the *Management System for the Company's Shares Held by Directors, Supervisors and Senior Managers and Changes Therein* to strengthen the rights and interests of directors while maintaining the order of the securities market.

The Company continues to optimize the structure of the Board of Directors and build a diversified governance system covering gender, cultural background, experience and other dimensions, injecting innovation vitality into corporate governance. As of the disclosure date of this Report, the Company's Board of Directors includes 2 female directors, accounting for 22.22% of the total number of directors. In addition, the Board of Directors includes 3 independent directors, each with accounting, financial management and industry expertise, and has accumulated rich business management experience in their respective fields. Independent directors are complementary in terms of knowledge structure, professional skills, industry experience and cultural background, which helps to make scientific, reasonable and professional decisions when facing complex and changing market environments and corporate needs, further improve the effectiveness of the Board of Directors, and ensure its standardized and effective operation. For more information about TZE's corporate governance and Board of Directors, please refer to the 2024 TZE Annual Report.

Key performance indicators of governance

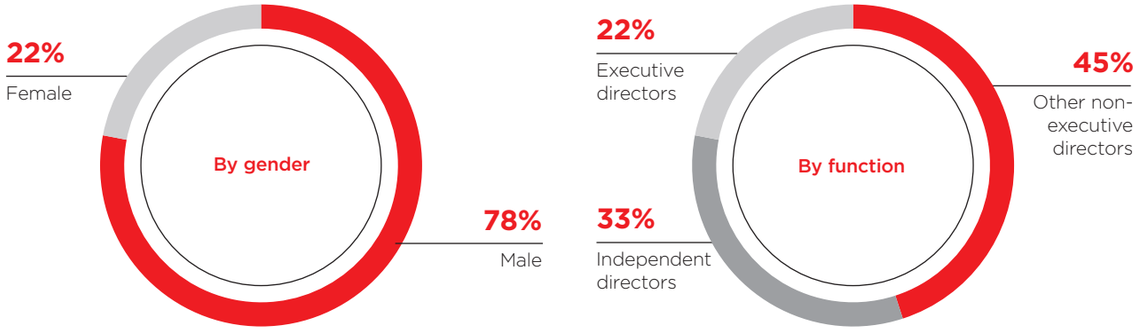
Members of the Board of Directors **9**

Average tenure **4.56** years

During the Reporting Period, **14** board meetings were held, with the attendance rate of directors reaching **100%**

The Company delivered **4** risk training courses for Board of Directors members. A total of **9** directors participated, achieving a **100%** coverage rate.

Members of the Board of Directors



TZE's performance

TZE has successfully carried out more than **150** roadshows

TZE has received over **3,000** investors

The response rate of small and medium-sized investors is nearly **100%**

Honors and awards

2024 Best Practice of the Board of Directors Offices of Listed Companies
China Association for Public Companies

The 7th China Excellence IR Best Capital Market Communication Award
Cross-border Roadshow Platform for Listed Companies

The 5th Panorama Investor Relations Gold Award and Model Award
ir.p5w.net

Shareholders Relations

TZE insists on safeguarding the rights and interests of shareholders, creditors and other stakeholders, adhering to the needs of investors, actively carrying out information disclosure, and conveying corporate value through multiple channels. The Company has formulated and implemented the "*Quality and Return Double Improvement*" *Action Plan* to ensure that shareholders exercise their rights fairly and protect the rights and interests of small and medium-sized investors.

The Company strictly follows the principles of truthfulness, accuracy, completeness, timeliness and fairness to continuously improve the quality of information disclosure. During the Reporting Period, we issued 145 announcements, covering major matters such as the Company's regular reports, foreign investment, and performance. Moreover, we completed the preparation and disclosure of regular reports 4 times with high quality. The Company has built an efficient communication platform to grasp the demands of investors and maintain the relationship with them in all aspects through performance briefings, exchanges with analysts, and communication with shareholders and potential investors. In 2024, we strengthened the construction of communication platforms, maintained the compliance of the official website and optimized presenting content to enhance the sustainable influence of the brand.

Tax Transparency

TZE strictly follows the tax laws and regulations in the countries where it operates, adheres to fair and transparent tax payment, and adopts a zero-tolerance attitude towards any tax evasion or avoidance. To fully fulfill tax obligations, we have clarified relevant requirements in the Code of Business Conduct. In 2024, TZE paid a total of CNY 1.56 billion in taxes and fees.

During the Reporting Period, the Company strictly followed the *Law of the People's Republic of China on the Promotion of Small and Medium-sized Enterprises*, *Regulations on Guaranteeing Payment of Funds to Small and Medium-Sized Enterprises* and other relevant laws and regulations. According to the National Enterprise Credit Information Publicity System, we had no overdue payment to small and medium-sized enterprises.

Business Ethics

The Company issued the *Code of Business Ethics* to clearly define the anti-corruption and business ethics requirements that TZE and its subsidiaries must strictly abide by in their business operations, as well as all employees must strictly follow when performing their duties. The Code clearly emphasizes the specific boundaries of integrity and self-discipline to executives and employees, requiring all of them to abide by the principle of "never crossing the red line".

In 2024, the Company had no major lawsuits involving corruption, bribery, conflicts of interest, money laundering or related-party transaction.

Anti-unfair Competition

To ensure compliant operation and enhance its core competitiveness, TZE has established a complete anti-unfair competition system, actively carried out antitrust declaration for domestic and foreign investment projects, followed relevant laws and regulations to ensure investment compliance, and maintained market fairness. At the same time, the Company has formulated the *Regulations on Business Secret Management* to clarify the scope and process of protection, and set up a multi-department emergency plan team to deal with emergencies. In terms of responsible marketing, the Company strictly abides by the *Advertising Law of the People's Republic of China*, formulates the *Technical Marketing and Service Team Compliance Management System*, organizes regulatory training and establishes an audit mechanism to ensure compliance with plans and materials. At the same time, we put forward communication principles for partners, prohibits false publicity, and safeguards the rights and interests of the market and customers.

The Company has sorted out, evaluated and improved the compliance management system and process, strengthened compliance awareness through publicity and training, and enhanced governance and management capabilities. In March 2024, it obtained ISO 37301 certification. During the Reporting Period, the Company did not incur any lawsuits or major administrative penalties due to unfair competition.

Anti-Bribery and Anti-Corruption

The Company adheres to clean management and has zero tolerance for corruption. We have formulated and strictly implemented anti-fraud systems such as the *Management Regulation on Combating Commercial Bribes* and the *Provisions on the Management of Reporting Conflicts of Interest of Employees*, covering all business links. We require our employees to sign a letter of commitment to integrity, which explicitly prohibits all types of violations, regulates the behavior of all employees, and builds a solid line of defense against corruption. In 2024, the signing rate of the *Employee Integrity and Self-discipline* Commitment of TZE and its subsidiaries reached 100%.

The Company has formulated the *Management Regulation on Supervision*, established a supervision and auditing agency, assigned dedicated personnel to manage reporting telephone numbers and email addresses, strictly kept reporting information confidential, protected the rights and interests of reporters, and focused on areas such as procurement, sales, and engineering to strengthen audit and supervision, and identify and assess risks. During the Reporting Period, the Company did not receive any relevant reports.

To facilitate the receipt of reporting information, the Company has set up diversified channels, as follows:

Email:jubao@tzeco.com

Tel:022 - 23789766 - 8022

Address for letters and visits: No. 10, Haitai South Road, Huayuan Industrial Zone (outside the ring), Tianjin Binhai High-tech Industrial Development Area

Business Ethics Audit

TZE has established an audit, monitoring and control system of "prevention before incidents, management and control during incidents, and supervision after incidents", and conducts rolling business ethics audits on all of its businesses to ensure that all operational aspects of its subsidiaries and itself are covered every two to three years. Every year, the Company focuses on key links such as sales, procurement, inventory, funds, assets, taxes and remuneration, carries out internal audits of business ethics, strengthens pre-, mid- and post-audit supervision, improves management mechanisms, identifies, evaluates and continuously reduces business ethics risks such as bribery and corruption. In response to the problems found during the audit, the Audit Center continues to track and supervise the progress of rectification work to ensure that the problems are thoroughly resolved.

In 2024, the Company conducted **11** professional audits on business ethics

The problem correction rate reached **100%**

No major violations of business ethics were found

Business Ethics Training

In 2024, TZE utilized the company's information platform to promote integrity through various forms of training, covering all members from the board of directors to ordinary employees. The Company sent the 2024 Anti-Fraud Notice and the handling decisions of typical cases to employees, guiding employees to learn from the cases, explaining the rules through the cases, eliminating organizational malpractices, and severely punishing corruption.

We launched trainings on the *ESG Code of Conduct for Partners* for suppliers, covering business ethics and compliance. In 2024, 251 suppliers participated online and offline training.

The anti-corruption and business ethics training reached **100%** employee coverage

totaling **56,060** hours

9 directors participated in anti-corruption and business ethics training

with **100%** director coverage

"Integrity Starts with Me" Special Training

Business Ethics and Anti-Corruption Key Performance

Indicator name	2024
Proportion of employees signing a commitment letter to the code of business ethics (%)	100
Proportion of new suppliers signing the code of conduct (%)	100
Anti-corruption special courses and business ethics training	
Number of participants (people)	14,015
Employee coverage (%)	100
Including	
Top management (people)	56
Middle managers (people)	280
Junior managers (people)	176
General staff (people)	13,503
Total hours of trainings on anti-corruption special courses (hours)	56,060
Average hours per FTE of training on anti-corruption special courses (hours)	4

Internal Control

TZE deeply embeds the construction of the internal control system into daily operations and management, and builds a long-term mechanism for continuous upgrading. In 2024, the Company realized the deep integration of the internal control system and operation management by improving the institutional framework, sorting out the boundaries of rights and responsibilities, and optimizing business processes, thus significantly improving its risk prevention and control ability and business management efficiency.

Improve the institutional framework

- In accordance with the basic framework and overall requirements of the internal control system, combined with the actual production and operation situation, we have built a textual system that conforms to our own actual situation to make it more feasible and operational.

Sort out the boundaries of rights and responsibilities

- We continue to optimize our work processes and, by improving each business link, further clarify the responsibilities and collaboration relationships between departments, positions, and superiors and subordinates to achieve efficient, smooth and coordinated work procedures.

Optimize business processes

- We conduct compliance checks on business processes and track the entire process to dynamically resolve discovered problems; we implement process optimization projects, standardize work procedures, streamline business relationships, build a standardized process system, and effectively improve operational efficiency.

Compliance Management

TZE strengthens anti-corruption and anti-commercial bribery management through system and ecological construction, training and supervision mechanisms, builds an honest cooperation ecosystem, and ensures the compliance of business activities. In addition, the Company has gradually improved its compliance system covering key overseas special areas such as labor employment, anti-corruption and anti-commercial bribery, and data protection by carrying out ISO 37301 compliance system certification and regularly implementing compliance assessments. In overseas compliance management, the Company conducts targeted risk compliance analysis for core products and materials, formulates labor employment compliance manuals and improves relevant systems to protect employees' rights and interests.

ISO 37301 Compliance System Certification

July 2024, special training site on Interpretation of Laws and Regulations Related to Labor Employment

Data Security and Privacy Protection

TZE builds a comprehensive information security management and customer privacy protection system to manage data collection, transmission, use and destruction throughout the life cycle. In 2024, the Company formulated and published the *Privacy Protection Policy* on its official website to clearly regulate the principles and behaviors of information collection, use, sharing and transfer, and list in detail the rights of customers, suppliers and employees and protection measures.

Governance

The Company has established a Digital Transformation Committee (hereinafter referred to as the "Digital Committee") to formulate overall digital strategies and guiding principles. The Digital Committee has an Information Security Technology Group, which is responsible for implementing information security policies, monitoring information and privacy security, and ensuring that relevant data processing, sharing and privacy protection for the Company's employees, partners, customers and suppliers are compliant. In 2024, the Company comprehensively established an overseas data compliance management system and a network security and data compliance framework system. Through the dual-wheel drive of technical protection and institutional constraints, we have strengthened partner management and achieved full-process control of data security and privacy protection.

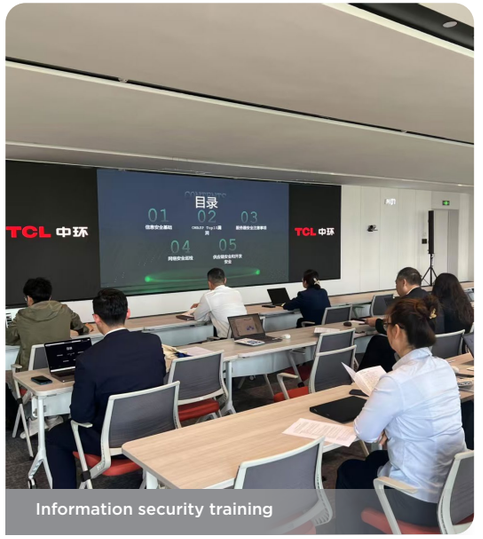
Strategy

The Company actively promotes the certification of the information security management system and comprehensively carries out systematic and standardized management of information security. As of the end of 2024, a total of 6 companies, including TZE Headquarters and its subsidiaries, have obtained ISO 27001 information security management system certification, covering TZE Headquarters and the industrial chain business unit.

The Company has established a data security management system to analyze the causes of data security incidents, collect evidence, record the processing process, investigate and evaluate after the disposal is completed, formulate improvement measures, and build a document encryption protection system. By deploying the EsafeNet encryption system, we have achieved data leakage risk prevention and control. During the Reporting Period, the Company did not experience any major information security or privacy leakage incidents.

The Company has formulated the *Regulations on the Management of Emergency Response Mechanism for Cyber Incidents* to clarify the incident level, handling methods and emergency mechanisms, and conducts annual testing of emergency plans and incident response procedures. The Company conducts internal security inspections on the information security management system every month, performs system vulnerability scans and industrial control traffic analysis every quarter, carries out a network security attack and defense drill every six months to prevent information security risks, and conducts an external audit of the information security management system every year to ensure its effectiveness. At the same time, the Company continues to implement the data security talent reserve plan, and improves professional knowledge and practical ability through security certification learning, such as CISSP. In 2024, the Company held 68 data security-related training sessions covering all employees.

100% of employees signed the TZE Cyberspace Security Employee Informed Authorization



Information security training

All employees were given the Employee Handbook on Cyberspace Security

Governance - Targets & Performance

Issues	Indicator	2023 Baseline	2024 Target	2024 Progress	2025 Target	2030 Target
Business ethics	Coverage rate of employees participating in business ethics training	100%	100%	100%	100%	100%
Information Security	ISO 27001 information security management system certification	2 entities obtained ISO 27001 information security management system certification	4 new entities won ISO 27001 certification	4 new entities won ISO 27001 certification	All factories will obtain ISO 27001 certification	/

TZE is moving forward steadily on the path of sustainable development. In the future, we will continue to deepen our ESG governance structure, improve the four-level system from decision-making to execution, and continuously enhance our sustainable development governance capabilities. In terms of sustainable development strategy, we will steadily advance our mid- and long-term goals for 2025 and 2030. At the same time, we will strengthen communication with multiple stakeholders, gain an in-depth understanding of their demands and expectations through a variety of channels, ensure that our decisions take into account the interests of multiple parties, lay a solid foundation for our long-term and stable development, and make great strides towards our vision of “becoming a respected global renewable energy technology company”.

About this Report

Report Overview

As a global leading manufacturer of PV materials, supplier of PV cells and modules and provider of intelligent PV solutions, TCL Zhonghuan Renewable Energy Technology Co., Ltd (referred to as "TCL Zhonghuan", "TZE", "the Company" or "We") has always adhered to the sustainable development vision of "becoming a respected global renewable energy technology company", and focuses on the Company's sustainability process.

This Report is the 9th sustainability report (i.e., environmental, social and governance report or social responsibility report) released to the public by TZE, providing transparent corporate sustainable development-related information to our stakeholders, including shareholders and investors, clients, government and regulatory agencies, employees, suppliers and partners, communities, non-governmental organizations, media and others.

Reporting Scope

The policies and data mentioned in this Report cover the Company and our subsidiaries, and the scope of the Report is consistent with that of our annual report. In 2024, the Company acquired Maxeon Solar Technologies, Ltd., and refers to the 2024 Annual Report, the relevant data of Maxeon Solar Technologies, Ltd. from August 31 to December 31, 2024 after acquisition is included in this Report. The subsidiary Ningxia Huanou officially started production in 2024 and is newly incorporated into the scope of this annual report. When the scope of specific data is not consistent with the scope of the Report, it will be noted in the text.

In 2025, TZE's subsidiaries, Zhonghuan Advanced and Maxeon, independently released the 2024 Sustainable Development Report. For details, please refer to their official websites.

Reporting Period

This Report is issued on a one-year cycle, consistent with the financial year. The Reporting Period is from January 1 to December 31, 2024 (referred to as the "Reporting Period"). The Report details TZE's practices and performance in the economic, environmental, social and governance during the Reporting Period. For comparability, consistency, timeliness and completeness, the Report refers back to previous years or covers the year 2025 as appropriate.

Basis for Preparation

The Report is prepared in compliance with the *Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange-Sustainability Report* (For Trial Implementation), the *Sustainability Reporting Guidelines for Listed Companies* of the China Association for Public Companies, and with reference to the *Global Reporting Initiative Sustainability Reporting Standards* (referred to as GRI Standards), the *Sustainability Accounting Standards Board Standards* (referred to as SASB Standards), the Ten Principles of the United Nations Global Compact (referred to as UNGC), and the International Financial Reporting Sustainability Disclosure Standard No. 1-*General Requirements for Disclosure of Sustainability-related Financial Information* and International Financial Reporting Sustainability Disclosure Standard No. 2-*Climate-related Disclosures* published by the International Sustainability Standards Board (ISSB).

List of Designations

To make this Report easier for the stakeholders to read, the company names and abbreviations in this Report are as follows:

Company Name	Abbreviation
Inner Mongolia Zhonghuan Crystal Material Co., Ltd.	Zhonghuan Crystal
Ningxia Zhonghuan Photovoltaic Materials Co., Ltd.	Ningxia Zhonghuan
Tianjin Huanou Semiconductor Material & Technology Co., Ltd	Tianjin Huanou
Tianjin Huanzhi New Energy Technology Co., Ltd	Huanzhi New Energy
Tianjin Huanou New Energy Technology Co., Ltd.	Huanou New Energy
Inner Mongolia Zhonghuan Photovoltaic Materials Co., Ltd.	Zhonghuan PV
Wuxi Zhonghuan Applied Materials Co., Ltd.	Zhonghuan Applied Materials
Ningxia Huanou New Energy Technology Co., Ltd.	Ningxia Huanou
Huansheng Photovoltaic (Jiangsu) Co., Ltd.	Huansheng PV
Huansheng New Energy (Jiangsu) Co., Ltd.	Huansheng Jiangsu
Huansheng New Energy (Tianjin) Co., Ltd.	Huansheng Tianjin
Tianjin Zhonghuan Advanced Material Technology Co., Ltd	Tianjin Zhonghuan Advanced

Company Name	Abbreviation
Zhonghuan Advanced Semiconductor Materials Co., Ltd.	Zhonghuan Advanced
Inner Mongolia Zhonghuan Advanced Semiconductor Material Co., Ltd.	Inner Mongolia Zhonghuan Advanced
Zhonghuan Advanced (Xuzhou) Semiconductor Materials Co., Ltd.	Xuzhou Advanced
Tianjin Huanou International Silicon Material Co., Ltd	Huanou International
Tianjin Huanrui Electronic Technology Co., Ltd	Tianjin Huanrui
Tianjin Zhonghuan New Energy Co., Ltd.	Zhonghuan New Energy
Tianjin Huanhai Industrial Park Co., Ltd.	Tianjin Asset
Inner Mongolia Zhonghuan Asset Management Co., Ltd.	Inner Mongolia Asset
Wuxi Zhonghuan Asset Management Co., Ltd.	Wuxi Asset
Ningxia Zhonghuan Industrial Park Management Co., Ltd.	Ningxia Asset
Maxeon Solar Technologies, Ltd.	Maxeon

Data Source

The sources of data and cases in the Report include TZE's internal relevant statistics, public reports, as well as public data from third-party research, verification or interviews, governmental departments, professional organizations, and other public data.

Unless otherwise specified, the currency used in this Report is Chinese Yuan (CNY).

The Board of Directors of the Company guarantees that there are no misrepresentations, misleading statements, or material omissions in this Report.

Access to the Report

The Report is published electronically, and the Chinese and English versions of the Report can be downloaded from the official website of TZE at https://www.tzeco.com/sdg/

Your valuable comments or suggestions are important to us. If you have any questions or suggestions regarding the Company's sustainability disclosures and performance, please feel free to contact the Company by the following means:

TCL Zhonghuan Renewable Energy Technology Co., Ltd

TEL: +86-022-23789766

Email: tze@tzeco.com

List of Key ESG Policies

Issues	Name of Policy/System in 2024	Name of Laws and Regulations Complied with in 2024
Sustainable Development	TZE Sustainable Development Policy TZE Sustainable Development Management Measures	Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange-Sustainability Report
Governance	Code of Business Ethics Articles of Association Rules of Procedure for the Shareholders' Meeting Rules of Procedure for Board of Directors Detailed Rules for the Implementation of Special Committees of the Board of Directors Management System for the Shares Held by Directors, Supervisors and Senior Managers and Their Changes Investor Relationship Management System Information Disclosure Management Measures Rules for Independent Directors Work System Public Opinion Management System Internal Control System Regulations on Business Secret Management Regulations on Legal Disputes Management Management Regulation on Supervision Management Regulation on Combating Commercial Bribes Management Measures for Employees Receiving Gifts Provisions on the Management of Reporting Conflicts of Interest of Employees Supplier Blacklist Management Regulations Employee Code of Conduct Compliance Management Manual Provisions on the Implementation and Management of Corporate Rule of Law Construction	Company Law of the People's Republic of China Code of Corporate Governance for Listed Companies Guidelines for Articles of Association of Listed Companies (Revised in 2025) Rules for the Management of Shares Held by Directors and Senior Managers of Listed Companies and Their Changes Measures for the Administration of Independent Directors of Listed Companies Measures for the Administration of Information Disclosure of Listed Companies Advertising Law of the People's Republic of China Law Against Unfair Competition of the People's Republic of China

Issues	Name of Policy/System in 2024	Name of Laws and Regulations Complied with in 2024
Climate Change and Energy Management	Environmental Management Policy Energy Management System	Measures on the Management of Environmental Standards Interim Regulations on the Administration of Carbon Emissions Trading Measures for the Administration of Carbon Emissions Trading (Trial) Guiding Opinions on Coordinating and Strengthening Work Related to Climate Change Response and Ecological Environmental Protection Energy Law of the People's Republic of China Law of the People's Republic of China on Conserving Energy Renewable Energy Law of the People's Republic of China Measures for the Administration of Industrial Energy Conservation
Environmental compliance and ecological protection	Environmental Management Policy Biodiversity Conservation Policy Environmental Protection Management Regulations Emergency Plan for Sudden Environmental Pollution Incidents Environmental Occupational Health and Safety Management Manual	Environmental Protection Law of the People's Republic of China Environmental Impact Assessment Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution Integrated Emission Standard of Air Pollutants Emission Standard of Pollutants for Battery Industry Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution Water Pollution Prevention and Control Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes National Catalogue of Hazardous Wastes Environmental Impact Assessment Law of the People's Republic of China

Issues	Name of Policy/System in 2024	Name of Laws and Regulations Complied with in 2024
Water Management	Environmental Management Policy Environmental Protection Management Regulations Environmental Occupational Health and Safety Management Manual	Water Law of the People's Republic of China Regulations on Water Conservation Water Pollution Prevention and Control Law of the People's Republic of China
Supply Chain Management	ESG Code of Conduct for Partners Conflict Minerals Policy Code of Conduct for Partners Supplier Management System Supplier Audit Management System Sourcing, New product/New Supplier Management Regulations Sustainable Procurement Management System Sustainable Procurement Management Manual Compliance Management Manual	Law of the People's Republic of China on Tenders and Bids The Government Procurement Law of the People's Republic of China Measures for the Administration of Tendering and Bidding for Government Procurement of Goods and Services Guidelines for Improving Supply Chain Management Level of Manufacturing Enterprises (Trial)
Data security and privacy protection	Privacy Protection Policy Network Privacy Protection Policy Data Security Management Policy Regulations on the Management of Overseas Project Information Documents Regulations on Privacy Protection Management Regulations on the Management of Emergency Response Mechanism for Cyber Incidents Employee Handbook on Cyberspace Security	Data Security Law of the People's Republic of China Cybersecurity Law of the People's Republic of China Personal Information Protection Law of the People's Republic of China Regulations on Network Data Security Management
Employee Rights and Interests	Human Rights Policy Employee Handbook Recruitment Management System Salary Management System Training Management Regulations Regulations on Annual Leave Management	Labor Law of the People's Republic of China Labor Contract Law of the People's Republic of China The Civil Code of the People's Republic of China Employment Promotion Law of the People's Republic of China Social Insurance Law of the People's Republic of China Law of the People's Republic of China on Mediation and Arbitration of Labor Disputes

Issues	Name of Policy/System in 2024	Name of Laws and Regulations Complied with in 2024
Employee Rights and Interests	Regulations on Employee In-Service Education Management Management Procedure for the Employees' Congress Regulations on the Administration of Disability Subsidies Regulations on Special Protection and Administration of Minors	Trade Union Law of the People's Republic of China Regulations on the Administration of Online Recruitment Services Minimum Wage Regulations Provisions on the Prohibition of Child Labor Law of the People's Republic of China on Protection of Minors Administrative Provisions on Special Protection of Female Employees and Minors
Occupational health and safety	Occupational Health and Safety Management Policy Environmental Occupational Health and Safety Management Manual Production Safety Responsibility System Regulations on Production Safety Target Management Regulations on Occupational Health Management Regulations on the Management of Production Safety Expenses Regulations on the Management of Safety Education and Training Regulations on the Safety Management of Hazardous Chemicals Regulations on the Detection and Management of Hidden Dangers Regulations on Safety Risk Grading, Control, and Management Regulations on the Management of Labor Protection Equipment Regulations on the Safety Management of Special Operations Regulations on the Safety Management of Special Equipment Fire Safety Management Regulations Regulations on the Safety Management of Related Parties Regulations on the Management of Production Safety Accidents Regulations on the Management of Emergency Information Reporting	Labor Law of the People's Republic of China Work Safety Law of the People's Republic of China Prevention and Control of Occupational Diseases of the People's Republic of China Regulations of the People's Republic of China on Work-related Injury Insurance Fire Protection Law of the People's Republic of China The Law of the People's Republic of China on Emergency Responses Regulations on the Management of Production Safety Accidents Regulations on Occupational Health Management Regulations on the Reporting, Investigation and Handling of Production Safety Accidents Regulations on the Safety Management of Hazardous Chemicals Interim Provisions on Investigation and Control of Hidden Dangers for Production Safety Accidents Regulations on Emergency Response to Production Safety Accidents Classification and Catalogue of Occupational Diseases

Issues	Name of Policy/System in 2024	Name of Laws and Regulations Complied with in 2024
Intellectual property	Code of Business Ethics Regulations on Intellectual Property Management Patent Management Regulations Technical Guidelines for Patent Mining Technology Project Management System Regulations on Physical and Chemical Center Test Management	Patent Law of the People's Republic of China Specifications for the Administration of Intellectual Property Rights of Enterprises
Product management	Customer Complaint Control Procedure Control Procedure for Customer Satisfaction Measurement Customer Feedback Management Regulations Customer Service Control Procedure Contract Management Regulations Quality Management Manual Compliance Management System for Technical Marketing and Service Teams	Law of the People's Republic of China on the Protection of Consumer Rights and Interests Product Quality Law of the People's Republic of China Industrial Product Quality Responsibility Regulations

GRI Standards Content Index

Index	Description	Location in the Report
GRI 2: General Disclosures		
The organization and its reporting practices		
2-1	Organizational details	About the Report
2-2	Entities included in the organization's sustainability reporting	About the Report
2-3	Reporting period, frequency and contact point	About the Report
2-4	Restatements of information	About the Report
2-5	External assurance	Appendix: Independent Verification Statement
Activities and workers		
2-6	Activities, value chain and other business relationships	Company Overview
2-7	Employees	Diversity, Equality and Inclusion
Governance		
2-9	Governance structure and composition	Corporate Governance
2-10	Nomination and selection of the highest governance body	Corporate Governance
2-11	Chair of the highest governance body	Corporate Governance
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Management
2-13	Delegation of responsibility for managing impacts	Sustainability Management
2-14	Role of the highest governance body in sustainability reporting	Sustainability Management

Index	Description	Location in the Report
Governance		
2-15	Conflicts of interests	Business Ethics and Anti-corruption
2-16	Communication of critical concerns	Sustainability Management
2-17	Collective knowledge of the highest governance body	Sustainability Management
2-18	Evaluation of the performance of the highest governance body	Sustainability Management
2-19	Remuneration policies	Talent Attraction and Retention
2-20	Process to determine remuneration	Talent Attraction and Retention
Strategy, policies and practices		
2-22	Statement on sustainable development strategy	Sustainability Strategy
2-23	Policy commitments	Sustainability Strategy
2-24	Embedding policy commitments	Sustainability Strategy
2-25	Processes to remediate negative impacts	Business Ethics and Anti-Corruption
2-26	Mechanisms for seeking advice and raising concerns	Stakeholder Engagement
2-27	Compliance with laws and regulations	Business Ethics
2-28	Membership associations	Promotion of Industry Development
Stakeholder engagement		
2-29	Approach to stakeholder engagement	Stakeholder Engagement
2-30	Collective bargaining agreements	Democratic Communication

Index	Description	Location in the Report
GRI 3: Material Topics		
3-1	Process to determine material topics	Sustainability Materiality Assessment
3-2	List of material topics	Sustainability Materiality Assessment
3-3	Management of material topics	Sustainability Materiality Assessment
GRI 201: Economic Performance		
201-1	Direct economic value generated and distributed	2024 Highlighs
201-2	Financial implications and other risks and opportunities due to climate change	Climate and Energy
GRI 204: Procurement Practices		
3-3	Management of material topics	Responsible Supply Chain
GRI 205: Anti-corruption		
3-3	Management of material topics	Business Ethics and Anti-Corruption
205-1	Operations assessed for risks related to corruption	Business Ethics and Anti-Corruption
205-2	Communication and training about anti-corruption policies and procedures	Business Ethics and Anti-Corruption
205-3	Confirmed incidents of corruption and actions taken	None
GRI 206: Anti competitive Behavior		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	None
GRI 207: Taxation		
207-1	Approach to tax	Tax Transparency

Index	Description	Location in the Report
GRI 302: Energy		
3-3	Management of material topics	Energy Management
302-1	Energy consumption within the organization	Energy Consumption Performance
302-3	Energy intensity	Energy Consumption Performance
302-4	Reduction of energy consumption	Energy Consumption Performance
302-5	Reductions in the energy requirements of products and services	Energy Consumption Performance
GRI 303: Water and Effluents		
3-3	Management of material topics	Water Management
303-1	Interactions with water as a shared resource	Water Management
303-2	Management of water discharge-related impacts	Water Management
303-3	Water withdrawal	Water Management
303-4	Water discharge	Water Management
303-5	Water consumption	Water Management
GRI 305: Emissions		
3-3	Management of material topics	Climate and Energy
305-1	Direct (Scope 1) GHG emissions	GHG Emissions Performance
305-2	Energy indirect (Scope 2) GHG emissions	GHG Emissions Performance
305-3	Other indirect (Scope 3) GHG emissions	GHG Emissions Performance
305-4	GHG emissions intensity	GHG Emissions Performance
305-5	Reduction of GHG emissions	GHG Emissions Performance
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Environmental Management Strategy

Index	Description	Location in the Report
GRI 306: Waste		
3-3	Management of material topics	Environmental Management Strategy
306-1	Waste generation and significant waste-related impacts	Environmental Management Strategy
306-2	Management of significant waste-related impacts	Environmental Management Strategy
306-3	Waste generated	Environmental Management Strategy
306-4	Waste diverted from disposal	Environmental Management Strategy
306-5	Waste directed to disposal	Environmental Management Strategy
GRI 308: Supplier Environmental Assessment		
3-3	Management of material topics	Responsible Supply Chain
308-1	New suppliers that were screened using environmental criteria	Responsible Supply Chain
308-2	Negative environmental impacts in the supply chain and actions taken	Responsible Supply Chain
GRI 401: Employment		
3-3	Management of material topics	Diversity, Equality and Inclusion
401-1	New employee hires and employee turnover	Diverse Recruitment
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Benefits and Care-Performance Assessment and Incentives
401-3	Parental leave	Employee Benefits and Care
GRI 403: Occupational Health and Safety		
3-3	Management of material topics	Occupational Health and Safety
403-1	Occupational health and safety management system	Occupational Health and Safety
403-2	Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety
403-3	Occupational health services	Occupational Health and Safety

Index	Description	Location in the Report
GRI 403: Occupational Health and Safety		
403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational Health and Safety
403-5	Worker training on occupational health and safety	Occupational Health and Safety
403-6	Promotion of worker health	Occupational Health and Safety
403-7	Prevention and mitigation of occupational health and safety impacts directly linked to business relationships	Occupational Health and Safety
403-8	Workers covered by an occupational health and safety management system	Occupational Health and Safety
403-9	Work-related injuries	Occupational Health and Safety
403-10	Work-related ill health	Occupational Health and Safety
GRI 404: Training and Education		
3-3	Management of material topics	Employee Training and Development
404-1	Average hours of training per year per employee	Employee Training and Development
404-2	Programs for upgrading employee skills and transition assistance programs	Employee Training and Development
404-3	Percentage of employees receiving regular performance and career development reviews	Employee Training and Development
GRI 405: Diversity and Equal Opportunities		
3-3	Management of material topics	Diversity, Equality and Inclusion
405-1	Diversity of governance bodies and employees	Diversity, Equality and Inclusion
GRI 406: Non-Discrimination		
3-3	Management of material topics	Diversity, Equality and Inclusion
406-1	Incidents of discrimination and corrective actions taken	None

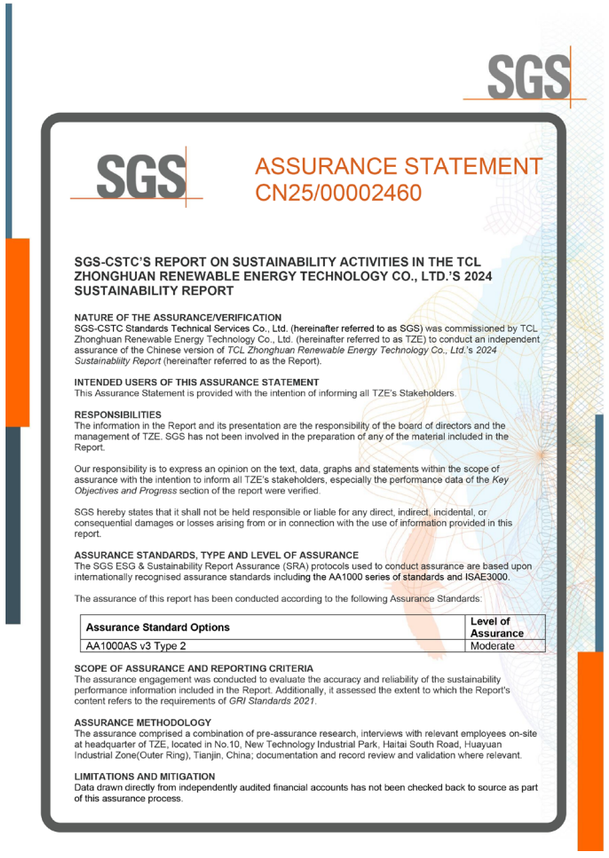
Index	Description	Location in the Report
GRI 407: Freedom of Association and Collective Bargaining		
3-3	Management of material topics	Diversity, Equality and Inclusion
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	None
GRI 408: Child Labor		
3-3	Management of material topics	Diversity, Equality and Inclusion
408-1	Operations and suppliers at significant risk for incidents of child labor	None
GRI 409: Forced or Compulsory Labor		
3-3	Management of material topics	Diversity, Equality and Inclusion
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	None
GRI 413: Local Communities		
3-3	Management of material topics	Social Contribution
413-1	Operations with local community engagement, impact assessments, and development programs	Social Contribution
413-2	Operations with significant actual and potential negative impacts on local communities	None
GRI 414: Supplier Social Assessment		
3-3	Management of material topics	Responsible Supply Chain
414-1	New suppliers that were screened using social criteria	Responsible Supply Chain
414-2	Negative social impacts in the supply chain and actions taken	Responsible Supply Chain
GRI 418: Customer privacy		
3-3	Management of material topics	Data Security and Privacy Protection
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	None

SASB Standards Sustainability Disclosure Topics and Metrics

Topic	Accounting Metric	Location in the Report
Energy Management in Manufacturing	1) Total energy consumed	Climate and Energy-Metrics & Targets
	2) Percentage of grid electricity	Climate and Energy-Metrics & Targets
	3) Percentage of renewable energy	Climate and Energy-Metrics & Targets
Waste Management in Manufacturing	1) Total water withdrawn	Water Management-Metrics and Targets
	2) Total water consumed	Water Management-Metrics and Targets
	3) Percentage of each in regions with High or Extremely High Baseline Water Stress	Water Management-Risk Management
	Description of water management risks and discussion of strategies and practices to mitigate those risks	Water Management-Risk Management
Hazardous Waste Management	Amount of hazardous waste generated, percentage recycled	Environmental Management Strategy-Waste Management
	Number and aggregate quantity of reportable spills, quantity recovered	None
Ecological impact of Project Development	Number and duration of project delays related to ecological impacts	None
	Description of efforts in solar energy system project development to address community and ecological impacts	Environmental Management Strategy-Environmental Protection

Topic	Accounting Metric	Location in the Report
Management of Energy Infrastructure Integration & Related Regulations	Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks	Analysis of Climate Risks and Opportunities
	Description of risks and opportunities associated with energy policy and its effect on the integration of solar energy into existing energy infrastructure	Analysis of Climate Risks and Opportunities
Product End-of-life Management	Percentage of products sold that are recyclable or reusable	/
	Weight of end-of-life material recovered, percentage recycled	/
	Percentage of products by revenue that contain IEC 62474 declarable substances, arsenic compounds, antimony compounds, or beryllium compounds	Not applicable
	Description of approach and strategies to design products for high-value recycling	/
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Supply Chain ESG Risk Management Conflict Minerals Management
	Description of the management of environmental risks associated with the polysilicon supply chain	Responsible Supply Chain
Activity Metrics	Total capacity of photovoltaic (PV) solar modules produced	Company Overview
	Total capacity of completed solar energy systems	Company Overview
	Total project development assets	/

Independent Verification Assurance Statement



SGS

SGS ASSURANCE STATEMENT
CN25/00002460

SGS-CSTC'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE TCL ZHONGHUAN RENEWABLE ENERGY TECHNOLOGY CO., LTD.'S 2024 SUSTAINABILITY REPORT

NATURE OF THE ASSURANCE/VERIFICATION
SGS-CSTC Standards Technical Services Co., Ltd. (hereinafter referred to as SGS) was commissioned by TCL Zhonghuan Renewable Energy Technology Co., Ltd. (hereinafter referred to as TZE) to conduct an independent assurance of the Chinese version of *TCL Zhonghuan Renewable Energy Technology Co., Ltd.'s 2024 Sustainability Report* (hereinafter referred to as the Report).

INTENDED USERS OF THIS ASSURANCE STATEMENT
This Assurance Statement is provided with the intention of informing all TZE's Stakeholders.

RESPONSIBILITIES
The information in the Report and its presentation are the responsibility of the board of directors and the management of TZE. SGS has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of assurance with the intention to inform all TZE's stakeholders, especially the performance data of the *Key Objectives and Progress* section of the report were verified.

SGS hereby states that it shall not be held responsible or liable for any direct, indirect, incidental, or consequential damages or losses arising from or in connection with the use of information provided in this report.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE
The SGS ESG & Sustainability Report Assurance (SRA) protocols used to conduct assurance are based upon internationally recognised assurance standards including the AA1000 series of standards and ISAE3000.

The assurance of this report has been conducted according to the following Assurance Standards:

Assurance Standard Options	Level of Assurance
AA1000AS v3 Type 2	Moderate

SCOPE OF ASSURANCE AND REPORTING CRITERIA
The assurance engagement was conducted to evaluate the accuracy and reliability of the sustainability performance information included in the Report. Additionally, it assessed the extent to which the Report's content refers to the requirements of *GRI Standards 2021*.

ASSURANCE METHODOLOGY
The assurance comprised a combination of pre-assurance research, interviews with relevant employees on-site at headquarter of TZE, located in No.10, New Technology Industrial Park, Haitai South Road, Huayuan Industrial Zone(Outer Ring), Tianjin, China; documentation and record review and validation where relevant.

LIMITATIONS AND MITIGATION
Data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

SGS

The greenhouse gas emission related data in the Report has been directly adopted from the independent third party verification data and has not been double verified in this audit.
This assurance engagement was restricted to the group level of TZE and did not include comprehensively traceability of original data from all subordinate institutions.
The assurance process only involved interviews with the heads of relevant departments and certain employees at the headquarter of TZE, and review of relevant documents. No external stakeholder was involved in this process.

STATEMENT OF INDEPENDENCE AND COMPETENCE
The SGS Group of companies is the world leader in inspection, testing and certification, operating in multiple countries and providing services. SGS affirm our independence from TZE, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment.

FINDINGS AND CONCLUSIONS

ASSURANCE/VERIFICATION OPINION
On the basis of the methodology described and the assurance engagement performed, the specified performance information included in the scope of assurance is accurate, reliable, capable of publicly disclosing multiple performance information to stakeholders, and provides a fair and pertinent statement of the sustainable development activities of TZE for the period from 1 January 2024 to 31 December 2024, and of revealing the sustainable management performance to stakeholders.

CONCLUSIONS, FINDINGS AND RECOMMENDATIONS BASED ON *GRI STANDARDS 2021*

The assurance team concludes that the Report has referred to the requirements of *GRI Standards 2021*, the methods, processes, and results of the double materiality assessment have been disclosed, along with the management methods and performance indicators applicable to relevant economic, environmental, and social issues

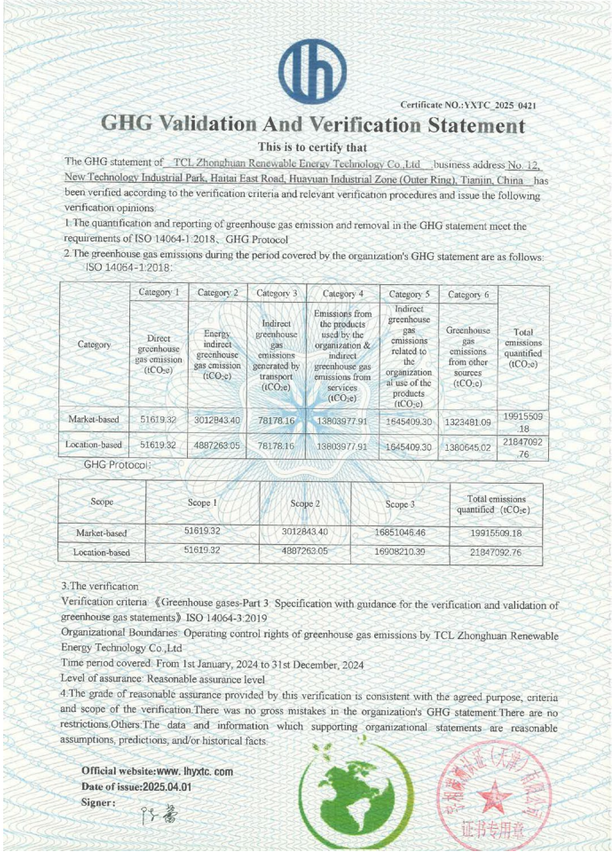
FINDINGS AND RECOMMENDATIONS
All observations pertaining to commendable practices, sustainable development activities, and managerial recommendations identified throughout the assurance process have been thoroughly documented in the *Internal Management Report on Sustainability Reporting Assurance*. This report has been officially presented to the relevant management divisions of TZE to serve as a reference for their ongoing efforts towards continuous improvement.

Signed:

For and on behalf of SGS-CSTC

David Xin
Sr. Director – Business Assurance
16/F Century Yuhui Mansion, No. 73, Fucheng Road, Beijing, P.R. China

Apr. 17th, 2025
WWW.SGS.COM



Certificate NO.:YXTC_2025_0421

GHG Validation And Verification Statement

This is to certify that

The GHG statement of TCL Zhonghuan Renewable Energy Technology Co.,Ltd business address No. 12, New Technology Industrial Park, Haitai East Road, Huayuan Industrial Zone (Outer Ring), Tianjin, China has been verified according to the verification criteria and relevant verification procedures and issue the following verification opinions:

1. The quantification and reporting of greenhouse gas emission and removal in the GHG statement meet the requirements of ISO 14064-1:2018, GHG Protocol
2. The greenhouse gas emissions during the period covered by the organization's GHG statement are as follows:

ISO 14064-1:2018:

Category	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	
	Direct greenhouse gas emission (tCO_2e)	Energy indirect greenhouse gas emission (tCO_2e)	Indirect greenhouse gas emissions generated by transport (tCO_2e)	Emissions from the products used by the organization & indirect greenhouse gas emissions from services (tCO_2e)	Indirect greenhouse gas emissions related to the organization al use of the products (tCO_2e)	Greenhouse gas emissions from other sources (tCO_2e)	Total emissions quantified (tCO_2e)
Market-based	51619.32	3012843.40	78178.16	13803977.91	1645409.30	1323481.09	19915509.18
Location-based	51619.32	4887263.05	78178.16	13803977.91	1645409.30	1360645.02	21847092.76

GHG Protocol:

Scope	Scope 1	Scope 2	Scope 3	Total emissions quantified (tCO_2e)
Market-based	51619.32	3012843.40	16851046.46	19915509.18
Location-based	51619.32	4887263.05	16908210.39	21847092.76

3.The verification
Verification criteria 《Greenhouse gases-Part 3 Specification with guidance for the verification and validation of greenhouse gas statements》 ISO 14064-3:2019
Organizational Boundaries: Operating control rights of greenhouse gas emissions by TCL Zhonghuan Renewable Energy Technology Co.,Ltd
Time period covered: From 1st January, 2024 to 31st December, 2024
Level of assurance: Reasonable assurance level
4.The grade of reasonable assurance provided by this verification is consistent with the agreed purpose, criteria and scope of the verification.There was no gross mistakes in the organization's GHG statement.There are no restrictions.Others.The data and information which supporting organizational statements are reasonable assumptions, predictions, and/or historical facts.

Official website:www. lhyxtc. com
Date of issue:2025.04.01
Signer:

Glossary

Abbreviation	Full Name
TOPCon	Tunnel Oxide Passivated Contact
BC	Back Contact
IBC	Interdigitated Back Contact
ACF	Anisotropic Conductive Film
PERC	Passivated Emitter and Rear Cell
LCOE	Levelized Cost of Electricity
IPCC AR6	Intergovernmental Panel on Climate Change Assessment Report 6
IEA	International Energy Agency
CVaR	Conditional Value at Risk
MES	Manufacturing Execution System
QMS	Quality Management System
MES/WMS	Manufacturing Execution System / Warehouse Management System
IPD	Integrated Product Development
RoHS	Restriction of Hazardous Substances
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
SRM	Supplier Relationship Management
RBA	Responsible Business Alliance
RMI-CMRT	Responsible Minerals Initiative - Conflict Minerals Reporting Template

TCL 中环

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