

# 2024

## 2024 Environmental, Social and Governance Report

& Sustainability Report

# 01

## Together to Consolidate Stewardship: Stable and Robust Operation

- 41 Corporate Governance
- 46 Investor Relations
- 47 Compliance and Risk Management
- 54 Business Ethics
- 58 Anti-Unfair Competition
- Data Security and Privacy Protection
- 59

# 02

## Together to Advance R&D: Cutting-Edge Technology Innovation

- 62 Innovation-driven Development
- 72 Digital Transformation
- 76 Product Quality & Safety
- 85 Protection of Client Rights and Interests

# 03

## Together to Leverage Intelligent Solutions: Responsible Procurement

- 91 Supply Chain Management
- 94 Supply Chain Security
- 96 Sustainable Supply Chains

# 04

## Together to Protect the Environment: Green and Low-Carbon Development

- 105 Environmental Compliance Management
- 110 Response to Climate Change
- 122 Energy Management
- 132 Water Resources Management
- 135 Pollution and Waste Management
- 141 Ecosystem and Biodiversity Conservation

# 05

## Together to Strengthen Collaboration: Diverse and Inclusive Partnership

- 147 Employees' Rights and Interests Protection
- 152 Employee Care and Communication
- 157 Talent Attraction and Development
- 165 Occupational Health & Safety
- 174 Social Contribution and Rural Revitalization

### Preface

- 1 About this Report
- 2 Message from the Chairman
- 4 About Tongwei
- 9 Topic1-3

### Sustainable Development Management

- 16 Sustainable Development Management System
- 32 Sustainable Development-related Honors and Awards
- 34 Stakeholder Communication
- 38 Assessment of Double Materiality Issues

### Appendix

- 178 Overview of Sustainability Data
- 192 Other Designations
- 193 Indicator Index
- 197 Assurance Report
- 198 Reader Feedback

# CONTENTS



# About this Report

## Report Introduction

This is the fifth Environmental, Social, and Corporate Governance Report and Sustainability Report (hereinafter referred to as "the Report" or "the ESG Report") issued by Tongwei Co., Ltd. (the Company) to disclose and demonstrate its ESG performance and responses to important concerns of each stakeholder. This Report has been reviewed by the Board of Directors of the Company which is responsible for the authenticity and validity of the information contained herein.



## Reporting Period

The period covered by this Report is from January 1, 2024 to December 31, 2024 unless otherwise specified. In order to guarantee the continuity, completeness, and comparability of the Report, some of the contents extend beyond the aforementioned timeframe and are explained in the Report.

## Reporting Scope

This Report covers Tongwei Co., Ltd. and its subsidiaries and branches, which is identical to the scope of its consolidated financial statements.

## Preparation Basis

This Report has been prepared with reference to *the Guidelines NO.14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies - Sustainability Report (Trial)*, the Global Reporting Initiative Standards (GRI Standards), the *International Financial Reporting Standards Sustainability Disclosure Standard IFRS S2 Climate-related Disclosures*, the United Nations Sustainable Development Goals (UN SDGs), and the issues that MSCI ESG ratings focus on, etc.

## Data Sources

All information and data used in this Report are formal documents and publicly disclosed documents of the Company. Any conflict between financial data referenced herein and financial data contained in the annual report shall be subject to the annual report. All the fund amounts in the Report are denominated in RMB unless otherwise stated.

## Reporting Language

This Report is issued in both Chinese and English and any conflict between the understanding of the two versions shall be subject to the Chinese version.

## Designations

In this Report, "Tongwei Co., Ltd.", "Tongwei", "Company" and "We" all refer to Tongwei Co., Ltd. For details of the other designations used in the Report, please refer to Other Designations.

## Release Form

This Report is issued electronically and available in the Sustainable Development module of the website of Tongwei ([www.tongwei.com.cn](http://www.tongwei.com.cn)) and the website of the Shanghai Stock Exchange ([www.sse.com.cn](http://www.sse.com.cn)).

## Feedback from Readers

To enhance the Company's ESG management level, improve the quality of ESG information disclosure, and drive the Company to live the ESG development concept, the Company sincerely seeks comments from readers (refer to Reader Feedback for details). Please send your opinions and comments to our email ([twesg@tongwei.com](mailto:twesg@tongwei.com)).

# Message from the Chairman



Enhancing Corporate Resilience through Sustainable Development, Building a New Era of Green and Low-Carbon Economy



The year 2024 marks the ninth year since the United Nations introduced its 17 Sustainable Development Goals and serves as a critical milestone leading up to the expiration of the *Paris Agreement*, signed in 2015. In this year of fluctuating international dynamics and turbulent industry cycles, we find ourselves facing an external environment laden with uncertainties. In response to these challenges, we enunciate our "Together to Win" sustainability strategy, leveraging our operational resilience. Our sustainability management framework comprises nine key dimensions built upon three pillars: "Strategy, Stewardship, Solution". This framework enables us to effectively respond to sustainability risks while seizing emerging opportunities. Internally, we are integrating ESG principles into our daily operations. We have announced 13 commitments toward sustainable development and established 20 specific sustainability goals while joining 10 international sustainable initiatives. As a result, we have witnessed continuous improvements in various ESG ratings year by year.

### In 2024, Tongwei solidified its foundation for development through exceptional governance, leading the industry with steady progress.

Guided by our operation policy of "Focus, Execution and Efficiency", we have adopted the compliance guidelines of "Adhere to the Rules, Know and Abide by Rules, Protect through Compliance". This approach has established a dynamic and robust corporate governance ecosystem. We are continuously enhancing our three-tier risk prevention system while deepening our long-term integrity and compliance mechanisms to promote agile upgrades in our governance framework. With specialized compliance management modules and multi-channel investor communication strategies in place, Tongwei has maintained the highest rating (Class A) for information disclosure from the Shanghai Stock Exchange for four consecutive years. We have also cultivated six entities that have achieved ISO 37301 international certification. Through these efforts, we are consistently raising industry standards in governance capacity building while establishing a modern corporate governance model unique to Tongwei.

### In 2024, Tongwei anchored its vision on carbon neutrality by creating a green paradigm for industrial growth.

We remain steadfast in our commitment to sustainable development while driving multidimensional improvements in environmental performance. Our strategic carbon reduction initiatives have yielded significant results: organizational carbon emissions decreased by 16% year-on-year, and the number of carbon footprint and Environmental Product Declaration (EPD<sup>1</sup>) certifications increased by 26 items. The implementation of our environmental management system has resulted in a systematic reduction of over 20% in emissions from wastewater, exhaust gas, and solid waste pollutants. Additionally, renewable energy consumption has surpassed 23.965 million megawatt-hours (MWh), positioning the proportion of clean energy utilization at an industry-leading level. Faced with the pressing challenge of global climate resilience construction, Tongwei is accelerating its commitment to low-carbon development. Grounded in our climate ambitions for 2030 and informed by scenario-based climate analyses as benchmarks, we have proposed a comprehensive value-chain carbon neutrality plan that establishes a model closed-loop system integrating zero-carbon manufacturing with green products and climate governance—providing an exemplary Chinese solution for global enterprises addressing climate change.

1. EPD: Environmental Product Declaration.

### In 2024, Tongwei forged deep connections with both employees and society, fostering a widespread humanistic influence.

Tongwei has consistently maintained a harmonious interaction with its employees and society, placing significant emphasis on safeguarding employees' rights and interests. We have deeply embedded the United Nations *Women's Empowerment Principles* (WEPs) to foster an equitable and inclusive workplace environment. By integrating international standards such as ISO 37301 and EcoVadis, Tongwei has established a more comprehensive and rigorous labor compliance management mechanism. Our commitment to building a high-standard sustainable supply chain is steadfast. Leveraging the strengths of our integrated PV industry chain, we have obtained EPD1 certifications and carbon footprint certifications, and enhanced our traceability management capabilities. These efforts enable us to provide society with green, low-carbon, and responsible products across their entire lifecycle. Notably, Tongwei has achieved a milestone as the first enterprise to successfully pass the TÜV Rheinland traceability audit in one attempt, receiving all A-grade or above evaluation results. Looking externally, Tongwei warmly embraces the voices and suggestions from all sectors of society, adhering to the principle of "Build Together, Govern Together, and Share Together". We actively engage in social initiatives such as charitable donations, rural revitalization, and science popularization, demonstrating our dedication to spreading positive societal impact through concrete actions.

### In 2024, Tongwei reaffirmed its commitment to sustainable development while further connecting with international platforms.

This marked a significant year for our company as we made our fifth appearance at the United Nations Climate Change Conference (COP 29), showcasing our practical achievements and sharing the story of climate actions from China and Tongwei with the global community. During China's annual National People's Congress (NPC) and Chinese People's Political Consultative Conference (CPPCC) Sessions, Chairman Liu Hanyuan of Tongwei Group Board of Directors submitted important proposals focused on establishing a power grid emission factor database and enhancing the green power trading mechanism. He expressed his hope that by calculating regional power grid carbon emission factors, which can effectively support Chinese products in accessing global markets. Currently, we have successfully achieved the large-scale "going global" of our battery and component products, continuously advancing high-quality products into the international market. This effort significantly contributes to the achievement of national and global carbon peaking and neutrality goals. As we celebrate the 20th anniversary of the ESG concept, Tongwei stands out as the only PV main material manufacturing enterprise recognized as one of the "20 Best Cases in 20 Years" by UNGC. This accolade underscores our commitment to sustainable practices on an international level.

The deadline for achieving the Sustainable Development Goals (SDGs) by 2030 is rapidly approaching. The United Nations' 2024 assessment report indicates that global progress toward the 17 SDGs is lagging, with only 16% of the targets currently on track to be met by 2030. Additionally, the 1.5°C temperature control target outlined in the Paris Agreement faces substantial challenges. The path toward global sustainable development remains long and challenging. As we reflect on a year marked by fluctuations, Tongwei will steadfastly uphold our commitment to sustainable development principles. We will continue to deepen technological innovation, enhance corporate governance, and expand our presence in international markets. With a reliable image, we will take on greater social responsibilities and collaborate closely with all our partners to create a brighter future together!



# About Tongwei

## Introduction to Tongwei

Headquartered in Chengdu, Sichuan, Tongwei Co., Ltd., established in 1995, is a large-scale private technology-based listed company controlled by Tongwei Group. It holds a leading position in the efficient synergy of green agriculture and green energy. Over the years, the Company has developed by leaps and bounds and has become a national key enterprise for agricultural industrialization, a major global producer of aquatic feed, and a leading manufacturer of high-purity polysilicon and silicon crystal cells worldwide. Currently, the Company has more than 200 branches and subsidiaries globally, with almost 60,000 employees.

Based on the two main businesses, agriculture and new energy, Tongwei has created unique competitiveness from the Fishery & PV Integration mode. For the future, it focuses on food safety and energy transition, two issues concerning the future of mankind, with the aim of becoming a **world-class safe food supplier and a world-class clean energy operator**.

Originating in aquatic products, growing up in agriculture and animal husbandry, and expanding to the new energy sector, Tongwei always adheres to the real economy, practices the philosophy of serving the people with industry, never forgets our original ideals and aspirations, and continues to implement the dream of green development.

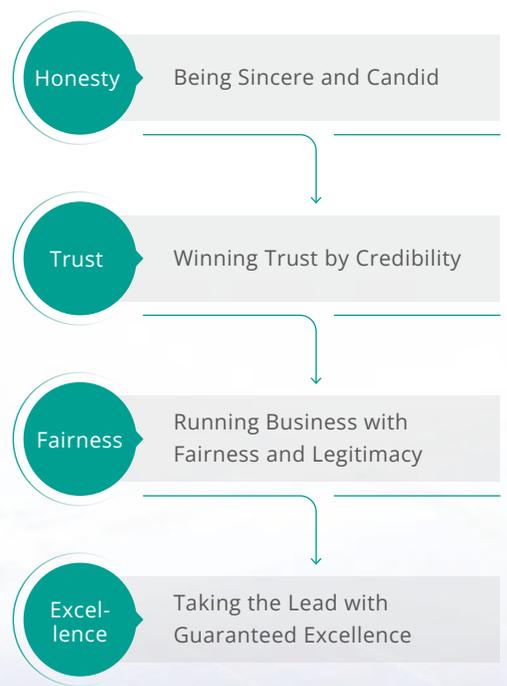
## Company Culture

**Vision** For Better Life

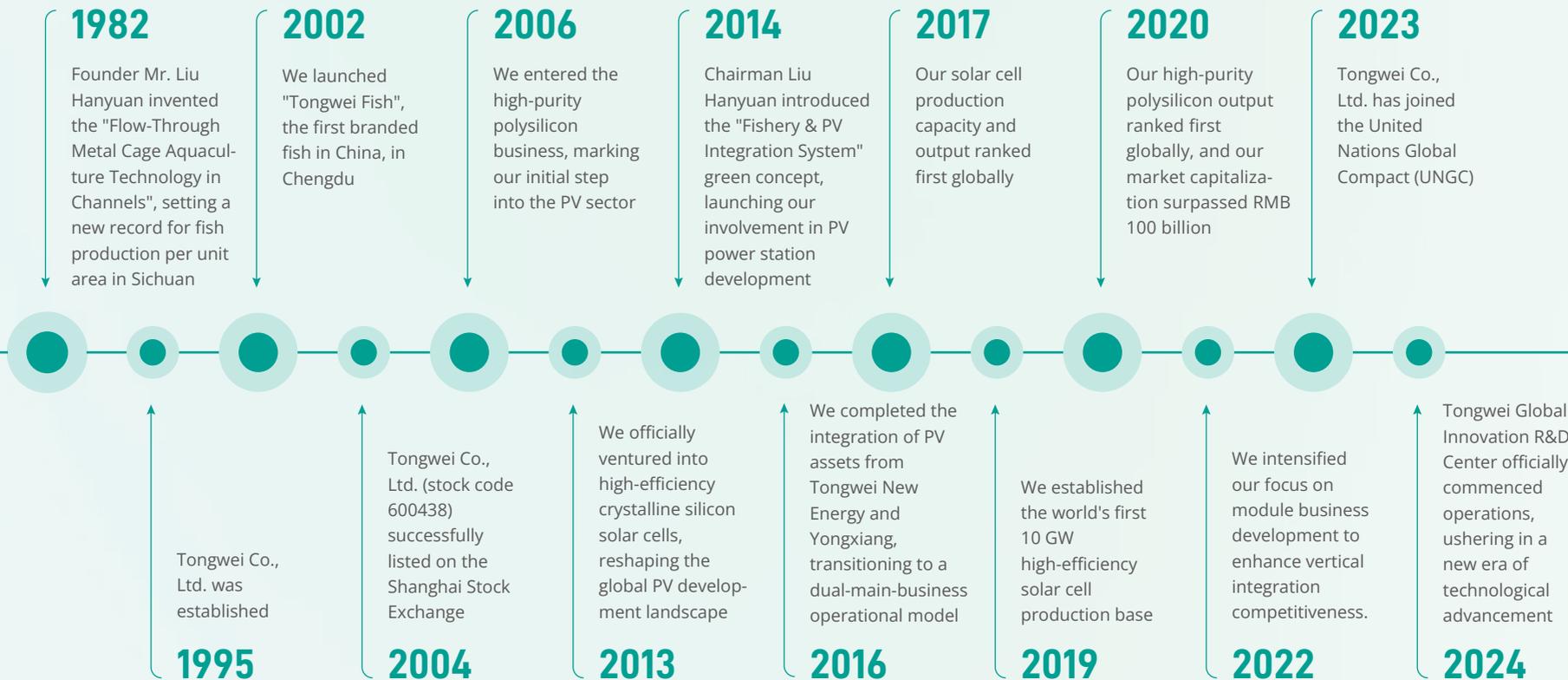
**Purpose** Striving for Excellence and Contributing to Society



## Management Philosophy



# Corporate Development Milestones







# Tongwei Data

## Basic Performance

Operating Revenue

RMB **91.994** billion

Annual production capacity of high-purity polycrystalline silicon

Over **900,000** tons

Total Assets

RMB **195.917** billion

Annual production capacity of solar cells

Over **150** GW

Total Tax

RMB **2.6** billion

Annual production capacity of solar cells

Over **90** GW

Annual production capacity of feed

Over **10** billion tons

Fishery & PV Integration grid connection

**4.67** GW

## Environmental Performance

Environmental investment

RMB **1.245** billion

Year-on-year decrease of Scope 1, 2 and 3 carbon emission

**16%**

Carbon footprint and EPD certificates

**26** certificates

Year-on-year decrease of air pollutants emission

**27.97%**

Proportion of recycled water

**98.04%**

Year-on-year decrease of wastewater pollutants discharge

**33.96%**

Year-on-year increase of renewable electricity

**28.00%**

Year-on-year decrease of waste emission

**19.98%**

Renewable electricity usage proportion

**64.01%**

## ◆ Social Performance

Year-on-year increase in R&D personnel

**26.94%**

Average training hours per employee

**82.03** hours/person

R&D expenses

RMB **2.673** billion

Year-on-year increase in number of newly authorized patents

**88.66%**

Proportion of primary raw material suppliers in the PV manufacturing sector signing social responsibility commitments

**100%**

Proportion of primary raw material suppliers in the PV manufacturing sector signing conflict minerals procurement commitments

**100%**

## ◆ Governance Performance

Proportion of female directors

**33.33%**

Proportion of independent directors

**33.33%**

Number of business ethics audits

**117** times

Internal supervision and audit issue resolution rate

**100%**

Number of litigation cases resulting from the fight against unfair competition

**0** case

Number of ISO 37301 compliance management system certifications

**6** certificates

## Participation in International Initiatives



Tongwei Co., Ltd. joins the United Nations Global Compact (UNGC)



Tongwei Co., Ltd. joins the RE100



Tongwei Co., Ltd. signs UN Women's Empowerment Principles (WEPs)



China ESG Alliance

Tongwei Co., Ltd. joined the China ESG Alliance



Tongwei Co., Ltd. joined the "ISSB International Sustainability Disclosure Standards Early Learner Partner Program"



Tongwei Co., Ltd. joins the Corporation Carbon Neutral Action (CCNA)



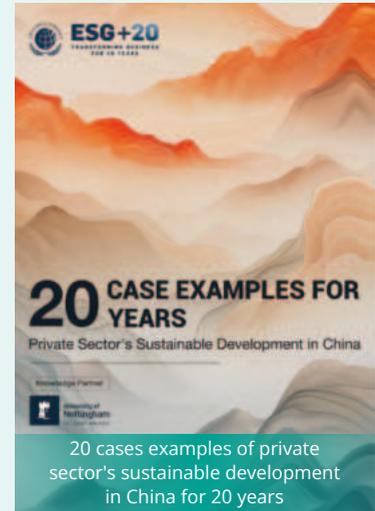
Tongwei Solar (Hefei) Co., Ltd. joins the Science Based Targets initiative (SBTi)

- Tongwei Co., Ltd. participated in the initiation and signed the *Digital Ecological Civilization International Climate Action Initiative*.
- Tongwei Co., Ltd co-initiated the "China Renewable Energy Enterprise Empowerment Africa Co-creation Plan".
- Tongwei Co., Ltd. has participated in the initiation and signed the "Pollution Reduction and Carbon Emission Reduction Synergy Empowerment Plan" initiative.

# "Fishery & PV Integration" - The Sole Photovoltaic Industry Project Selected Among the UN's "20 Cases Examples for 20 Years"

As a global leader in both the photovoltaic and aquaculture sectors, Tongwei has consistently embraced a sustainable development philosophy. Leveraging its dual-industry strategic framework across the photovoltaic sector and the agriculture and animal husbandry sector, the Company has innovatively integrated photovoltaic power generation with modern aquaculture to establish the "Fishery & PV Integration" model, which allows for both power generation and fish farming. This model has driven the transformation and upgrading of aquaculture, facilitated the continuous generation of sustainable clean energy, invigorated rural economies, and demonstrated a strong commitment to environmental protection. It has paved the way for green and sustainable development.

Tongwei keeps expanding the scale of "Fishery & PV Integration" bases. As of the end of 2024, Tongwei had built 56 solar power plants primarily focused on this model across more than 20 provinces-including Jiangsu, Shandong, and Anhui-achieving a total installed grid-connected capacity exceeding 4.67 GW. In December 2024, Tongwei was successfully recognized by the United Nations Global Compact (UNGC) as one of the "20 Cases Examples of Private Sector's Sustainable Development in China for 20 Years", with its pioneering "Fishery & PV Integration" model. Tongwei is the sole photovoltaic materials manufacturer to be included in this distinguished selection.



## 01 Ecological Aquaculture

The "Fishery & PV Integration" model leverages ecological breeding, healthy aquaculture practices, and integrated multi-trophic aquaculture techniques to address traditional challenges in fishery farming-such as limited technological advancement, high disease susceptibility, inadequate risk management capabilities, substantial capital investment, and elevated operational risks. By harnessing photovoltaic power generation, this model supplies clean energy that facilitates the transformation and upgrading of aquaculture toward industrialization, digitalization, and modernization while significantly reducing environmental costs.

## 02 Clean Power Output

Tongwei leverages high-efficiency solar modules and advanced construction and installation technologies to generate clean energy, while simultaneously enhancing aquaculture productivity. This approach significantly boosts the economic returns per unit of land. In 2024, the green power generated by the Company's "Fishery & PV Integration" power stations reached 5.007 billion kWh, resulting in a carbon reduction of approximately 2.68 million tons. The continuous production of clean energy not only benefits thousands of households but also plays a crucial role in promoting environmental sustainability.

## 03 Integrated Development of Three Industries to Optimize Land Use Efficiency

Tongwei utilizes the "Fishery & PV Integration" model to effectively integrate elements from the tertiary sector, including tourism, leisure, and science education. This approach has successfully created a diversified development ecosystem that harmoniously combines primary, secondary, and tertiary industries, significantly improving land use efficiency per unit area in rural regions. In the primary industry, by promoting fishery aquaculture, we provide local farmers with accessible job opportunities, facilitating their transition from agricultural laborers to skilled workers. In the secondary industry, our continued investment in photovoltaic power generation enables us to produce green clean energy consistently, supporting local sustainable development initiatives. In the tertiary industry, we tailor our offerings to local conditions by developing educational and science-themed tourism initiatives that boost rural tourism growth.



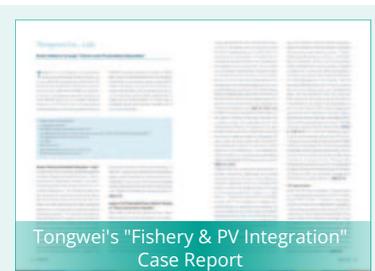
Case | "Having Fun and Learning in Aquatic Science Education" – Creating a Fishery & PV demonstration park for study tours

To enhance environmental education among students and support the national goals of carbon peaking and carbon neutrality, Tongwei has launched a study tour project centered on the "Fishery & PV Integration" model at the "Tongwei Fishery & PV Integration Demonstration Industrial Park" located in Tianfu Agricultural Expo Park. The program offers immersive experiences focused on Tongwei's integrated Fishery & PV projects. The project includes activities such as on-site visits to the Fishery & PV Integration Park, science education classes on photovoltaic power generation, and hands-on workshops for making photovoltaic cars. These activities allow students to gain insights into the potential of renewable energy development as well as modern agricultural technological advancements, while also experiencing the charm of technological innovation.

As of the end of 2024, a total of 3,257 participants had engaged in these study tours, who are from the schools such as Chengdu Wanda No. 7 Middle School, Chengdu Foreign Language Experimental Middle School, and Xinjin Middle School. The park plans to develop more products related to "Fishery & PV Integration" while enhancing its environmental education initiatives and value-added benefits.



Study tour activities at the "Tongwei Fishery & PV Integration Demonstration Industrial Park"



Tongwei's "Fishery & PV Integration" Case Report



Case | Smart IoT in Fishery & PV integration – advancements in automated operation and maintenance

In 2024, Tongwei continued to advance its strategic initiative of becoming an "Intelligent Operation Expert for Fishery & PV Integration". The Company achieved three significant technological milestones, including the drone automatic inspection function, the Feeding Robot 3.0, and the Digital Twin 2.0's function for factory-based aquaculture scenarios. These innovations have greatly enhanced the automatic operation and maintenance capabilities of Fishery & PV integration projects.

Regarding drone automatic inspection function, Tongwei successfully deployed drones at the Dongying Power Station to conduct unattended inspections, resulting in improved efficiency for routine inspections. Moreover, Tongwei's intelligent AI inspection system for photovoltaic power stations utilizing drones received prestigious recognition, including the "2024 Golden Data Award for Most Valuable AI Innovation Application Case" and "2024 Top 100 AI Industry Products – Smart Application Products".

Regarding feeding robot R&D, Tongwei has broadened the application scenarios for its feeding robots, achieving precision feeding that conserves labor, reduces feed consumption, and mitigates water pollution. In December 2024, Tongwei's intelligent aquaculture feeding robot was recognized as the "Sichuan Province's First Set of Major Technical Equipment". In terms of digital twin system development, Tongwei continues to address technical challenges and has successfully completed the development of functions for factory-scale aquaculture scenarios.



Drone Inspection



Feeding Robot 3.0

## Proposals Made During the Annual NPC and CPPCC Sessions Driving Updates to Power Carbon Emission Factors

As a leader in green energy and sustainable agriculture, Tongwei consistently demonstrates a strong sense of responsibility by identifying challenges through practical production experiences and market insights. This commitment enables the Company to contribute valuable wisdom and strategies for accurate carbon emission measurement across society. In March 2024, Liu Hanyuan, NPC Deputy, Vice Chairman of the All-China Federation of Industry and Commerce, and Chairman of Tongwei Group's Board of Directors, submitted a proposal during the annual China's NPC and CPPCC sessions. The proposal advocated for the establishment of a grid carbon emission factor database and enhancements to the green power trading mechanism. It also emphasized the need for monitoring processes to accurately quantify carbon emissions from electricity consumption, thereby facilitating corporate transitions towards greener and low-carbon operations.

Key proposals presented during the annual NPC and CPPCC sessions focused on fostering "New-Quality Productive Forces" to enhance policy optimization. These included:

- Accelerating the development of diverse energy storage projects in China
- Establishing a grid carbon emission factor database
- Supporting equitable participation by private enterprises in PV power station investments
- Stabilizing renewable energy subsidy policies
- Promoting the development of floating PV projects

### Proposal on "Establishing a Grid Carbon Emission Factor Database"

The electrification of energy consumption and the decarbonization of power production have emerged as core pathways to achieving China's carbon peaking and carbon neutrality goals. Purchased electricity-related carbon emissions represent a significant portion of corporate carbon footprints. As the proportion of renewable energy in China's power generation continues to grow, accurately quantifying and monitoring carbon emissions from electricity consumption has become a critical foundational task. This process is essential for reflecting the current state and progress of carbon emissions reduction among industrial enterprises. It serves not only as an effective means to boost enterprises' commitment to green power consumption, reduce their indirect carbon emissions, and advance green and low-carbon transition, but also as the most effective measure to demonstrate the low-carbon competitiveness of industrial export products.



Mr. Liu Hanyuan, Chairman of the Board of Directors of Tongwei Group, submitting a proposal on establishing a foundational database for power carbon emission factors during the annual NPC and CPPCC sessions

## Proposal Recommendations

- Implementing comprehensive monitoring and precise quantification of carbon emissions from electricity consumption is fundamental for capturing the real-time status and progress of industrial emission reductions. This approach empowers enterprises to lower indirect carbon emissions, accelerate their transition toward greener operations, and strengthen the low-carbon competitiveness of export-oriented products.
- Developing and continuously updating grid emission factors at national, regional, and provincial levels will provide essential parameters for enterprises to more accurately forecast indirect emissions. This initiative reduces uncertainties in electricity-related carbon accounting, incentivizes optimization of production processes, and enables local regulators to devise energy transition policies tailored to regional conditions.
- Addressing the issue of multiple accounting for emission reduction benefits from green power will enhance China's green power credibility on the international stage. Fully leveraging green power's inherent low-carbon attributes in corporate carbon reporting and product carbon footprint assessments will stimulate growth in China's green power certificate market. Additionally, it will help export-driven enterprises effectively respond to emerging challenges such as those posed by the European Union's Carbon Border Adjustment Mechanism (CBAM).



## Policy Progress

- In April 2024, the Ministry of Ecology and Environment (MEE) and the National Bureau of Statistics (NBS) jointly released the 2021 national, regional, and provincial average carbon emission factors for electricity.
- In August 2024, the National Energy Administration (NEA) issued the *Notice of Issuing the Rules for the Issuance and Trading of Renewable Energy Green Electricity Certificates*. This notice clarifies that "green certificates are the sole proof of the environmental attributes of renewable energy electricity in China and serve as the exclusive basis for verifying renewable energy power production and consumption".
- In September 2024, MEE released the national standard GB/T 24067-2024, *Greenhouse gases-Carbon footprint of products-Requirements and guidelines for quantification*. This standard successfully adapts to ISO 14067, guiding the development of carbon footprint accounting standards for various products in China.
- In October 2024, the National Development and Reform Commission (NDRC) issued the notice titled "Work Plan for Improving the Carbon Emission Statistics and Accounting System" (NDRC Huanzi [2024] No. 1479), outlining key tasks for enhancing the national carbon emission statistics and accounting system.
- In December 2024, the Ministry of Ecology and Environment (MEE) and the National Bureau of Statistics (NBS) jointly released the 2022 national, regional, and provincial power emission factors. This release marks the first publication of a national power emission factor that excludes non-fossil energy electricity from market-based transactions. This development provides a crucial foundation for future applications of green electricity certificates (GECs) and green power in carbon emission accounting.



# Tongwei Global Innovation R&D Center – An Innovation Beacon Illuminating the Future of Photovoltaics

The International Energy Agency (IEA), in its *Energy Technology Outlook 2024*, highlights that China accounts for over 70% of global investments in clean technology. China has successfully transitioned from manufacturing basic clean energy products to pioneering advanced technological innovations, thereby reinforcing its strategic leadership role in global energy innovation.

Standing at the forefront of this industry evolution, Mr. Liu Hanyuan, Chairman of the Board of Directors of Tongwei Group has articulated a visionary proposal to establish the Tongwei Global Innovation R&D Center. As the core innovation engine of Tongwei Co., Ltd., the Tongwei Global Innovation R&D Center not only consistently delivers cutting-edge technological advancements to the photovoltaic industry but also serves as an integrated industry incubator, fostering vertical and horizontal collaboration among partners through a cooperative innovation model. By adopting a diverse and inclusive R&D approach, it provides a broad platform for technical talent to fully realize their potential, thereby fulfilling its mission to drive the energy transition and spearhead sustainable industry development.

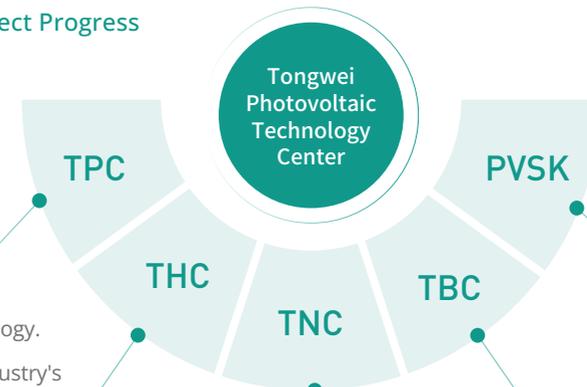
## 01 Comprehensive Technology Layout

As the only R&D base in the industry that encompasses all technology pathways, the Tongwei Global Innovation R&D Center has achieved significant breakthroughs in future mainstream cell and module technologies, including TOPCon, HJT, bifacial cells (BC), and perovskite/silicon tandem technologies. This center provides a robust platform and strong research and development momentum for advancing global photovoltaic technology.

### ◆ Tongwei Photovoltaic R&D Project Progress

- Cell efficiency reaches the world record of **24.47%**
- Become the first in the industry to ship **300GW** of cells cumulatively

- In 2018, Tongwei laid out the HJT technology.
- In May 2021, Tongwei completed the industry's first 210 half-cell project.
- In 2021, Tongwei established the China's first GW-scale HJT production line.
- In January 2022, Tongwei produced the first cell of copper interconnects.
- In July 2022, Tongwei developed the industry's first double-sided microcrystalline.
- In June 2024, Tongwei Global Innovation R&D Center completed the first HJT+THL cell.
- In March 2025, the 210 HJT 66 version of the module power set records 11 times and reached a record high power of **790.8W**, with the efficiency of **25.46%**, which is the highest value of the authoritative test of crystalline silicon module full-area efficiency.



- In 2020, Tongwei laid out the TOPCon technology.
- In 2021, Tongwei completed the industry's first 210 PECVD Poly cell pilot line.
- In March 2025, the TNC G12-66 module frontal power reached **778.5W** with the efficiency of **25.06%**, and the G12R-66 module frontal power reached **682.8W** with the efficiency of **25.28%**, setting a new power and efficiency record for the dual mainstream version of TOPCon.

- The related lab was built in Q3 2022.
- The perovskite/heterojunction stacked cells reach the efficiency of **34.17%**.
- In Q2 2022, Tongwei established the TBC pilot line.
- The n-TBC cell reaches the R&D efficiency of **26.87%**.
- The TBC module power output reaches **660+W**.

\*The progress and result data for all photovoltaic R&D projects are updated til April 2025.

## 02 Panoramic R&D Coverage

The Tongwei Global Innovation R&D Center occupies 608 mu (approximately 40.5 hectares) with a total workshop floor area of 108,000 square meters. It comprises six specialized workshops covering diverse technical domains and application scenarios, including cell R&D, module R&D, production technology development, and product testing, while consistently maintaining comprehensive and state-of-the-art production facilities. Leveraging an integrated project management approach, the center enables efficient sharing of R&D resources across various research environments. The adoption of the "Amoeba" management model fosters technology incubation and internal entrepreneurship by incentivizing innovation. This approach effectively connects critical stages-from fundamental research and applied development to industrialization-thereby accelerating the commercialization and large-scale production of innovative outcomes.

<b>T1 Workshop</b> TNC Battery Pilot Line	<b>T2 and T3 Workshops</b> TBC Cell and Module Pilot Line	<b>T4 Workshop</b> Module R&D Center
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Tongwei Global Innovation R&D Center Park

<p><b>T5 Workshop-PV Testing Center</b></p> <ul style="list-style-type: none"> <li>PV Reliability Laboratory</li> <li>Battery Testing Laboratory</li> <li>Materials Physics and Chemistry Laboratory</li> </ul> <p>the industry's largest and most intelligent testing center</p>	<p><b>T6 Workshop</b></p> <ul style="list-style-type: none"> <li>GW-class HJT+THL Workshop</li> <li>Perovskite Laboratory</li> </ul> <p>the industry's largest single-unit R&amp;D facility with the highest upgrade potential</p>
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## 02 Full-Dimensional Innovation Empowerment

Focused on the innovative advancement of the photovoltaic industry, the Tongwei Global Innovation R&D Center is dedicated to establishing a pilot zone for industrial collaborative innovation ecosystems and a dynamic platform for cultivating innovative talent. This approach injects robust momentum into the high-quality development of China's crystalline silicon photovoltaic industry.

### ◆ Linking Collaborative Innovation, Empowering a New Photovoltaic Ecosystem

The Tongwei Global Innovation R&D Center offers integrated hardware and software platforms to enable collaborative innovation among leading enterprises across the entire photovoltaic industry value chain. Supported by its subsidiary, Sichuan Tongwei Crystalline Silicon Photovoltaic Industry Innovation Co., Ltd., the center actively collaborates with upstream and downstream partners to develop innovative cooperation models and advance technological breakthroughs. This concerted effort fosters the emergence of new-quality productive forces within the photovoltaic sector.



### ◆ Fostering Industry-Academia Research Cooperation, Nurturing New Talents in the Photovoltaic Sector

The Tongwei Global Innovation R&D Center builds dedicated bases for technology transfer and engineering-focused talent development through extensive cutting-edge research and collaborative industry-academia-research partnerships. It has set up technology transfer bases and applied talent training bases. Additionally, the center has established strategic mechanisms for linking innovative elements and resources. The center continuously produces tech professionals with industrial insights. Meanwhile, it has designed a comprehensive support system covering scientific research, career development, and living environment. These efforts are aimed at creating sustainable growth potential for the photovoltaic industry.



### ◆ Tongwei's Global Innovation Strategy Drives Industrial Upgrading

Tongwei Global Innovation Center focuses on building a global R&D ecosystem. There's no funding limit for technology research and talent training to ensure sustainable innovation. The center links global academia, research, industry organizations, and enterprises to form a collaborative innovation network through an open-innovation platform. Also, it shares technology and empowers industries to convert innovations across fields, improving R&D efficiency in the whole industry.





# Sustainable Development Management

Tongwei is committed to the forefront of sustainable development, leveraging outstanding strategic vision and practical wisdom to establish a comprehensive sustainable development management system, thereby reinforcing the foundation of the enterprise in all aspects. We uphold the mission and vision of sustainable development to anchor our growth direction, demonstrate responsibility through our sustainable development commitments, and precisely implement strategic deployments by setting clear targets and indicators. The Company optimizes decision-making processes based on its governance system, standardizes operational behaviors according to international standards, and strengthens institutional frameworks to solidify the foundation for development. Meanwhile, we continuously enhance the sustainable development awareness of all employees and disclose transparent and fair information to the public. In a complex and ever-changing external environment, Tongwei Co., Ltd. demonstrates strong adaptability and leadership capabilities, working hand in hand with all parties to steadily advance along the path of sustainable development, jointly painting a promising future blueprint.



# Sustainable Development Management System

As a global leader in both the PV and agricultural sectors, Tongwei is committed to green development as its foundational principle. Centered around our "Together to Win" sustainable development strategy and the practice of material ESG issues, we actively engage in and contribute to global governance for sustainable development. We integrate the United Nations Sustainable Development Goals (SDGs) into our sustainability framework and implement these goals through a systematic management structure. Through tangible actions, Tongwei aims to create a sustainable and improved quality of life for society.

## Connection between the Company's Material Issues and Sustainable Development Goals

Tongwei's Material Sustainability Issues	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
Response to Climate Change							●					●	●				
Energy Management							●				●	●	●				
Pollutant Emissions											●	●		●	●		
Environmental Compliance Management											●	●					
Water Stewardship						●					●	●					
Waste Disposal											●	●			●		
Green Manufacturing									●			●	●				
Clean Technology Opportunities							●				●	●	●				



Tongwei's Material Sustainability Issues	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
Ecosystem and Biodiversity Conservation						●					●	●		●	●		
Circular Economy											●	●					
Employees' Rights and Interests Protection					●			●		●							
Occupational Health and Safety			●					●									
Product and Service Safety and Quality									●			●					
Innovation-driven Development							●		●								
Equality and Diversity					●			●		●							
Employee Training and Development								●		●							
Digital Transformation									●								
Data Security and Customer Privacy Protection																●	●
Sustainable Supply Chain Management												●	●				●



## 3S Sustainable Development Management System

Tongwei has drawn valuable insights from its practices and established a nine-pillar sustainable development management system that encompasses three dimensions: "Strategy, Stewardship, and Solution". The Strategy dimension is supported by the mission and vision system, the commitment system, and the metrics and targets system. The Stewardship dimension is constructed through the governance system, standards system, and institutional framework. The Solution dimension comprises the certification system, training system, and disclosure system. This comprehensive management system empowers the Company to maintain strong resilience in an ever-changing external environment while steadily progressing on its sustainable development journey. By collaborating with all stakeholders, we aim to create a brighter future together.



# S strategy

## » 1.Mission and Vision System

In 2024, Tongwei further advanced its "Together to Win" sustainable development strategy. The Company established the **three major sustainable development missions** - "build together", "govern together", and "share together" for a sustainable and better life, while defining the **four key visions for sustainable development**: "winning people", "winning progress", "winning environment", and "winning economy".

By continuously deepening the connotations of these three missions and four visions, Tongwei has officially launched the "Together to Win – Global Sustainable Partnership Co-construction Initiative", enhancing close communication with various stakeholders while emphasizing governance, environmental stewardship, customer engagement, employee welfare, supply chain partnerships, and societal contributions as critical pillars of our strategy. Through an open-minded, inclusive approach characterized by collaboration and sharing, we are committed to winning together towards a sustainable and prosperous tomorrow.

### Winning Environment

◆ Environmental

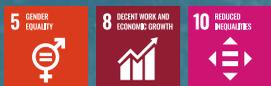
Committed to green and low-carbon development, achieving a harmonious symbiosis between business development and environmental protection, and continuously sharing a beautiful ecological environment



### Winning People

◆ Employees

People-centric commitment: Focusing on collective growth with our employees, cultivating an inclusive and healthy work environment for everyone



◆ Supply Chain

Mutual benefit and trust: Partnering with supply chain stakeholders to co-create a resilient and green eco-industrial chain



### Winning Economy

◆ Social

Committed to public welfare: Delivering social value to local communities, advancing social equity, and improving environmental sustainability to create a better home for all



◆ Customers

Innovation-driven collaboration: Partnering with our customers to foster economic vitality and work together towards a greener future



### Winning Progress

◆ Governance

Continuously improving the level of corporate sustainability governance, participating in global ESG governance, and strengthening operational resilience



## ➤ 2. Commitment System

Tongwei adheres to the principle of "Striving for Excellence and Contributing to Society". We actively support and respond to the United Nations Sustainable Development Goals (SDGs) while placing equal emphasis on business value and social responsibility. Our commitment is to conduct business with high ethical standards. Moreover, we actively advocate for collaboration with suppliers and partners to jointly advance sustainable development. We embody our sustainable development mission through the principles of "build together", "govern together", and "share together" for a sustainable and better life.

To standardize our corporate sustainability pathway and demonstrate our commitment to sustainability, Tongwei has identified several key areas in which we have established a sustainability commitment system. As of the end of 2024, Tongwei has publicly released **13 sustainability commitments and policies**:

	Business ethics	Environmental protection	Human rights and labor	Supply chain management	Performance-based salary
Policies	<ul style="list-style-type: none"> <li>• <i>Anti-Corruption and Anti-Bribery Policy</i></li> <li>• <i>Principle of Diversified Board of Directors and Its Performance</i></li> <li>• <i>Business Ethics Code of Conduct</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Environmental Management Commitment and Policy</i></li> <li>• <i>Biological Diversity Conservation Commitment and Policy</i></li> <li>• <i>Forest Protection Commitment and Policy</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Human Rights Commitment and Policy</i></li> <li>• <i>Anti-harassment and Anti-discrimination Commitment and Policy</i></li> <li>• <i>Occupational Health and Safety Commitment and Policy</i></li> <li>• <i>SA8000 Social Accountability Commitment</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Supplier Code of Conduct</i></li> <li>• <i>Conflict Minerals Commitment and Policy</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy for Performance-Based Pay and its Clawbacks</i></li> </ul>
Commitments	<ul style="list-style-type: none"> <li>• We are committed to adopting a "Zero Tolerance" attitude towards all kinds of violations of business ethics, including but not limited to corruption, bribery, conflicts of interest, monopolistic and unfair competition, and breaches of trade secrets</li> <li>• We pledge to requires all employees to follow business ethics and social responsibility in sales and marketing practices, to ensure that legal, clear, authentic product marketing content is communicated to customers and society</li> <li>• We encourage and protect the reporting of misconduct, and all reports of misconduct will be investigated by the reporting department and dealt with seriously if necessary</li> </ul>	<ul style="list-style-type: none"> <li>• We pledge to strictly comply with applicable laws and regulations and regulatory requirements on environmental protection at the place of operation</li> <li>• We commit to developing environmental goals and emission reduction pathways, and actively adopting effective and innovative technologies and measures to address climate change</li> <li>• We are dedicated to safeguarding natural ecology and participate forest protection initiatives, striving to avoid forest destruction caused by business activities and to supervise and manage projects in its supply chain that may post forest destruction</li> </ul>	<ul style="list-style-type: none"> <li>• We pledge to positively responding to the <i>Universal Declaration of Human Rights</i>, backing up the <i>UN Guiding Principles on Business and Human Rights</i>, safeguarding and respecting human rights, legal rights and interests of each employee</li> <li>• We are dedicated to prohibiting child labor and forced labor, and conducting no human trafficking during our operation and management</li> <li>• We commit to firmly making a stand against discrimination, harassment, and other insulting behaviors</li> <li>• We promise to provide a safe, healthy, diverse, and inclusive workplace for our employees</li> <li>• We are committed to providing diversified learning and occupational development opportunities to our employees</li> <li>• We pledge to respect employees' liberty of association and collective bargaining</li> </ul>	<ul style="list-style-type: none"> <li>• We commit to incorporating environmental and social factors into our supplier management mechanism in an orderly manner, strengthening supplier performance management in human rights, environmental protection, safety and health, business ethics and other relevant aspects, and building a sustainable supply chain</li> <li>• We commit to adhering to international conventions and industry initiatives such as the UN Global Compact and the Responsible Minerals Initiative (RMI), ensuring the responsible sourcing of tin, tantalum, tungsten, gold, cobalt, and other mineral materials used in our products while striving to guarantee that all raw materials are ethically sourced</li> </ul>	<ul style="list-style-type: none"> <li>• We commit to linking executives' performance rewards to both financial performance and sustainable development metrics, motivating executives to oversee and actively advance corporate goals related to climate change management, energy conservation and emission reduction, innovation and R&amp;D, employee management, green supply chain management, workplace safety, as well as business ethics and anti-corruption</li> <li>• By effectively incentivizing executives to enhance their performance and productivity, we strengthen their accountability for shared growth with the Company, ensuring that executive actions are consistent with our corporate sustainable development objectives and the long-term interests of our shareholders</li> </ul>

### » 3. Metrics and Targets System

The successful implementation of the sustainable development strategy requires not only the guidance of our mission and the support of policies and commitments but also a clear system of goals to serve as a roadmap. Under the three main dimensions of environment, society, and governance, we have proposed **20 goals** across short-, medium-, and long-term horizons to form the sustainable development goal system of Tongwei.

#### Short-term

- To reduce water consumption by **3.096** million tons by 2025
- To achieve **100%** non-hazardous treatment of hazardous waste by 2025
- To reduce carbon emission intensity by **19.5%** compared to 2020 levels by 2025
- To achieve an on-site audit rate for core major raw material suppliers in the photovoltaic manufacturing sector reaching **100%** by the end of 2026
- To ensure that female representation on the Board of Directors is at least **30%**

#### Medium-term

- To strive to achieve **carbon neutrality at the operating level** by 2030
- To strive to reduce Scope 3 carbon emission intensity (greenhouse gas emissions from purchased goods & services and upstream transportation per MW of photovoltaic products produced) by **55.8%** by 2030, using 2023 as the baseline year
- To strive for a total reduction of greenhouse gas emissions across the entire value chain by **50%** by 2035, with a baseline year of 2023
- To commit to achieving a minimum of **100%** renewable energy usage no later than 2030

#### Long-term

- To achieve **carbon neutrality across the entire value chain** no later than 2050

- Environmental
- Social
- Governance

#### Corporate governance

- To achieve **100%** coverage of internal anti-corruption audits and key employee training each year

#### Social

- To achieve “No personal injury accident” each year
- To achieve “No fire, explosion, or poisoning incident” each year
- To achieve “No occupational disease accident” each year
- To ensure a product pass rate of **100%** upon delivery each year
- To maintain **zero** quality and safety incidents each year
- To achieve **100%** processing rate of user complaints every year
- To ensure that the rate of integrity commitment signed by suppliers reach **100%** every year
- To complete ESG risk identification and assessment for major raw material suppliers in the photovoltaic manufacturing sector at a rate of no less than **100%** every year
- To attain a compliance investigation coverage rate of no less than **100%** regarding conflict minerals procurement for suppliers dealing with raw materials containing tin, tantalum, tungsten, and gold (3TG metals) every year

To ensure the effectiveness and relevance of this goal system, Tongwei conducts regular reviews. In response to changes in domestic and international policies, regulatory requirements, and industry developments, we continuously evaluate, track, adjust, and update our sustainable development goals to ensure alignment with both our strategic direction and the external environment. Additionally, we integrate long-term sustainable development goals into both internal policies and external documentation to institutionalize goal management. In 2024, with the collective efforts of all members of Tongwei, we successfully achieved 4 sustainable development goals.

Environmental	Water conservation goal for 2024: <b>4.5259</b> million tons	✔ Completed
Social	Signing rate of suppliers' integrity commitments reaches <b>100%</b> annually	✔ Completed
	By the end of 2024, the signing rate of social responsibility commitments among primary raw material suppliers in the PV manufacturing sector reached <b>100%</b>	✔ Completed
Governance	Coverage rate of the Company's internal anti-corruption audits and training for employees in key positions reaches <b>100%</b> annually	✔ Completed

To standardize sustainable information disclosure and target management at Tongwei Co., Ltd. and its business entities, the ESG Management Committee has taken the lead in establishing an ESG indicator system and compiling the *Manual for Using Tongwei Co., Ltd.'s Environmental, Social, and Governance (ESG) Indicator System*. This manual references multiple domestic and international disclosure frameworks, establishes more than **300** sustainable development indicators, and is updated annually to align with evolving policies and industry trends, thereby ensuring robust effectiveness in advancing sustainable development goals.

# S Stewardship

## » 4. Governance System

The sustainable development governance system serves as a critical support for stewardship, enabling the Company to swiftly adapt to changes in external trends, accurately grasp the latest developments in sustainability, and ensure timely responses to stakeholder needs. The Company adheres to the principles of "dynamic identification, rapid response, and resilient development" as its operational guidelines and constructs a sustainable development governance system centered around its governance structure.

Tongwei has established and refined a three-tier sustainable development governance framework comprising **"decision-making, management, execution"**. The Board of Directors, along with its subordinate Strategic Sustainable Development Committee, serves as the highest decision-making body. The ESG Management Committee and ESG Management Working Group are tasked with coordinated management. Additionally, the Company integrates operation management, functional departments, and business segments into the sustainable development governance framework. This includes identifying risks and opportunities associated with specific sustainability issues as part of their routine operations. This approach fosters a governance mechanism that facilitates vertical collaboration from top to bottom and from bottom to top while establishing a comprehensive risk and impact management layout that spans the entire organization. By promoting cross-sectoral and cross-functional collaboration horizontally, we ensure that the principles of sustainable development are effectively implemented across all levels and business areas, thereby laying a solid foundation for stable operations and resilient growth.

### Decision-making ▶



#### Board of Directors

- Make decisions on and supervise sustainable development matters, and provide guidance for the Company's strategic deployment for sustainable development
- Review, approve and update sustainable development guidelines, policies, strategic objectives and plans
- Review and discuss annual sustainable development reports and significant sustainable development matters

#### Strategic & Sustainable Development Committee

- Research the Company's sustainable development matters, and provide advice accordingly
- Authorize the ESG Management Committee to carry out specific tasks

#### Core Operation Management

- Get to know the progress of sustainable development matters every month, solve the key and difficult problems in sustainable development, and provide decision support for sustainable development in each operation link

**Management ▶****ESG Management Committee**

- Led by the Company's Chairman, with 8 core managers as members
- Regularly report the progress of sustainable development matters to the Board and core management
- Determine the significance of sustainable development matters and take them into business consideration
- Review the Company's sustainable development policies, strategies, regulations and specifications
- Supervise the implementation of sustainable development strategies

**Execution ▶****Sustainable Development Working Group**

- Impact and risk assessment: Identify sustainable development issues related to Company operations and use quantitative and qualitative tools for a scientific assessment of their social and financial impacts, and develop appropriate risk management plans
- Capability building: Organize management and employees to carry out special sustainable development studies, mobilize internal and external resources to develop sustainable development training courses, conduct comprehensive publicity, and promote the Company's innovation in the field of sustainable development
- Benchmarking analysis: Benchmark against global leading sustainable development standards, conduct gap analysis compared with benchmarking enterprises, dynamically reflect on and summarize the Company's current situation, and provide professional support, coping strategies, and solutions
- Standardization construction: According to the principles of sustainable development information disclosure at home and abroad, formulate the Company's sustainable development indicator system, and clarify the scope and requirements of information and data reporting
- Information disclosure: Compile and release sustainable development reports to ensure the authenticity, accuracy, and timeliness of the Company's sustainable development information disclosure

**Management Working Group**

- Regularly report the sustainable development management progress and performance to the ESG Management Committee, convey the Board's sustainable development decisions to all departments, and mobilize all departments and business segments to implement sustainable development strategies
- Identify impacts and risks associated with various sustainability issues, enhance risk management processes, and promote the establishment of sustainability plans and goals
- Determine the departments in charge of sustainable development, and organize and coordinate all departments and business segments to carry out sustainable development practices
- Organize communication with stakeholders, integrate resources to promote cross-business cooperation, and create a sustainable business ecosystem

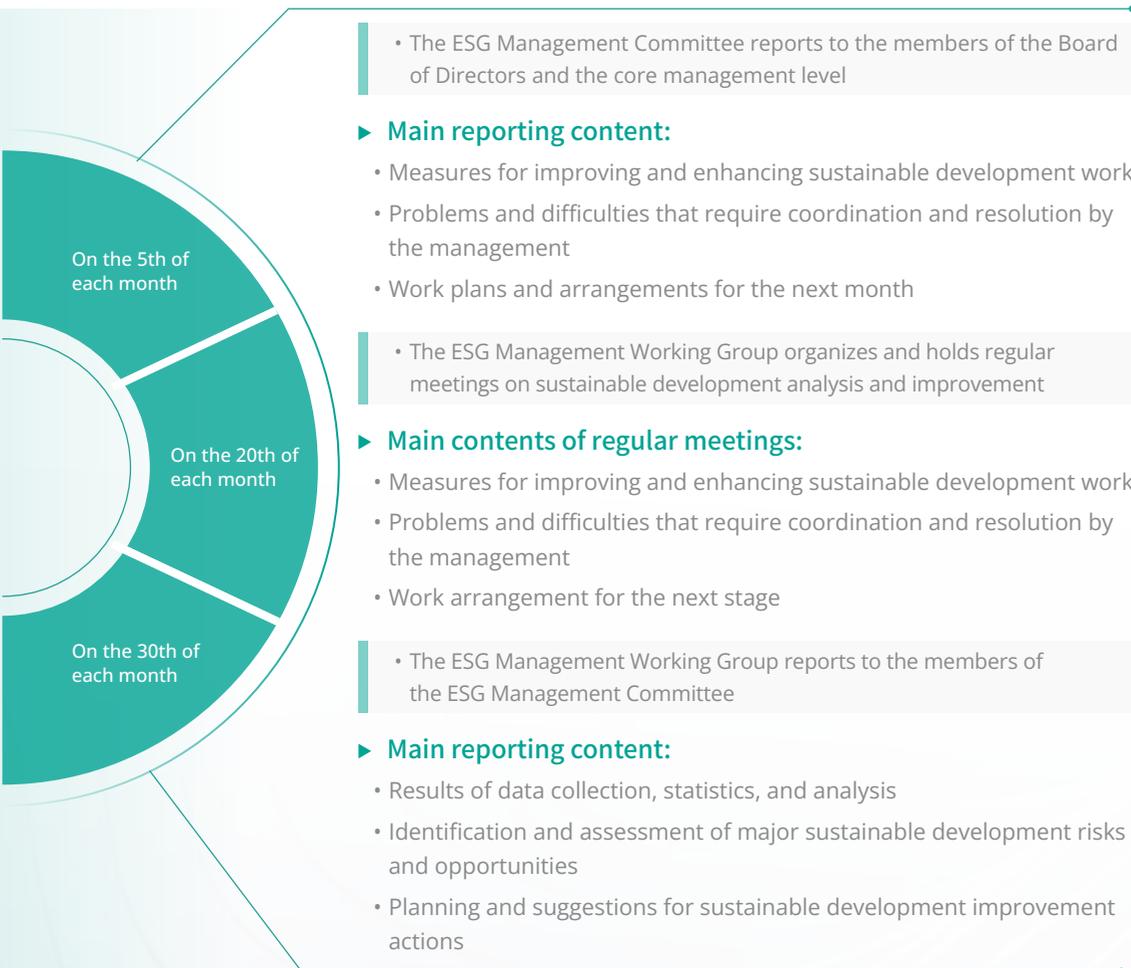
**ESG Representatives of Each Department**

- Each functional department at the Head Office has appointed ESG representatives responsible for participating in the establishment of sustainable development goals and planning sustainable development action pathways. These representatives carry out specialized training on sustainable development, manage risks and impacts related to sustainable development issues, and report on action progress in a timely manner

**ESG Management Working Groups of Each Business Entity**

- Each of the Company's six major business segments establishes an Energy Management Center or an Inter-departmental Working Group tailored to its specific business characteristics. These groups participate in the Head Office's sustainable development goal setting and action path planning, engage in sustainable development practices within their respective segments, manage risks and impacts related to sustainable development issues professionally, and report on action progress promptly

Tongwei adheres to the principle of "dynamic identification, rapid response, and resilient development" by implementing a rolling management mechanism for sustainable development. This approach allows for the dynamic identification and control of risks and opportunities throughout production and operational processes. The Company regularly convenes meetings across various departments and business segments focused on analyzing sustainability challenges and improvements. Periodic reports are made to the Board of Directors as well as core management. We continuously update and optimize our sustainable development management strategies based on evolving company needs to ensure that we can "adapt promptly while being moderately proactive" in meeting new internal and external sustainability demands.



Sustainable Development Reporting Mechanism of Tongwei

Conference Proceedings on Sustainable Development	Key Research Topics of the Conference				
	Advancement of goals and tasks	Institutional system construction	Bottleneck resolution	Key performance evaluation	Improvement actions and planning
Meetings of the Board and core management	●	●	●	○	○
Briefings of ESG Management Committee	○	●	●	○	○
ESG Management Working Group's regular sustainable development analysis and enhancement meetings	○	○	●	●	●

Meeting type

## » 5. Standard System

Effective sustainable development stewardship requires a comprehensive, multi-dimensional standard system that spans various domains. Throughout its sustainable development journey, Tongwei has drawn reference to the **standards of sustainable development in three major links** domestically and internationally to align its practices across production, operational management, supply chain procurement, information disclosure, and other critical areas with leading industry practices. Drawing upon practical experience and stakeholder feedback, Tongwei is actively developing an internal sustainable development standard system. Furthermore, the Company is committed to contributing to the formulation of relevant industry and national standards to advance the entire value chain towards cleaner, more transparent, and more responsible practices.

### | Benchmarking Framework for Tongwei's Sustainable Development Standard System



## » 6. Institutional System

The sustainable development institutional system is the cornerstone of corporate stewardship. Leveraging an efficient governance framework, Tongwei has effectively translated external standards into internal control mechanisms that span the entire value chain and enforce multi-level oversight. The Company has developed over **40 specialized systems** covering multiple areas: compliance operations, information security, data governance, innovation-driven development, quality management, customer service, supply chain management, environmental management, occupational health and safety, and employee relations. These systems collectively establish a closed-loop assurance mechanism integrating "Strategy-Stewardship-Solution". Through continuous institutional iteration coupled with rigorous execution monitoring and feedback loops, Tongwei has significantly enhanced the effectiveness of its sustainable development strategy implementation.



### Environmental

#### Institutional Management Aspect

- Carbon Management
- Energy Management
- Environment Management

#### Institutional Content

- *Environmental Factor Identification and Evaluation Procedures*
- *Environmental Protection Management Procedure*
- *Environmental Monitoring Management Policy*
- *Wastewater and Waste Gas Emission Control Procedures*
- *Solid Waste Management System*
- *Hazardous Waste Disposal Management System*
- *Noise Management Control Procedures*
- ...



### Social

#### Institutional Management Aspect

- Innovation Management
- Product Quality Management
- Protection of Consumer Rights and Interests
- Supply Chain Management
- Employee Management
- Occupational Health & Safety Management

#### Institutional Content

- *Implementation Measures for Science and Technology Achievement Awards of Tongwei Co., Ltd.*
- *Quality Risk and Opportunity*
- *Supplier Management Control Procedures*
- *Internal Management Mechanism for Supply Chain Traceability*
- *Recruitment and Hiring Management Measures*
- *Management System for the Protection of Female Employees and Minors*
- *Occupational Health Management System*
- ...



### Governance

#### Institutional Management Aspect

- Compliant Operation
- Information Security
- Data Governance

#### Institutional Content

- *Compliance Management Measures of Tongwei Co., Ltd.*
- *Internal Control Evaluation and Risk Assessment System of Tongwei Co., Ltd.*
- *Audit Management Measures of Tongwei Co., Ltd.*
- *General Principles of Information Security Management of Tongwei Co., Ltd.*
- *Data Management Measures of Tongwei Co., Ltd.*
- *Information Technology Implementation Management Specifications of Tongwei Co., Ltd.*
- *General Provisions of Information System Operation and Maintenance Security Management of Tongwei Co., Ltd.*
- *Digital Project Management and Operation Measures of Tongwei Co., Ltd.*
- ...

# S Solution

## » 7. Certification System

Certification is a key evaluation mechanism for sustainable initiatives, signifying both external validation of the management system and guiding its standardization. Tongwei has proactively established a comprehensive sustainability certification framework by integrating **over 10 internationally recognized standards** and assessment mechanisms. This system rigorously validates the Company's performance in core areas such as environmental management, product quality, occupational health and safety, compliance governance, and information security.

### | Tongwei's Sustainable Development Certification System

Major Domains	Certification Name
Environmental	ISO 14001 Environmental management system certification
	ISO 14064 GHG certificate
	ISO 14067 Carbon footprint certification
	ISO 50001 Energy management system certification
	...
Social	ISO 45001 Occupational health and safety management system certification
	ISO 9001 Quality management system certification
	ISO 22000 Food safety management system certification
	GB/T 29490 2013 Enterprise Intelligent property compliance management system
	SA8000 Social accountability international standard accreditation
...	
Governance	ISO 37301 Compliance management system certification
	ISO 37001 Anti-Bribery management system certification
	ISO/IEC 27001 Information security management system certification
	...

## » 8.Training System

Tongwei systematically conducts internal and external training sessions along with knowledge-sharing initiatives to enhance sustainability management awareness and operational capabilities across its business units. In 2024, we engaged external industry experts to deliver **6 major categories of thematic training sessions** for functional departments and key personnel across six major business divisions. The training covered fundamental concepts of sustainable development, energy conservation, green and low-carbon initiatives, information systems, and management frameworks. This program has provided strong support to enhance sustainable management capabilities throughout the Company's business segments.

### | Tongwei's Thematic Training on Sustainable Development

Training category ▶ **Sustainable Development**

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Training theme ▶ Thematic Training on Implementation and Promotion of Sustainable Development Reports  
Training on Digital Innovation for Sustainable Development  
Diversity and Inclusion Trends Training  
Sustainable Development Due Diligence Training  
SA8000 Social Responsibility System Training  
...



Training category ▶ **Energy Management**

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Training theme ▶ Smart Energy Conversation Management System Training  
High-Efficiency Cooling Management Training  
Digital Transformation for Energy Management Systems Training  
Summer Electricity Management Training  
...



Training category ▶ **Green and Low-Carbon**

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Training theme ▶ Automated Energy-Saving Technologies Sharing  
Carbon Management Digital Systems Training  
Science-Based Targets Initiative (SBTi) Training  
Organizational Carbon Emissions Accounting and Decarbonization Roadmapping Training  
...



Training category ▶ **Sustainable Supply Chains**

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Training theme ▶ Specialized Training on Supplier Quality Management  
Enhancing Communication Skills for Supply Chain Personnel  
...



Training category ▶ **Business Ethics**

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Training theme ▶ Occupational Criminal Risk and Prevention  
Anti-Corruption Training  
...



Training category ▶ **Talent Cultivation**

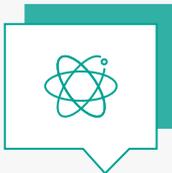
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Training theme ▶ Occupational Health and Safety Training  
Intellectual Property Protection Training  
Human Rights Training  
Information Security and Confidentiality Training  
Specialized Training on PV Technology Standards  
...

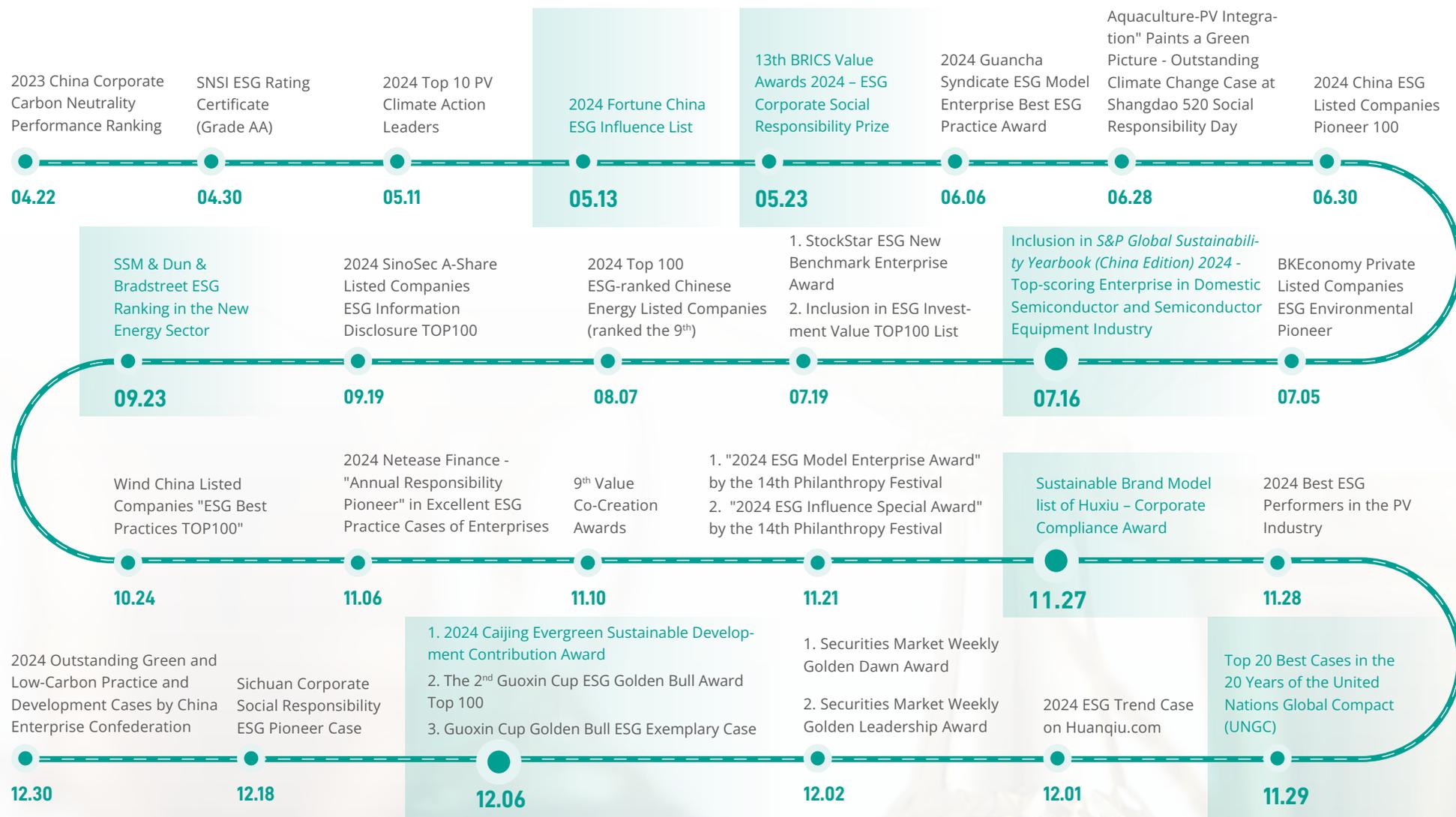


## » 9. Disclosure System

Tongwei has established a "1+1+N" sustainable development disclosure framework that includes one annual sustainability report, a dedicated section on the Company's official website for sustainability initiatives, and multiple specialized disclosures. This framework enables regular reporting of progress in sustainable development actions while addressing external stakeholder concerns to foster a collaborative environment that supports mutually beneficial growth.

Main component	Disclosure content description	Disclosure frequency
<p>1 Corporate Sustainability Report</p>	<ul style="list-style-type: none"> <li>Adhering strictly to regulatory disclosure requirements while benchmarking against advanced disclosure standards; this report provides a detailed public showcase of the Company's achievements in key areas of sustainable development each year through an analysis grounded in double materiality principles, and enhances the understanding and recognition of the Company by external stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Annually</li> </ul>
<p>1 Sustainable Development Section on the Company's Official Website</p>	<ul style="list-style-type: none"> <li>Based on the significant outcomes of the Company's sustainable development practices, presenting key highlights on the company's official website's dedicated webpage. It provides an accessible portal for stakeholders to quickly understand the Company's sustainability initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Updated annually as needed</li> </ul>
<p>N The Company's Specialized Sustainable Development Disclosures</p> 	<ul style="list-style-type: none"> <li>The Company actively engages in external thematic disclosures through rating and disclosure platforms such as the Carbon Disclosure Project (CDP) and Corporate Sustainability Assessment (CSA). By utilizing these targeted information disclosures, we identify potential areas for improvement, to continuously improve the Company's sustainable practices</li> </ul> 	<ul style="list-style-type: none"> <li>Conducted regularly</li> </ul> 

# Sustainable Development-related Honors and Awards





# Mainstream Ratings Performance in 2024

**MSCI** 

MSCI ESG Ratings

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2024	 <b>BB</b> Grade
2023	B Grade

**S&P Global**  
Market Intelligence

S&P Global Corporate Sustainability Assessment

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2024	 <b>57</b> Score
2023	53 Score

**ecovadis**

EcoVadis Sustainability Rating  
(Tongwei Solar (Hefei))

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2024	 <b>78</b> Score
2023	67 Score

**Wind ESG**

Wind ESG Rating

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2024	 <b>AA</b> Grade
2023	A Grade

 **中证指数**  
CHINA SECURITIES INDEX

CSI ESG Rating

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2024	<b>AA</b> Grade
2023	AA Grade

**IIGF** 中央财经大学  
绿色金融国际研究院

IIGF ESG Rating

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2024	<b>A+</b> Grade
2023	A+ Grade



CDP Global Environmental Disclosure

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2024	Climate Change <b>B</b> Grade	2024	 Water Security <b>B</b> Grade
2023	Climate Change <b>B</b> Grade	2023	—



# Stakeholder Communication

Tongwei places great importance on the opinions and concerns of its stakeholders, recognizing them as essential drivers of the Company's ongoing operations and development. In 2024, the Company proactively expanded its stakeholder communication channels and employed diverse methods to thoroughly listen to and address the concerns and expectations of all stakeholders. During the decision-making process, Tongwei comprehensively considers stakeholder feedback, leveraging it as a catalyst for continuous improvement in its sustainable development management. Through these efforts, we strive to foster a win-win development paradigm in collaboration with all parties involved.

In 2024,

centered on the theme of sustainable development, the Company organized a total of

**264** communication activities

- Customer communication activities: **111** sessions
- Communication activities with banks and investors: **8** sessions
- Corporate communication activities: **90** sessions
- Communication activities with industry associations: **42** sessions
- Other stakeholder communications: **13** sessions

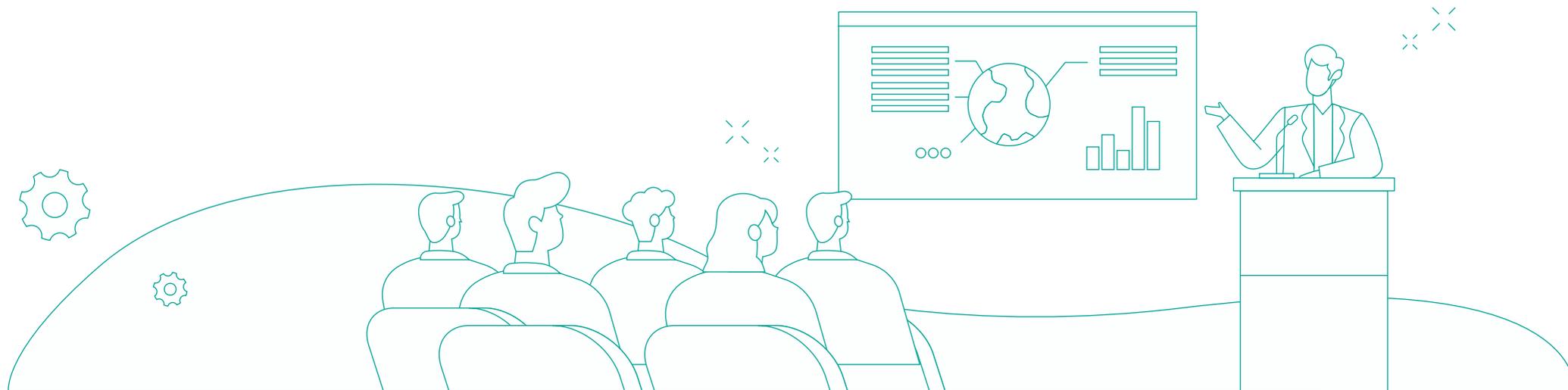
The activities primarily focused on several key dimensions, including sustainable development governance frameworks, carbon emissions management, water resource management, supply chain management, occupational health and safety, conflict minerals procurement, and business ethics. These initiatives have significantly strengthened collaboration and consensus among the Company and its various stakeholders in the realm of sustainable development. As a result, the Company has enhanced its influence in sustainable development initiatives.

Stakeholders	Topic	Communication and response
Governmental bodies and regulators	• Anti-unfair Competition	• Operate with honesty
	• ESG Management	• Pay taxes on time
	• Due Diligence	• Submit to supervision and inspection
Investors/ Shareholders	• Corporate Governance	• Conduct meetings and exchanges
	• Compliant Operation	• Disclose information, etc.
	• Risk Management	• Profit distribution
	• Anti-Bribery and Anti-Corruption	• Disclose information
	• Environmental Compliance Management	• Shareholders' Meeting
	• Energy Management	• Regular reporting
	• Clean Technology Opportunities	• Sustainability report
		• Performance briefing
	• Use the SSE E-interactive platform	
	• Daily exchange meetings/teleconferences/ roadshows with investors, etc.	

Stakeholders	Topic	Communication and response
Employees	• Employees' Rights and Interests Protection	• Employee representatives' meeting
	• Equality and Diversity	• Employee satisfaction survey
	• Employee training and Development	• Employee feedback channels
	• Occupational Health & Safety	• Improve the training system
Suppliers	• Anti-Bribery and Anti-Corruption	• Organize occupational health examinations
	• Sustainable Supply Chain Management	• Employee talks
	• Supply Chain Security	• Set the "Employee Care Fund"
		• Optimize supplier management system
		• Develop supplier code of conduct
	• Supplier vetting and training	
	• On-site interview and visit	
	• Industry exhibitions, cooperative meetings and exchanges, etc.	

Stakeholders	Topic	Communication and response
Customers	<ul style="list-style-type: none"> <li>Product and Service Safety and Quality</li> <li>Data Security and Customer Privacy Protection</li> <li>Corporate Governance</li> <li>ESG Management</li> <li>Environmental Compliance Management</li> <li>Pollutant Emissions</li> <li>Green Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Enhance product quality management</li> <li>Improve the after-sale service</li> <li>Customer satisfaction survey, etc.</li> <li>Customer online/on-site visit</li> <li>New product release conferences, product exhibitions, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>Response to Climate Change</li> <li>Pollutant Emissions</li> <li>Product and Service Safety and Quality</li> <li>Compliant Operation</li> </ul>	<ul style="list-style-type: none"> <li>Industry conference and forum</li> <li>Seminar on standard setting</li> <li>Academic research activities, etc.</li> </ul>
Sustainable development experts		

Stakeholders	Topic	Communication and response
Media/ Industry associations	<ul style="list-style-type: none"> <li>ESG Management</li> <li>Anti-Bribery and Anti-Corruption</li> <li>Sustainable Supply Chain Management</li> <li>Supply Chain Security</li> <li>Product and Service Safety and Quality</li> <li>Digital Transformation</li> <li>Social Contribution</li> </ul>	<ul style="list-style-type: none"> <li>Press conferences</li> <li>Exclusive interview</li> <li>Disclose information, etc.</li> </ul>
	Local communities/Charity organizations	<ul style="list-style-type: none"> <li>Social Contribution</li> <li>Pollutant Emissions</li> <li>Waste Disposal</li> <li>Occupational Health and Safety</li> <li>Energy Management</li> <li>Environmental Compliance Management</li> <li>Ecosystem and Biodiversity Conservation</li> </ul>



## » Resonating in Harmony with Social Values

Tongwei firmly believes that open and equitable communication with all sectors of society is a key strategy for conveying social value and uniting diverse stakeholders. Over the past year, centered on the "Together to Win" philosophy, the Company has consistently promoted multi-dimensional value narratives and employed a multi-channel stakeholder engagement model, ensuring its corporate development vision resonates with societal expectations.

### Amplifying Tongwei's Voice in Global Sustainable Initiatives

- Tongwei is the sole PV raw material enterprise featured in the UN Global Compact's (UNGC) report on the "Top 20 Sustainable Development Cases by Chinese Enterprises over 20 Years".
- The Company has consecutively participated in the *United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP)* for five years, where it initiated and actively championed the "Synergistic Empowerment Plan for Pollution Reduction and Carbon Abatement".



### Collaborating with International Organizations to Outline a Sustainable Future Blueprint

- The Company hosted a roundtable discussion titled "Sustainable Future: PV Energy and Global Development", inviting esteemed international organizations such as the United Nations Development Programme (UNDP), the United Nations Industrial Development Organization (UNIDO), the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). Together, participants explored strategies to balance energy needs with sustainable development in the context of ESG. This forum emphasized how individuals, businesses, and society can collaboratively promote global sustainable development through integrated efforts.



### Sharing Sustainability Best Practices with Business Partners

- The Company supported the SPARK UNDP SDG Innovation Lab (Chengdu) by organizing on-site visits and forum activities. These events served as a platform for over 20 leading enterprises from across China to share their sustainable development practices. The initiative aimed to encourage more businesses to actively engage in discussions surrounding sustainability initiatives.



# “Together to Win”

Tongwei actively promotes its sustainability vision through major international platforms, broadly disseminating and fully demonstrating the "Together to Win" philosophy at significant events such as the Chengdu PV and Energy Storage Conference, the Shanghai SNEC, Germany's Intersolar, COP29, as well as at forums in Australia, Belgium, France and beyond. Through these initiatives, Tongwei amplifies its voice in sustainable development globally while reinforcing the core essence of sustainability concepts.



# Assessment of Double Materiality Issues

Drawing on industry characteristics, value chain positioning, and actual development conditions, Tongwei has established a systematic mechanism for identifying and assessing materiality issues. This mechanism precisely addresses the concerns of stakeholders and provides a scientific basis for the Company's risk and opportunity management.

In 2024, the Company further advanced the organic integration of financial management and sustainable disclosure, and carried out financial materiality assessment for the first time. By organizing middle and senior management personnel from functional departments such as finance, investment, procurement, and supervision and audit, and employing a combination of quantitative assessment and qualitative analysis methods, key issues that may affect the Company's financial situation were identified. This measure not only ensures that sustainable issue management does not harm financial performance, but also promotes the integration of sustainable considerations into the management decision-making system.



# Double Materiality Matrix of Tongwei



● Environmental issue   ● Social issue   ● Corporate governance issue

Issues with both financial materiality and highly impactful materiality are double materiality issues

The special working group adjusts the content of the issues according to the actual business situation and incorporates sustainable supply chain management

Disclose double materiality issues in accordance with the recommended framework of *Guidelines No. 14 of Shanghai Stock Exchange for the Self-Regulation of Listed Companies—Sustainability Report (Trial)*

**Governance**

Disclose the governance structure and internal systems used by the Company to manage and supervise sustainable development-related

**Strategy**

Disclose the Company's plans, strategies, and methods for addressing sustainable development-related impacts, risks, and opportunities

**Impact, Risks, and Opportunities Management**

Disclose the Company's measures and processes for identifying, assessing, monitoring and managing sustainable development-related impacts, risks and opportunities

**Strategic Indicators and Targets**

Disclose the indicators and targets used by the Company to measure, manage, supervise, and evaluate its responses to sustainable development-related impacts, risks, and opportunities



# 01

## Together to Consolidate Stewardship: Stable and Robust Operation

Sound corporate governance serves as a critical foundation for the sustainable development of listed companies. Tongwei consistently adheres to the business guidelines of "Focus, Execution, and Efficiency". We are dedicated to continuously strengthening our risk management practices, upholding business ethics, and enhancing our information security management capabilities. The Company is committed to solidifying its governance foundations and actively building a robust and transparent governance framework, aiming to create long-term sustainable value for all stakeholders.

Material ESG issues covered in this chapter:

- Corporate Governance
- Compliant Operations
- Risk Control and Management
- Anti-Bribery and Anti-Corruption
- Anti-Unfair Competition
- Data Security and Customer Privacy Protection
- Stakeholder Communication

SDGs addressed in this chapter:

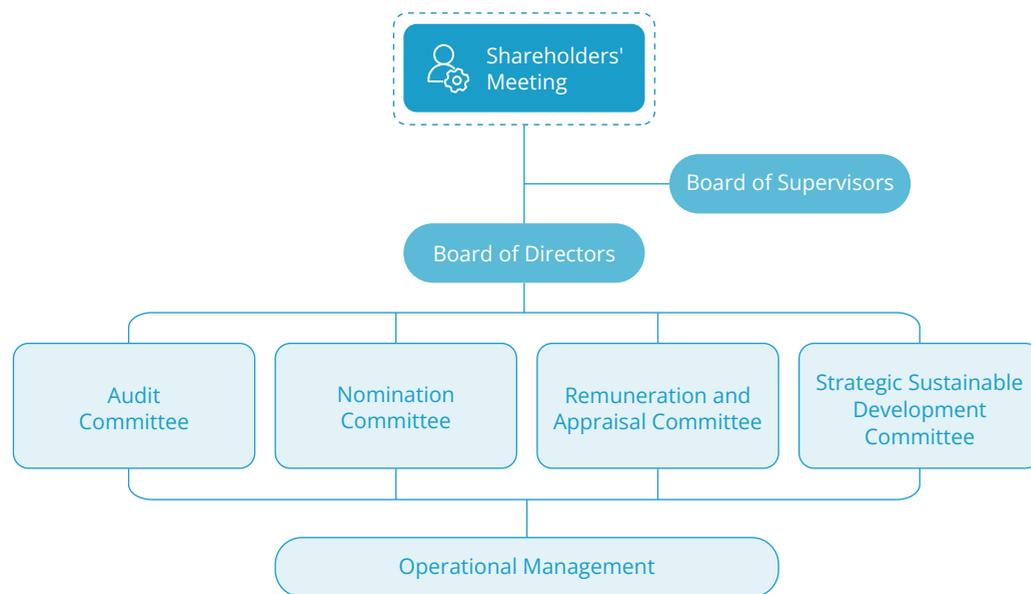


# Corporate Governance

Tongwei has continuously optimized and improved its corporate governance structure, establishing an efficient governance framework in which the general meeting of shareholders, the Board of Directors, and the Board of Supervisors work in harmony. This integrated approach ensures scientific decision-making, effective execution, and efficient supervision, providing a solid governance foundation for the stable development of the enterprise.

## Governance Structure

The Company's Board of Directors has established four specialized committees: Strategic Sustainable Development Committee, Remuneration and Appraisal Committee, Nomination Committee, and Audit Committee. Each specialized committee is accountable to the Board of Directors and operates in strict compliance with the *Articles of Association of Tongwei Co., Ltd.* and mandates delegated by the Board. These committees standardize management decision-making processes and operational supervision mechanisms, thereby providing scientific and reasonable decision-making support to the Board.



Corporate Governance Structure of Tongwei

Tongwei strictly complies with the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, and other relevant laws and regulations while continuously refining and improving its corporate governance structure. In 2024, the Company placed a strong emphasis on revising key documents, including the *Articles of Association of Tongwei Co., Ltd.* and the *Rules of Procedure for the Board of Directors of Tongwei Co., Ltd.* Additionally, we established the *President's Work Procedures of Tongwei Co., Ltd.* to further optimize our internal governance mechanisms, enhancing the standardization and stability in our operational management.

Tongwei has established and improved the governance structure involving the general meeting of shareholders, the Board of Directors, and the Board of Supervisors, aligned with the *Company Law of the People's Republic of China* and follows standardized meeting procedures. By implementing standardized meeting processes, the Company continuously enhance operational transparency. The Company is dedicated to protecting shareholders' rights and interests, particularly those of minority shareholders. We rigorously implement mechanisms that guarantee shareholders' rights to propose issues and cast votes. For significant matters such as amendments to the Company's regulations, we employ a special meeting deliberation system to ensure that minority shareholders can fairly participate in corporate governance decisions through a one-share-one-vote system.

| During the reporting period,

the Company convened Board meetings

8

with an attendance rate of

100%

proposals were approved

38

the Company convened Shareholders' meeting

1

proposals were approved

13

proposals under the separate voting mechanism for minority shareholders

38

the Company convened Supervisory Board meetings

6

with an attendance rate of

100%

proposals were approved

31

public information disclosure documents were released

132

## Diversity of Directors

Tongwei firmly believes that the diversity of directors is crucial for promoting the high-quality development of the Company and enhancing aggregate value. The Company strictly adheres to the director election procedures outlined in the *Articles of Association of Tongwei Co., Ltd.*, upholding the personnel management philosophy of "value the capable ones, replace the mediocre ones, and dismiss the incapable ones." Tongwei incorporates diversity factors such as candidates' gender, age, cultural and educational background, and professional experience into its comprehensive evaluation. By aligning these criteria with our governance needs, we rigorously select and strategically allocate talents from diverse fields, enhancing the diversity and comprehensiveness of the Board's decision-making processes.

### Gender Diversity on Boards of Directors



### Age Diversity on Boards of Directors



### Education Diversity on Boards of Directors



## Independence of Directors

Independence serves as a fundamental guarantee for the standardized performance and scientific decision-making of the Board of Directors. The Company follows the *Measures for the Administration of Independent Directors of Listed Companies* and has established a series of management documents aimed at its governing independent directors and specialized committees. These include the *Detailed Rules of Independent Directors' Special Meetings*, the *Detailed Rules of Remuneration and Appraisal Committee*, the *Detailed Rules of Strategic Sustainable Development Committee*, the *Detailed Rules of Audit Committee*.

All members of these specialized committees are composed entirely of directors, with independent directors holding a majority and serving as conveners in key committees such as the Audit Committee, Nomination Committee, and Remuneration and Review Committee. This structure ensures that independent directors can effectively exercise their supervisory and guiding functions within corporate governance. Tongwei actively adopts the professional opinions put forward by independent directors, strengthening their role in the governance of listed companies and promoting high-quality development of the Company.

In 2024, the independent directors diligently fulfilled their responsibilities and significantly participated in the Company's governance and decision-making processes. Independent Directors Fu Daiguo, Jiang Yumei, and Xu Yingtong leveraged their respective professional expertise in the photovoltaic and sustainable development sector, financial accounting sector, and legal compliance sector, deeply engaged with Tongwei's frontline sustainability initiatives, offering numerous constructive suggestions to support and advance the Company's sustainable development.

| During the reporting period,

Tongwei had independent directors

3

accounting for

33.3%

of the total number of directors



## Professionalism of Directors

The professionalism of the Board of Directors is fundamental to effective strategic corporate decision-making. The current board members have extensive experience across various fields including agriculture and animal husbandry, photovoltaic industry, finance, and risk management, possessing the necessary knowledge and skills to effectively fulfill their duties. With their diverse industry backgrounds and international perspectives, the directors can provide scientific and forward-looking insights that support Tongwei's strategic decisions, helping the Company navigate a complex and ever-changing market environment while achieving long-term high-quality growth.

Moreover, several board members have deep expertise in risk management, providing explicit and professional guidance on the Company's risk control measures. Among them, Independent Director Ms. Jiang Yumei possesses a profound legal professional background and is an expert with the qualification of the "State Council Special Government Allowance". She has achieved remarkable research results in the areas of corporate management and sustainable development. With her extensive research and hands-on experience, she provides invaluable support for the Company's risk management strategies. Independent director, Mr. Fu Daiguo, as the vice president of Chengdu Accounting Association, has conducted in-depth on corporate risk internal control and sustainability issues, with over 30 research articles published in top domestic journals, continuously providing the Company with profound professional insights into risk control.

Board of Directors	Ms. Liu Shuqi	Mr. Yan Hu	Mr. Liu Hanyuan	Mr. Fu Daiguo	Ms. Jiang Yumei	Mr. Xu Yingtong	Mr. Li Peng	Ms. Ding Yi	Mr. Song Dongsheng
	<b>Chair and CEO</b> Specialized in business administration major, graduated from Queen Mary University of London and has extensive practical experience in the supply chain domain as well as strong business management capabilities.	<b>Vice Chair of the Board of Directors</b> MBA from Guanghua School of Management at Peking University and senior accountant, has extensive experience in corporate management, sustainable strategy, and financial risk control.	<b>Director</b> EMBA from Guanghua School of Management, Peking University. He is a senior engineer in hydroelectric engineering, a deputy to the National People's Congress, and vice chair of the All-China Federation of Industry and Commerce.	<b>Independent Director</b> The dean of the Western Business School of Southwestern University of Finance and Economics, doctoral supervisor, and vice president of Chengdu Accounting Society. His research primarily focuses on risk management and internal control as well as corporate sustainable development.	<b>Independent Director</b> Doctor in Law and doctoral supervisor, expert with the qualification of the "State Council Special Government Allowance", is committed to long-term research in the areas such as international trade rules, business management, and sustainable development.	<b>Independent Director</b> MBA from Fudan University, has extensive industry experience in the field of new energy and is actively involved in the global sustainable development cause.	<b>Director</b> Doctor in finance who graduated from the School of Economics at Xiamen University, possesses extensive experience in financial risk management and strategic investment industries.	<b>Director</b> Doctor in economics who graduated from the Renmin University of China, possesses profound experience in financial management.	<b>Director</b> Master's degree, senior engineer, and recipient of the Special Government Allowance granted by the State Council.
Business Strategy	●	○	●	○	●	●	●	●	●
Corporate Governance	●	○	●	●	●	○	○	●	●
Legal Compliance	●	○	○	○	●	○	○	○	●
PV Industry	●	○	●	○	○	●	○	●	●
Sustainable Development	●	●	○	●	●	●	○	○	○
Financial Industry	○	●	○	○	○	○	●	●	○
Financial Management	○	●	○	●	●	○	●	●	○
Risk Management	○	●	○	●	●	○	●	●	●
Agriculture and Animal Husbandry	○	●	●	○	○	○	○	○	○
Strategic Sustainable Development Committee	●	●	●	○	○	●	●	○	○
Nomination Committee	●	○	○	○	●	●	○	○	○
Remuneration and Appraisal Committee	●	○	○	●	○	●	○	○	○
Audit Committee	○	●	○	●	●	○	○	○	○

Professional Background of Tongwei Board of Directors

To ensure the standardization and effectiveness of corporate governance, Tongwei continuously provides systematic training programs to the members of the Board of Directors. These programs cover multiple core areas, including business ethics, compliant operations, risk management, and internal control, aimed at enhancing the performance capabilities and compliance awareness of Board members.

In 2024,

the Company conducted training sessions for the Board of Directors

**5**

with a total of

**21** participants

The training duration reached

**168** hours

## Executive Compensation Policy

To actively implement sustainable development principles, Tongwei has formulated and issued the *Tongwei Co., Ltd. Policy for Performance-Based Pay and its Clawbacks*, comprehensively incorporating sustainable development indicators into the performance evaluation criteria for executive directors and management teams. The performance-based compensation for executives is evaluated annually to ensure that the executive team actively participates in advancing the overall objectives of the Company while continuously improving their contributions.



## Related-Party Transaction Policy

To improve the Company's standardized operation level, protect the legitimate rights and interests of all shareholders, and ensure that related-party transaction contracts comply with principles of fairness, justice, and transparency, Tongwei has established the *Related-Party Transaction Management Regulations*. These regulations are formulated in accordance with the *Company Law of the People's Republic of China*, the *Rules Governing the Listing of Stocks on the Shanghai Stock Exchange*, and the *Articles of Association of Tongwei Co., Ltd.*, which clearly define and standardize all aspects of related-party transactions, including agreement signing, approval processes, limit management, information disclosure, and control mechanisms.

# Investor Relations

## Communications with Investors

Tongwei proactively safeguards the legitimate rights and interests of shareholders, creditors, and other stakeholders. To strengthen communication with investors and shareholders effectively, we have implemented the *Tongwei Investor Relations Management Policy*.

This year, we adhered to our guiding principle of "bringing in and going out", which has allowed us to continually strengthen relationships with our core shareholders while expanding our outreach to overseas investors and domestic insurance funds as sources of long-term capital. We actively participated in crafting and publishing in-depth industry research reports while maintaining effective communication with leading market institutions.

In 2024, Tongwei conducted a total of 594 investor communication activities. This extensive engagement allowed us to gather valuable feedback from investors that will inform ongoing improvements within the Company as well as our strategic planning initiatives.



Tongwei's FY2023 and Q1 2024 Earnings Conference Call

Furthermore, the Company is committed to treating small- and medium-sized enterprises equitably by continually broadening communication channels available to them. Through various platforms such as the SSE E-interactive Platform as well as investor hotlines and email correspondence, we effectively respond to the needs and expectations of small- and medium-sized investors.

## Compliance Information Disclosure

Standardized operations and compliance information disclosure are the cornerstones for listed companies to establish a solid presence in the capital market. Tongwei has formulated and implemented information disclosure systems such as the *Tongwei Information Disclosure Management Policy*, with an effort to strengthen the confidentiality of insider information and conduct information disclosure following the principles of transparency, fairness, and impartiality. During the reporting period, the Company issued 132 announcements to all investors, effectively fulfilling its information disclosure obligations and safeguarding investors' right to know.

### Honors and Awards



In 2024, Tongwei received an "A" rating from the Shanghai Stock Exchange for its outstanding performance in information disclosure during the 2023-2024 period, marking the fourth consecutive year the Company has achieved this honor. Additionally, Tongwei has been awarded several prestigious accolades, including the "Most Valuable Investment" and "Golden Bull Secretary Award" at the 25th Golden Bull Awards organized by China Securities Journal, recognition as one of the "Top 100 Value of Main Board Listed Companies" in China Listed Company Value Selection, and the "Best Board of Directors Award" from National Business Daily.

In 2024, the Company conducted site surveys	engaging over	<b>104</b>	<b>712</b> participants
the Company held strategy conferences	with in-person attendance exceeding	<b>262</b>	<b>1,017</b> participants
the Company organized virtual investor meetings	with more than	<b>162</b>	<b>709</b> participants
the Company conducted reverse roadshows	engaging over	<b>66</b>	<b>701</b> participants
the Company collaborated in publishing broker research reports	including in-depth analyses exceeding 20 pages	<b>70</b>	<b>4</b>
the Company responded to a total of inquiries through telephone and online channels	achieving an investor inquiry response rate of	<b>1,213</b>	<b>98.93</b> %

# Compliance and Risk Management

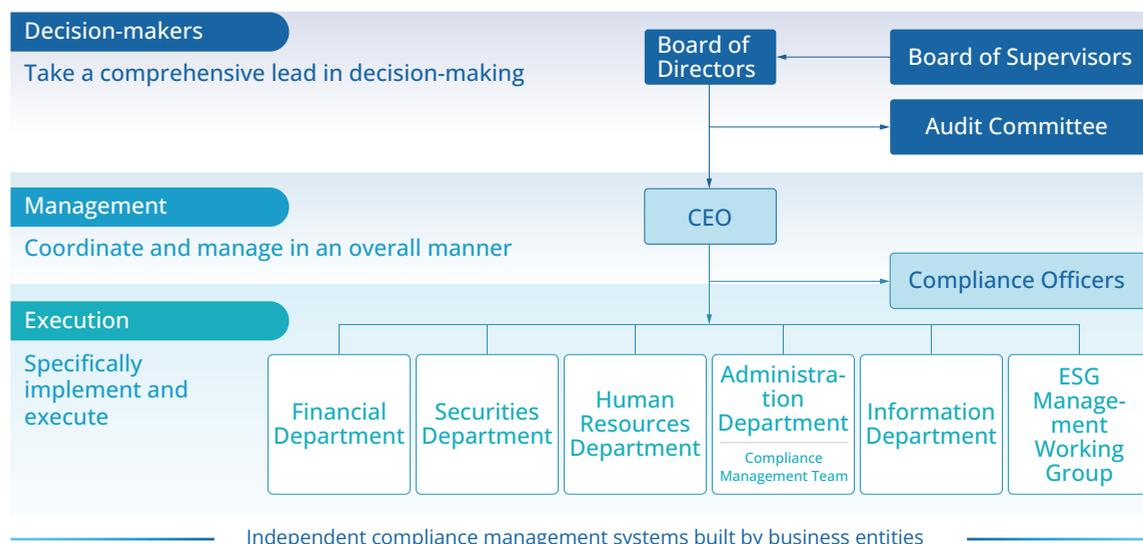
Tongwei has consistently adhered to the business guidelines of "Focus, Execution, and Efficiency", and employed a pragmatic and diligent approach to navigate complex environments, ensuring efficient operations within a legal framework by enhancing its compliance system. The Company implements scientific risk control strategies to identify and mitigate operational and internal control risks. Additionally, we optimize audit and supervision mechanisms to improve operational efficiency, thereby providing robust support for achieving strategic objectives and continuously promoting steady enterprise development.

## Governance

### ◆ Compliance Management

Tongwei complies with laws and regulations such as the *Company Law of the People's Republic of China*. In accordance with the requirements of the ISO 37301 compliance management system standard, the Company has developed and refined normative documents including the *Compliance Management Measures of Tongwei Co., Ltd.*, which comprehensively cover 11 compliance areas such as corporate governance, anti-commercial bribery, information security and data protection, accounting and taxation, anti-monopoly, and anti-unfair competition to ensure legal operations.

Tongwei has established a top-down compliance governance framework that clearly delineates responsibilities across departments. The Board of Directors is responsible for overall decision-making; the CEO and compliance officer coordinate the implementation and management of compliance affairs. Each business department implements compliance management requirements within its scope of responsibilities, while each business entity establishes an independent compliance management system tailored to its situation to ensure effective implementation of compliance risk control.



Tongwei's Compliance Management Structure

Tongwei has established and maintained an efficient compliance management system by benchmarking against international leading compliance management standards to comprehensively control compliance risks. This year, the Company issued the *Notice of Tongwei Co., Ltd. on Issuing the 2024 Annual Compliance Management Work Plan*, requiring all operating entities to formulate annual compliance work plans in accordance with the requirements of the ISO 37301 compliance management system to systematically advance the implementation of compliance management. In 2024, Tongwei's headquarters guided its subsidiaries, Yongxiang and Tongwei Solar (Chengdu), to complete ISO 37301 compliance management system certification.

In 2024,

Tongwei's headquarters guided its subsidiaries, Yongxiang and Tongwei Solar (Chengdu), to complete **ISO 37301** compliance management system certification.

As of now, the number of operating entities within the Company that have obtained this certification has increased to

6



Case | Tongwei participated in the Press Conference for *Guidelines on Compliance Construction for Private Enterprises in Sichuan Province*, sharing experience in building a compliance system

On August 22, 2024, as a benchmark enterprise for private enterprise compliance construction in Sichuan Province, Tongwei was invited to participate in a press conference for the *Guidelines for Compliance Construction of Private Enterprises in Sichuan Province* (hereinafter referred to as the *Guidelines*), jointly organized by Sichuan Federation of Industry and Commerce and Department of Justice. During this event, Feng Chang, Administrative Director of Tongwei, shared the Company's insights on constructing a robust compliance system following government directives.

Following the release of these *Guidelines*, Tongwei promptly reviewed and refined its internal compliance framework by integrating insights from past efforts with those presented in the *Guidelines*. Moving forward, Tongwei will uphold law-compliant operations as a strategic goal for enterprise development, further strengthening its compliance management and improving its effectiveness.

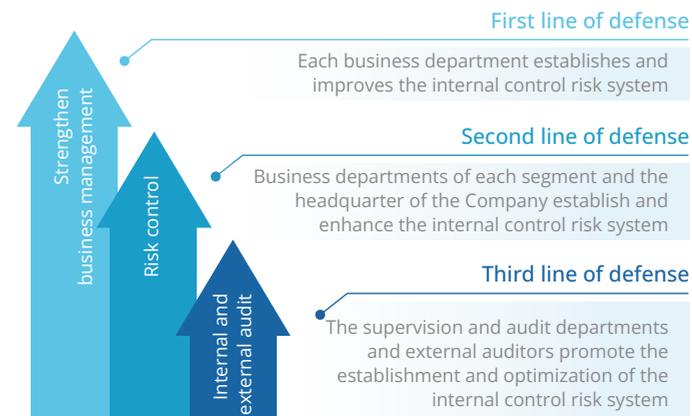


Feng Chang, Administrative Director of Tongwei Shared Experience in Private Enterprise Compliance Construction

## Risk Management and Control

Guided by the principles of "efficiency priority, positive transparency, and supervision assurance", Tongwei continuously refines its risk management system, conducts internal control evaluations in accordance with the *Internal Control Evaluation and Risk Assessment System of Tongwei Co., Ltd.*, and urges its business and functional departments to optimize internal control processes and procedures, which comprehensively covers key risk areas including operations, auditing, capital management, and financial management. Additionally, the Company has also implemented in-depth risk control initiatives.

The Company has established a "Three Lines of Defense" risk management framework that clearly delineates the responsibilities among the Board of Directors, Audit Committee, Board of Supervisors, and management within the risk control mechanism. This structure strengthens collaboration among business operations, risk control, and internal audits to ensure the long-term effectiveness of risk mitigation measures.



The framework of Tongwei's "Three Lines of Defense"

## Strategy

### ◆ Compliance Guidelines



Tongwei's Compliance Guidelines

### ◆ Identification of Compliance Obligations

To implement compliance principles in operations, the Company systematically identifies compliance obligations related to internal and external environments, implements tiered management of internal and external stakeholders, defines the scope of its compliance management system, and thoroughly addresses their core expectations—thereby enhancing the fulfillment of compliance obligations.

Dimension	Key Stakeholders	Core Compliance Obligations	Compliance Management Measures
External environment	Regulatory bodies	Compliance with policies and regulations; fulfillment of supervisory requirements	Continuous regulatory monitoring, and periodic compliance audits
	Suppliers	Contract performance, anti-bribery	Establishment of a supplier compliance management system
	Shareholders and investors	Information disclosure and equity protection	Enhancement of disclosure mechanisms
Internal Environment	Governing bodies	Decision-making compliance and internal control effectiveness	Optimization of governance structure and enhancement of internal supervision
	Employees	Labor law adherence and rights protection	Improvement in compensation and welfare systems, and enhancement of employee training
	Functional departments	Cross-functional collaboration and information disclosure integrity	Establishment of interdepartmental coordination mechanisms

Tongwei conducts systematic reviews and in-depth analyses of relevant compliance laws and regulations on a regular basis. The Company effectively translates policy orientations and regulatory requirements into mandatory compliance obligations across all compliance-related domains within the organization. In 2024, the Company updated and revised its *Compliance Obligation Checklist* to ensure timeliness and applicability, further reinforcing Tongwei's overall compliance management system.

| During the reporting period,

Tongwei reviewed a total of regulatory documents

**512**

adding new institutional regulations

**196**

revising existing regulations

**325**

the Company identified and updated compliance obligations

**325**

identified and updated compliance risks

**2,413**

formulated and updated risk response measures

**93**

while following up on rectification efforts to ensure the effective operation of its compliance management system.

## ◆ Compliance System Audit

To ensure the effective implementation of the compliance policy, Tongwei has established a regular assessment mechanism for its compliance management system. Tongwei regularly conducts supervision and inspection of compliance operations, internal audits, and management reviews. The Company also engages third-party professional institutions to conduct annual comprehensive audits on the six operating entities that have obtained ISO 37301 certification. Through systematic assessments, Tongwei is able to promptly identify and rectify potential issues, continuously optimizing its compliance management system.

In 2024, all operating entities with ISO 37301 certification successfully passed third-party surveillance audits, effectively validating the operational effectiveness of their compliance management systems. This success not only consolidates Tongwei's leading position in the field of compliance management but also provides a solid guarantee for sustainable development.

## ◆ Compliance Culture Development

To enhance internal understanding of the compliance policy, Tongwei places great emphasis on cultivating a strong compliance culture. The Company actively promotes its compliance culture and raises employees' awareness through special compliance training sessions, compliance management awareness campaigns, and producing Tongwei Compliance Cards. These efforts are aimed at facilitating the implementation of the Company's strategic plan for compliance.



### Case | Tongwei organized Compliance Practitioner Training on the ISO 37301 Compliance Management System

In 2024, Tongwei organized training for ISO 37301 Compliance Management System practitioners, successfully adding 64 new internal auditors to the Company. To date, a total of 116 compliance internal auditors have been trained, creating a team equipped with both expertise in compliance management and practical skills, which provide strong talent support and professional assurance for the Company's compliance management. Furthermore, to further standardize compliance behaviors among all employees, Tongwei tailors its compliance training to meet the practical needs of business units and functional departments. Through diversified formats and high-frequency sessions, the Company intensifies training in key weak areas and critical points such as anti-bribery, occupational misconduct, information security, and confidentiality management. This systematic approach ensures that compliance behaviors are standardized across the organization.



### Case | Tongwei developed and launched a series of compliance management training and awareness campaigns

In 2024, Tongwei successfully held 15 sessions of its "Law in Mind, Compliance in Action" compliance management training and awareness campaigns that comprehensively covered all compliance domains within the organization. These campaigns included several key themes such as legal regulations, corporate policies, case studies, and risk advisories. The objectives of these campaigns are to reinforce legal boundaries and institutional compliance red lines, strengthen compliance awareness through cautionary instruction, elevate internal governance standards, and deepen employees' understanding of compliance management. By positively guiding employees to proactively identify and address compliance risks in daily operations, the campaigns foster a work environment characterized by operational efficiency, transparency, robust systems, and standardized procedures.



In 2024,

Tongwei's headquarters and certified entities organized special training sessions on the ISO 37301 compliance management system

1,539

with a total duration of

755 hours

covering over

87,158 participants

## Internal Compliance Supervision and Audit

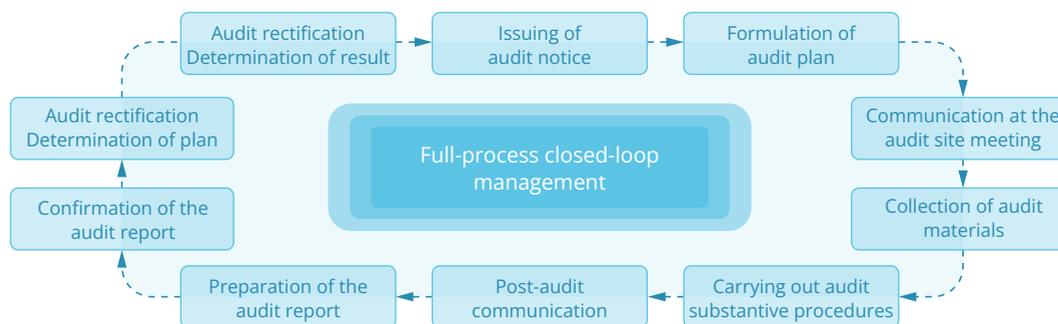
### Internal Supervision

In accordance with internal regulations such as the *Articles of Association of Tongwei Co., Ltd.* and the *Rules of Procedure for the Board of Supervisors of Tongwei Co., Ltd.*, Tongwei has established a comprehensive internal supervision and audit mechanism based on the principle of "error detection, fraud prevention, and supervisory assurance." The Board of Supervisors at Tongwei oversees the actions of directors and senior management in fulfilling their duties. This includes promptly identifying problematic behaviors that may harm corporate interests, as well as reporting significant illegal or irregular incidents to shareholder meetings or relevant state departments. The Supervision and Audit Department operates independently under the guidance of both the Board of Directors and the Board of Supervisors, conducting supervisory inspections to investigate violations by personnel within subsidiaries, with a focus on holding accountable those responsible for financial losses incurred due to improper operations.

### Internal Audit

Tongwei complies with laws and regulations such as the *Audit Law of the People's Republic of China*. During the reporting year, the *Working Procedures for Audit Teams* were upgraded to a guiding document for basic departmental management, and renamed to the *Audit Management Measures* establishing a closed-loop, end-to-end internal audit management system, which further enhanced standardization and systematization in audit management while ensuring efficient and orderly progress in audit work. The Company's Audit Department, overseen by the Board of Supervisors, operates in accordance with management requirements and aligns closely with the Company's strategic development plans. It focuses on overseeing, attesting to, and evaluating the economic activities of the Company and its subsidiaries, with particular attention to major investments, significant risks, and key projects. Audit operations cover six major areas across the Group, including engineering and construction, procurement, production and sales, performance evaluation, human resources, administration, and tax compliance.

During routine audits of subsidiaries across segments, the Supervision and Audit Department incorporates ESG risks into its evaluation criteria with a focus on environmental-related audits as well as occupational health and safety matters. Any identified risk factors or non-compliance issues are truthfully disclosed in audit reports. For issues identified during reviews, Tongwei formulates targeted rectification measures and ensures thorough communication with audited units. Systematic tracking is conducted on subsequent corrective actions taken, ensuring clear correspondence among discovered problems, rectification plans, and results to achieve closed-loop management throughout this entire process.



Internal Audit Process of Tongwei

In 2024,

the Company achieved audit coverage for its photovoltaic manufacturing segment and Tongwei Food

100%

audit coverage for Tongwei Agricultural Development

96.06%

significant violations related to environmental regulations or occupational health and safety were identified in audited entities

0

Tongwei completed internal audits

170

issued supervision and audit reports

325

## Impact, Risk and Opportunity Management

### ◆ Risk Identification and Control

Tongwei continuously strengthens its risk management capabilities by implementing a comprehensive closed-loop risk management process that encompasses core steps of risk identification, assessment, mitigation, and execution. By embedding risk awareness across all key business activities, the Company standardizes risk management in critical areas such as major investments, capital management, credit practices, and production quality control. To improve the applicability and effectiveness of risk management measures, the Company regularly updates its internal audit plans based on operational dynamics and priorities. We closely monitor the outcomes of internal audits and controls to ensure the rigorous execution of risk management measures.

### ◆ Compliance and Risk Management

Tongwei actively conducts compliance risk assessments, incorporating key third parties such as suppliers into its evaluation scope. The Company has developed comprehensive and actionable *Risk Assessment Summary Tables* and *Risk Response Plan Tables* to ensure systematic governance over risks. The Company quantifies compliance risks based on established assessment criteria and formulates corresponding risk control measures according to the evaluation results. These measures include conducting due diligence, executing compliance agreements, and performing targeted compliance audits, thereby proactively preventing and mitigating compliance risks.



#### Case | Tongwei's risk management and internal control training

In 2024, Tongwei enhanced its risk management and internal control initiatives by implementing integrated training programs that combined online platforms with in-person sessions for both internal employees and external stakeholders. The training thoroughly covered critical topics such as risk identification, mitigation strategies, and internal control enhancement. During the in-person training sessions led by the Company's Supervision and Audit Department, participants received detailed explanations of risk management frameworks and internal control principles. By incorporating practical case studies from critical production and operational processes, the sessions reinforced compliance oversight awareness and effectively enhanced the capability of managers and employees to identify and respond to risks within governance and internal controls.



Risk Management and Internal Control Training Avenue

In 2024,

the Company's risk mitigation plans achieved coverage of all identified compliance risks

**100** %

## Metrics and Targets

In line with its annual priority work plan, Tongwei continues to strengthen its compliance management framework while enhancing its risk prevention capabilities, aiming to achieve the corporate governance objective of zero administrative penalties and dispute incidents.

In 2025, Tongwei will maintain comprehensive audit coverage across its photovoltaic subsidiaries, including Yongxiang, Tongwei Solar, Tongwei Solar Technology, and Tongwei New Energy, with audits focusing on operational data fulfillment, benchmark comparisons, internal control optimization, and critical business risks. Through systematic auditing and proactive monitoring, Tongwei aims to reinforce its risk management and control processes while enhancing overall operational efficiency. Additionally, the Company plans to further enhance audit coverage within its agribusiness sector by optimizing resource allocation across all business units. This initiative will ensure that compliance operations are robustly supported, facilitating high-quality development initiatives throughout the organization.

### Highlight Indicators for Compliance Management

Indicators	Unit	2024
Number of ISO 37301 Compliance Management System certifications obtained	/	6
Number of specialized ISO 37301 Compliance Management System training sessions conducted	Session	1,539
Total duration of ISO 37301 Compliance Management System training	Hour	755
Total participants covered by ISO 37301 Compliance Management System training	Participants	87,158

### Highlight Indicators for Internal Compliance Supervision and Audit

Indicators	Unit	2024
Number of complaint cases handled	/	222
Supervision and audit resolution rate	%	100%
Audit coverage rate (Tongwei Photovoltaic Manufacturing Sector, Tongwei Food)	%	100%
Audit coverage rate (Tongwei Agricultural Development)	%	95.06%
Number of internal audits	/	170
Supervision and audit reports issued	/	325
Internal audit rectification rate <sup>3</sup>	%	100%

### Highlight Indicators for Risk Management

Indicators	Unit	2024
Risk response plan coverage rate	%	100%
Compliance risks identified and updated	/	2,413
Countermeasures developed to address risks	/	93

3. Including internal audit issues that are closed-loop processed across years.

# Business Ethics

Tongwei adheres to the management philosophy of "Honesty, Trust, Fairness, and Excellence", and strictly complies with high standards of business ethics. The Company is committed to building a clean and fair business environment. Tongwei continuously advances its anti-corruption system, refines both internal and external complaint and reporting mechanisms, and conducts regular business ethics audits. The Company actively implements anti-corruption policies and standards through various awareness campaigns, resolutely opposing any form of corruptions. Furthermore, the Company actively promotes the values of integrity among all employees, integrating the concept of integrity into their daily work and behavioral norms. This ensures that all employees uphold the moral bottom line in their business activities, safeguarding the Company's good reputation and image.

## Anti-Commercial Bribery and Anti-Corruption Management

In 2024, Tongwei formulated and publicly released the official *Anti-Corruption and Anti-Bribery Policy of Tongwei Co., Ltd.* based on the *Tongwei Co., Ltd. Business Ethics Code of Conduct*. This policy clearly defines the Company's behavioral principles and standards in various aspects, including anti-corruption and anti-bribery, conflict of interest, competition and anti-monopoly, responsible marketing, and business confidentiality. The scope of application covers all employees of Tongwei and its subsidiaries and affiliated companies. Additionally, all stakeholders who have business dealings with the Company, including suppliers, service providers, contractors, and customers, are required to strictly comply with both the *Anti-Corruption and Anti-Bribery Policy* and the *Code of Business Ethics*.

### Summary of the *Tongwei Co., Ltd. Anti-Corruption and Anti-Bribery Policy*

Tongwei Co., Ltd. is committed to upholding both commercial value and social responsibility, and is dedicated to conducting business with higher ethical standards. With the operating principle of "Honesty, Trust, Fairness, and Excellence", Tongwei is committed to strictly complying with the anti-corruption and anti-bribery laws and regulations in China and in the countries where all business partners and stakeholders are located.

#### The corruption and bribery behaviors specified in this policy refer to

Actions of unfair competition in the form of directly or indirectly offering or receiving cash, material items and other benefits outside the transaction under various guises such as kickbacks, promotional fees, publicity fees, labor fees, reimbursement of various expenses, and the provision of domestic and overseas travel, with the purpose of obtaining business transaction opportunities.

Exploiting one's position to embezzle, steal, defraud, or illegally possess the Company's property by other means, as well as misappropriating the Company's funds for personal use or lending them to others.

All employees of the Company (including but not limited to directors, senior management, general staff, contract staff, part-time staff, and temporary agency employees and interns working for the Company, etc.) have signed the Letter of Commitment on Anti-commercial Bribery (including business ethics and anti-corruption and anti-bribery contents), and participate in the training related to business ethics and anti-corruption and anti-bribery on an annual basis to demonstrate their compliance with the anti-corruption and anti-bribery policies and procedures set out in this Policy.

Any employees of the Company fail to comply with this policy will be subject to disciplinary action, up to and including dismissal or termination of employment (depending on the circumstances), as well as potential civil or criminal charges.

The Company establishes cooperative relationships with partners and suppliers on the basis of lawfulness, integrity and fair trade, and expects suppliers and partners to comply with relevant anti-corruption and anti-bribery laws and regulations in their business relationships with their employees, local communities and the Company. Furthermore, the Company requires suppliers to sign the "Supplier Compliance Commitment Letter", hoping to conduct business activities and transactions with them in good faith and legally, and actively comply with the relevant laws and regulations as well as the requirements in this policy, so as to jointly build a clean and honest cooperation environment.

To further enhance internal management, the Company has formulated a suite of management documents, including the *Tongwei Co., Ltd. Employee Reward and Punishment Policy*, the *Bribery Risk Identification and Assessment Management Measures*, and the *Employee Bribery Risk Prevention and Control Management Measures*. These documents require all employees to strictly comply with laws, regulations, and professional ethics norms during their business activities. In response to improper behaviors such as embezzlement, bribery, and money laundering, the Company has established comprehensive response and punishment measures. All employees are mandated to sign the *Letter of Undertaking on Compliance with Laws and Rules for Clean Performance*, which serves to strengthen controls over integrity risks and ensure the transparency and fairness of the Company's operations.

| During the reporting period,

the Company established dedicated anti-corruption positions

**38**

marking an increase of compared to the previous year

**2**

There was 1 litigation case stemming from embezzlement and bribery occurred within the reporting period. Upon occurrence the case, the Company's Supervision Department responded swiftly, conducting a thorough investigation and gathering evidence. The department promptly reported the findings to the Company's management and relevant departments. Currently, the case has entered the judicial process, with the relevant individuals having been transferred to the judicial authorities for subsequent penalties and judgments to be carried out in accordance with the law.

## Complaint Reporting Mechanism

The Company has established a robust complaint and reporting mechanism, providing clear and accessible internal and external reporting channels. All employees and external stakeholders are encouraged to disclose any actual or suspected misconduct related to the Company, with anonymous reporting being explicitly permitted and protected. All reports of misconduct will be diligently investigated by the designated department, and appropriate measures will be taken based on the investigation results.

In accordance with the *Tongwei Group Supervision Regulations* and other relevant policies, Tongwei undertakes to lawfully protect the confidentiality of whistleblowers' information. The Company strictly prohibits any form of retaliation, discrimination, or harm against whistleblowers by its employees or representatives. Any harassment, discrimination, retaliation, or harm directed toward a whistleblower will be deemed as serious misconduct, and the Company reserves the right to take appropriate disciplinary actions against the perpetrators. If individuals believe they have been subjected to retaliation, they are encouraged to immediately report the incident and provide relevant evidence.

In 2024, leveraging its digital capabilities, the Company introduced a new internal complaint reporting channel within the i-Tongwei 2.0 System, further enhancing the accessibility and effectiveness of its complaint reporting channels for all employees.

| During the reporting period,

the Company addressed a total of 222 complaints and report

**222**

achieving a resolution rate of

**100%**

### Tongwei's Compliant Reporting Channels

- For external stakeholders (including but not limited to suppliers, customers, and third parties):

Tel: (028) 86168834 86168838

Mobile: 15608175053 (WeChat ID synchronized)

Official WeChat Account: "Integrity Tongwei"

Email: jcb@tongwei.com

Address: Tongwei International Center, No.588 Tianfu Avenue, Hi-Tech Zone, Chengdu, Sichuan, 610041, China

- For internal employees:

In addition to the aforementioned five reporting channels, employees may also submit complaints and reports through the i-Tongwei 2.0 System.

## ◆ Anti-corruption Training

Tongwei prioritizes the development of an integrity culture and compliance capabilities as core operational imperatives. The Company mandates that all senior management and employees—including part-time employees, agency personnel, and interns—participate in annual business ethics and anti-corruption training organized by the Supervision and Audit Department. Furthermore, Tongwei enforces stringent compliance management for all suppliers and partners. This includes requiring them to sign Anti-Commercial Bribery and Compliance Commitment Letters and to participate in corporate business ethics training programs. These initiatives ensure that all stakeholders fully understand and adhere to relevant policies, jointly strengthening the integrity and compliance line of defense.



### Case | Tongwei's integrity culture development and anti-corruption training practices

To strengthen the integrity culture, Tongwei undertakes multi-tiered and diversified training and awareness-raising activities, comprehensively enhancing employees' ethical awareness and anti-corruption capabilities. On an annual basis, the Company conducts business ethics training for its board members during the year-end summary sessions, emphasizing the importance of anti-corruption policies that encompass corruption, fraud, malpractice, and negligence. For executives, key personnel, and general employees, Tongwei's Supervision and Audit Department organizes business ethics training through various forms such as on-site workshops, remote training sessions, and articles published on its official platforms. These training sessions focus on themes including integrity in duties, regulatory compliance, anti-corruption initiatives, risk prevention, and internal control systems. By analyzing real-life case studies, the Company provides in-depth explanations of its anti-corruption policies and further reinforces internal ethical awareness.

In 2024, Tongwei organized over 20 in-person integrity-themed seminars, reaching 3,054 management personnel with 64,146 participants. Furthermore, we have produced videos and infographics based on relevant case studies, which are distributed to all employees through the "Integrity Tongwei" WeChat official account and internal oversight information platforms. Throughout the year, a total of 38 integrity alerts were published, fostering a transparent and upright operational environment.

## Integrity culture development

### ◆ Business Ethics Audit

The Company commits to conducting annual anti-corruption and business ethics audits to ensure that all operational segments are comprehensively covered at least once every three years. The audit scope includes both routine and special audits across all subsidiaries, including those that are established as well as those under construction. The audit evaluates critical dimensions such as anti-corruption, anti-bribery, responsible marketing, fair competition, and information confidentiality. To enhance risk monitoring and prevention further, we adjust the audit frequency flexibly according to specific business development needs.

| During the reporting period,

Tongwei conducted business ethics audits encompassing subsidiaries

# 117

# 111

During the reporting period,

Tongwei conducted anti-corruption training sessions across all business units and subsidiaries

**180**

totaling

**167** training hours

with

**66,163** participants

the Company achieved a

**100** %

anti-corruption training coverage rate for its employees, partners, and suppliers

## Tongwei's 2024 Anti-Corruption Training Overview

### Number of anti-corruption training by rank

Directors

**9** Session



Managers

**180** Session



Employees

**179** Session



### Number of anti-corruption training participants by rank

Directors

**24** participants



Managers

**3,864** participants



Employees

**62,275** participants



### Pass rate of anti-corruption training by rank

Directors

**100** %



Managers

**100** %



Employees

**100** %



# Anti-Unfair Competition

Tongwei is committed to maintaining a free and fair market environment by actively complying with all applicable competition and anti-monopoly laws. The Company has established clear codes of conduct for all departments and employees regarding market competition, strictly prohibiting any unreasonable restrictions on customers or suppliers, the abuse of dominant market positions, and the dissemination of false information that could harm the reputation or credibility of competitors.

Additionally, the Company requires its suppliers and partners to adhere to competition and anti-monopoly laws. In 2024, in response to unified management requirements for the photovoltaic supply chain, Tongwei reiterated the importance that suppliers comply with the antitrust laws, fair competition regulations, and other relevant legal and industry standards applicable in their respective countries and regions, to avoid unfair competitive practices during business operations.

| During the reporting period,

the Company recorded litigation cases arising from unfair competition

0

monetary claims associated with such cases

0



# Data Security and Privacy Protection

Tongwei strictly adheres to relevant regulations such as the *Cybersecurity Law of the People's Republic of China*, the *Data Security Law of the People's Republic of China*, and the *Personal Information Protection Law of the People's Republic of China*. In alignment with international standards including ISO/IEC 27001, ISO 37301, and GB/T 22239-2019, the Company actively advances its Information Security Management System (ISMS) while rigorously implementing data protection measures.

In 2024, Tongwei's headquarters enhanced centralized control over ISMS documentation by issuing the *Tongwei Information Security Management General Principles*. Six existing policies—such as *Tongwei Data Management Measures* and *Tongwei IT Implementation Guidelines*—were revised. Additionally, 14 new policies were introduced including *Tongwei Data Flow Security Management Measures* and *Tongwei IT System Operation Security General Rules*. These frameworks encompass various aspects such as physical and network security management, procurement processes standardization, data governance practices—and asset management—ensuring robust security and stable operations for corporate information systems.

## Data Security Management Measures

Tongwei institutionalizes standardized business processes through policy frameworks, continuously improving protections against data breaches and misuse. The Company upgrades security tools and comprehensively identifies, assesses, and mitigates information security risks. Additionally, we strengthen employees' awareness of information security and enhances overall data security management standards.

### Case | Development of Tongwei's Information Security Management System (ISMS)

In 2024, Tongwei launched a comprehensive initiative for the certification of its ISMS, establishing a robust ISMS framework. During the implementation phase, the Company conducted thorough gap analyses through extensive interviews and assessments to identify security vulnerabilities. Based on these insights, we designed the management systems and procedures that encompass critical areas such as information asset management and access authorization. Throughout the three-month pilot phase, the Company continuously monitored the operational effectiveness of the system, promptly gathered user feedback, and refined the framework through iterative revisions to ensure its stable and efficient implementation. Additionally, Tongwei enhanced its ISMS by introducing six supplementary policies covering various dimensions including training education, outsourcing management, and development security. The Company also deployed four categories of information security products and implemented 62 quantifiable metrics for information security, achieving deep integration of policies, processes, and technologies that support ongoing improvements.

Leveraging its solid framework construction and efficient operational management, Tongwei successfully achieved ISO/IEC 27001 ISMS certification in 2024. Moreover, Tongwei's internal FBC system passed the Ministry of Public Security's Cybersecurity Classified Protection Level 2.0 Level 3 (S3A3) assessment successfully while completing necessary filings with the local public security bureau. This highest-level certification for non-banking organizations' information systems in China demonstrates that Tongwei's information security management has reached industry-leading standards.



Tongwei's ISO/IEC 27001 ISMS Certifications



### Standardize business processes

- Build a full-lifecycle closed-loop management system from process establishment and release, process execution, process monitoring and evaluation, process operation and maintenance, and process optimization to process abolition.
- Standardize various process management activities and use a unified standard process language to ensure that the process management work of the entire company is carried out in accordance with regulations, and promote the process management to move towards the mode of self-organization, self-optimization and self-iteration.



### Prevent information security risks

- Strengthen the internal security protection system to effectively separate the north-south and east-west defense measures. Enhance the security audit function of the database and improve the audit ability from the perspective of compliance.
- Improve the email security gateway to enhance the ability to defend against external spam. Launch the firewall function and comprehensively protect the release interfaces of external businesses.
- Engage a third-party security agency to conduct penetration testing on the Company's business systems, promptly discover risk vulnerabilities and carry out effective repairs.
- Promote the construction of the ISO/IEC 27001 information security management system, and improve the emergency drill and risk combing processes and systems.



### Improve personnel professionalism

- Strengthen the construction of the information team, introduce outstanding talents and industry experts in the field of information and data, and improve the professionalism of internal personnel. Formulate a systematic digital training course system, covering basic information security, intelligent office work, process management, etc., and regularly carry out training lectures and online learning activities for all employees.
- Organize special information security training to enhance employees' data awareness and quality. Organize multiple simulated phishing attack drills, covering multiple segments and multiple important functional departments at the headquarters, to evaluate and improve employees' ability to identify network security threats.

Tongwei's Information and Data Security Management Measures

## ◆ Customer Privacy Protection

Tongwei places a high priority on customer privacy protection and strictly complies with the *Civil Code of the People's Republic of China*, as well as the *Personal Information Protection Law of the People's Republic of China* and other relevant regulations. Tailored to its business characteristics, the Company has implemented a comprehensive suite of privacy protection measures. We collect customer information only after obtaining informed consent and establish confidentiality agreements with all new customers prior to collaboration, clearly defining the mutual responsibilities and obligations. For critical data provided during the customer vetting process, we enforce stringent confidentiality protocols that prohibit any unauthorized disclosure of customer data or documents without the customer's explicit knowledge and consent.

In 2024, the Company conducted specialized information security training sessions

# 39

covering a total of

# 9,298

 participants

During the reporting period, the Company confirmed information security incidents

# 0

with associated financial losses

# 0

the Company underwent external information security audits

# 2

During the reporting period, the Company recorded incidents of customer privacy breaches

# 0

with associated financial losses

# 0



# 02

## Together to Advance R&D: Cutting-Edge Technology Innovation

With innovation as its strategic pillar of corporate development, Tongwei has built and continuously improved the full-chain innovation system covering basic research, applied development, and achievement transformation. The Company strives to develop a world-class R&D team, and continues to build technological capabilities through continuous R&D investment, optimization of innovation mechanisms, deepening of industry-university-research collaboration, and strengthening of intellectual property protection.

Material ESG issues covered in this chapter:

- Innovation-driven Development
- Product and Service Safety and Quality
- Digital Transformation

SDGs addressed in this chapter:



# Innovation-driven Development

*The Global Innovation Index Report 2024* identifies

## Green Technologies, Digital Technologies, and Biotechnology

as the three core trends driving future global technological innovation. However, in 2024, the global technology industry struggled amid a complex international environment. Scientific investment declined significantly, and research output returned to pre-pandemic levels. Against this backdrop, confidence in the sustainable development of technology remains crucial for all stakeholders.



As a technology-driven innovative company, Tongwei has always placed innovation at the heart of its strategy and has upheld an innovation-driven approach in the face of external uncertainties. In 2024, the Company continued to invest in scientific research, accelerating the exploration of cutting-edge technologies and their commercial applications. The Company also strengthened industry-university-research cooperation and cultivated a highly skilled R&D team, infusing robust impetus into the sustainable and high-quality growth across the Company's two core sectors.

## The System of R&D and Innovation

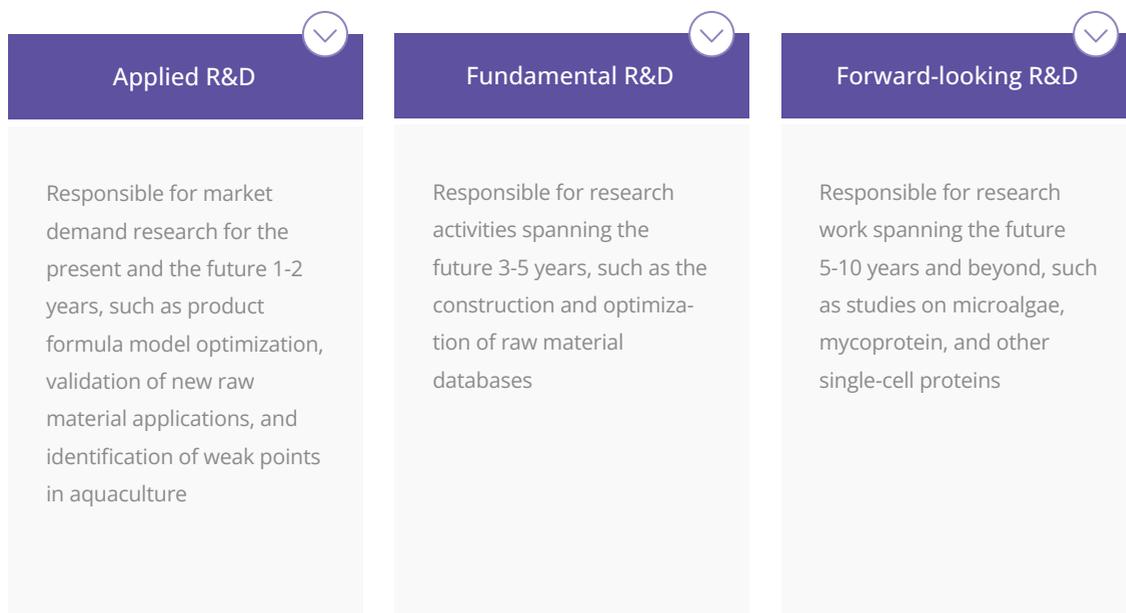
### ◆ PV Sector

In 2024, the Global Innovation and R&D Center of Tongwei was made fully operational, marking the Company's formal establishment of vertically integrated capabilities spanning "cutting-edge technology research – pilot-scale validation – mass production conversion," thereby achieving a strategic closed-loop from laboratory innovation to industrial-scale application in PV technology. Leveraging the Global Innovation and R&D Center as a world-class platform, the Company is simultaneously advancing breakthrough innovations in mainstream technologies such as TOPCon, heterojunction, back contact, and perovskite/crystalline silicon layered cells.

- For TOPCon technology, the Company has continuously optimized its mass production process system and inter-departmental collaborative innovation mechanism, achieving a leap in the energy efficiency of its N-type technology platform. Both photoelectric conversion efficiency and module power have reached new heights, with the TNC 2.0 product now fully deployed and demonstrating strong competitive advantages.
- For differentiated PV technologies such as heterojunction and back contact, the Company has established forward-looking technology tracking and R&D systems, accumulating a reserve of mass-producible core technologies to ensure sustained leadership throughout future technological iterations in the industry.
- In the forward-looking area of perovskite layered cell technology, the Company has systematically carried out research into breaking efficiency limits and mapping out industrialization roadmaps, while simultaneously advancing multi-dimensional validation of material systems and process stability, building a solid technical foundation for a new era in the PV industry.

## ◆ Agriculture and Animal Husbandry

Tongwei drives industrial upgrading through innovation, centering its efforts on the "1234 Strategy"—focusing on the development of 1 strategic variety, 2 stably upgrading varieties, 3 rapidly upgrading varieties, and 4 varieties of great concern and breakthrough. In terms of organizational structure, the Company has established specialized research institutions including the Aquaculture Research Institute, Livestock and Poultry Research Institute, and Animal Health Research Institute. We have also established a three-level R&D system, covering the full-chain innovation from basic research to applied development.



Tongwei Agriculture Development's three-level R&D system

1. 1 strategic variety (shrimp), 2 stable and enhanced varieties (grass carp, crucian carp), 3 rapidly enhanced varieties (crayfish, crab, California bass), 4 key varieties to focus on and break through (frog, snakehead, migratory fish, yellow catfish).

| During the reporting period,

Invested in R&D

RMB **2.673** billion

accounting for

**2.91** %

of operating revenue.

Established national company-level technology centers

**3**

centers including provincial enterprise technology centers, industrial technology centers, industrial design centers, R&D platforms, and technological innovation centers

**6**

along with R&D experiment bases

**24**

➤ R&D and Technological Innovation Awards of Tongwei in 2024 (Selected)

PV sector

2024 First Set of Major Technical Equipment in Sichuan Province

High-efficiency N-type TOPCon solar cells

China Frontier Technology Contribution Award in PV and Energy Storage

Tongwei's heterojunction technology that set records in module power and efficiency

Second Prize of the 2nd Energy Electronics Industry Innovation Competition

Bifacial passivated contact TOPCon solar cells

Second Prize of the Award for Scientific and Technological Progress in Guangdong Province

R&D and industrialization of new high-efficiency crystalline silicon solar cell paste

Anhui Provincial Patent Award of Excellence

Adhesive ribbon method for solar cells

First Prize of Leshan Science and Technology Award

Research and application of fully automatic one-click start-up for reduction furnace

Agriculture and animal husbandry

Second Award of the National Prize for Progress in Science and Technology

Establishment and industrial application of precision nutrition technology system for marine aquaculture fish

Second Prize of the Award for Scientific and Technological Progress in Sichuan Province

Innovative and integrated application of key technologies for antibiotic-free prevention and control of streptococcosis in fish



## R&D Talent Development

Tongwei has continuously strengthened its efforts in the cultivation and introduction of R&D talents, and through a well-developed talent development system and diversified introduction channels, it has gradually built an R&D talent team with international perspectives and professional skills.

### ◆ Cultivation of R&D Talents

In the PV sector, customized training courses are provided, offering a blended learning platform that combines on-line and off-line programs to R&D personnel at all levels, covering both technical theory and practical application comprehensively. At the same time, the *PV Technology Department Talent Integration Scheme* has been implemented for the PV sector, which enables precise management of R&D personnel, encourages technical exchanges and experience sharing, and establishes both horizontal and vertical career development paths, providing multiple promotion opportunities for talents.

For agriculture and animal husbandry, the model of transitioning technical talents to managerial roles has shown initial success. After 3 consecutive years of organizational training and model exploration, the Company has demonstrated the high overall quality of technical talents and their deep understanding of product quality. Through collaboration with the technical system and the Tongwei Learning Center, the Company has successfully transformed 4 technical personnel, including 2 who have formally taken on the role of general manager and 2 who are now serving as marketing general managers.



### ◆ Introduction of R&D Talents

In the PV sector, the Company has made continuous efforts to deepen the talent exchange with universities and research institutes, signed an agreement with the School of Optoelectronic Science and Engineering at the University of Electronic Science and Technology of China to establish an employment and talent development practice base, which has been awarded a plaque, and engaged in discussions regarding collaborative projects such as school-enterprise joint (postdoctoral) appointments. Additionally, in the PV sector, the Company has renewed the appointment of 2 industry mentors from the College of Materials Science and Engineering at Sichuan University, hired 3 new mentors, and also partnered with Southwest Petroleum University to hire 14 industry mentors.

For agriculture and animal husbandry, the Company has initiated the establishment of a specialized R&D team for the technical system, developed a detailed plan, and successfully introduced high-end talents. In 2024, 32 technical personnel were introduced for agriculture and animal husbandry, including 4 Doctor's degree holders, 23 Master's degree holders, and 5 Bachelor's degree holders, further strengthening the technical team. Additionally, the Company has collaborated with top academic institutions such as the Ocean University of China and the Freshwater Fisheries Research Center of the Chinese Academy of Fishery Sciences, to jointly carry out advanced talent development programs.

| In 2024,

Tongwei employed R&D personnel

**5,277**

marking a year-on-year increase of

**26.94%**

Among them, held master's degrees or above

**10.33%**

## Innovation Incentive Mechanism

In 2024, Tongwei continued to improve its management of scientific and technological projects and the reward mechanism for technological achievements. Based on the *Regulations on the Implementation of Technological Achievement Rewards of Tongwei Co., Ltd.*, the Company extensively carried out technological achievement rewards and established the "R&D Project Advancement Award" to accurately incentivize R&D personnel.

Innovation types	Incentives
Patents and software copyrights	Provide cash incentives for employees' patent inventions and software copyrights based on the different stages of patent application
Scientific papers	Provide cash incentives for employees' published scientific papers based on the journal in which they are published and the order of authorship
Works	Provide cash incentives for employees' published books based on the type of work and the order of authorship
Academic reports	Provide cash incentives for employees who participate in conferences and deliver academic reports based on the type of conference
Standard writing	Provide cash incentives for employees involved in the preparation and revision of standards based on the type of standard and the position held in the preparation
National new drugs, new products, and new varieties	Provide cash incentives for employees involved in the development and application of national new drugs, new products, and new varieties based on the ranking of the completion unit
Scientific honors	Provide cash rewards for employees who apply for external scientific honors based on the type of awards and the ranking of the completion unit
Scientific research platforms	Provide cash rewards for employees involved in the construction or application of scientific research platforms based on the type of platform

In 2024,

Tongwei invested in innovation incentives

RMB **5.34** billion

with a total of employees receiving rewards

**2,077**



## R&D of Environmentally Friendly Products

Tongwei deeply integrates the concept of sustainable development into its product R&D process, ensuring environmental friendliness throughout the product's lifecycle, from design and development to production. By taking measures to reduce the environmental footprint of products from the source, such as using environmentally friendly materials, reducing consumable usage, improving low-carbon processes, and adopting green design principles, the Company aims to minimize negative impacts on ecosystems, and drive products toward green and low-carbon development.

### ◆ PV Sector: Design Sustainable Products

### ◆ Agriculture and Animal Husbandry: Develop Green Agriculture products

#### Cell-side

- Simplified process: use a 4-step core process to reduce production steps and equipment operation time, lowering energy consumption and carbon emissions
- Low-temperature process advantages: reduce the temperature required by the process to reduce thermal damage and fuel consumption  
Reduced silver consumption: increase the number of main grids and eliminate PAD points to reduce the use of silver
- Thin-wafer technology: utilize silicon wafer thinning technology to reduce energy consumption and carbon emissions during silicon wafer production

#### Development of new high-quality feed protein sources

- Microalgae is a novel high-quality protein source, rich in proteins, fats, polysaccharides, vitamins, and other nutrients. It is highly nutritious and sustainably sourced. Unlike traditional aquaculture feed—fishmeal, which is sourced from deep-sea fishing, replacing fishmeal with microalgae can help reduce the reliance on marine resources and promote the development of aquaculture towards resource conservation and environmental sustainability

#### Module-side

- Tongwei pioneered the new 0BB interconnection technology: Silver content is reduced to less than 40%, minimizing the use of precious metals, saving 30% of paste material, and reducing the gram weight of the encapsulant material and the thickness of modules
- Environmentally friendly flux: replace traditional alcohol-based flux with water-based flux, reducing VOC content by 50%, free of harmful substances like trichloroethylene and halogens, minimizing the damage to the atmosphere
- Lightweight products: lightweight dual-glass products for residential use, reducing material usage
- Long-life module technology: develop high-reliability, long-life module technology to lower the replacement rate of module auxiliary materials and extend service life

#### Research on the application of ozone source water system

- The ozone source water system enables the full recycling of water used in shrimp farming, significantly reducing water costs and resource waste while minimizing the introduction of pathogens and ensuring farming safety. This technology substitutes the traditional intensive water exchange method with efficient sterilization and nitrogen-phosphorus reduction, effectively reducing environmental pollution. The project has made smooth progress and achieved notable results



## Intellectual Property Protection

As a national-level intellectual property demonstration enterprise, Tongwei places intellectual property management at the strategic level of corporate governance, establishing an industry-leading management system for the full lifecycle of intellectual properties. In 2024, the Company continued to upgrade its intellectual property management system in accordance with the *Enterprise Intellectual Property Management Standard (GB/T 29490-2013)*, including revising 10 intellectual property management systems, and establishing standardized management processes covering patent risk control, patent mining, patent layout, and patent knowledge training. 5 production entities under Yongxiang have obtained the Enterprise Intellectual Property Management (GB/T 29490-2013) certification.

In the PV industry, the Company forms a specialized intellectual property management team, with 11 senior experts, 5 of whom have over 10 years of industry experience. The team has taken the lead in developing various normative documents, including intellectual property management systems, scientific achievement reward systems, and confidentiality systems for intellectual property, thoroughly integrating the creation, utilization, protection, and management of intellectual property into the Company's daily operations.

### Infringement analysis

- Establish a patent warning system to analyze market competition dynamics, warn against patent risks and proactively prevent them
- Conduct a comprehensive patent infringement risk inspection in several core technological fields to prevent active and passive infringement

### Risk control

- Establish a patent risk response mechanism, create and implement the *Patent Emergency Reporting System*, and collaborate with the Company's legal team to create the *Management Measures for Patent Dispute Response of Tongwei (Trial)*
- Carry out effective preparations for patent risk countermeasures

### Dispute resolution

- In case of infringement, immediately initiate investigation and evidence collection, and take action based on the actual situation.
- When necessary, protect intellectual property through litigation or other legal means

### Patent of Tongwei

Indicator	Unit	2024		
		PV sector	Agriculture and animal husbandry	Total
Patents authorized	piece	175	8	183
Utility models authorized	piece	442	12	454
Patent applications	piece	316	24	340
Utility model applications	piece	957	25	982

Tongwei Agriculture Development's three-level R&D system

## Industry-University-Research Collaboration

Tongwei actively expands in-depth cooperation with external research institutions to jointly carry out cutting-edge R&D projects. We optimize resource allocation, such as talent, techniques, and funding, to drive breakthroughs in cutting-edge technology, and accelerate the transformation of technological achievements to meet the market demand for exceptional products.

### | Industry-University-Research Collaboration Projects of Tongwei (Selected)



#### PV sector

##### Regional innovation and development joint fund project of National Natural Science Foundation of China

In collaboration with Sichuan University and the China National Electrical Equipment Research Institute Co., Ltd., the Company explores the accelerated aging mechanism, life prediction, and regulation under harsh environments, aiming to establish accurate aging models and life prediction methods to optimize the design of encapsulation materials

##### Sichuan Natural Science Foundation - major project

In collaboration with Sichuan University, leveraging the expertise and accumulated knowledge of its School of Chemical Engineering, and combining the Company's extensive experience in the industrial application of solar cells, the Company conducted research on new active layer materials for new solar cells, new device structures, and manufacturing processes for new cells and modules

##### Major science and technology special "open call for leadership in key research project" in Sichuan Province

In collaboration with Southwest Petroleum University, Sichuan University, Southwest University of Science and Technology, University of Electronic Science and Technology of China, and SunSync Photovoltaic Technology (Yibin) Co., Ltd., and to meet the demand goals in the "R&D and Application Demonstration of Key Technologies for Ultra-efficient PV Cell Modules", the Company conducted R&D and pilot test on key technologies for ultra-efficient, highly stable PV cells and modules to enhance the efficiency limits and optimize the stability of crystalline silicon PV cell modules



#### Agriculture and animal husbandry

##### National key R&D program - "Marine Agriculture and Freshwater Fisheries Scientific and Technological Innovation" Key Special "High-Quality and Safe Fish Nutrition Regulation Mechanism and Precision Feed Technology" Project

In collaboration with the Institute of Hydrobiology, Chinese Academy of Sciences, the Institute of Feed Research of Chinese Academy of Agricultural Sciences, and Huazhong Agricultural University, the Company conducted research on the topic "full-chain key technologies and intelligent equipment for fish feed production and feeding" in the project

##### National key R&D program - "Intergovernmental International Scientific and Technological Innovation Cooperation" Special "2024 China-Singapore Science and Technology Innovation Cooperation Flagship Project"

The Company established an alliance with Huazhong Agricultural University, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, Wuhan University, Institute of Hydrobiology, Chinese Academy of Sciences, Northwest Agriculture & Forestry University, and iFlytek Co., Ltd., to jointly conduct research

## Industry Development

Tongwei actively engages in the industry-wide ecosystem by joining several industry associations as a formal member and holding relevant positions. We also participate in and support the development of national, industry, and group standards, and attend seminars, industry conferences, and forums to facilitate the high-quality development of the PV and agriculture industries.

As of the end of the reporting period,

Tongwei had participated in the formulation or revision of industry standards

# 108

including national standards

# 35

In 2024

Tongwei participated in industry association exchange activities

over 

# 80

### Selected Participation in the Preparation of National Standards by Tongwei

Standard number	Standard title	Release time
<b>PV sector</b>		
GB/T 31034-2024	Insulating Back Sheet for Crystalline Silicon Photovoltaic(PV) Modules	2024
GB/T 24007-2024	Environmental Management — Guidelines for Determining Environmental Costs and Benefits	2024
GB/T 24008-2024	Monetary Valuation of Environmental Impacts and Related Environmental Aspects	2024
GB/T 45205-2024	Specification for Fair Competition Compliance Management for Undertakings	2024
<b>Agriculture and animal husbandry</b>		
GB/T 22919.12-2024	Aquatic Feed—Part 12: Formula Feed for Crucian Carp	2024
GB/T 22919.11-2024	Aquatic Feed—Part 11: Formula Feed for Loach	2024
GB/T 22919.9-2024	Aquatic Feed—Part 9: Formula Feed for Largemouth Bass	2024
GB/T 17817—2024	Determination of Vitamin A in Feeds—High Performance Liquid Chromatography	2024
GB/T 18868-2024	Rapid Determination of Moisture, Crude Protein, Crude Fibre, Crude Fat, Lysine and Methionine in Feeds—Near Infrared Spectroscopy	2024
GB/T 44617-2024	Determination of Gentamycin in Feeds—Liquid Chromatography-tandem Mass Spectrometry	2024
GB/T 21037-2024	Determination of Diaveridine, Trimethoprim and Ormetoprim in Feeds	2024

Case | Tongwei attended SNEC PV+2024 International PV Conference and 2024 the 7th China International PV and Energy Storage Industry Conference

In June 2024, Tongwei attended SNEC PV+ the 17th (2024) International PV Power Generation and Smart Energy Conference & Exhibition. We shared our insights in several dialogues, including hosting 3 academic lectures and leading 5 technical discussions, highlighting our robust technology.

In November 2024, Tongwei attended 2024 the 7th China International PV and Energy Storage Industry Conference, and participated in 16 technical forums and activities, presenting the Company's latest R&D development and achievement in PV technology. At the main conference, we proudly unveiled the Tongwei Global Innovation R&D Center, highlighting its key role as a powerful technology engine in driving industry progress.



SNEC PV+ the 17th (2024) International PV Power Generation and Smart Energy Conference & Exhibition



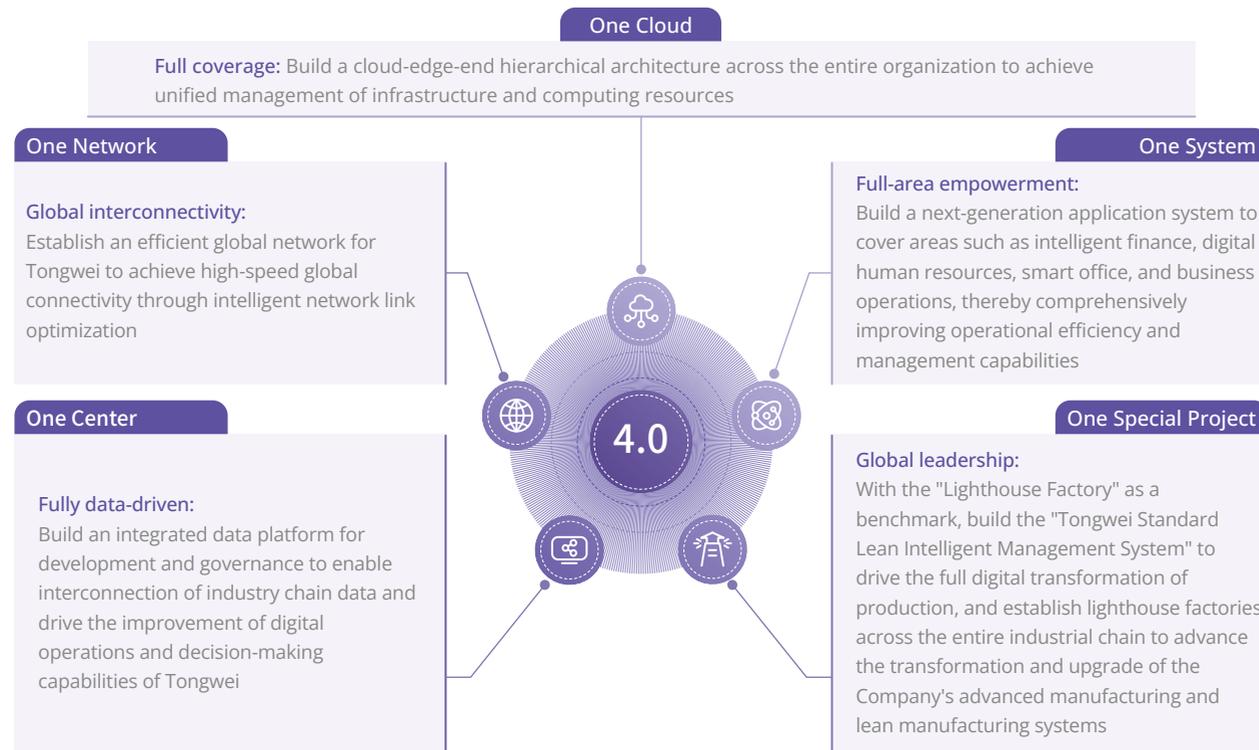
2024 the 7th China International PV and Energy Storage Industry Conference

# Digital Transformation

In April 2024, Tongwei accelerated its Digital 4.0 construction based on the "Five Ones" blueprint, and promoted a comprehensive upgrade of infrastructure and technology architecture, aiming to facilitate breakthroughs in data-driven, intelligent operations, and industry chain collaboration, thereby providing strong fundamental technical support for the Company's next phase of leapfrog development.

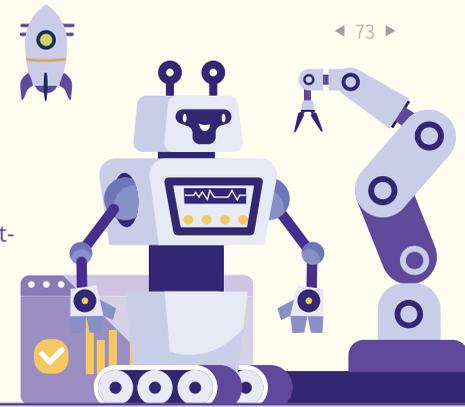
## Strategic Planning

Based on the "Five Ones-One Cloud, One Network, One Center, One System and One Special Project" blueprint, our Digital 4.0 construction aims to build a "next-generation infrastructure, next-generation technology architecture, next-generation application systems, and next-generation digital intelligent operations," and create a real-time online, data-driven, intelligently operated Digital Tongwei and Smart Tongwei.



# Fully Initiate Digital 4.0 Construction to Drive Business Leapfrog Growth from Hundreds of Billions to Trillions

The Company commits to building a next-generation digital platform that is "domestically leading and internationally first-class" By constructing an integrated management platform, Tongwei integrates digital management across six major sectors, breaking down information silos, unifying basic data and business processes, improving the standardization and efficiency of management, thereby providing the information infrastructure for cross-sector collaboration and industrial chain upgrades, and supporting the Company's strategic decision-making.



To strengthen the synergy across our global businesses, Tongwei proposed the "Global One Network" construction blueprint, aiming to build a secure global networking system featured by intelligent routing, accelerated scheduling, and cloud-network integration. The global networking transformation project covers the Company's headquarters and six major business entities. It began in January 2024, with acceptance completed and the system officially running by July. During the transformation, the project completed the major tasks, such as the connection of 100 branch offices, the deployment of over 200 hardware and software devices, the connection to Tongwei Cloud, the launch of the mobile app, and the delivery of the operation and maintenance management platform.

To address the differences in basic technical architecture and informatization construction across business entities and improve decision-making information analysis efficiency, the Company launched the Tongwei Cloud construction project to build a next-generation unified, efficient, and reliable infrastructure platform. The Tongwei Cloud project exceeded expectations in achieving its original objectives. It completed the cloud migration

of 13 production environments and 18 non-production environments, covering various key business areas such as human resources, finance, administration, and production, and established unified management standards and system regulations, achieving the goal of building the cloud well, utilizing the cloud effectively, and managing the cloud efficiently.

**13** production environments  
**18** non-production environments



One Cloud



One Network

**Digitalization Management**



One System



One Center

## Data middle platform project

A unified data management standard system that covers the Company's headquarters and six major business entities has been built, and the project has been fully launched. As of December 31, the project platform supports **71 professional engineers** for data construction, integrating about **6,300 tables** and **7.73TB** of data in total.

## Digital intelligent operation management center project

Following the principle of "profit orientation and cost reduction orientation", a data application platform for the entire industrial chain has been built. Formally launched in August 2024, the project has completed research on core areas and indicator sorting, establishing **927 core indicators**. In the future, the indicator system will continue to be developed, with full construction of financial, human resources, procurement, production, and marketing indicator maps.

## 01. Smart office



In terms of smart office, Tongwei focuses on the full-scale promotion of FBC and the integration of smart office. The FBC project has been upgraded to an integrated information platform, completing the iteration of functions such as the application center and process center, with process approvals now mobile-enabled. The iTongwei 1.0 was upgraded to 2.0, with nearly **180** applications added and migrated; FBC has iterated **190** functions, with **60** applications added and over **1,600** issues resolved, further meeting the demands for remote and mobile working.



## 02、Smart finance



Tongwei has implemented three projects for smart finance: Finance Sharing 2.0, comprehensive budget management, and foreign exchange management.

### ○ The Finance Sharing 2.0

was launched in our PV manufacturing sector, covering ten major business areas. By organizing more than **150 business processes** and implementing **175 system interfaces**, it integrated multiple information systems and eliminated information barriers.

### ○ The comprehensive budget management

was rolled out across the entire industrial chain: Phase I project implemented nearly **400 forms**, achieving an automation rate of over **97%** for statements. In Phase II project, the system for preparing, consolidating and merging budget reduced the time required from **ONE month to ONE week**, improving efficiency by **75%**.

### ○ The foreign exchange management project

has completed its launch and acceptance: Phase II project directly integrated the online trading systems of **6 banks** total, reducing the time required for offline transactions from **1-2 hours to under 30 seconds** for price inquiries and transactions, resulting in a **120-time** improvement in efficiency.

## 03、Smart human resources



The smart human resources upgraded the human resources management and recruitment platform project.

- The human resources management project achieved process standardization across sectors, integration of personnel and job data, and full digitalization of organizational management, thereby enhancing the efficiency of human resource management. The project organized **45 business scenarios** and over **200 sub-processes**, reducing administrative tasks to **under 1 hour**.
- The human resources recruitment platform achieved full online processes from recruitment to onboarding, enabling smooth talent management across departments, and offering **24/7** human resources assistance for employees to improve their experience.

## 04、ERP



The ERP project team streamlined over **700 business processes**, integrated nearly **100 systems**, and developed **650 interfaces** and more than **1,600 tasks**.

- The ERP 4.0 project is planned to achieve efficient and unified management of data, business operations, and processes. All business entities will realize the unification of technology architecture, application systems, and data management based on a unified ERP 4.0 platform, and enable end-to-end business collaboration and closed-loop control.

## 05、SRM



- Phase I SRM project achieved unified management of procurement operations across multiple business segments, all business forms, and the entire process. By digitalizing procurement operations, efficiently integrating supplier information, and enhancing transparency, supplier collaboration efficiency has been significantly improved, achieving the seamless integration with relevant systems across business segments, and driving a comprehensive enhancement of procurement management levels.



## Intelligent Production

With the establishment of "Lighthouse Factories" as the goal, Tongwei aims to advance the intelligent upgrade of its PV industry and agriculture and animal husbandry, and build a globally leading, lean, and smart production and manufacturing system.

### ◆ PV Industry: Digitalized Production

The PV sector focuses on integrating "production flow, process flow, and management flow" to create a fully digitized and intelligent factory, and use digital systems and 5G technology to achieve online management of modules such as production plans, production execution, WIP (work in progress), quality control, process management, and equipment management.

The "Lighthouse Factory" project of Tongwei was officially launched in May 2024 at the Tongwei Solar Meishan Base. The project has already completed the digitalization of all core use cases and is undergoing continuous optimization, achieving multiple results in reducing non-silicon costs, improving equipment OEE, increasing the Category A product rate, empowering the Company's employees, and optimizing the technological ecosystem in terms of business, organization, and technology.

### ◆ Agriculture and Animal Husbandry: Intelligent Farming

Taking the "Lighthouse Factory" as a benchmark for agriculture and animal husbandry, Tongwei constructed an intelligent production system based on MES and IoT technologies to drive the transformation from traditional farming to digital and intelligent practices. By integrating innovative technologies such as intelligent forklifts, unmanned weighing systems, automated inspection, automated feeding, and automatic meal distribution, the Company has achieved the automation and visualization of the entire production process, significantly improving operational efficiency and cost control capabilities.



Smart factory

The numerical control rate and network connectivity rate for key equipment have both reached **100 %**

The production efficiency has increased by	the operational costs have decreased by	the production yield has improved by	and the labor productivity has risen by
<b>45 %</b> ↑	<b>25 %</b> ↓	<b>1.5 %</b> ↑	<b>28 %</b> ↑



Optimization of production process control

Leveraging IoT (Internet of Things) technology and model predictive control technology, the Company has achieved the first deep integration of IT (information technology) and OT (operational technology) in the feed industry, optimizing production process control and ensuring that production equipment remains in optimal condition



Smart logistics

AI algorithms are applied to schedule indoor IGVs and outdoor unmanned forklifts, improving efficiency by **141 %** ↑

reducing labor by	and decreasing defect rates by	with fragmentation rates down by	AGVs have been employed to automate the processes of packaging, handling, and warehousing, further reducing labor dependence and enhancing logistics efficiency.
<b>40 %</b> ↑	<b>12.5 %</b> ↓	<b>25 %</b> ↓	



Data-driven management and decision-making

The Company has established a digitalized and standardized production management model, and through the digital intelligent manufacturing platform, it has achieved lean management and data-driven business decision-making

# Product Quality & Safety

Tongwei has always viewed product quality and safety as the lifeline of its development, and it commits to building a high-quality, high-standard management system that covers the entire industrial chain. By making continuous efforts to improve its systems, strengthening risk control, optimizing management methods, and promoting full participation, the Company ensures outstanding quality and reliable safety throughout the entire product lifecycle, and embeds green and efficient principles into full lifecycle management to create sustainable value for clients and society.

## Governance

The Company has built a multi-level product quality and safety management system, with the headquarters as the core, parallel management lines for both PV and agricultural and animal husbandry products, and collaborative efforts across all operation entities, achieving full coverage from headquarters management to grassroots execution.

For the PV sector, in 2024, Tongwei streamlined the management of polysilicon, cells, and modules at the headquarters, strengthening the product management department's functions and fully coordinating the strategic planning and full-process product quality service management of PV products. For agriculture and animal husbandry, we established a quality control department within each subsidiary to manage the quality of the various product lines in the agriculture development. At the same time, each business subsidiary has set up a dedicated quality management department for specific quality control tasks.

## Strategy

Tongwei considers product quality and safety as one of top priorities. We have implemented quality policies across our PV and agriculture and animal husbandry product lines. Through strict control processes and refined management practices, the Company ensures that products continue to meet the requirements for excellent quality and reliable safety throughout their entire lifecycle, establishing a strong reputation for "Tongwei Manufacturing."

### ◆ Quality Policies

Quality, market, and profitability constitute the eternal themes of the Company's development, with quality serving as the foundation and premise for the latter two.

By accurately identifying the essential needs of clients, the Company consistently aims to maximize client value by standardizing the awareness and behavior of all employees, and strictly controls product quality through professional, standardized, and scaled levels throughout the entire process of design, manufacturing, and use.

The Company has constantly refined the quality management system to create a robust value chain that leads in efficiency and offers high value. We deliver safe products to our customers to empower mutual growth.

| In 2024,

Tongwei Obtained ISO 9001 quality management system certification for the PV sector

**100** %

Obtained ISO 9001 quality management and ISO 22000 food safety management dual system certifications for the Agriculture and Animal Husbandry

**57**

more than the previous year,

**3**

achieving coverage in the food processing sector

**100** %

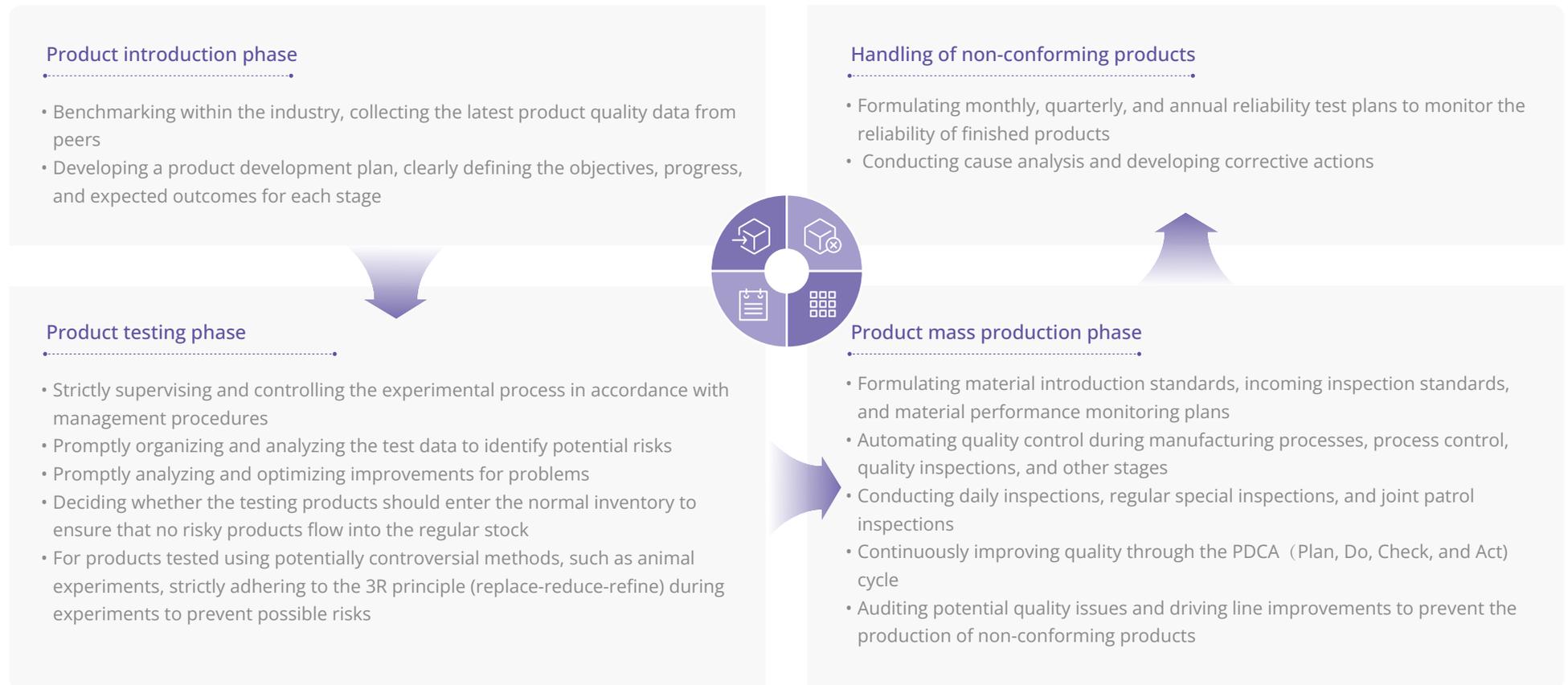
and coverage in the aquaculture feed sector

**78** %

Hainan Aquaculture has obtained HACCP and BRC global food safety certifications, and Chunyuan Food has obtained HACCP certification.

## ◆ Full Lifecycle Quality Management

Tongwei comprehensively applies refined management principles throughout the entire product lifecycle, from procurement source, production processes, finished product inspection, to product recall, forming a full-process, closed-loop management system to ensure continuous control over product quality and safety. The Company has set up rigorous and scientific test and control measures at every stage from preliminary preparations of market research and product design to final stages of mass production and market launch to ensure that the high-standard quality requirements and business ethical requirements are met at all stages.



## ◆ Product Quality Management Process

Focusing on full-process product quality control, the Company has meticulously developed a complete and rigorous internal management system and operating procedures for key stages from source control, process supervision, and quality risk assessment, to finished product acceptance and product recall. Through a multi-dimensional quality control system, the Company effectively enhances its ability to address product quality risks, ensuring product stability and reliability.

Management process	Procurement source control	Process quality control	Quality risk control	Product acceptance management	Product recall management	Quality emergency handling
 <p><b>Company policies</b></p>	<ul style="list-style-type: none"> <li>• <i>Supplier Management and Control Procedures</i></li> <li>• <i>Incoming Inspection and Test Control Procedures</i></li> <li>• <i>Management Procedures on Introduction of N-type Materials</i></li> <li>• <i>Measures for the Management of Feed Ingredient Suppliers</i></li> <li>• <i>Non-Conforming Product Control Management System, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Product Manufacturing Process Control Procedures</i></li> <li>• <i>In-Process Product Inspection Management</i></li> <li>• <i>On-site Quality Inspection Policy</i></li> <li>• <i>Formula Execution Management Policy, etc</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Risk and Opportunity Control Procedure</i></li> <li>• <i>Quality Risk and Opportunity Management Policy</i></li> <li>• <i>Product Quality and Safety Risk Prevention Measures, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Finished Goods Outbound Inspection Control Procedures</i></li> <li>• <i>Product Inspection Management Policy</i></li> <li>• <i>Non-conforming Product Control Procedures, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Product Recall Policy</i></li> <li>• <i>Food Recall Management Procedures, etc</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Product Emergency Management Procedures</i></li> <li>• <i>Client Complaint Emergency Response Management Procedures</i></li> <li>• <i>Non-conforming Product Control Procedures</i></li> <li>• <i>Production Abnormality Handling Specifications, etc.</i></li> </ul>
 <p><b>Management measures</b></p>	<ul style="list-style-type: none"> <li>• After raw materials are delivered to the factory, have them automatically weighed and assign an inspection number. Perform random sampling inspections, with qualified materials entering the warehouse, and unqualified ones triggering approval processes.</li> <li>• For abnormal materials, the Procurement Department shall propose handling suggestions and reasons, which are then submitted to quality control and production departments for review. In case of disagreement, the issue shall be escalated to leadership for evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify production process inspection, abnormality definition and disposal methods</li> <li>• Automatic monitoring of the whole production process, real-time risk alarm, and timely correction of instructions</li> <li>• Conduct random sampling inspections of products</li> <li>• Full information management for formula control</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify the mechanisms and procedures of risk identification, and develop effective prevention and control measures</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct quality inspections for finished goods</li> <li>• Dispose of non-conforming products</li> <li>• Regularly deliver products to a third-party testing company for type test</li> </ul>	<ul style="list-style-type: none"> <li>• Establish the product recall mechanism</li> </ul>	<ul style="list-style-type: none"> <li>• Standardized procedures for client feedback and complaint handling to improve service quality and products</li> <li>• Established processes for urgent release of materials awaiting or under inspection to ensure effective control over urgently needed materials</li> </ul>

## ◆ Product Quality Test

Tongwei regularly and proactively carries out internal and external product testing to ensure product quality and safety. Internal monitoring includes routine spot checks and surveillance, while external monitoring is conducted by third-party organizations for product testing.

	Internal test	Inspection by an external organization
PV sector	<ul style="list-style-type: none"> <li>Conduct internal tests, including adhesive rod main and auxiliary material temperature test, new guide wheel first three blade silicon wafer test, cleaning machine pure water conductivity test, and cleaning machine ultrasonic test to ensure the stability and reliability of PV cell products</li> <li>Conduct sampling confirmation tests on monocrystalline solar cells according to the reliability test specifications for solar cells to ensure that the product performance requirements are met and product defects are exposed, thereby providing reference information for the quality control, process optimization, and new product development for finished monocrystalline cell products</li> </ul>	<ul style="list-style-type: none"> <li>Conduct sampling confirmation tests on finished monocrystalline cell products according to battery module reliability inspection standards to ensure that the products are compliant after they are processed into battery modules, and qualified samples are sent to an accredited test agency for inspection</li> </ul>
Agriculture and Animal Husbandry	<ul style="list-style-type: none"> <li>Raw material test: According to <i>Raw Material Quality Standards</i>, conduct batch inspection, routine inspection, and safety monitoring for each batch of incoming raw materials. In 2024, a total of 120,873 batches of raw materials were tested, covering more than 600,000 test indicators.</li> <li>Product test: According to internal policies such as the <i>On-site Quality Inspection Policy</i>, closely monitor each batch of products throughout the production process, and conduct exit inspections according to the <i>Product Inspection Procedures</i>. In 2024, a total of 161,917 batches of products were tested, covering over 380,000 test indicators.</li> </ul>	<ul style="list-style-type: none"> <li>In 2024, a total of 68 branches and subsidiaries underwent on-site inspections, with 234 samples selected for inspection, covering products such as aquatic feed, livestock and poultry compound feed, livestock and poultry concentrated feed, and premium feed supplements, along with Over 3,000 test indicators, achieving a consistent qualification rate of 100%.</li> </ul>

## ◆ Management of Hazardous Substances in Products

Tongwei places product safety as its top priority and fully implements the green and environmental protection concept. During the R&D phase, the Company strictly controls hazardous substances to ensure compliance with the EU's RoHS Directive and REACH Regulation. The Company enforces strict control over its supply chain by requiring suppliers to provide compliance test reports, and uses environmentally friendly materials such as fluorine-free back sheets to reduce the use of hazardous substances, significantly lowering environmental risks. After undergoing third-party authoritative tests, the products can meet the stringent requirements of markets such as Europe and Japan.

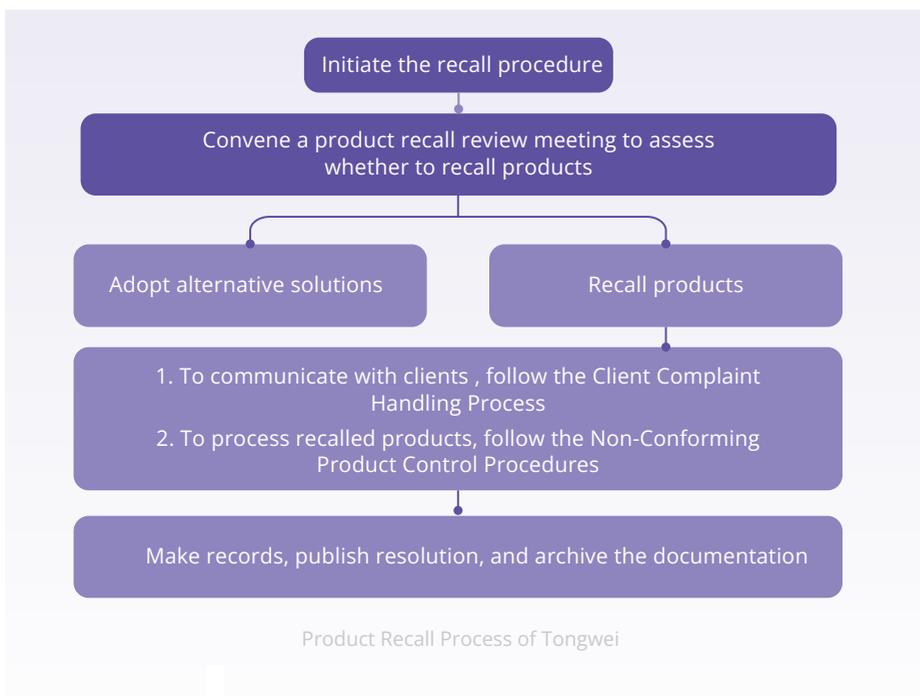
During the reporting period, the Company's PV products have passed regular hazardous substance tests and remain committed to continuously providing clients with safe and reliable product solutions.



Compliance of Tongwei's Monocrystalline Solar Cells with RoHS Directive

## ◆ Product Recall Management

The Company has established the *Product Recall Policy* and other institutional documents to strictly regulate the product recall procedure, clarify the conditions for triggering a recall, the evaluation, approval, execution, and record-keeping steps, ensuring a prompt response where quality issues are identified, thereby protecting client rights and maintaining the Company's reputation.



### Case

### Swift implementation of internal supply chain risk product optimization and recall for light-dark abnormalities

In 2024, the workshop of Tongwei Solar Pengshan Base experienced issues with the new front-back film production line, resulting in a batch of light-dark abnormalities in related products at the Yancheng and Jintang Module Bases. To ensure product quality and prevent downstream products from damaging external client interests after leaving the factory, the Company quickly initiated an internal product optimization program within its supply chain. Through internal identification and module verification, the issue mentioned above was confirmed, and the Company decided to recall the affected module cells internally.

The Company began investigating, analyzing and identifying the risks on November 11, and completed the handling of at-risk products at the module end and in transit by November 14. By November 18, the entire internal optimization and recall process was completed, with a total of 1.7148 million solar cells recovered.



## ◆ Construction of Quality Culture

Tongwei designates every September as the Quality Month, during which special activities such as regulation promotion and quality improvement initiatives are conducted to strengthen the quality awareness of all employees. The Company has established a "Quality Star" evaluation mechanism to encourage employees to engage deeply in quality development and continuously improve quality management levels.

Specifically, Tongwei Solar has innovatively implemented total quality management (TQM), formulated the *Continuous Improvement Management Measures of TQM*, and set up an incentive system to encourage employees to offer suggestions and ideas. In 2024, the number of TQM submissions increased by 101% year-on-year, rational suggestions grew by 112%, and improvement projects resulted in a revenue gain of RMB 500 million, effectively driving the improvement of the Company's quality management level.

### Polysilicon

Yongxiang invited industry experts to conduct internal auditor training for quality systems, aiming to enhance employees' understanding and application of standards and ensure the effective operation of the management system. The Company organized 4 special training sessions covering responsibility fulfillment, standardization theory, and more. Through systematic training programs the team's management level witnessed a comprehensive improvement.

### Solar cell

Focusing on an immersive quality culture, Tongwei Solar systematically advances the construction of quality culture by implementing innovative measures such as monthly policy checks, three-micro activities, tiered training, case analyses, and knowledge competitions. In 2024, the Company held 2 knowledge competitions, receiving 7,524 valid responses, with an average score of 73.9. This effectively enhanced employees' quality awareness and professional skills, injecting new momentum into the Company's high-quality development.

### Module

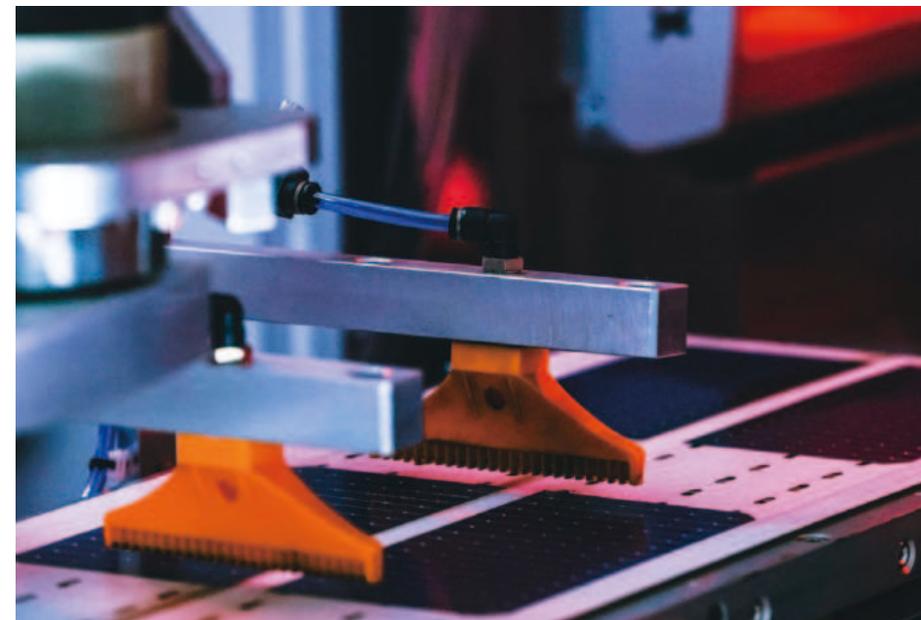
Tongwei Solar Technology focused on the provision of employee training in specialized tools and process control management. In 2024, a total of 181 training sessions were completed, accumulating 404 hours of training, with 5,059 person times of participants (incomplete statistics), effectively enhancing employees' quality process management levels.

Quality Training in the PV Sector

## ◆ Quality honors

### | Tongwei's Quality Honors

Sector	Awarding units	Awards
PV sector	Sichuan Quality Supervision Association	Commitment to Quality Integrity Unit
		National Product and Service Quality and Integrity Brand
Agriculture and animal husbandry	China Association for Quality Inspection	National Demonstration Enterprises for Product and Service Quality and Integrity
		Leading Brand of Quality in China's Agriculture and Animal Husbandry Industry



## Impact, Risk and Opportunity Management

The Company attaches great importance to product quality risks and has established a systematic product quality and safety risk assessment and monitoring mechanism to ensure timely identification and assessment of potential quality and safety issues throughout the entire product lifecycle. The Company has formulated the *Quality, Environmental, and Occupational Health and Safety Management System Manual* and the *Risk and Opportunity Control Procedure*, which define the methods for identifying product quality risks, providing the scientific basis and normative guidance for product quality management.

### ◆ PV Sector

#### Raw material quality risk investigation

- The Company conducts on-site surprise inspections of silicon powder suppliers, performs comprehensive evaluations on multiple dimensions such as product quality control, production process specifications, and quality management systems, and requires suppliers to establish a comprehensive quality traceability system to ensure the traceability of raw material quality and maintain detailed records of quality changes, thereby ensuring a standardized approach.

#### Polysilicon production quality risk supervision

- The Company regularly dispatches quality control teams to subsidiaries for quality supervision, gaining an in-depth understanding of the current state of quality management through means such as on-site audits, discussions, and data analysis. Through summary and analysis, the Company pursues continuous improvement of product quality management levels.

#### Battery production quality risk control

- The Company strictly evaluates changes in production factors that affect product quality, the environment, and occupational safety, ensuring that the production is carried out under controlled conditions for quality, environment, and occupational health and safety to guarantee the compliance of production with laws and regulations while meeting client quality requirements.

#### Module production quality risk control

- The Company has established quality management documents such as FMEA<sup>2</sup>, QCP<sup>3</sup>, Change Control Procedures, Trial Production Management Regulations, Non-Conforming Product Handling and Control Procedures, New Material Introduction Control Procedures, and Reliability Test Management Regulations, ensuring that the entire process from input to output is under quality risk control.

2. FMEA: Failure mode and effect analysis

3. QCP: Quality Control Plan



## Case | The Quality Control Department of Yongxiang conducted professional line inspections and guidance for the Tongwei Green Materials Quality Control Preparation Team

The inspection of Tongwei Green Materials conducted by Yongxiang covered personnel configuration, laboratory optimization, production process control, finished product test, and other steps, providing comprehensive coverage of all work stages of the Quality Control Preparation Team. This inspection and guidance provided valuable opportunities for the Tongwei Green Materials Quality Control Preparation Team to identify and address gaps, assisting it in improving its quality management system before production and elevating its quality management level.

## ◆ Agriculture and Animal Husbandry

### Production quality risk control



The Company conducts on-site quality patrols to strictly control the standardization, accuracy, and safety of the production process, thereby improving product stability. The Company specifies the inspection points, content, frequency, definition of abnormalities, and disposal methods during the production process.

### Product transport risk management



Before shipment, the Company performs thorough cleaning and disinfection of cold chain vehicles, and lowers the temperature. During loading, the Company strictly controls the exposure time of products, and uses temperature recorders throughout the process to monitor temperature changes.

### Product quality safety risk prevention



Based on the *Product Quality and Safety Risk Prevention Measures*, the Company specifies the process for handling product quality safety risks, covering risk identification, formulation of preventive measures, reviews, and quality record requirements.

### Product impact management



The quality control department regularly visits clients alongside shipments to investigate potential product quality issues and collect client feedback and complaints, then categorizes and defines complaints, and specifies the distribution of authority for compliant handling, process management requirements, and complaint handling records to ensure timely identification of product issues and efficient resolution of client concerns.

## Metrics and Targets

### Product Quality and Safety Training at Tongwei

Number of training sessions conducted

**8,112** Session



Number of employees receiving training

**56,668** Person



Total training hours received

**74,836.2** Hour



In 2025, We will continue to rigorously control product quality,

aiming for product qualification upon factory delivery

**100** %

user complaint resolution rate

**100** %

incidents of quality and safety issues

**0**

and quality goals that contribute to the Company's growth and expansion

### Case | Quality improvement in the "Year of Good Products" for Tongwei Agriculture Development

In 2024, guided by the "Year of Good Products" initiative, Tongwei Agricultural Development extended the concept of quality improvement into the production system, driving the quality management system to focus on "stable raw materials, leading products, and professional teams," achieving phased results in building a standardized production system.

#### Raw material management

In 2024, the Company introduced a winter storage and port inspection mode for external warehouses for the first time, stabilizing the supply of animal proteins and creating storage profits, while achieving zero quality disputes with the winter storage receipt.

#### Process optimization

Focusing on "strong benchmarking, superior standards, mechanism construction, and execution guarantee," the Company upgraded 296 process standard indicators, increasing rather than decreasing the compliance rate of key processes, and improving the product appearance quality benchmark success and parity rate by over 5%. Despite a 9% increase in market spot checks, the product compliance rate remained stable at 100%, outperforming the industry by 1.3 percentage points.

#### Talent development

The Company has built a three-tier talent selection and training system covering subsidiaries, regions, and headquarters, addressing 5 categories of employees. The reserve cadre rate reached over 30%, with a 26% increase in the proportion of critical talents. Additionally, relying on the smart manufacturing platform, the Company has achieved workload reduction and enhanced teamwork efficiency.



# Protection of Client Rights and Interests

We deeply understand that clients are the foundation of the Company's stable development, and good client relationships are not only the key to business growth but also an important reflection of corporate social responsibility. In 2024, we strictly adhered to the *Law of the People's Republic of China on the Protection of Consumer Rights and Interests* and other relevant laws and regulations. We continuously enhanced our client relationship management levels and improved client complaint handling efficiency, viewing client feedback as a critical opportunity to enhance service quality. We also continually improved client satisfaction and established long-term, stable trust relationships with clients.

## ◆ Client Service Management

In 2024, we effectively implemented standardized procedures such as the *Client Complaint Handling Process* and the *Procedures for Handling of Client Returns*, and revised the *Client Complaint and Feedback Control Procedures* and *After-sales Service Management Regulations*, optimizing complaint response and after-sales service mechanisms to improve client issue resolution efficiency. At the same time, we established a performance evaluation system based on client feedback, ensuring that client demands are promptly responded to and professionally handled.

4. CRM: Customer relationship management

	PV sector	Agriculture and animal husbandry
 <b>Pre-sale</b>	<ul style="list-style-type: none"> <li>Introduce product information to clients through various means such as trade shows, distribution of promotional materials, and inviting clients and mainstream industry media to interview production bases</li> <li>Answer client inquiries online through WeChat official accounts, TikTok accounts, live streaming, and other Internet platforms</li> <li>Develop our own CRM application and build a pool of potential clients through offline surveys by client representatives</li> </ul>	<ul style="list-style-type: none"> <li>Open 400 and 800 national client service hotlines, as well as subsidiary market service numbers, to assess client needs and assign dedicated personnel for handover</li> <li>Answer client inquiries online through social networking platforms and other media</li> <li>Develop our own CRM<sup>4</sup> system and integrate the client relationship network</li> </ul>
 <b>During sales</b>	<ul style="list-style-type: none"> <li>Visit clients to understand their needs</li> <li>Invite interested target clients to attend promotional meetings</li> <li>Strengthen production and logistics management to improve delivery efficiency and timeliness</li> </ul>	<ul style="list-style-type: none"> <li>Visit clients to understand their needs</li> <li>Distribute breeding technical manuals, hold technical lectures, and establish breeding demonstration sites to improve users' breeding skills</li> <li>Invite interested target clients to attend promotional meetings to deepen their understanding of our business</li> </ul>
 <b>After-sales</b>	<ul style="list-style-type: none"> <li>Provide clients with timely and professional technical support and services</li> <li>Implement regional management of client complaints, assign dedicated personnel to handle complaints, and establish an online complaint processing procedure</li> <li>Maintain communication with clients, conduct regular follow-up visits, and carry out satisfaction surveys</li> <li>Add a module authenticity query function to the official website to improve product information transparency</li> </ul>	<ul style="list-style-type: none"> <li>Push service evaluations through the Marketing Comm App to collect client feedback promptly</li> <li>Resolve client issues through multiple channels such as offline maintenance, the 400 hotline, and Internet platforms</li> <li>In 2024, the agriculture and animal husbandry WeChat official account of Tongwei launched the "Direct Access to Supervision" plan, gathering 129 feedback questionnaires from the market and breeders, identifying potential issues and opportunities for improvement</li> </ul>



### Case | Tongwei Solar Technology Hefei Base received client factory acceptance

The company actively conducts on-site quality audits for clients, and promptly takes corrective action for any issues raised during client factory acceptance. During the reporting period, the Hefei Base received 34 client, third-party, and product certification audits, achieving a 100% pass rate. A total of 64 issues were identified during the on-site feedback, including 44 minor issues and 20 suggestions for improvement. The Company's relevant responsible departments achieved a 100% correction and response rate and received high recognition from clients, demonstrating its excellence in quality control.



### Case | Empowerment of users by the "Year of Good Products" for Tongwei Agriculture Development

In 2024, the Company further advanced the "Year of Good Products" initiative for feed, continuing to uphold 5 commitments: daring to innovate in feed formulation, daring to label true content, daring to guarantee breeding performance, daring to compete, and daring to accept public supervision. For users who follow the Tongwei breeding model and use Tongwei products throughout the entire process, the Company publicly commits to feed coefficient and provides the fish farm TSC (technology, safety, cost) lean management to enable more high-quality users to experience the breeding benefits brought by the "Year of Good Products," comprehensively enhancing users' breeding profitability.

In 2024, the Company held 7,744 events, including product release conferences, breeding competitions, in-house marketing, evidence-based demonstration, and model promotion sessions, training 170,000 breeders. It also provided 1,188 training sessions for internal sales personnel, reaching 40,000 person times of trainees, and accumulating a total training duration of 2,300 hours. Through an "internal and external" approach, the Company ensures that users can "use good products to create good benefits," delivering tangible benefits.



## ◆ Empowerment of Small and Medium-sized Clients

Tongwei firmly believes that the Company's growth is inseparable from the support of its vast client base. We adhere to the principle of treating small and medium-sized enterprises equally and work with partners to promote industry-wide mutual success. In 2024, as a key component of the "Year of Good Products" initiative, Tongwei Agriculture Development officially launched the "For Common Growth" plan, providing a platform for resource sharing and collaborative development of small and medium-sized clients to help them achieve breakthroughs and growth in market competition.

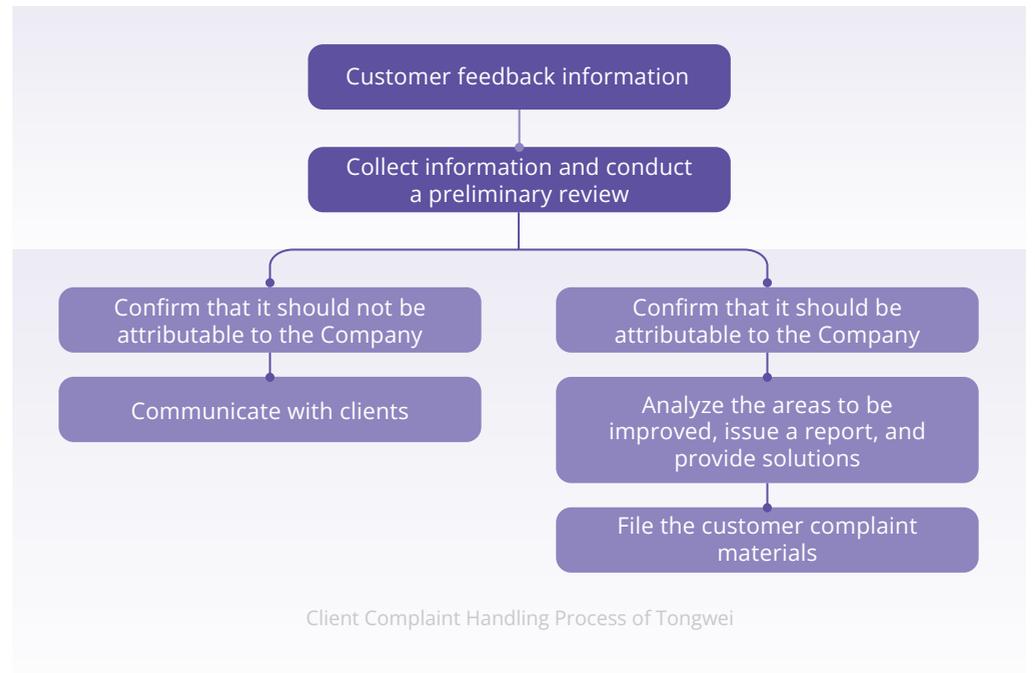
The "For Common Growth" project focuses on high-quality clients in the aquatic feed industry, aiming to create a platform for the joint growth of professionals who recognize the Tongwei philosophy and are committed to promoting high-quality industry development. During the reporting period, the Company formulated the *Aquaculture "For Common Growth" Client Direct Sales Management Measures* to standardize project execution requirements, and through 42 marketing events titled "Come Up, Go Down," it directly interacted and exchanged experience with over 600 clients. Branches and subsidiaries conducted TSC (technology, safety, cost) service pilot projects, integrating resources to address clients' core issues and effectively enhancing the adhesion of small and medium-sized clients.



## ◆ Client Complaint Management

Prioritizing client complaint management, Tongwei thoroughly analyzes client feedback to precisely identify the root causes of problems, thereby driving continuous service improvement, and ensuring that client voices are fully heard and transformed into improvement momentum. The Company strictly complies with the *Standard Handbook on Client Complaint Handling* and *Client Complaint Handling Regulations* to ensure that the complaint handling process is normalized and standardized.

In 2024, the Company further improved its client complaint handling system by revising the *Client Complaint and Feedback Control Procedures* and *Client Complaint Handling Process Management System*, and introducing the *Client Complaint Emergency Response Management Measures* to optimize the complaint handling process, ensuring quick responses to client feedback.



| In 2024,

• PV sector

Received product and service complaints,

24

achieving a resolution rate of

100%

• Agriculture and animal husbandry

Received product and service complaints

66

achieving a resolution rate of

100%

Received a total of calls on the national client service hotline

1,230

## Client Satisfaction

Client satisfaction is an important indicator for assessing the Company's client relationship management level and guiding the continuous optimization of services and product quality. We have established internal management systems such as the *Client Visit Management Measures and Procedures for Client Communication and Satisfaction Survey*, and revised the *Client Satisfaction Measurement Methods* during the reporting period. Through regular client satisfaction surveys, we comprehensively collect feedback and ratings from clients regarding product quality, service, price, and delivery cycle, and conduct in-depth analysis and summarization of the survey results to ensure that client concerns are addressed in a timely manner and corrective actions are implemented effectively.

In 2024, the Company continued to adopt scientific survey methods and rigorous statistical analysis tools to dynamically monitor changes in client satisfaction. Each quarter, we conduct satisfaction surveys for users, distributors, and other core client groups, and sales personnel collect client feedback through a combination of distributing questionnaires and making follow-up phone calls. For issues raised by clients in the survey, we commit to responding within one month, and statistically analyzing the collected questionnaires to generate special reports for delivery to relevant departments, aiming to drive corrective actions and service optimizations and ensure continuous improvement in client satisfaction.



| In 2024, the product satisfaction survey results<sup>5</sup> for Tongwei were as follows:

PV sector

Module business

95.26%

Agriculture and animal husbandry

Feed business

Feed quality

93.45%

Service quality

95.16%

External product packaging

95.60%

Food business

Feed quality

97.8%

5. The product satisfaction survey mainly focuses on the ToC (business-to-consumer) segment.

## Responsible Marketing

Product information and promotional materials are key windows for clients to understand the Company's products. Tongwei strictly adheres to laws and regulations such as the *Advertisement Law of the People's Republic of China*, integrating the concept of responsible marketing into all stages of product information dissemination. We have established a management system where the headquarters performs supervision and review, and branches and subsidiaries are responsible for execution to ensure continuous standardization of trademark use and marketing practices and prevent any false advertising or misleading of consumers. The Company's brand management department and product safety management department are responsible for the review of external publicity to ensure the authenticity and compliance of product promotion.

| In 2024,

Tongwei Conducted a total of responsible marketing training sessions

**1,312**

Conducted internal and external special audits focused on responsible marketing

**7**

with employees participated in

**45,912**

Had incidents of violations related to product and service information or labeling

**0**

and a total training duration of hours

**2,494**





# 03

## Together to Leverage Intelligent Solutions: Responsible Procurement

Tongwei has always viewed supply chain management as a key component of corporate sustainability. Tongwei upholds the business philosophy of "Honesty, Trust, Fairness and Excellence" and shares this philosophy with all partners across the value chain. It advocates for establishing an equal, respectful and transparent environment for cooperation. Based on this philosophy, Tongwei has established long-term and stable, mutually beneficial partnerships with suppliers and partners over the years to build a responsible supply chain that underpins its robust growth.

Material ESG issues covered in this chapter:

- Supply Chain Management
- Supply Chain Security
- Sustainable Supply Chains

SDGs addressed in this chapter:



# Supply Chain Management

Tongwei recognizes the importance of a stable and reliable supply chain to its operations. The Company commits to conducting business with highest ethical standards, fostering a supply chain environment defined by equality, respect, transparency, and integrity. In addition, the Company leverages supply chain management principles to build a highly competitive supply chain management system that actively engages global suppliers in a cooperative ecosystem.

## Supply Chain Management System

Tongwei strictly abides by the *Company Law of the People's Republic of China*, the *Bidding and Tendering Law of the People's Republic of China* and other relevant laws and regulations, and has developed a comprehensive supplier management framework, including the *Procurement Control Procedures*, *Supplier Management and Control Procedures*, and other management regulations in accordance with business needs, so as to continuously strengthen the effectiveness and standardization of the supplier admission process.



## Supplier Admission and Classification

Tongwei clearly defines the supplier admission process and strictly controls supplier quality within the policies including *Supplier Management and Control Procedures*. In 2024, the Company improved supplier qualification management methods, revised ESG on-site audit requirements for new suppliers, and developed a rectification and handling process for suppliers who do not meet the audit standards. Additionally, the Company published supplier qualification criteria to further enhance transparency in supplier management.

## Supplier Overview

As of the end of 2024, Tongwei had a total of 5,269 suppliers.

Indicators	Unit	In China	Outside China	Total
Tongwei Agricultural Development	Count	1,058	523	1,581
Tongwei Food	Count	330	0	330
Tongwei Yongxiang	Count	2,370	1	2,371
Tongwei Solar	Count	137	0	137
Tongwei Solar Technology	Count	111	0	111
Tongwei New Energy	Count	739	0	739
<b>Total</b>	<b>Count</b>	<b>4,745</b>	<b>524</b>	<b>5,269</b>

## Supply Chain Traceability

Aligning with the *United Nations Universal Declaration of Human Rights* and the *United Nations Guiding Principles on Business and Human Rights*, Tongwei consistently adheres to Chinese laws and regulations and advances its social responsibility practices. The Company continues to improve its traceability management mechanisms and supports external suppliers through targeted training, thereby enhancing the traceability and information transparency of the entire industry chain.

In 2024, the Company developed the *Internal Management Mechanism for Supply Chain Traceability*, organized traceability training covering all products, and integrated efficient processes, systems, and hardware, to further strengthen digital traceability management capabilities. Through a series of management optimizations, Tongwei has not only improved internal operational efficiency but also provided actionable, standardized guidance to external suppliers. This ensures the efficient operation of a complete traceability chain covering processes from quartz, metallurgical-grade silicon(MGS), polysilicon, silicon rods, silicon wafers, to cells and modules.

The Company builds a comprehensive and integrated traceability system from PV modules to quartz. To validate and enhance its traceability capabilities, Tongwei successfully passed a one-time

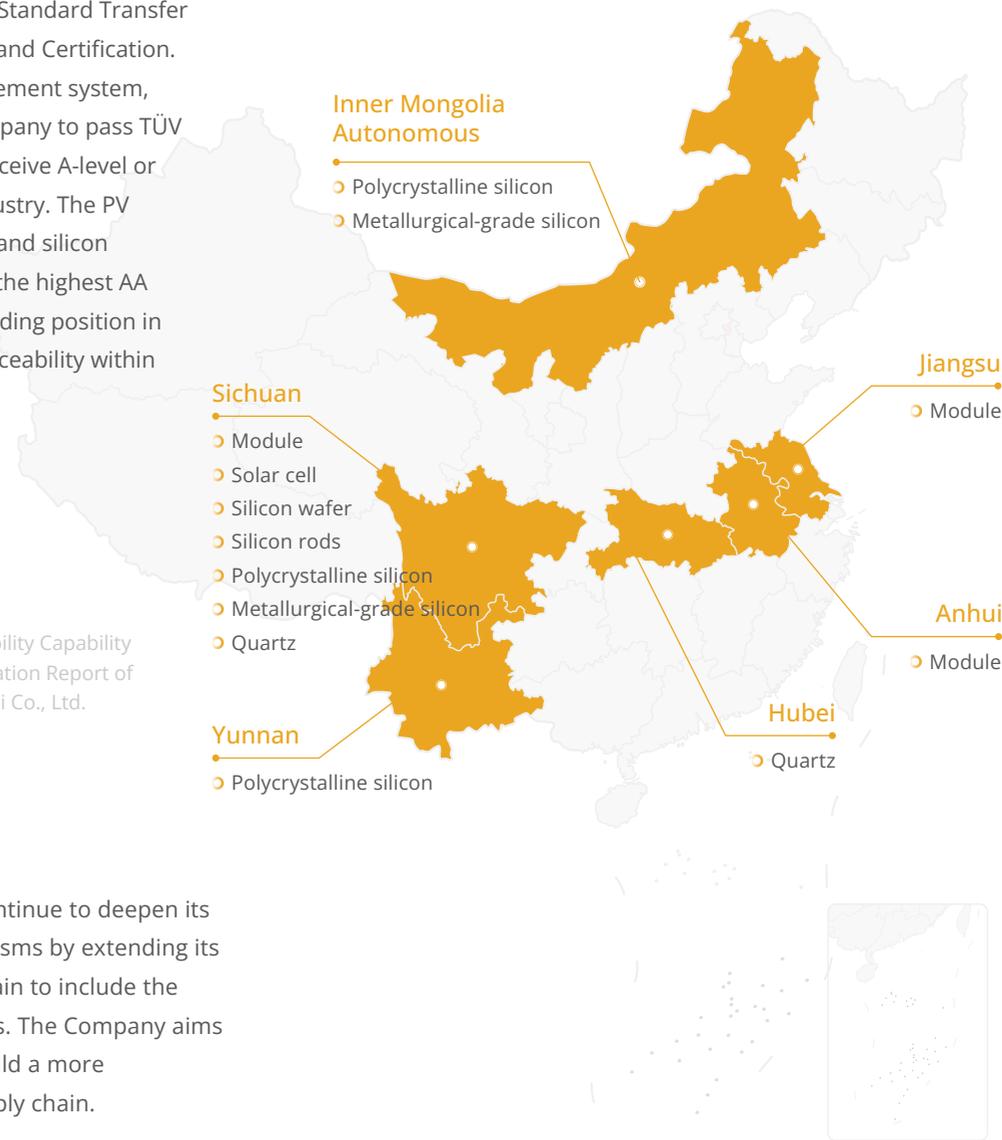
traceability audit conducted by independent third-party organizations, such as Standard Transfer Specification (STS) and TÜV Rheinland Certification. With its robust traceability management system, Tongwei has become the first company to pass TÜV Rheinland's audit in one go and receive A-level or higher ratings in the entire PV industry. The PV module, silicon wafer, silicon rod, and silicon material processes have received the highest AA rating, underscoring Tongwei's leading position in supply chain transparency and traceability within the industry.



Traceability Capability Certification Report of Tongwei Co., Ltd.

In the future, the company will continue to deepen its traceability management mechanisms by extending its internal integrated traceability chain to include the metallurgical-grade silicon process. The Company aims to collaborate with partners to build a more transparent and traceable PV supply chain.

### Tongwei's PV Product Traceability Supply Chain Map



## Enhancing Supply Chain Management Capabilities

Supply chain management is critical for operational efficiency, cost control, risk mitigation, all of which contribute to corporate competitiveness.

Navigating the shifting market dynamics in the PV industry, Tongwei constantly strengthens internal competencies of its supply chain team. The Company provides comprehensive training programs for employees at all levels, including topics about supply chain capabilities, sustainable development principles, and social responsibility management systems. Tongwei prioritizes the development of a supply chain team with specialized expertise and strategic management vision, enhancing the Company's ability to respond resiliently to policy and industry trends.

In 2024, the PV Commerce Department conducted a series of training sessions on supply chain systems to improve Tongwei's performance of sustainability management and supply chain management.



### Supply Chain Management Professional (SCMP) Training Program

- Collaborate with the China Federation of Logistics and Purchasing, covering four key training modules: supply chain operations, supply chain planning, supply chain leadership, and procurement management
- Build a comprehensive system of foundational supply chain knowledge for employees and elevate professional expertise



### Supply Chain Management Professional (SCMP) Training Program

- Developed specifically for the photovoltaic industry, these customized courses incorporate internationally advanced sustainable development management tools and methodologies, providing comprehensive coverage of sustainability frameworks, EU Battery Regulation due diligence requirements, and supplier sustainability assessment criteria.
- Empower supply chain managers to master international cutting-edge sustainable development management concepts and provide support for the Company's global strategy with sustainable competitiveness



### Internal Auditor Training for SA 8000 Social Responsibility Management System

- Structured interpretation of the SA 8000 International Social Accountability Standard
- Improve the professional capabilities of the Company's internal auditors, with a focus on strengthening the awareness of human rights protection in the supply chain, and provide guidance for core suppliers to strengthen the construction of the social responsibility system

Specialized Training for Tongwei's PV Supply Chain System



# Supply Chain Security

As a global leader in green agriculture and renewable energy, Tongwei acknowledges that supply chain security is essential for operational stability. In 2024, the Company improved management measures for the PV industry and agriculture and animal husbandry to ensure supply chain stability and security, safeguarding the Company's supply chain competitive edge.

## PV Sector

### Combining Market and Bulk Commodities In-depth Analysis with Hedging to Reduce Supply Chain Risks

Tongwei conducts an in-depth analysis of macroeconomics, commodity prices, and PV industry trends to optimize procurement strategies for reducing supply chain risks and enhancing supply chain resilience. Adapting to evolving global policies of the PV industry, the Company analyzes risks from trade tensions, carbon tariffs, and other external shocks, and develops countermeasures to drive the supply chain's transition towards full lifecycle traceability and low-carbon operations. Leveraging the price discovery role of the futures market, the Company creates an efficient coordination and collaboration mechanism of spot goods purchase and sale, advances hedging for metallurgical-grade silicon and polysilicon to mitigate operational risks arising from price fluctuations in the industrial chain, thus stabilizing operations, reducing risks, and increasing profits.

### Strengthening Strategic Supplier Partnerships to Enhance Supply Chain Risk Resilience

Tongwei has established long-term strategic partnerships with key suppliers by signing long-term agreements to ensure raw material supply and price offerings. The Company control costs by negotiating with suppliers, optimizing procurement processes, and reducing logistics costs. Additionally, Tongwei collaborates with suppliers on technology development and innovation to improve product quality and performance, lower production costs, and achieve mutually beneficial outcomes. This fosters a strategic supplier ecosystem characterized by shared risks and benefits and driven by joint innovation.

### Promoting Supply Localization and Building Lines of Defense against Regional Supply Chain Risks

In 2024, we leveraged our leading role in the supply chain and actively promoted projects of supply chain localization. Across all procurement stages, the share of localized supply in the PV manufacturing industry has grown significantly, enabling the development of an efficient and collaborative regional supply network. This move shortens procurement cycles, ensures timely supply, and greatly reduces transportation costs and occupied capital. Besides, optimized inventory management and shorter supplier response times boost overall supply chain efficiency.

## Agriculture and Animal Husbandry

### Forecasting Prices for Proactive Planning

Tongwei deploys a two-pronged strategy of strategic stockpiling and dynamic procurement optimization to bolster supply chain resilience against agricultural commodity price swings. By forecasting resource-based raw-material costs, the Company locks in large-scale raw material reserves ahead of market cycles, thus achieving cost reductions surpassing industry averages. A bulk-commodity data tracking system also pinpoints price troughs of long-tail commodities, including dried ristillers grain solids and peanut meal, for timely purchases that further strengthen cyclical resistance.

### Diversifying Procurement Channels for Raw Material Supply Security

To ensure supply stability and cost advantages, Tongwei continuously optimizes and broadens its sourcing network along with building a diversified supplier system. In 2024, the Company proactively expanded its global procurement network by adding 48 new import channels, and the share of imported raw materials rose to 20%. The number of countries from which raw materials are sourced has expanded to 17 with a total of 85 import channels. This diversification enriches the raw material supply and optimizes procurement costs.

### Building a Digital Monitoring Platform for Early Warning and Response Enhancement

Tongwei has established a digital monitoring platform for the entire procurement and supply chain process, covering channel compliance, contract execution, and inventory supervision. Using process mining systems, the Company identifies and addresses bottlenecks in the end-to-end procurement process, optimizing 18 procurement efficiency indicators by 5%. Additionally, a subsidiary inspection mechanism covering 35 units has been implemented, with system efficiency evaluations and reverse feedback from 92 frontline employees, enabling dynamic risk perception and closed-loop rectification within the supply chain to ensure operational resilience.

## Supplier Risk Management

The Company has built a systematic supplier risk management framework that incorporates four core processes, namely risk identification, risk assessment, risk monitoring, and risk control. This framework is underpinned by a three-stage management model involving access audits, regular assessments, and annual reviews to effectively safeguard supply chain stability.



During the admission stage, the Company evaluates whether suppliers' risk management is robust, focusing on the maturity of their risk identification system and resource security. This ensures new suppliers meet the required risk management standards to avoid potential collaboration risks at the source.



In regular assessments, the Company incorporates identified major supply chain risks into the supplier evaluation framework while continually monitoring suppliers' commercial and compliance risks. The Company also timely adjusts procurement strategies and supplier priorities in response to supply-demand dynamics and suppliers' delivery capabilities, to effectively cope with market fluctuations.



During the annual review of qualified suppliers, the Company especially verifies the effectiveness of suppliers' risk management systems and emergency response mechanisms for production anomalies. Weaknesses in management systems are identified, followed by improvement suggestions and tracking to closure, ensuring that suppliers possess strong risk control capabilities.

In module procurement, the Company implements closed-loop management for identified high-risk suppliers. When the comprehensive risk assessment exceeds the threshold, we use a digital coordination mechanism to compress procurement quotas and issue corrective notices. Once the closed-loop rectification is completed and the risk rating is lowered to a low-risk level in the next cycle, normal procurement quotas are reinstated.

# Sustainable Supply Chains

Tongwei attaches equal importance to business value and social responsibility and places sustainability at the core of its value-chain synergistic development, to build a responsible, resilient supply chain. We require every partner to comply with the Supplier Code of Conduct and promote their transition to environmental-friendly, socially-inclusive, and well-governed partners through ESG risk screening, targeted management measures, and capability enhancement.

## Tongwei sustainable supply chain management commitment

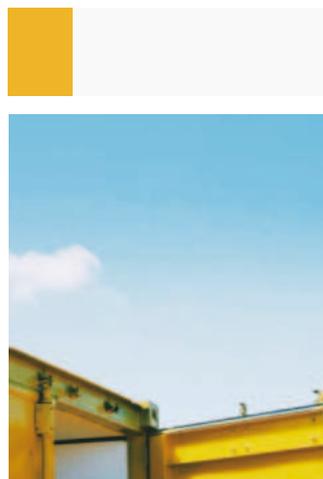


Tongwei systematically incorporates environmental and social criteria into supplier oversight. We strengthen the performance management of suppliers in business ethics, human rights and labor, environmental protection, and occupational safety and health. Upholding the business philosophy of "Honesty, Trust, Fairness and Excellence", we require suppliers to obey all the legal regulations applied in locations where their business operations are situated and encourage them to continuously advance their sustainable development management. We collaborate with suppliers to cultivate ethical and dignified workplaces and drive the supply chain sustainable development.

## Governance

Tongwei complies with laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, the *Labor Law of the People's Republic of China*, the *Social Insurance Law of the People's Republic of China*, the Responsible Business Alliance (RBA) Code of Conduct, the International Labor Organization (ILO) Conventions, the Universal Declaration of Human Rights and other international conventions. We continually update the *Tongwei Co., Ltd. Supplier Code of Conduct*. Suppliers affirm their commitment via signed commitments, self-assessments, and on-site audits, which clearly define their obligations in sustainable development. Our sustainable supply chain management framework places Head Office at the strategic center, with parallel management streams for the PV and agriculture and animal husbandry industries. Under this framework, all operation entities collaborate in a closed-loop system from centralized oversight through industry coordination to local execution.

Under the *Supplier Management and Control Procedures*, sustainability requirements are embedded in both new-supplier audits and the annual review of approved suppliers. By strengthening the performance management of suppliers in business ethics, human rights and labor, environmental protection, and occupational safety and health, we steadily enhance the sustainable development capability of our suppliers.



### Business Ethics

- Sign the *Supplier Social Responsibility Commitment*, the *Agreement on Anti-bribery in Business* and the *Integrity Commitment*, and accept reports through the open hotline and email.
- Conduct business with fairness, transparency, and integrity.

### Privacy and Information Protection

- Comply with privacy and information security laws and regulations to conduct business.
- Encourage the strengthening of information security construction to enhance the risk resistance resilience of the industrial chain.

### Human Rights and Labor

- Eliminate the use of child labor and forced labor, and comply with local labor and human rights laws and regulations.
- Provide a zero-harassment, zero-discrimination and inclusive work environment

### Occupational Health & Safety

- Provide a safe and healthy working environment, establish occupational health and safety management systems and standards, and offer occupational health and safety training and regular medical checkups



### Environmental Management

- Suppliers should not cause environmental pollution incidents during the production of goods and provision of services.
- The discharge and treatment of pollutants should comply with laws, regulations, and local policies, and the use of hazardous materials should be avoided.
- Collaborate with suppliers to promote carbon inventory and product carbon footprint certification in the value chain

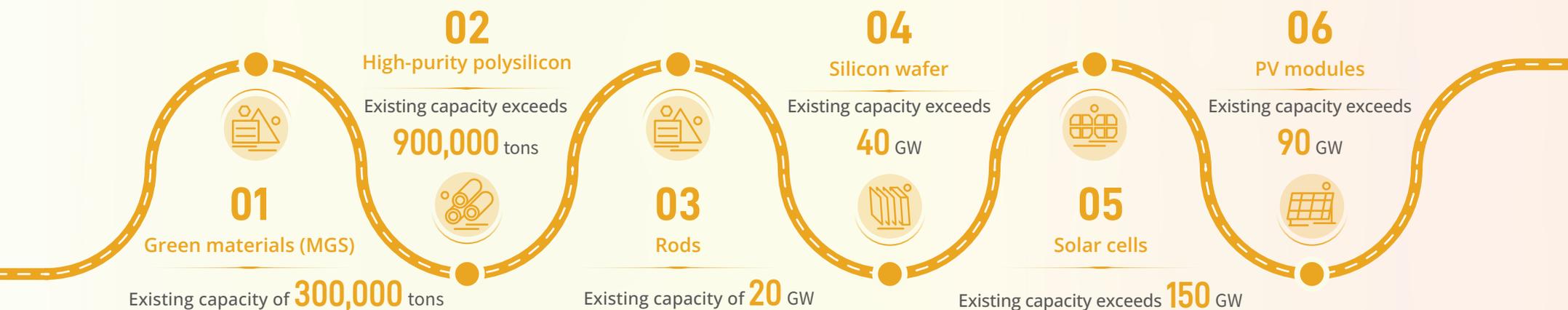
### Conflict Minerals

- Strictly follow international conventions such as the Responsible Minerals Initiative (RMI), no involvement in controversial purchases, and no use of mineral resources from conflict areas and those that violate the policies of Tongwei Co., Ltd.

### Community Engagement

- Respect local cultures, traditions and beliefs, respect the right to informed consent of communities and residents, and actively participate in the activities of the communities in which we operate.

# Tongwei - Sustainable Supply Chain



## Key Measures and Annual Achievements in Tongwei's Sustainable Supply Chain Management

Category	Key measures	2024 outcome
Green	Establish a circular and green supply chain	Obtained <b>4</b> Environmental Product Declarations (EPDs)
Low carbon	Drive carbon reduction across the supply chain	Secured <b>22</b> carbon footprint certifications
Responsible	Build responsible partnerships	<b>100%</b> of major and auxiliary raw material suppliers signed the Conflict Minerals Commitment, and all key metal suppliers confirmed free of conflict minerals
	Enhance supply chain social responsibility oversight	<b>100%</b> of major raw-material and auxiliary suppliers in the PV division signed the <i>Social Responsibility Commitment</i>
	Implement the supply chain partner empowerment plan	Over <b>200</b> PV suppliers completed ESG self-assessments, Over <b>60</b> agriculture suppliers completed ESG self-assessments
	Ensure compliant, ethical procurement	Over <b>100</b> PV suppliers passed on-site ESG audits, Achieved top-level supply chain traceability from TÜV Rheinland Certification
	Delivered approximately <b>536</b> hours of ESG training to suppliers	
		<b>100%</b> of major raw and auxiliary material suppliers in the PV industry signed both Compliance Commitments and Integrity Commitments

## ◆ Supplier Sustainability Commitment Communication

Tongwei has established a supplier sustainable development supervision framework that integrates organizational governance, business ethics, labor rights, health and safety, and environmental protection into one accountability structure. New suppliers are required to sign commitment letters covering social responsibility, conflict minerals, and other ESG requirements. Approved suppliers undergo annual on-site audits, and their ESG risk levels are quantified using a compliance matrix model. Six functional departments—including Legal, Procurement, and others—collaborate to close the governance loop and ensure a resilient, compliant supply chain.

| In 2024,

Tongwei delivered **ESG training to suppliers**, boosting their management capabilities and awareness across environmental protection, climate action, workforce and society, compliance management, business ethics, and sustainable development.

| By the end of the reporting period,

**100%** of major raw material suppliers in the PV manufacturing industry had signed the *Supplier Social Responsibility Commitment*, the *Supplier Compliance Commitment*, and the *Supplier Guidelines*.

## ◆ Low-carbon Supply Chain Climate Strategy

During the reporting period, Tongwei expanded its product carbon footprint certifications and conducted value chain carbon emission accounting, underscoring its responsibility to lead peers and partners in achieving green and low carbon development.

In 2024, the Company secured 22 carbon footprint certifications, including 18 French carbon footprint certifications and 4 ISO 14067 certifications.



### Case | Logistics carbon reduction by Tongwei Agricultural Development and PV sector

In 2024, leveraging national support for new energy vehicles, Tongwei Agricultural Development actively explored new energy freight transport models. Starting in June 2024, it launched a pilot of electric heavy-duty trucks in East and South China. Contracts were finalized in June, and the electric trucks entered service in December 2024. This has markedly reduced environmental impacts and greenhouse gas emissions across our supply chain while positioning Tongwei at the forefront of transport model innovation in the industry. At the same time, the photovoltaic sector has also started pilot projects for new energy freight on some short-distance fixed routes.



## ◆ Respectful and Equal Supply Chain Labor Relations

Tongwei places human rights and labor management at the heart of building sustainable supply chains. We have formulated normative documents including the *Supplier Social Responsibility Commitment* and the *Supplier Code of Conduct*, so as to ensure the protection of labor rights and benefits.



Supply Chain Human Rights and Labor Management

## ◆ Transparent Procurement

Tongwei commits to promoting integrity and transparency in supply chain management and striving to create an open and transparent procurement environment. The Company integrates principles of integrity and compliance into procurement practices, requiring its internal procurement team to sign the *Letter of Undertaking on Compliance with Laws and Rules for Clean Performance* and mandating all partner suppliers to sign the Supplier Compliance Commitment, which clearly defines the ethical boundaries of the procurement process. Additionally, we require all suppliers and partners to sign multiple commitment letters covering anti-commercial bribery, anti-money laundering, and fair competition. They are also required to participate in training sessions on business ethics, anti-corruption, and anti-bribery organized by the Company, ensuring that suppliers fulfill business ethics requirements. In 2024, our PV Commerce Department organized compliance procurement training for all employees in the supply chain system. The training included courses on anti-commercial bribery, anti-unfair competition, procurement and supply chain risks and compliance management, and auditing knowledge, effectively strengthening the risk prevention and control awareness of the internal procurement team and fostering a transparent supply chain ecosystem together with suppliers.

## ◆ Responsible Mineral Procurement

We have formulated and issued the *Tongwei Co., Ltd. Conflict Minerals Commitment and Policy* to safeguard labor and human rights, healthcare, and the environment in mineral-producing regions, aiming to strengthen controversial sourcing practices of conflict minerals. Tongwei pledges strict compliance with the UN Global Compact, OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, the Responsible Minerals Initiative (RMI), and further international regulations. We prioritize responsible sourcing of minerals like tantalum, tin, tungsten, and gold (3TG) for our products, ensuring all mineral inputs are acquired both legally and ethically.

The Company has established a conflict minerals management mechanism. Every supplier must sign the *Supplier Conflict Minerals Commitment and Declaration of Tongwei Co., Ltd.* before admission, and conflict-minerals criteria are embedded in the Supplier ESG Audit Form to conduct supplier due diligence. Moreover, first-tier suppliers are required to guarantee their non-involvement in transactions of conflict materials while also imparting the principles of responsible mineral procurement to their respective suppliers in higher tiers, to reinforce compliance throughout the entire supply chain.

Meanwhile, Tongwei has implemented an oversight and reporting channel administered by its supervision department. The department's contact information is publicly available on the corporate website, in the *Supplier Compliance Commitment*, and in the *Supplier Guidelines*. Suppliers and stakeholders are encouraged to monitor our responsible mineral sourcing management and reinforce its transparency.

In 2024, we mandated that all suppliers potentially exposed to conflict minerals sign the Tongwei Supplier Conflict Minerals Declaration and Commitment, achieving a 100% signing rate. Follow-up due diligence confirmed that none of our suppliers procure conflict minerals, achieving a 100% conflict-free supplier ratio. Tongwei will require primary conflict metal material suppliers to conduct self-assessments in line with RMI guidelines and cross-verify results using the Conflict Minerals Reporting Template (CMRT) or other tools.



## Impact, Risk and Opportunity Management

Tongwei integrates sustainability risk assessment into the full lifecycle management process of suppliers. Starting with the admission of new suppliers and the routine management of qualified suppliers, the Company comprehensively screens, identifies, and manages sustainable development risks in the supply chain, providing a clear direction for enhancing the supply chain's sustainable development capabilities.



Tongwei has established an ESG risk management system that spans the entire supplier lifecycle. During the admission of new suppliers and the annual audits of qualified suppliers, an ESG review mechanism is implemented, covering material issues such as environmental management, labor rights, and business ethics. Suppliers that violate zero-tolerance clauses are subject to a one-vote veto. For non-compliance issues, suppliers are required to submit a detailed corrective action plan with supporting documents within 7 working days, with a full tracking mechanism established to ensure closure of the corrective actions. If a supplier fails the ESG review, they are required to provide feedback on corrective measures and improvement evidence for non-compliance issues within 3 months. A re-evaluation is conducted within 7 working days after receiving the supplier's feedback email. During the rectification period, the supplier's procurement share is gradually reduced, and it will be restored only after the supplier passes the re-evaluation.

During the partnership, the Company monitors suppliers' sustainable development performance through a dual EHS and ESG tracking system, combined with supplier self-assessment reports and on-site audits. Targeted improvement recommendations are provided, urging suppliers to rectify issues within a specified time frame, thereby systematically enhancing the sustainable development capabilities of the supply chain.

# Metrics and Targets



## Supply chain sustainable development goals

## Achievement status

## Progress in 2024

**100%**

By the end of 2024, achieve a 100% signing rate of social responsibility commitments by major raw material suppliers in the PV manufacturing industry.



Completed

- In 2024, in Tongwei's PV manufacturing industry, major raw material suppliers achieved

**100%**

signing rate for supplier social responsibility commitments

**100%**

signing rate for supplier compliance commitments

**100%**

signing rate for supplier integrity commitments

**100%**

By the end of 2025, achieve 100% coverage for ESG risk identification and assessment of major raw material suppliers in the PV manufacturing industry.



In progress

- In 2024, suppliers conducted ESG self-assessments.

**68%**

The PV manufacturing industry achieved an overall completion rate of

**100%**

By the end of 2026, achieve a 100% on-site audit rate for major raw material suppliers in the PV manufacturing industry.



In progress

- In 2024, suppliers underwent on-site audits.

**45%**

The PV manufacturing industry achieved an overall completion rate of



# 04

## Together to Protect the Environment: Green and Low-Carbon Development

Tongwei actively responds to China's "Dual Carbon" strategy, prioritizing ecological protection and green development. We are committed to achieving our strategic goals and environmental commitment to become both a world-class safe food supplier and a world-class clean energy operator. We keep improving our environmental management system and employ diversified low-carbon strategies to address the negative impacts of climate change on production and operations. By ensuring efficient resource utilization and reducing pollution and waste emissions, we collaborate with all stakeholders to build a beautiful China and share the benefits of green development.

Material ESG issues covered in this chapter:

- Response to Climate Change
- Energy Management
- Environmental Compliance Management
- Water Stewardship
- Pollutant Emissions
- Waste Disposal
- Green Manufacturing
- Clean Technology Opportunities
- Circular Economy
- Ecosystem and Biodiversity Conservation

SDGs addressed in this chapter:



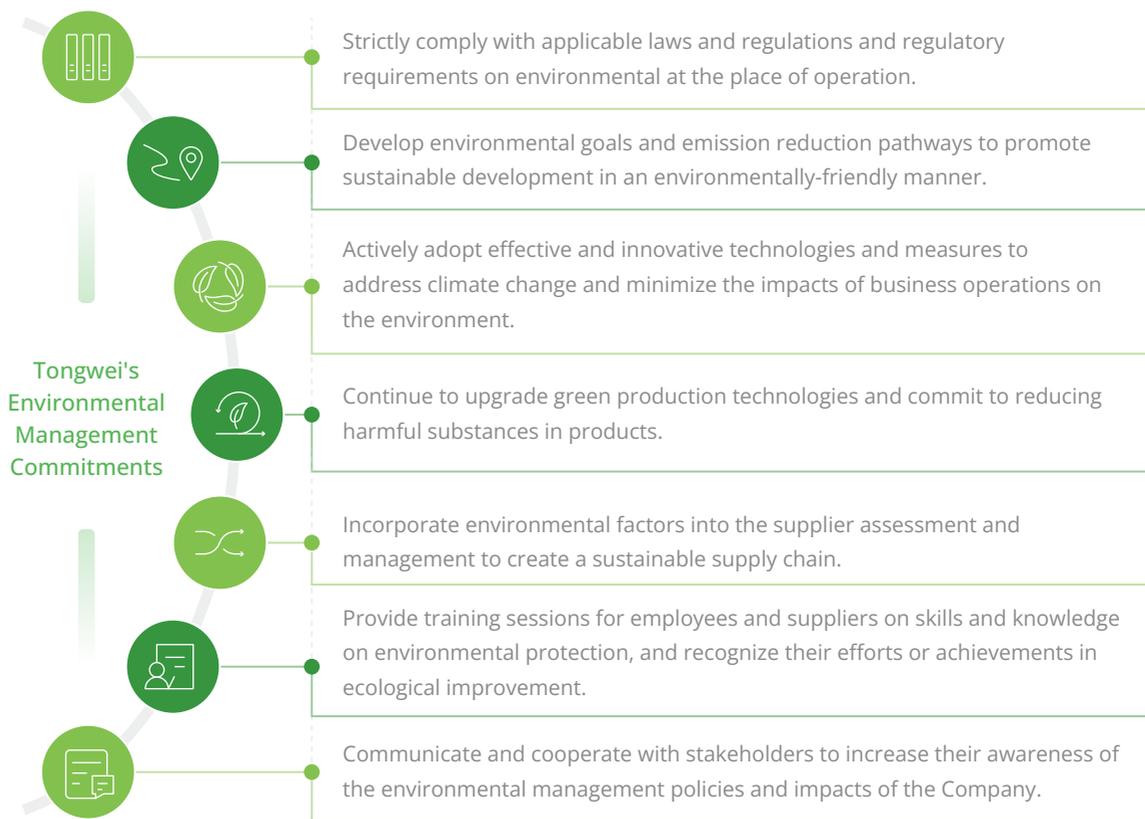
# Environmental Compliance Management

Tongwei upholds the green development philosophy and continues to strengthen our standing as a resource-efficient and environmentally-friendly enterprise. We have established a collaborative and highly-efficient environmental governance framework with a clear division of responsibilities, implemented rigorous compliance and risk control measures, and strive to elevate employees' environmental awareness and emergency response capabilities. These efforts position us as an industry leader in green development while contributing to a low-carbon circular economy.

## Environmental Management System

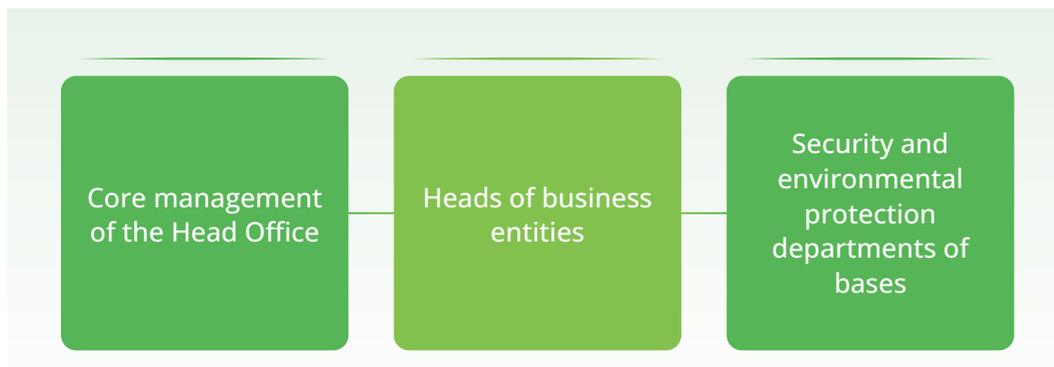
Tongwei strictly complies with laws and regulations such as the *Environmental Protection Law of the People's Republic of China* in every jurisdiction where we operate. We continuously improve our environmental management system by implementing our internal management procedures and rules such as the *Environmental Protection Management Procedure* and the *Environmental Monitoring Management Policy*. By integrating environmental protection requirements into all aspects of production and operations, we effectively prevent and mitigate the negative environmental impacts of our activities.

To demonstrate our commitment to addressing nature-related risks and opportunities to all internal and external stakeholders, Tongwei has established multiple public environmental commitments at the operational level. In alignment with these commitments, we have also formulated the *Tongwei Co., Ltd. Environmental Management Commitment and Policy*, which outlines our approach to managing the most material nature-related risks in an effective and cost-efficient manner.



Tongwei's Environmental Management Commitments

To ensure environmental protection-related commitments and strategies are adequately resourced and effectively implemented at all levels, Tongwei has established a comprehensive and scientific environmental management framework. The management level serves as the highest authority, responsible for supervising and administering all environmental affairs including greenhouse gas emissions management, pollution and waste control, and water resources stewardship. Dedicated environment and safety departments at all business units are required to implement plant-specific programs by aligning corporate mandates with their actual business conditions and incorporate environmental management performance metrics into annual assessments of key personnel according to documents such as the *Safety and Environmental Protection Assessment Management Policy*, so as to reinforce strict environmental accountability across all management levels.



Tongwei's Three-Tier Environmental Management Structure

To ensure comprehensive coverage and effectiveness of the environmental management system certification, we conduct regular third-party audits of the ISO 14001 environmental management system certification. Furthermore, the Company actively explores and practices green manufacturing principles, including green factories and green supply chains, by integrating green design and green product management throughout our entire production and operation processes. This commitment is evidenced by our multiple national and provincial-level green factory certifications, green supply chain certifications, and green design product certifications.

As of the end of the reporting period,

companies of Tongwei and its subsidiaries were certified the ISO 14001 environmental management system

**22**

compared to last year, representing an increase of

**3**

coverage rate in the photovoltaic sector

**100** %

production bases were certified as national green factories

**8**

national green supply chain management enterprises

**4**

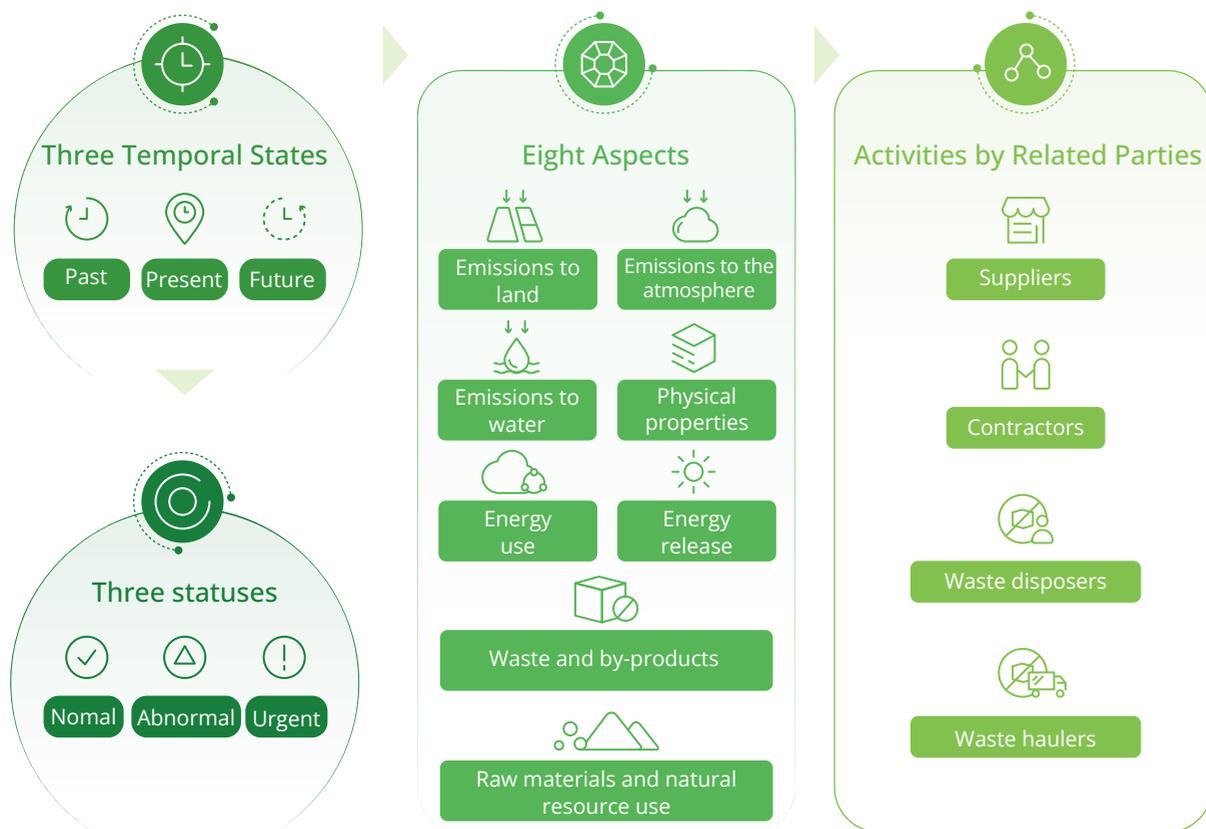
national green design products

**3**

In December 2024, Tongwei Solar (Jintang) Co., Ltd. was included in the **Ministry of Industry and Information Technology's (MIIT) public list of green factories**, marking the third production base under Tongwei Solar to receive the national green manufacturing professional certification.

## Environmental Risk Management and Control

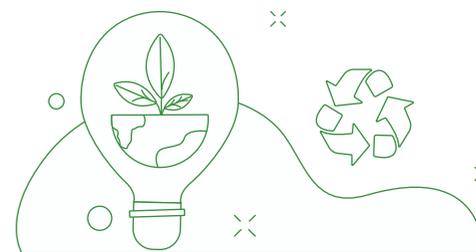
Tongwei has established a comprehensive environmental risk management system, incorporating core regulations such as the *Procedures for Identifying and Evaluating Environmental Factors* and the *List of Material Environmental Factors*, along with supporting assessment forms. By developing a dynamic analysis model that covers three temporal states (past, present, future), three states (normal, abnormal, emergency), and eight impact categories, the Company has achieved full-process identification and closed-loop control of environmental risk factors. Furthermore, we extend environmental risk management to our suppliers, setting quantifiable control targets and implementing dedicated risk control measures to ensure environmental compliance across the value chain.



Environmental Factor Identification Process of Tongwei

Tongwei implements annual environmental inspections, monitoring, and audits in strict compliance with our *Environmental Internal Audit Procedures* to promptly identify and eliminate potential environmental hazards. We encourage all branches, subsidiaries and production bases to engage accredited third-party agencies for comprehensive environmental impact monitoring on exhaust gases, wastewater, noise, and hazardous waste based on the requirements of the pollutant discharge permit and ISO 14001 Environmental Management System, thereby ensuring full compliance with environmental laws and regulations in every jurisdiction where we operate.

In 2024, Tongwei conducted over 270 environmental inspections-both internal and external-across its production bases, with the photovoltaic sector achieving a 100% internal audit coverage rate in accordance with ISO 14001 standards.



### Special inspection on environmental protection

- Organize professional personnel from various departments to carry out irregular special environmental protection inspections, covering multiple contents such as water, electricity, gas, and special equipment. Identify and assess environmental safety hazards in a timely manner, and guide and urge the responsible departments to analyze the causes of the hazards and take targeted measures.
- The Security and Environmental Protection Department conducts monthly environmental assessments of each department to ensure that all environmental protection and safety work is implemented in place.



### Environmental monitoring

- Carry out the detection of pollutant factors according to the requirements of the environmental permit, and disclose the detection results to the public.
- At the bases involving pollutant emissions, conduct online monitoring of the wastewater and waste gas emissions, and manually monitor the noise emissions. Timely calibrate and maintain the monitoring equipment to ensure the accuracy and effectiveness of the monitoring data.



### Internal environment audit

- Implement the internal audit mechanism, carry out quarterly environmental management review work, and take timely and effective corrective measures for potential problems and deficiencies to prevent environmental accidents and pollution incidents.



Environmental Protection Inspection and Supervision at Tongwei

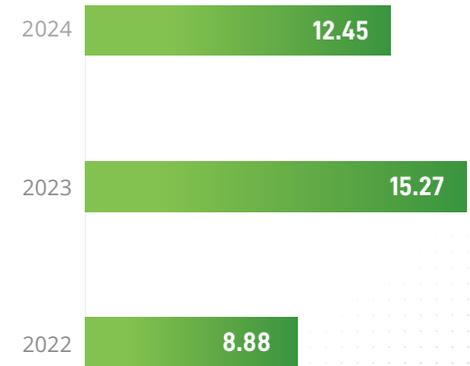
Tongwei consistently enhances the internal tiered emergency response mechanism for environmental incidents. We have established dedicated task forces to implement institutional regulations such as the *Emergency Plan for Sudden Environmental Incidents*, creating an integrated system that links risk classification with preventive controls. Through regular emergency drills and intensified monitoring inspections with strengthened supervision, we have comprehensively improved our incident response capabilities. During the reporting period, we maintained a record of zero major environmental accidents.

| In 2024

Tongwei invested in environmental protection initiatives including procurement of water and electricity conservation equipment, maintenance of environmental protection facilities, plant greening, and environmental awareness campaigns.

RMB **12.45** billion

#### Environmental Protection Investment at Tongwei (单位:亿元)



## Environmental Protection Culture Building

Tongwei has established a regular environmental training system based on World Environment Day and Environmental Protection Month to systematically enhance employees' awareness of environmental compliance while improving their professional skills. This effort solidifies the foundation of the Company's environmental culture. The Company has integrated low-carbon principles into its daily operations through initiatives such as electricity-saving campaigns, office supply approval protocols, air conditioning usage guidelines, holiday equipment shutdown procedures, along with paperless office practices like double-sided printing. These measures collectively create a refined energy-saving management network across all workplace scenarios.

### Case | Tongwei Solar Technology launches low-carbon and environmental protection training and promotion activities

In 2024, Tongwei Solar Technology (a subsidiary of Tongwei) conducted targeted low-carbon and environmental protection training for environmental protection management teams across all departments. The training covered critical topics such as environmental protection awareness; wastewater, waste gas emissions, and hazardous waste disposal management. This initiative has enabled environmental management teams to operationalize acquired expertise in daily workflows, leading to marked improvements in both environmental protection consciousness and technical proficiency across all departments.

Additionally, we annually designate an Environmental Protection Month to organize diverse engagement programs. Through incentive-based recognition awards for employees who participate in these activities, this initiative effectively fosters employees' intrinsic motivation to understand and engage in environmental protection.



Environmental Law Compliance Training at Tongwei Solar Technology



Environmental Protection Month Solid Waste Classification Competition at Tongwei Solar Technology



Environmental Protection Month Gamified E-Learning Challenge at Tongwei Solar Technology

| In 2024

environmental protection training activities Tongwei implemented

71

employees engaged

18,100

with a cumulative training duration of

24,663.5 hours

# Response to Climate Change

The Global Risks Report 2025 identifies climate change as the most significant long-term global risk.

In 2024, global carbon emissions are expected to reach a record high of

**41.6** billion tons

compared to the pre-industrial level, the average global temperature rises by

**1.2** °C

perilously hitting the threshold set by the Paris Agreement of

**1.5** °C



To achieve the "dual carbon" goals, China has made addressing climate change a national strategy and integrated it into the holistic development of ecological civilization and socioeconomic progress. As part of this strategy, China is gradually establishing a "1+N" policy system that includes implementing action plans for key sectors and industries, and providing related supporting measures. This approach demonstrates China's unwavering commitment to climate action.

As a dual-industry leader in both the photovoltaic and agricultural sectors, Tongwei aligns with international standards including TCFD and IFRS S2, operationalizing climate risk management through our three-tier governance structure. By advancing dual-track innovation in carbon emission management and emission reduction technologies, we drive low-carbon transition across the value chain. This creates a demonstration loop of "zero-carbon manufacturing-green products-climate governance", offering a Chinese solution to global climate challenges.

## Governance

Tongwei places high priority on climate governance, establishing a top-down three-tier climate governance structure.

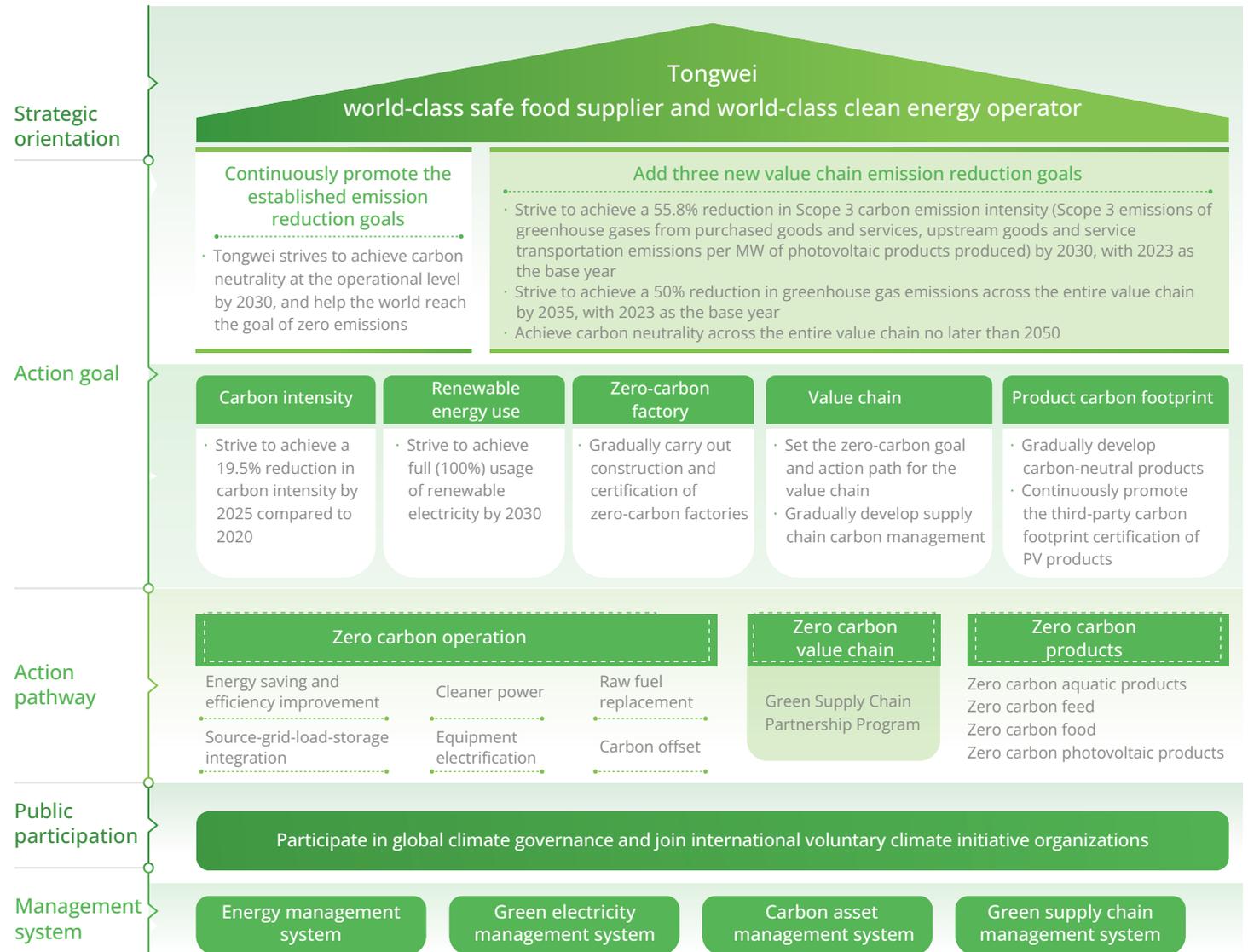


Tongwei's Climate Governance Structure

## Strategy

Tongwei has formulated and implemented a phased climate action strategy to systematically enhance climate risk management effectiveness while strengthening the climate resilience of our operations. This strategy infuses climate adaptation capabilities into the coordinated development of our dual-core businesses in green energy and green agriculture, accelerating our ambitions regarding climate action and demonstrating our accountability and commitment to addressing global climate change.

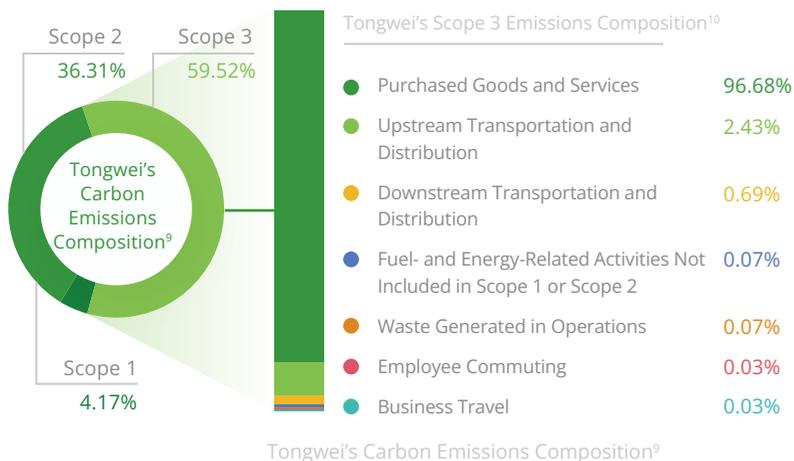
Since Tongwei first proposed the ambition to achieve carbon neutrality in the operation level by 2030 and outlined the implementation pathways, we have integrated responses to climate change into our production and operations, resulting in continuous improvements in carbon emission performance. In 2024, to showcase our responsibility and leadership in addressing global climate change, we extended our commitment across the value chain in response to climate change, fully upgrading our strategic framework for climate change adaptation.



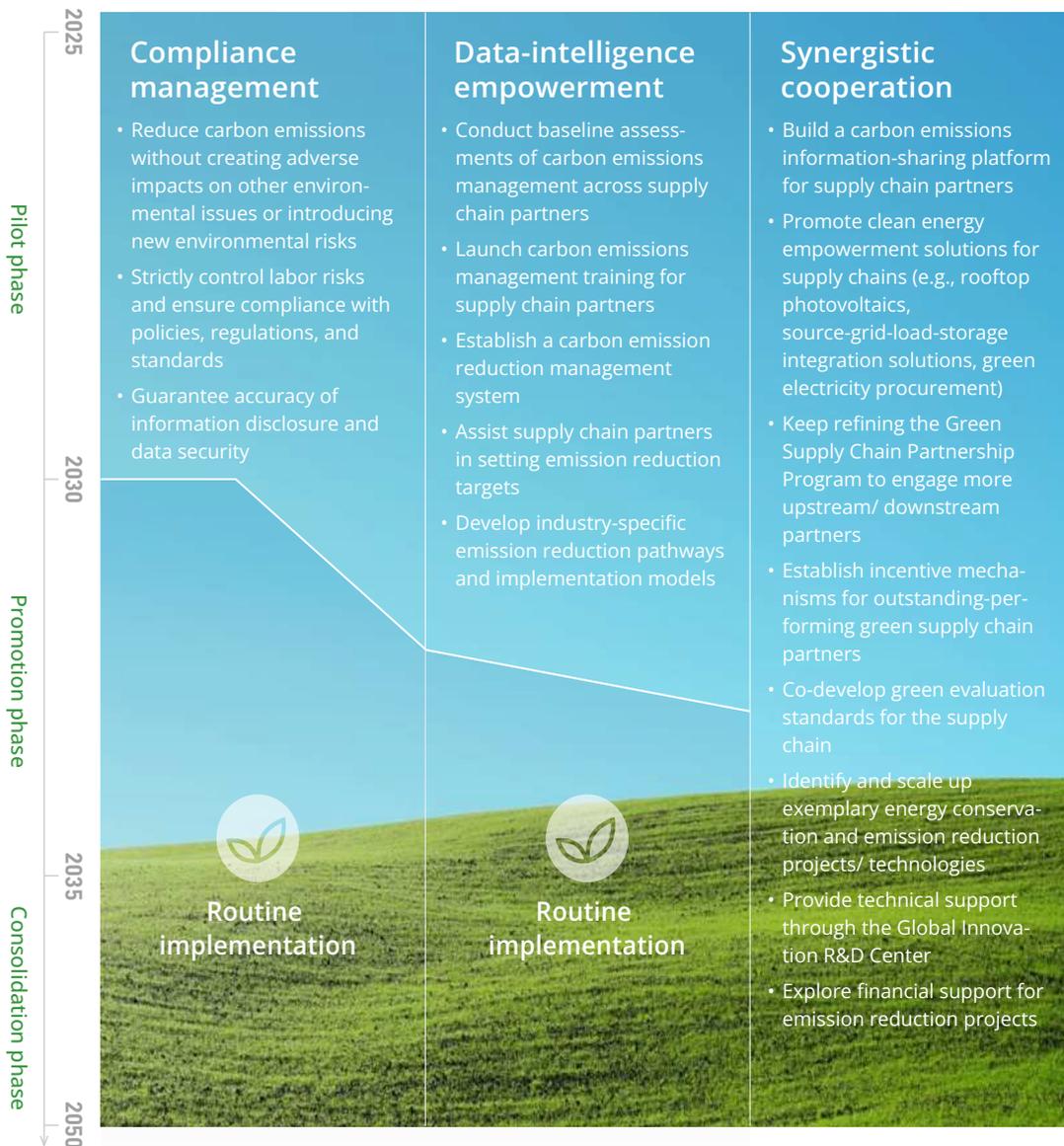
“Zero-Carbon Operations - Zero-Carbon Value Chain - Zero-Carbon Products” Systematic Action Goal<sup>8</sup>

8. The light green part in the figure shows the updated content of Tongwei's climate governance strategy in 2024.

According to Tongwei's 2024 carbon accounting results, nearly 60% of carbon emissions originate from Scope 3 (excluding direct emissions and indirect emissions from purchased energy), with 97% of those Scope 3 emissions attributable to upstream supply chain activities. The manufacturing process within the supply chain remains the key emission reduction challenge.



To address the carbon reduction challenges arising from manufacturing and ensure full commitment fulfillment, Tongwei has launched the Green Supply Chain Partnership Program by leveraging policy incentives and industry expertise. This approach, characterized by "compliance management, digital intelligence, and synergistic cooperation", is designed to advance the carbon neutrality across the value chain in a phased manner, actively promoting value chain transformation. We plan to establish a supply chain emission reduction empowerment platform committed to enhancing climate resilience and aligning carbon management capabilities across the supply chain, thereby achieving larger-scale carbon emission reductions.



9. Scope 1 corresponds to Category 1, Scope 2 corresponds to Category 2, and Scope 3 corresponds to Categories 3 and 4.

10. Reasons for not including other categories in Scope 3 in the calculation: 1. Regarding the carbon emissions from product use, silicon products need further processing before they can be used as end products. The use phase of solar cells and PV module products varies depending on specific working conditions and usage methods, making it difficult to accurately quantify. 2. For the carbon emissions in the category at the end of the product life cycle, because there is currently no average data on the end of the product life cycle in the industry, it is difficult to accurately quantify. 3. Regarding other categories such as downstream leased assets, Tongwei is not involved at present.

## Impact, Risk and Opportunity Management

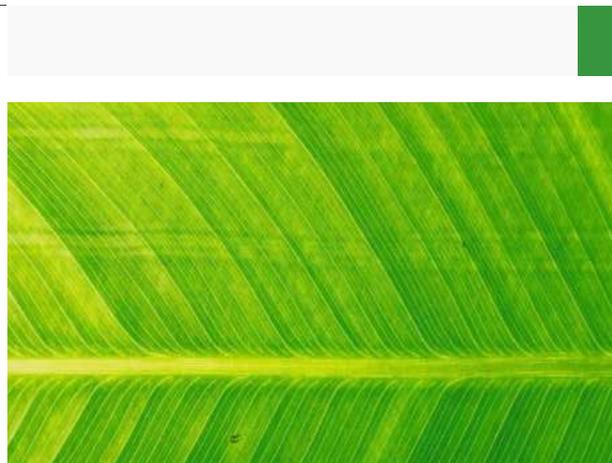
To drive the deep integration of climate risk and opportunity identification with daily risk management practices, Tongwei maintains vigilant oversight of critical factors including policy and regulatory shifts, market dynamics, technological advancements, corporate reputation, and physical risks. Guided by the *Task Force on Climate-Related Financial Disclosures (TCFD)* and *IFRS S2 Climate-related Disclosures*, we have conducted granular analyses of how climate-related risks and opportunities influence value creation and business models, mapping their transmission pathways. This enables the identification of climate-related risks and opportunities that have material impacts on operations, prompting the timely development and updating of mitigation measures.

### Tongwei's climate risk identification and countermeasures

Risk type	Short-term	Medium-term	Long-term	Description of potential impact	Value chain impact	Financial impact	Countermeasures
Acute risks	✓			<ul style="list-style-type: none"> <li>Extreme weather events such as extreme heat, heavy precipitation, river flooding, and coastal flooding may disrupt production operations at manufacturing bases, reduce production efficiency, and increase maintenance and replacement costs for facilities and equipment.</li> <li>Extreme weather phenomena including heavy precipitation, river flooding, coastal flooding, and tropical cyclones can also impact raw material transport, diminish logistics efficiency, and raise logistics costs.</li> </ul>	<ul style="list-style-type: none"> <li>Upstream</li> <li>Production and operation</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Increased capital expenditures</li> </ul>	<ul style="list-style-type: none"> <li>Conduct in-depth identification and assessment of climate change-induced financial risks to operations, and collaborate with insurance companies to promptly initiate claims procedures in the event of sudden environmental disasters.</li> <li>Keep improving emergency response mechanisms by developing and regularly updating emergency response plans for extreme weather and natural disasters, establishing standardized procedures for emergency response workflows, personnel assignments, and resource management</li> <li>Conduct regular emergency drills to enhance employees' response capabilities.</li> </ul>
Physical risks		✓	✓	<ul style="list-style-type: none"> <li>Prolonged droughts may lead to water shortages for production, affecting production stability and efficiency while increasing water procurement costs at manufacturing bases.</li> <li>Sea level rise exposes coastal production bases or projects to risks of seawater erosion and flooding, resulting in higher maintenance and replacement costs of production equipment. Significant sea level rise may even necessitate relocation and reconstruction of facilities, incurring substantial capital expenditures.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Increased capital expenditures</li> </ul>	<ul style="list-style-type: none"> <li>Establish corporate water conservation targets and continuously follow up the progress of water conservation efforts.</li> <li>Implement a scientific water metering system to quantify and analyze water usage equilibrium, enabling timely detection and control of abnormal consumption, thereby informing rational water-saving strategies.</li> <li>Keep optimizing production processes, upgrade water-saving equipment, expand wastewater reuse scenarios, and enhance water resource utilization efficiency.</li> <li>Conduct water conservation training sessions to cultivate employees' awareness of water conservation and understanding of water resource management.</li> <li>Perform comprehensive analyses of natural and socio-environmental factors in project areas to formulate optimal planning and design solutions, thereby ensuring precise site selection and development strategies to address climate change challenges.</li> </ul>

Risk type	Short-term	Medium-term	Long-term	Description of potential impact	Value chain impact	Financial impact	Countermeasures	
Transition risks	Policy and legal risks	✓	✓	✓	<ul style="list-style-type: none"> <li>The introduction of stricter national policies and regulations to mitigate climate change increases corporate costs for carbon market compliance, compliance workload pressures, and litigation risks, thereby raising expenditures for product testing, carbon trading, and other compliance-related activities to meet regulatory requirements.</li> <li>The introduction of regulatory documents such as the <i>Guiding Opinions on Actively Promoting Innovation and Applications in Supply Chains</i> and the <i>Implementation Plan for Establishing Carbon Footprint Management Systems</i> demonstrates the government's heightened emphasis on green and low-carbon supply chain management, accompanied by increasingly comprehensive policy requirements.</li> <li>Products exported overseas are subject to carbon tariffs and carbon footprint requirements, necessitating increased R&amp;D expenditures to ensure compliance with these regulations, thereby elevating product development costs.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> <li>Downstream</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Increased R&amp;D expenditures</li> </ul>	<ul style="list-style-type: none"> <li>Closely monitor international and domestic environmental/carbon-related laws and regulations, and policy updates, calculate organizational-level greenhouse gas emissions in compliance with relevant standards, and regularly assess compliance costs and progress.</li> <li>Conduct carbon audits across the value chain, integrate carbon emission performance into supplier evaluation mechanisms, implement the Green Supply Chain Partnership Program, and optimize raw material transport strategies.</li> <li>Advance product life-cycle carbon footprint verification, expand carbon footprint certification scope, monitor carbon tariff policies, and timely assess export costs to adjust business strategies.</li> <li>Strictly follow local regulatory requirements and the Shanghai Stock Exchange's <i>Sustainability Reporting Guidance</i> for information disclosure, preventing risks of false information disclosure and greenwashing.</li> </ul>
	Technology risks	✓	✓	✓	<ul style="list-style-type: none"> <li>Failure to advance systematic development of the energy management system may result in decreased energy efficiency, leading to increased additional energy costs.</li> <li>Without developing and adopting higher-efficiency and lower-energy consumption technologies, an expansion of production and operation scale will lead to rapid increases in energy consumption and energy purchase cost.</li> <li>Investment failures in new technologies and equipment resulting in commercial viability failure could incur additional financial losses.</li> <li>To meet carbon emissions management policy requirements, Tongwei has intensified investments in low-carbon technology R&amp;D, correspondingly increasing expenditures for equipment procurement and technology R&amp;D.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Increased capital expenditures</li> <li>Increased R&amp;D expenditures</li> </ul>	<ul style="list-style-type: none"> <li>Establish a systematic energy management system, keep optimizing energy management processes, and promote energy operations toward greater efficiency, precision, and intelligence.</li> <li>Evaluate the financial impacts of energy consumption costs and gradually phase out high-energy-consuming, and high-emission equipment and facilities.</li> <li>Increase investments in energy-saving technological upgrades, enhance low-carbon technologies in production processes and equipment, and explore application scenarios for energy-saving technologies, thereby reducing energy consumption and carbon emissions during production.</li> <li>Develop an advanced digital energy and carbon management system to achieve precise tracking of production energy consumption, providing data support for technology R&amp;D and application.</li> <li>Strengthen feasibility studies of low-carbon technology research and application to mitigate the risk of investment failure.</li> <li>Actively engage in industry collaborations and promote low-carbon technology R&amp;D and application with value chain partners.</li> </ul>

Risk type	Short-term	Medium-term	Long-term	Description of potential impact	Value chain impact	Financial impact	Countermeasures
Transition risks	Market risks	✓	✓	<ul style="list-style-type: none"> <li>The phase-out of new energy subsidies is shifting partial costs back to manufacturers, leading to an increase in production and operation costs.</li> <li>Climate change impacts have driven up prices for raw materials, warehousing, and transport, elevating cost escalation risks.</li> <li>Market price fluctuations caused by policy-driven price adjustments and intense industry competition are compressing profit margins.</li> <li>Growing customer preference for low-carbon products and increasing demands for green and low-carbon attributes are reshaping market requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Upstream</li> <li>Production and operation</li> <li>Downstream</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Increased production expenditures</li> <li>Declined revenue</li> </ul>	<ul style="list-style-type: none"> <li>Continuously enhance production manufacturing efficiency and power generation capacity to boost product sales and increase profit margins.</li> <li>Expand product carbon footprint certification coverage to ensure alignment with market and policy requirements, maintaining competitive low-carbon advantages.</li> <li>Closely monitor the market impacts of climate and natural disasters, and formulate preemptive strategies.</li> <li>Forge strategic partnerships with premium partners to strengthen supply chain risk resilience and improve supply chain security and stability.</li> <li>Substitute traditional raw materials with green recyclable alternatives in production to extend product lifespan, and progressively establish a component recycling system, thereby reducing carbon emissions from product disposal.</li> </ul>
	Reputation risks	✓	✓	<ul style="list-style-type: none"> <li>Stakeholders including regulators, investors, and customers are imposing stricter requirements on ESG performance and climate-related disclosures. Inadequate responses may trigger reputational damage and brand equity erosion, necessitating increased PR expenditures for brand recovery through activities like roadshows and press conferences.</li> <li>Negative ESG-related publicity may damage the brand and alienate ESG-conscious customers, leading to revenue decline.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> <li>Downstream</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating expenditures</li> <li>Declined revenue</li> </ul>	<ul style="list-style-type: none"> <li>Optimize carbon emissions management mechanisms to drive efficient progress in ESG governance and prevent negative ESG-related incidents.</li> <li>Active Respond to stakeholders' concern regarding climate management efforts through ESG reports, official website disclosures, questionnaire responses, and other channels, enhancing company performance and information transparency.</li> </ul>



**Tongwei's climate opportunity identification and countermeasures**

Opportunity type	Short-term	Medium-term	Long-term	Potential opportunities	Value chain impact	Financial impact	Countermeasures
Policy opportunities	✓	✓	✓	<ul style="list-style-type: none"> <li>The national 14th Five-Year Plan on Renewable Energy Development aims to accelerate the multi-scenario integration of photovoltaic power generation. The advancement of "PV+" integrated development models such as agriculture (animal husbandry)-photovoltaic and Fishery &amp; PV synergies enables optimal resource allocation and efficient utilization, thereby enhancing production and operational efficiency.</li> <li>Market-oriented hydropower trading policies and mechanisms at national and local levels are increasingly improving, providing institutional support for green electricity trading.</li> <li>Green finance policies at national and regional levels offer significant advantages for the photovoltaic industry.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> <li>Down-stream</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating revenue</li> </ul>	<ul style="list-style-type: none"> <li>Continuously develop distributed photovoltaic power generation projects at production bases, expand application scenarios for Fishery &amp; PV integration, and increase both the number of Fishery &amp; PV power plants built and their cumulative grid-connected installed capacity.</li> <li>Sign hydropower procurement contracts, promote standardized issuance and trading mechanisms of hydroelectric green certificates, and scale up green electricity market trading to boost green power sales revenue.</li> <li>Actively utilize green financial instruments such as green bonds to reduce financing costs for business operations.</li> </ul>
Market opportunities	✓	✓	✓	<ul style="list-style-type: none"> <li>The growing market demand for green electricity will drive increased needs for photovoltaic power generation components and raw materials. By exploring photovoltaic power supply needs across diverse application scenarios while expanding market scope for related products such as silicon materials, solar cells, and modules, we aim to meet customers' growing and diversified renewable energy demands, thereby boosting operating revenue.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> <li>Down-stream</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating revenue</li> </ul>	<ul style="list-style-type: none"> <li>Focus on core segments including silicon materials, solar cells, and modules, while continuously exploring innovative photovoltaic application scenarios to deliver effective photovoltaic power generation solutions for customers.</li> <li>Strengthen R&amp;D, manufacturing, and market expansion of silicon materials, solar cells, and modules to deliver products with superior performance.</li> </ul>
Technology opportunities	✓	✓	✓	<ul style="list-style-type: none"> <li>Given Tongwei's substantial total energy consumption and high carbon emission intensity, improving energy consumption efficiency will not only drive carbon reduction at the operational level but also significantly reduce overall energy costs, achieving both economic and environmental benefits.</li> </ul>	<ul style="list-style-type: none"> <li>Production and operation</li> </ul>	<ul style="list-style-type: none"> <li>Declined operating expenditures</li> </ul>	<ul style="list-style-type: none"> <li>Identify and explore energy-saving opportunities in all aspects through R&amp;D in low-carbon production technologies, equipment retrofitting, process optimization, and management system upgrades, so as to continuously enhance energy consumption efficiency and reduce energy consumption per unit of product.</li> </ul>



## Metrics and Targets

In active pursuit of global climate action, in 2024, Tongwei expanded carbon reduction targets from existing operational-level carbon neutrality commitments to encompass the full value chain, demonstrating industry leadership in green development by establishing value chain emission reduction targets with 2023 as the baseline year.



Strive to achieve a 55.8% reduction in Scope 3 carbon emission intensity (greenhouse gas emissions from purchased goods and services, upstream transportation and distribution for every MW of photovoltaic products produced) by 2030, with 2023 as the base year.



Strive to achieve a 50% reduction in greenhouse gas emissions across the entire value chain by 2035, with 2023 as the base year.



Achieve carbon neutrality across the entire value chain no later than 2050.

### Tongwei's Value Chain Carbon Emission Reduction Targets

## Climate Goals Progress Review

Tongwei has established a systematic climate action framework covering "zero-carbon operations-zero-carbon value chain-zero-carbon products", aligned with our strategic vision as a "world-class safe food supplier and a world-class clean energy operator". We granulate our carbon emission goals into five dimensions, including carbon intensity, renewable energy consumption, zero-carbon factories, value chain, and product carbon footprint. Concrete action pathways and management systems have been formulated to drive product lifecycle carbon reduction and enable zero-carbon transition of the value chain.

In the second year following the proposal of the systematic goals of "zero-carbon operations-zero-carbon value chain-zero-carbon products", Tongwei has successfully achieved multiple phase-specific milestones. To ensure the long-term effectiveness of climate action plans, the Company conducted a comprehensive goal review and defined next-phase goals, enabling dynamic optimization of our action plans.

Dimension	Performance highlights in 2024
Carbon intensity	Achieved a <b>2.84%</b> year-on-year reduction in GHG emission intensity per unit of feed product across the value chain Attained a <b>31.90%</b> decrease in GHG emissions per MW of photovoltaic product across the value chain
Renewable energy consumption	The Company's renewable energy power consumption reached <b>23,965,269.51MWh</b> , accounting for 64.01% of total electricity consumption
Zero-Carbon factories	<b>8</b> production bases have obtained the national-level Green Factory certification cumulatively <b>15</b> subsidiaries have obtained the <b>ISO 50001</b> Energy Management System certification. <b>1</b> production base has been awarded the Near-Zero Carbon Factory certification
Value chain	Completed carbon inventory covering Scopes 1, 2, and 3 in accordance with <b>ISO 14064</b> Updated <b>value chain emission reduction targets and carbon neutrality goals</b> Achieved a year-on-year decrease of <b>35.08%</b> in Scope 3 emissions
Product carbon footprint	Added <b>22</b> new carbon footprint certifications and <b>4</b> new EPD certifications, bringing the total number of carbon footprint and EPD certifications obtained to <b>68</b>

## ◆ Tongwei's Carbon Inventory

In 2024, Tongwei conducted carbon inventory and verification initiatives:

covering subsidiaries/branches

87

with collaboration from departments

over 600

screened and categorized carbon emission sources

1,392

audited with full traceability more than supporting documents

15,000

obtained the ISO 14064-1: 2018 Greenhouse Gas Verification Statement Certificate issued by BSI

compared to the previous year, data quality improved by

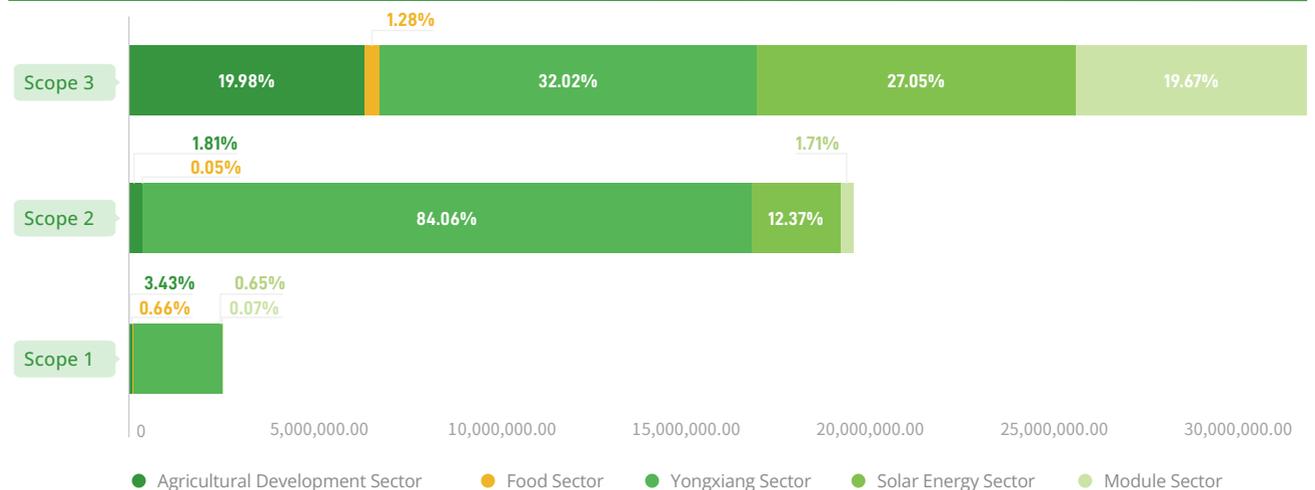
1 tier

### ○ Organizational-level carbon emissions measurement

To advance the Paris Agreement climate goals and China's "Dual Carbon" strategy, Tongwei conducts GHG emissions accounting in compliance with ISO 14064 international standards and sector-specific national guidelines, including the *Guidelines for Accounting and Reporting Greenhouse Gas Emissions from Chemical Manufacturing Enterprises (Trial)* and the *Guidelines for Accounting and Reporting of Greenhouse Gas Emissions for Enterprises in the Cement Industry (CETS-AG-02.01-V01-2024)*. This initiative covers Tongwei's head office and 87 subsidiaries and branches across agriculture and photovoltaic sectors, encompassing Scopes 1, 2, and 3 emissions. For hard-to-quantify Scope 3 value chain activities, quantification exemptions are applied in accordance with ISO 14064-1 rules, achieving over 95% GHG emissions coverage across the value chain.

In the photovoltaic segment, 12 subsidiaries of Tongwei have conducted management in accordance with the ISO 14064-1:2018 international standard and independently obtained the certifications of the ISO 14064-1: 2018 Greenhouse Gas Verification Statement. The certifications provide the critical data foundation for timely updates to carbon reduction targets and formulation of science-based decarbonization roadmaps.

GHG Emissions by Business Segment at Tongwei



## GHG emissions<sup>12</sup>

Indicator	Unit	2024	2023	2022
<b>GHG scope 1 emissions</b>				
Total GHG scope 1 emissions <sup>13</sup>	tCO <sub>2</sub> e	2,312,905.79 <sup>14</sup>	1,212,243.29	1,049,077.71
<b>GHG scope 2 emissions</b>				
Total GHG scope 2 emissions (market-based) <sup>15</sup>	tCO <sub>2</sub> e	8,032,770.17	-	1,843,924.16
Total GHG scope 2 emissions (location-based) <sup>16</sup>	tCO <sub>2</sub> e	20,160,530.74 <sup>17</sup>	13,980,776.04	10,308,044.50
Total GHG scope 2 emissions(location-based, regional power grid) <sup>18</sup>	tCO <sub>2</sub> e	13,146,576.18	-	-
<b>GHG scope 3 emissions</b>				
Total GHG scope 3 emissions <sup>19</sup>	tCO <sub>2</sub> e	33,045,754.45 <sup>20</sup>	50,902,399.97	-
<b>GHG emissions at the operational level</b>				
Total GHG emissions at the operational level (market-based)	tCO <sub>2</sub> e	10,345,675.96	-	2,743,055.82
Total GHG emissions at the operational level (location-based)	tCO <sub>2</sub> e	22,473,436.53	15,193,019.33	11,357,122.21
Total GHG emissions at the operational level (location-based, regional power grid)	tCO <sub>2</sub> e	15,459,481.97	-	-

12. The GHG emission inventory includes carbon dioxide, methane, nitrogen oxides, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. Greenhouse gas accounting is presented in carbon dioxide equivalent.

13. The Scope 1 greenhouse gas emissions include emissions from the combustion of bituminous coal, diesel, biodiesel, natural gas, and gasoline, process emissions generated during industrial production processes, as well as emissions from CO<sub>2</sub> fire extinguisher discharge, refrigerant leakage, methane (CH<sub>4</sub>) emissions from septic tanks, and methane emissions from wastewater treatment. Emission calculation factors refer to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the General rules for calculation of the comprehensive energy consumption (GB/T 2589-2020), and the Guidelines for Accounting and Reporting of Greenhouse Gas Emissions for Enterprises in the Cement Industry (CETS-AG-02.01-V01-2024).

14. The main reasons for the change in Scope 1 greenhouse gas emissions in 2024: To be consistent with the 2023 accounting methodology, fugitive emissions continue to be calculated using the charging method. The newly built factories put into operation in 2024 led to an increase in Scope 1 greenhouse gas emissions due to a relatively large purchase volume of refrigerants.

15. The market-based Scope 2 greenhouse gas emissions are calculated in accordance with *The Notice by the National Development and Reform Commission, the Ministry of Finance, and the National Energy Administration of Effectively Completing the Full Coverage of Renewable Energy Green Electricity Certificates to Promote Renewable Electricity Consumption (No. 1044 [2023], NRDC)*. The calculation includes both purchased green power certificates and those accounted under the policy scenario, representing the company's internal accounting results.

16. The location-based Scope 2 greenhouse gas emissions are calculated based on the 2022 national average carbon dioxide emission factor of electricity as published in *The Notice by the Ministry of Ecology and Environment and the National Bureau of Statistics on the Release of the 2022 Carbon Dioxide Emission Factor of Electricity (2024)*.

17. The main reason for the change in Scope 2 greenhouse gas emissions in 2024: The commissioning of newly built factories led to an increase in electricity consumption.

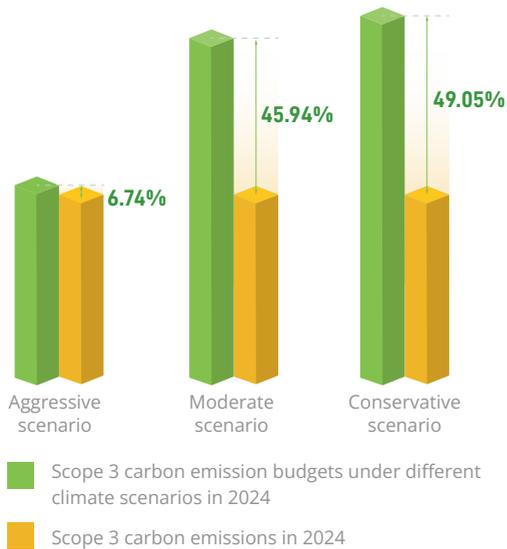
18. The location-based Scope 2 greenhouse gas emissions (regional grid) are calculated based on the 2022 regional average carbon dioxide emission factor of electricity as published in *The Notice by the Ministry of Ecology and Environment and the National Bureau of Statistics on the Release of the 2022 Carbon Dioxide Emission Factor of Electricity (2024)*.

19. The Scope 3 greenhouse gas emissions cover emissions generated from upstream material transportation and distribution, downstream finished product transportation and distribution, employee commuting, waste transfer, business travel, material consumption, tap water, and waste treatment. The emission calculation factors are from the *Standard for building carbon emission calculation (GB/T 51366-2019)*, the *Chengdu Exhibition Activity Carbon Footprint Accounting and Carbon Neutrality Implementation Guide (DB5101/T 41-2018)*, as well as various domestic and international carbon footprint databases.

20. The main reasons for the change in Scope 3 greenhouse gas emissions in 2024: ① Technological updates; ② Adoption of more accurate carbon emission factors that can better represent the actual production situation of suppliers; ③ The implementation of emission reduction strategies; ④ In 2023, Tongwei conducted its first Scope 3 carbon emissions accounting and, to avoid underestimation or miscalculation, using higher industry average values. The 2024 data reflects a return to the more reasonable and accurate levels.

Tongwei acknowledges that fulfilling the emission reduction commitments and formulating effective reduction plans requires an understanding of the current status and challenges of carbon emissions. At present, the performances of the Company's value chain climate actions have significantly exceeded the requirements of the three climate scenarios. To realize the carbon neutrality vision by 2050, the Company will continue to optimize its carbon reduction pathways and implement systematic measures to ensure the steady advancement of deep decarbonization.

Comparison between value chain carbon budgets under multiple climate scenarios and current carbon emissions<sup>21</sup>



## ◆ Product-level carbon emissions measurement

The Company's carbon footprint management is led by the ESG Management Committee, which work closely with cross-functional departments including Product Management Department, Technical Support Department, Production Department, Supply Chain Management Department, Planning Department, Plant Operation Departments, and Safety and Environmental Protection Departments to advance product carbon footprint certification. By identifying and integrating high-quality resources across the supply chain, the Company has established its internal carbon footprint certification system and built a comprehensive low-carbon industry chain to effectively support its overseas market expansion.

Tongwei is committed to producing low-carbon and clean photovoltaic products by building a product-level carbon database spanning the entire industry chain. We encourage all subsidiaries and production bases to commission prestigious third-party agencies for product carbon footprint verification and full-lifecycle environmental impact assessments, and conduct comprehensive audits of GHG emissions at each "cradle-to-gate" stage for core products, thereby establishing solid data foundations to facilitate lifecycle carbon reduction.

| In 2024,

carbon footprint certifications and EPD certifications obtained across Tongwei's product portfolio

**26**

carbon footprint certifications achieved cumulatively

**68**

new French Carbon Footprint Certification

**18**

new ISO International Standard System Certifications

**4**

new EPD Certifications

**4**

21. We use the IEA 2050 Net Zero Emissions Scenario (IEA NZE), the IEA Stated Policies Scenario (IEA STEPS), and the NGFS Nationally Determined Contributions Scenario (NGFS NDC) as the aggressive, moderate, and conservative scenarios, respectively, for climate scenario analysis. We use the IEA 2050 Net Zero Emissions scenario (IEA NZE), the IEA Stated Policies Scenario (IEA STEPS), and the NGFS Nationally Determined Contributions scenario (NGFS NDC) as the Aggressive, Moderate, and Conservative scenarios, respectively, for climate scenario analysis. Among these, the IEA 2050 Net Zero Emissions Scenario is one of four main scenarios proposed by the International Energy Agency (IEA). It illustrates a pathway for the global energy sector to achieve net-zero carbon dioxide emissions by 2050 without relying on emission reductions outside the energy sector, which means there are no offsets required from other sectors. The IEA Stated Policies Scenario (STEPS), also one of the IEA's four key scenarios, depicts a future based on the latest policy settings, including energy, climate, and related industrial policies, encompassing policies already implemented or announced. The NGFS Nationally Determined Contributions Scenario is published by the Network for Greening the Financial System (NGFS), and projects a potential global temperature increase exceeding 2°C.

Product Carbon Footprint Certifications in 2024

	<p>Type ISO 14067 Product Carbon Footprint Certification</p> <p>Number <b>4</b></p>
	<p>Type Evaluation Carbone Simplifiée (ECS)</p> <p>Number <b>18</b></p>
	<p>Type Environmental Product Declaration<sup>23</sup></p> <p>Number <b>4</b></p>

Green Finance

By aligning with national green finance development initiatives, Tongwei has strategically expanded its presence in the green finance sector. We actively engage in green investment, financing, and roadshow exchanges, leveraging green finance as a tool to adopt new climate risk management models. Building on our 2023 milestone of issuing China's first green sci-tech note, we raised funds in 2024 through diversified green financial instruments such as green bonds and green loans. These funds are exclusively allocated to high-resilience assets such as clean energy transition initiatives and low-carbon technology innovations. This strategic allocation provides a robust foundation for optimizing product carbon footprints and strengthening climate adaptation capabilities across the value chain, thereby enhancing financial resilience against climate transition risks.

23. The environmental indicators certified by EPD include Global Warming Potential (GWP), Ozone Depletion Potential (ODP), Acidification Potential (AP), Eutrophication Potential (EP), Photochemical Ozone Creation Potential (POCP), Abiotic Depletion Potential (ADP), Water Depletion Potential (WDP), Potential Incidence of Disease due to Inhalable Particulate Matter Emissions (PM), Potential Human Exposure Efficiency (IRP), Ecotoxicity Potential (ETP), Human Toxicity Potential (HTP), and Soil Quality Points (SQP).

In 2024,

registered a green medium-term note (MTN) program with a quota of

RMB **10** billion

issued six tranches of green sci-tech medium-term notes totaling

RMB **3** billion

issued three tranches of green sci-tech ultra short-term financing totaling

RMB **1.5** billion

Our green finance practices were recognized as one of the "2024 Top 10 ESG Investment and Financing Cases in China" by the Green Shores Project, highlighting our exemplary innovation and implementation.



Zhou Bin, Tongwei's Chief Financial Officer and Gan Lu, Deputy Financial Director participated in the 2024 Green Bond Roadshow and Communication Event

# Energy Management

The carbon peaking and carbon neutrality strategy has cemented the energy transition as an inevitable global trend. In 2024, non-fossil energy sources overtook petroleum to become China's second-largest energy consumption category, accompanied by sustained growth in renewable power generation capacity. Energy saving and efficiency improvement, and green energy substitution have become the two key future trends in corporate energy management.



Aligned with the commitment to "100% renewable energy use by 2030 at the latest Achieve a 100% usage coverage rate of renewable energy no later than 2030", Tongwei implements a coordinated three-pronged approach focusing on energy conservation, carbon reduction, and cost optimization. Seizing opportunities in energy management system upgrade and production technology transformation, we advance energy consumption electrification, clean electricity consumption and comprehensive energy efficiency improvement. By building an advanced internal energy management system, Tongwei aims to create a virtuous cycle of producing clean energy products with clean energy and deliver clean energy solutions to the world.

## Governance

To systematically advance energy management initiatives, Tongwei strictly complies with the *Energy Conservation Law of the People's Republic of China* and other relevant laws and regulations in its operating regions, formulated and implemented the *Energy Management Measures of Tongwei Co., Ltd.* and developed the "core management of the head office - heads of business entities - plant operation departments and energy management centers of bases" three-tier management structure. This vertically integrated structure enables vertical and coordinated management of all energy-related matters. At the head office, our dedicated ESG Management Committee provides centralized oversight of energy management, ensuring both regulatory compliance and operational efficiency. This governance approach significantly enhances energy risk management capabilities and drives green, low-carbon development across all branches, subsidiaries, and production bases.

Our ESG Management Committee organizes functional departments and energy management teams across the business units to conduct operational data benchmarking analysis and specialized improvement discussions through monthly analysis meetings. These meetings focus on technical solution optimization and management model innovation to systematically formulate action plans for energy efficiency improvement. Simultaneously, the Committee requires all branches and subsidiaries to implement a monthly energy and carbon accounting reporting system and establish a dynamic data tracking system covering the entire production process. This provides decision-making support for enhancing energy utilization efficiency and implementing clean energy substitution strategies.

| In 2024,

over

**250** employees

participated in the monthly "Energy Management Analysis and Improvement" working meetings

covering

**6**

major production divisions

discussed

**14**

energy-related topics



## Strategy

Guided by our management philosophy of "budgeting for energy use and planning for energy development", Tongwei has positioned energy management as a strategic pillar of our sustainable development. We develop scientifically validated energy budgets that align with both external market conditions and internal development roadmaps, clearly defining energy management goals and action paths to ensure rationality and economic efficiency in energy consumption. Tongwei's integrated energy strategy addresses four critical dimensions including energy conservation and consumption reduction, energy security, clean energy substitution, and Energy digitalization. This is operationalized through five focused improvement pathways including management system optimization, measurement system standardization, control system automation, energy-efficient production technology adoption, and diversified energy consumption patterns. To implement this strategy, we have developed systematic and detail-oriented action plans and leveraged green finance, green technologies, and green energy solutions, responding to the challenges and opportunities related to energy transition.



Tongwei's Energy Management Strategy

## Impact, Risk and Opportunity Management

Tongwei recognizes energy risk and opportunity management as a critical component of our sustainable development strategy. Through analysis of policy trends, market dynamics and industry characteristics, we have identified two key energy risks, which are energy price volatility and energy supply stability, along with three major energy opportunities, including low-carbon energy transition, development and application of digital technologies, and green investment and financing. To effectively address these challenges while capitalizing on these opportunities, we have implemented comprehensive measures focusing on five aspects, which include energy conservation and consumption reduction, energy supply security, clean energy substitution, digital energy transition, and green finance solutions. This integrated approach allows us to achieve efficient clean energy use.

### ◆ Energy Conservation and Consumption Reduction

As an energy-intensive manufacturer, Tongwei recognizes that production-related energy consumption is not only a critical factor influencing operational costs and production stability, but also a primary focus area for achieving cost efficiency and low-carbon transition through energy management. We comprehensively explore energy conservation potential and continuously improve energy efficiency through several approaches including technological innovation, equipment upgrades, process optimization, and management system upgrades, thereby fully tapping into energy-saving potential, continuously improving energy use efficiency, and driving green and low-carbon transition.

In 2024,

Tongwei implemented energy conservation and consumption reduction projects

**101**

achieving annual electricity savings exceeding

**130.83** million kWh

## I Tongwei's 2024 Highlights in Energy Conservation and Consumption Reduction

<p><b>Technology R&amp;D</b></p>	<p>Optimized steam pressure, temperature, and proportional valve openings to achieve an electricity consumption coefficient of <b>0.90</b> at agricultural development subsidiaries.</p>
<p><b>Equipment Retrofitting</b></p>	<p>Improved efficiency of under-performing motors, saving approximately <b>400,000 kWh/year</b> at Tongwei Solar Technology. Adjusted transformer operations at plant facilities, reducing power consumption by <b>220,000 kWh/year</b> at Tongwei Solar Technology. Implemented energy-saving improvements for U5 power station air compressors, achieving annual savings of <b>4.19 million kWh</b> at Tongwei Solar Technology.</p>
<p><b>Process Optimization</b></p>	<p>Conducted energy-saving technical research across production bases, including vacuum systems replacing CDA which reduce air compressor energy use, CDA system energy efficiency improvements, and technical studies on DCS component impacts on reducing power consumption.</p>
<p><b>Management Upgrade</b></p>	<p>Implemented refined production management at Tongwei Food, consolidated production schedules to increase capacity utilization, thereby reducing energy consumption per ton of output.</p>



### Case | The 2nd "Tongwei Energy Efficiency Cup" Best Practice Award for Energy Consumption Reduction and Outstanding Individual Energy Management Award Ceremony

In pursuit of cost efficiency and carbon neutrality, Tongwei launched the 2nd "Tongwei Energy Efficiency Cup" Best Practice Award for Energy Conservation Reduction and Outstanding Individual Energy Management Award Ceremony. The awards program evaluated outstanding projects from our agriculture and photovoltaic sectors according to five key criteria, including energy conservation effectiveness, implementation difficulty, promotion potential, economic benefits, and social benefits. Through a rigorous review system involving initial submission by production bases, review and recommendation by respective business units, and final evaluation by the head office, Tongwei awarded 1 first prize, 3 second prizes, 5 third prizes, and 12 merit awards.

Simultaneously, to enhance company-wide energy management awareness and further support our energy conservation and consumption reduction efforts, we recognized six outstanding employees from various business units who demonstrated exceptional performance in energy management. This recognition serves to motivate all employees to actively participate in energy management initiatives.



On-site Evaluation of the 2nd "Tongwei Energy Efficiency Cup" Best Practice Award for Energy Consumption Reduction



Evaluators, Supervisors, and Award-Winning Representatives of the 2nd "Tongwei Energy Efficiency Cup" Best Practice Award for Energy Consumption Reduction



**一等奖**

获奖项目名称	项目所属公司
电池生产车间&厂务联合深度降耗	通威太阳能（成都）有限公司



**二等奖**

获奖项目名称	项目所属公司
废水“零排放”二阶节水项目	通威太阳能（眉山）有限公司
高温纯水降本提效	通威太阳能（彭山）有限公司
通合厂务电池车间风平衡优化项目	通合新能源（金堂）有限公司



**三等奖**

获奖项目名称	项目所属公司
DCS柜分含量对还原电耗影响的技术研究	四川永祥多晶硅有限公司
CDA系统节能降耗	通威太阳能（金堂）有限公司
真空代替CDA降低空压机能耗	通威太阳能（南通）有限公司
窑料消化沫渣干应用	宁波天邦新材料科技有限公司

List of the 2nd "Tongwei Energy Efficiency Cup" Best Practice Award for Energy Consumption Reduction (Partial)

## ◆ Energy Security

As a critical production input, stable energy supply is fundamental to Tongwei's operational continuity. Electricity disruptions or shortages would threaten normal operations, potentially causing unanticipated cost increases and profit losses. Adhering to a "prevention-first" principle, Tongwei implements comprehensive power supply assurance initiatives while pioneering new energy supply patterns, particularly an integrated "source-grid-load-storage" system, to ensure energy security across all operating locations through multi-pronged measures.



### Internal power supply-demand analysis and guidance

- The ESG Management Committee issued weekly power supply-demand analysis reports, supplemented by daily reports during supply gaps in time, providing professional guidance to all the production bases.



### Standardized power supply assurance procedures

- Developed "2024 Summer Peak Power Emergency Assurance Plans" across all bases to enhance emergency response capabilities.
- Hosted the 2024 Summer Peak Power Assurance Kickoff Meeting to align operational strategies for peak summer periods.



### Enhanced regulatory engagement

- Maintained daily communication with power regulators including Department of Economy and Information, Bureau of Energy, and power supply companies to monitor regional power dynamics and policy updates.
- Collaborated with Department of Economy and Information and power supply companies to identify and resolve regional grid supply gaps, minimizing operational disruptions from power curtailment.
- Actively utilized grid demand response (DR) programs to maximize DR compensation and reduce operational disruptions caused by power curtailment.

## ◆ Clean Energy Substitution

As a committed participant in the clean energy industry, Tongwei deeply recognizes the opportunities arising from clean energy development. We have prioritized the promotion and substitution of clean energy across our production and operations as a key strategy. This is achieved through constructing distributed photovoltaic power generation projects at production bases, exploring the development of new power systems at production bases, conducting grid-connected green electricity trading and promoting the standardization of hydropower green certificate issuance and transactions. Through these measures, Tongwei continuously enhances clean energy consumption and overall economic efficiency.

### ○ Distributed photovoltaic power generation projects at production bases

In 2024, Tongwei completed 13 distributed photovoltaic power generation projects at its production bases, with 5 additional distributed PV power generation projects under construction and 8 more in the planning stage. The Company also advanced and completed 1 source-grid-load-storage integration project.

Tianmen, Hubei	Tianmen Tongwei	✓
Honghu, Hubei	Honghu Tongwei	✓
Huanggang, Hubei	Huanggang Tongwei	✓
Huai'an, Jiangsu	Huai'an Tongwei	✓
Ningbo, Zhejiang	Ningbo Tianbang	✓
Xinxiang, Henan	Henan Tongwei	✓
Hefei, Anhui	Module Hefei	✓ ✓ ✓
Baotou, Inner Mongolia	Inner Mongolia Tongwei	✓
Baoshan, Yunnan	Yunnan Tongwei	✓
Chengmai, Hainan	Tongwei (Hainan) Aquatic Products	✓ ✓



Maoming, Guangdong	Maoming Tongwei	▶
Nantong, Jiangsu	Module Nantong	▶
Yancheng, Jiangsu	Module Yancheng	▶
Chengdu, Sichuan	Module Jintang	▶
Chengmai, Hainan	Tongwei Hainan Aquatic Products	▶

## ◉ Exploring New Power System Models

To align with the development trends of new power systems, Tongwei has explored green power supply solutions for new power systems across multiple production bases. Through initiatives such as source-grid-load-storage integration and digital energy storage dispatch systems, we tailor solutions to production loads with diverse energy consumption characteristics and varying energy demand scales. This approach achieves simultaneous cost reduction and green transition of energy use as well as synergy between operational efficiency and safety. These efforts provide society with a scaled-down demonstration model of new power systems.

### Cost reduction

Lowered energy costs through reducing reliance on grid-purchased electricity and mitigating electricity price volatility risks



### Green transition of energy use

Increased the proportion of clean energy use by direct supply of green electricity to production bases



### Efficiency

Ensured 100% local consumption of green electricity through source-load matching



### Safety

Reduced energy security risks by leveraging multi-energy complementarity and grid-backed safety mechanisms



### Tongwei's New Power System Highlights

Energy demand scale	Load characteristics	Solutions	Tongwei's practice highlights
1GW	Non-adjustable loads	Integration of wind-solar source-grid-load-storage	Integration of wind-solar source-grid-load-storage at Inner Mongolia Base (The first domestic "central state-owned enterprise + private enterprise" equity partnership project delivering green power at a megawatt scale)
100MW	Non-adjustable loads		
10MW	Adjustable loads	Base energy storage projects and digital dispatch systems	Source-grid-load-storage integrated dispatch system at Yancheng Base

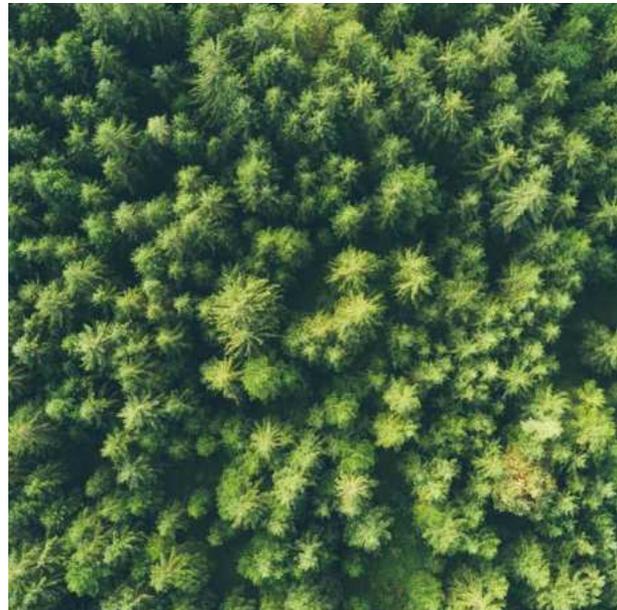


### ◉ Conducting grid-connected green electricity trading

Tongwei has proactively engaged in the market-based green electricity trading sector with a highly proactive approach and forward-looking vision. By actively pursuing grid-connected green electricity procurement and advancing green certificate acquisitions, we continue to increase the clean energy utilization ratio. In 2024, Tongwei achieved remarkable results in green electricity trading, with a total of 23,840,674 MWh of grid-connected green electricity traded, including 7,339,203 MWh through renewable energy trading.

### ◆ Digital Energy Management

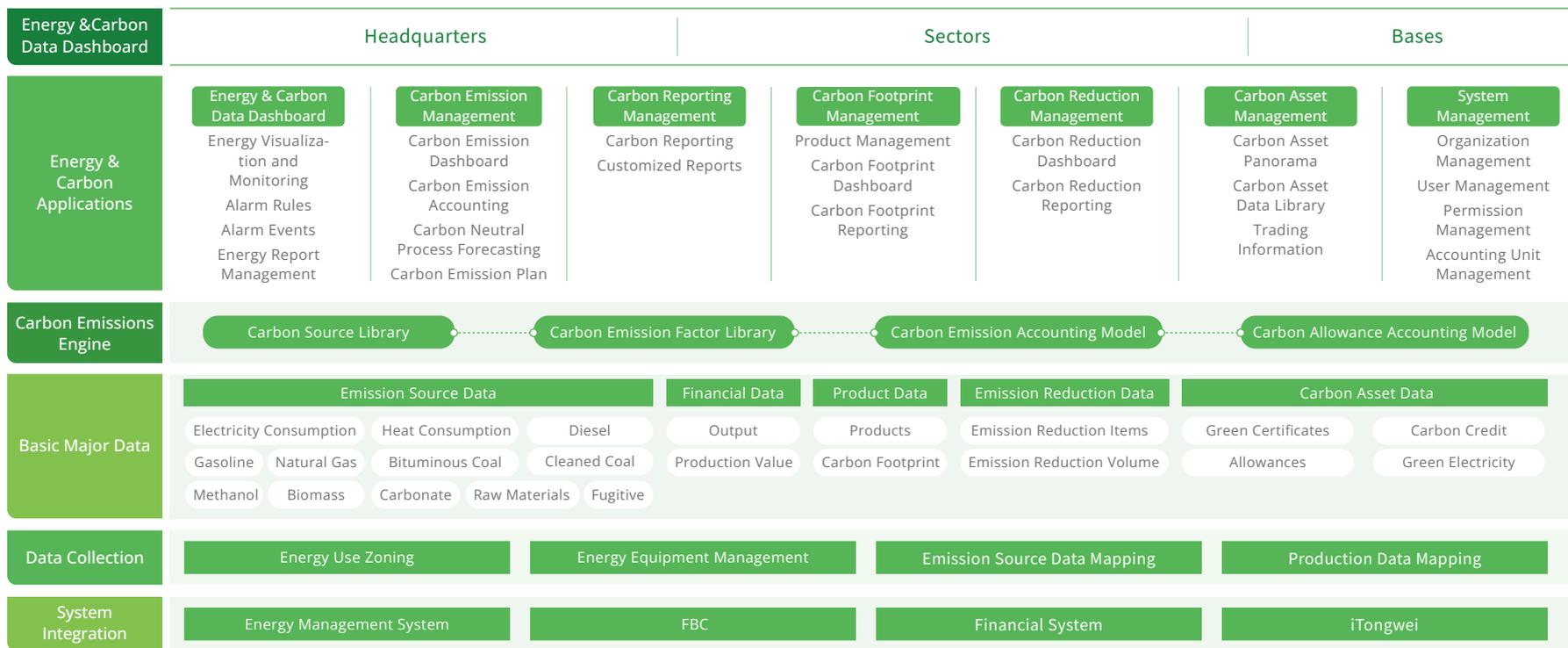
Tongwei enhances energy efficiency, optimizes energy structures, and strengthens energy supply stability through data-driven management approaches. This provides robust support for refined energy management in production and operation, while also delivering decision-making data to advance the Company's carbon neutrality goals. In 2024, we further optimized and successfully commissioned our integrated sustainability management platform, enabling real-time monitoring of company-wide carbon emissions, product carbon footprints and energy consumption. This platform significantly strengthens internal energy-carbon management capabilities and drives sustainability.



Case | Official completion acceptance of Tongwei's integrated sustainability management platform project

On November 17, 2024, Tongwei's integrated sustainability management platform project officially completed and passed acceptance, achieving the original objective of "establishing a professional energy and carbon management platform to enable internal energy-carbon management" and becoming the industry's first enterprise-level sustainable performance management platform.

The platform implemented four core functions, including template-based carbon accounting, task-oriented carbon inventory management, comprehensive carbon asset management, and full-process emission reduction project management. As of the end of December 2024, the platform managed 33 carbon footprint projects, 6 carbon reduction projects (including 4 electricity-saving projects and 1 water-saving project), 1 carbon credit project, and 347 green electricity and green certificate trading projects. In terms of standardized data management, the platform achieved 4 functionalities, including real-time carbon emission data collection, standardized emission source management, data rationality check, and multi-dimensional report management. As of December 2024, the platform enabled automatic data collection for 136 bases and processed over 33,000 manual data entries, achieving a base integration coverage rate of 92.65%, and maintaining an automatic data collection rate of 91.1%.



## Metrics and Targets

As a key participant and driver in China's and global energy transition, Tongwei joined the RE100 global initiative in 2023, committing to the goal of "achieving 100% renewable energy use by 2030 at the latest". We continue to advance the electrification of end-use energy consumption, enhance the share of clean energy in production-related electricity use, and expand the scale and proportion of renewable energy consumption, thereby accelerating the clean energy transition and optimizing our energy structure. Concurrently, we encourage our branches, subsidiaries and production bases to actively pursue energy management system certifications, further improving the standardization and professionalization of energy management to ensure efficient and sustainable energy utilization.

### Tongwei's Energy Consumption

Type	Unit	2024	2023	2022
<b>Direct energy consumption</b>				
Bituminous coal	Ton	112,418.75	113,787.87	126,100.66
Gasoline	Liter	254,311.01	308,409.86	265,366.48
Diesel	Liter	4,192,309.19	1,200,973.58	749,980.59
Biodiesel	Ton	403.78	486.89	404.31
Natural gas	Cubic meter	67,659,706.93	79,528,610.25	79,714,953.22
Liquefied natural gas	Ton	2,828.66	113,049.57	54,228.18
Liquefied petroleum gas	Ton	83.02	22.97	139.35
<b>Indirect energy consumption</b>				
Purchased steam	Ton	299,191.13	351,083.71	302,909.51
Purchased electricity	MWh	37,440,253.80	24,330,084.33	17,924,490.29
<b>Comprehensive energy consumption</b>				
Total comprehensive energy consumption	tce	4,813,067.35	3,423,569.21	2,535,289.36

As of the end of the reporting period, the number of subsidiaries obtaining the ISO 50001 Energy Management System certification reached

**15**

During the reporting period, Tongwei's total electricity consumption reached

**3,744,0253.80** MWh

the electrification rate rose to marking a year-on-year increase of

**95.60%** **8.64%**

Tongwei's renewable energy electricity consumption amounted to

**23,965,269.51** MWh

compared to 2023, reaching a year-on-year increase of

**28.00%**

the proportion of total electricity consumption reaching

**64.01%**



# Water Resources Management

Global water resource accessibility imbalances and diminishing reserves present severe challenges.

By the end of 2024, the proportion of the global population faced water scarcity threats reached approximately

# 1/4

While China ranks sixth globally in total water resources, its per capita water availability reaches only

# 35

 % of the global average

Under dual pressures of macro-level geographical constraints and micro-level supply-demand mismatches, advancing intensive water resource utilization has become critical for achieving sustainable development.

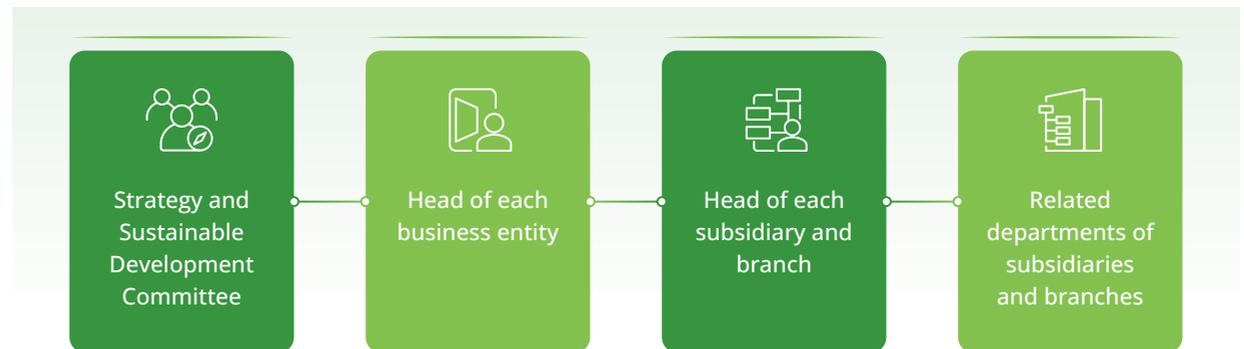


In alignment with national water conservation actions and strategies, Tongwei has established a comprehensive water management framework. Through source control mechanisms, water-use optimization, wastewater treatment and recycling, and water balance analysis and management, we enhance water-use efficiency, fostering synergistic progress between operational growth and water resource conservation.

## Governance

Tongwei has always prioritized the rational and compliant utilization of water resources, strictly complying with national laws and regulations such as the *Water Law of the People's Republic of China* and the *Water Pollution Prevention and Control Law of the People's Republic of China*, as well as local policies. We have established and implemented internal governance documents including the *Water and Electricity Conservation Management Procedures* and the *TQM Continuous Improvement Management Measures*. Our subsidiaries and production bases have developed water use and conservation regulation systems tailored to operational realities to regulate water use and conservation practices.

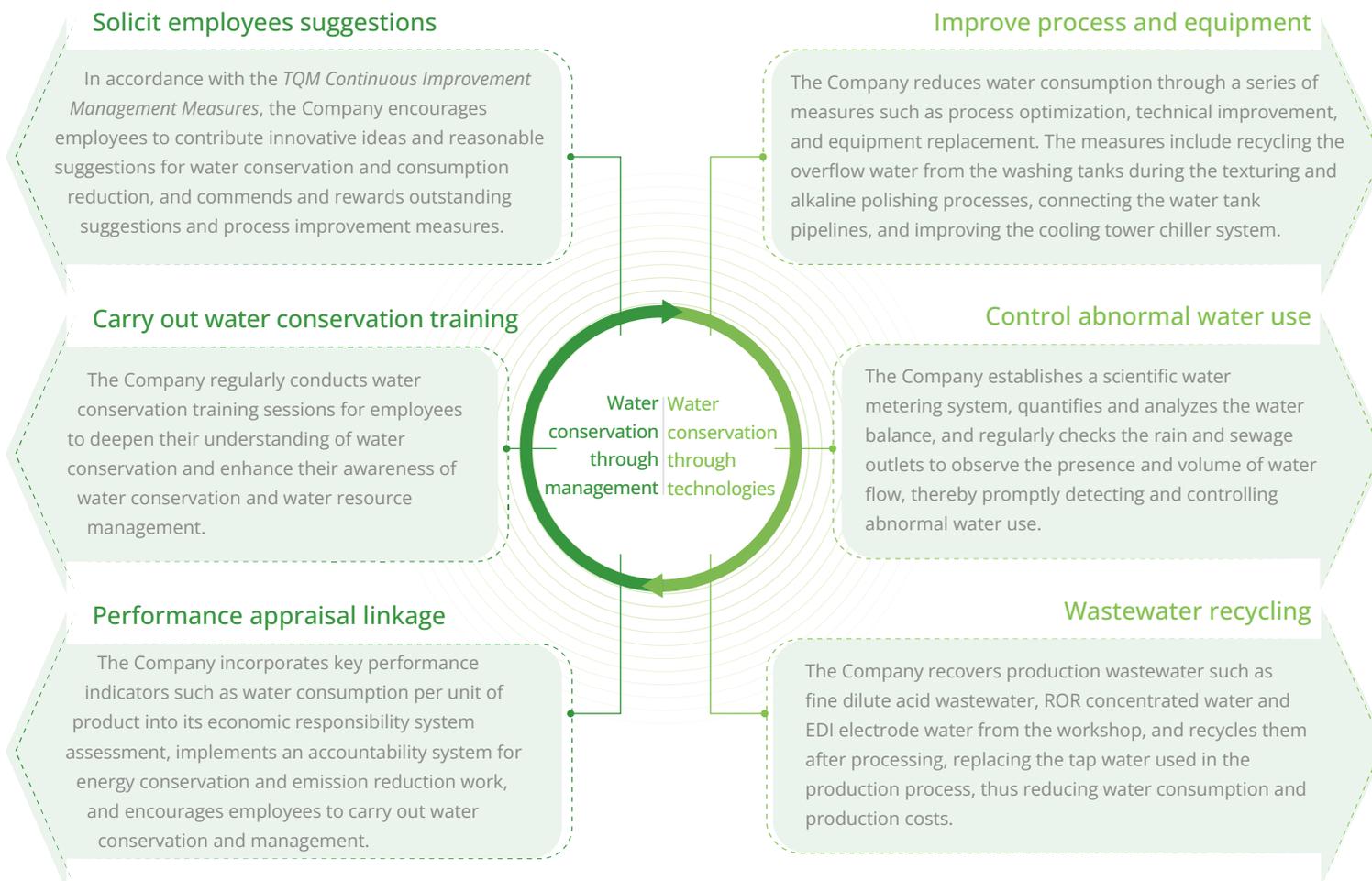
To ensure systematic progress in water use and conservation, Tongwei has established and continuously refined a multi-tier water governance framework. Recognizing water as a strategic resource, we integrate water management with energy management and carbon emission management under the oversight of the Strategy and Sustainable Development Committee, the highest-level decision-making body for resource management, composed of five Board members. This Committee is responsible for setting management strategies, monitoring performance, and driving coordinated advancements in management initiatives of water, energy, and carbon emissions. At the executive level, heads of branches, subsidiaries, and dedicated departments implement specific water conservation and use measures aligned with business realities. They incorporate water use metrics into the key performance indicators of responsible personnel, minimizing risks of irregular water resource depletion.



Tongwei's Water Resource Management Structure

## Strategy and Management Method

Tongwei adopts a comprehensive water resource management strategy, driving innovation across both management and technology to continuously optimize water use and conservation technologies, thereby ensuring the sustainable utilization of water resources. By strengthening controls over vulnerable areas in water management, we effectively reduce water dependency and mitigate water scarcity risks, achieving conservation-intensive, rational, and efficient water utilization. In 2024, Tongwei reported no incidents of illegal or non-compliant water use.

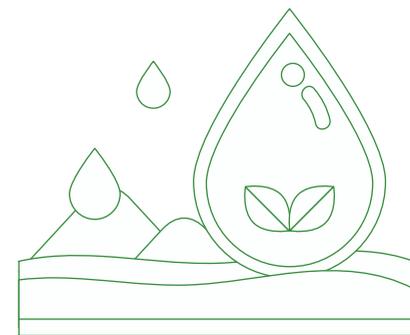


| In 2024,  
the number of Tongwei's water-saving improvement projects implemented reached

# 23

with water savings of

# 2.9234

 million tons




### Case | Phase II of the "Zero Wastewater Discharge" Project at Tongwei Solar (Meishan)

To achieve a 50% reduction in wastewater discharge, Tongwei Solar (Meishan) implemented a multi-pronged strategy encompassing discharged wastewater recycling, water production optimization, and water production cost reduction. These initiatives include recycling wastewater, utilizing surplus capacity from the water purification system to recover and reuse discharged wastewater, substituting softened water for reverse osmosis (RO) water in the supply systems, and reducing the flow rates of cleaning water used in production lines. With a total investment of RMB 4.63 million, this project enabled annual water savings of 5.61 million tons at Meishan Plants 1, 3, and 4 while maintaining stable production. This project ensures orderly production while reducing water resource consumption, contributing to the advancement of environmental protection in the industry.

## Metrics and Targets

During the reporting period, Tongwei achieved water savings exceeding 12.74 million tons, successfully meeting the short-term water conservation goal of 4.5259 million tons in 2024. By improving the water-saving process and management pattern, and expanding water recycling, we have achieved industry-leading water consumption per unit of key products. We set a short-term water-saving goal of 3.096 million tons for 2025 and keep monitoring progress toward this goal.

| During the reporting period,

total water resource consumption reached

**40.7050** million tons

The water recycling and reuse rate reached

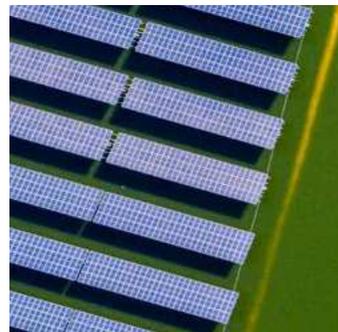
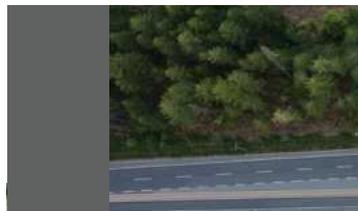
**98.04**%

with a water consumption intensity of

**442.47** tons per RMB 1 million of revenue

compared to 2023, representing an increase of

**6.32**%



# Pollution and Waste Management

Environmental quality directly determines economic development and human health and well-being. The ecological damage caused by extensive growth patterns during the Era of Industrial Civilization has proven that pollution prevention is now an essential requirement for sustainable development. OECD research warns that if current pollution trends continue unchecked, global environmental governance costs will surge to

**4** times

the current baseline by 2050, with the resulting public health burdens extending beyond measurable economic impacts.

Tongwei implements circular economy principles in operations, strictly complying with national and local environmental protection standards. We have established comprehensive pollution prevention systems covering waste gas, wastewater, noise pollution, and solid waste. Through intelligent monitoring platforms, innovation in recycling technology, and full life-cycle packaging management, the Company has established systematic pollution tracking and control.

## Waste Gas Management

By strictly complying with national, local, and industry-specific regulations, rules, and standards for waste gas emissions, including the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, the *Integrated Emission Standard of Air Pollutants*, and the Emission Standard of Pollutants for Battery Industry, Tongwei has established and implemented management systems such as the *Wastewater and Waste Gas Emission Control Procedures*, conducted regular monitoring as required by emission permits, and equipped waste gas treatment facilities. These facilities employ physical adsorption and chemical treatment to minimize gas emissions during production.

### Waste Gas Management Measures at Tongwei

Type	Industrial wastewater	Aquaculture/processing waste gas
Source	<ul style="list-style-type: none"> <li>Process gases from workshops, and those from wastewater treatment stations for sewage treatment</li> </ul>	<ul style="list-style-type: none"> <li>Odorous gases from feed residues</li> </ul>
Disposal method	<ul style="list-style-type: none"> <li>Equip ventilation and purification systems operating synchronously with production, utilizing "activated carbon adsorption/dry filtration + zeolite rotor catalytic oxidation" and scrubber towers</li> <li>Conduct government-compliant emissions treatment with discharge records, regular facility inspections, maintenance, and equipment upgrades</li> </ul>	<ul style="list-style-type: none"> <li>Engage accredited third-party agencies for quarterly odor and particulate matter testing (organized and fugitive emissions)</li> </ul>
Emissions monitoring	<ul style="list-style-type: none"> <li>Install VOC online monitoring systems for real-time emission data analysis and monitoring, thereby effectively controlling and reducing the impact of waste gas pollutants on the environment</li> <li>Engage accredited third-party agencies for regular waste gas testing and issuance of waste gas monitoring reports</li> </ul>	



### Case | Tongwei Agriculture Development upgraded the waste gas treatment facilities for high-efficiency operations

To enhance waste gas treatment efficiency and reduce waste gas emissions, Tongwei Agriculture Development undertook 11 new expansion and technological upgrade projects in 2024, investing RMB 28.04 million. These projects enable the high-efficiency waste gas treatment of 1.794 million m<sup>3</sup>/h. After the upgrade of exhaust gas treatment equipment, all emission indicators consistently remained below the 1000 non-dimensional unit, significantly lower than the national standard of 2,000 dimensionless units.

During the reporting period,

total waste gas pollutant emissions from the headquarter, branches and subsidiaries amounted to

**425.94** tons

representing a reduction compared to 2023.

**27.97** %



### Tongwei's Emission Reduction Performance of Waste Gas and Pollutants

Indicator	Unit	2024	2023	YOY change
Nitrogen oxides	Ton	160.15	200.05	-19.94%
VOCs	Ton	121.52	172.88	-29.71%
Ammonia	Ton	42.42	114.44	-62.93%
Hydrogen chloride	Ton	18.08	19.02	-4.94%
Fluorides	Ton	11.70	20.25	-42.22%
Soot	Ton	6.50	13.72	-52.62%
Sulfur dioxide	Ton	6.25	7.34	-14.85%

## Wastewater Management

Tongwei strictly complies with laws, regulations, and discharge standards, including the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Integrated Wastewater Discharge Standard*, and the *Wastewater Quality Standards for Discharge to Municipal Sewers*. The branches, subsidiaries and production bases follow internal management systems such as the Wastewater and Waste Gas Emission Control Procedures. To improve the quality of wastewater awaiting discharge, they employ methods including treatment by contracted third-party institutions and septic tank sedimentation. Additionally, online wastewater monitoring systems have been established as required by environmental authorities, enabling real-time monitoring of wastewater quality prior to discharge.

### Tongwei's Waste Gas Management Measures

Type	Industrial wastewater	Domestic wastewater	Aquaculture/processing wastewater
Source	<ul style="list-style-type: none"> <li>Wastewater from equipment cleaning and workshop processes</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater generated by the office and cafeteria</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater from aquaculture and feed processing</li> </ul>
Disposal method	<ul style="list-style-type: none"> <li>Processed by third-party operators at wastewater treatment plants to meet discharge standards, and then discharged into municipal pipelines with records maintained.</li> <li>Treated through sedimentation and fermentation in septic tanks before discharge.</li> </ul>	<ul style="list-style-type: none"> <li>Establish dedicated wastewater treatment plants at production bases; conduct regular inspections and cleaning of equipment.</li> <li>Adopt AAO process with treated effluent reused for eco-friendly waste gas scrubber towers to conserve water resources.</li> <li>Conduct testing of all concentration parameters at the domestic wastewater discharge outlets within the factory boundary and the clear water tank outlets of the wastewater treatment plants in accordance with the environmental impact assessment reports.</li> </ul>	
Emissions monitoring	<ul style="list-style-type: none"> <li>All branches, subsidiaries, and production bases have established domestic wastewater treatment plants and conduct semi-annual water quality monitoring of wastewater.</li> <li>We collaborate with professional environmental monitoring agencies to monitor wastewater and pollutants and publicly upload the data to government environmental protection monitoring platforms.</li> <li>Relevant departments propose monitoring plans based on discharge permits, coordinate with third-party maintenance providers for equipment inspections/maintenance, and regularly clean total discharge outlets, pH sensor probes, and pumps.</li> </ul>		

Case | Yongxiang optimized wastewater classification and recycling methods in the Phase I high-purity polysilicon project

Completed in November 2024 with full environmental protection compliance, Yongxiang's Phase I High-Purity Polysilicon Project features an advanced wastewater classification and recycling system incorporating industry best practices. The project features a comprehensive wastewater treatment infrastructure, including one filtered wastewater treatment system for cleaning and rinsing purposes, one 400 m<sup>3</sup>/h recycled water treatment system (soft water station), and one centralized wastewater treatment plant equipped with two integrated wastewater treatment lines (total capacity 240 m<sup>3</sup>/h, comprising one 120 m<sup>3</sup>/h low-chlorine wastewater treatment station and one 120 m<sup>3</sup>/h chlorine-containing wastewater treatment station), and one 50 m<sup>3</sup>/h high-salinity wastewater treatment unit. This integrated system has significantly improved wastewater treatment efficiency while maximizing water resource recycling.

Case | Groundwater pollution prevention and control at Tongwei Solar Technology's Nantong Production Base

In 2024, Tongwei Solar Technology implemented a rigorous groundwater protection program at its Nantong production base, adopting a dual prevention strategy to minimize potential impacts on groundwater and soil.

For source control, Tongwei Solar Technology implemented anti-seepage treatments for all water supply and drainage pipelines in the project, completely preventing wastewater infiltration and eliminating any "leakage, spillage, dripping or seepage" of sewage, thereby ensuring the normal operation of the wastewater treatment system. Notably, the project applied a visual management approach by routing wastewater transfer pipelines above ground where possible, enabling immediate leak detection and prompt remediation to avoid potential groundwater contamination from buried pipe failures.

For end control, Tongwei Solar Technology has adopted zoned anti-seepage measures and pollutant collection strategies in areas within the facility that are prone to contamination. Anti-seepage treatment has been implemented in locations such as chemical storage areas and production workshops to prevent contaminants from seeping underground and to collect and treat any pollutants accumulating on the surface in a centralized manner, thereby avoiding contamination of groundwater.

During the reporting period, wastewater pollutant emissions from Tongwei totaled

**5,888.63** tons

compared to 2023, representing a reduction of

**33.96** %



Tongwei's Emission Reduction Performance of Wastewater and Pollutants

Indicator	Unit	2024	2023	YOY change
Chloride	Ton	2,149.65	5,337.41	-59.72%
Total nitrogen	Ton	206.33	422.06	-51.11%
Ammonia nitrogen	Ton	114.18	240.03	-52.43%
Fluorides	Ton	36.91	93.17	-60.38%
Total phosphorus	Ton	20.61	20.80	-0.91%

## Waste Management

Tongwei’s headquarter and its branches, subsidiaries and production bases strictly abide by the *Law of the People’s Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes and the Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2023)*, and formulate comprehensive management systems such as the *Solid Waste Management System and the Hazardous Waste Disposal Management System*. For non-hazardous waste, we conduct systematic classification, collection and storage. Hazardous waste is collected and stored separately in dedicated storage facilities before being regularly transported to licensed treatment providers. We actively explore recycling solutions for high-value non-hazardous waste to maximize resource recovery. These integrated approaches significantly reduce the environmental impact on surrounding communities while promoting our circular economy development.

In 2024, Tongwei Solar (Hefei) was awarded the "Zero-Waste Factory" title by Hefei authorities in recognition of our outstanding performance in waste management and resource recycling.

### Tongwei’s Waste Management Measures

Category	Non-hazardous waste 	Hazardous waste 
Source	<ul style="list-style-type: none"> <li>General industrial waste, domestic waste, construction waste, end-of-life electronic equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Waste activated carbon, waste batteries, waste oil, waste packaging.</li> </ul>
Disposal method	<ul style="list-style-type: none"> <li>Strictly implement the solid waste classification management system and explore resource recovery of waste.</li> <li>Pre-classify general industrial solid waste and delegate compliant disposal to external accredited agencies.</li> <li>Transfer high-value solid waste to internal recycling warehouses for reuse.</li> <li>Outsource domestic and kitchen waste to third parties for centralized classification and disposal.</li> </ul>	<ul style="list-style-type: none"> <li>Classify hazardous waste according to the <i>National Catalogue of Hazardous Wastes</i> and transport it to centralized storage facilities.</li> <li>Establish a traceable transfer record system for full-process monitoring.</li> <li>Regularly commission licensed third parties for transportation and disposal to ensure regulatory compliance.</li> <li>Initiate waste removal when storage reaches 80% capacity to prevent overstocking risks.</li> </ul>
Supervision and management	<ul style="list-style-type: none"> <li>Safety and Environmental Protection Departments at the production bases maintain hazardous waste records and supervise disposal compliance across workshops.</li> <li>Administration Departments or Plant Operation Departments verify types and quantities of hazardous waste leaving factories.</li> </ul>	

### Waste Discharge at Tongwei

Indicator	Unit	2024	2023
Total waste	Ton	429,621.57	536,862.89
Non-hazardous waste	Ton	426,603.03	534,797.90
Hazardous waste	Ton	3,018.54	2,065.59



| During the reporting period,

Tongwei generated a total waste volume of

**429,621.57** tons

compared to 2023, representing a reduction of

**19.98** %



among the total, non-hazardous waste amounted to

**426,603.03** tons

compared to 2023, representing a decrease of

**20.23** %



hazardous waste generated amounted to

**3,018.54** tons

## ◆ Packaging Material Management

Tongwei integrates green and low-carbon management into all aspects of product design, production, packaging, and transport in accordance with relevant regulations and requirements, such as the *Notice by the General Office of the State Council of Controlling the Over-packaging of Commodities*, thereby enhancing recyclability and circular utilization of packaging materials. We conduct usage statistics and management of packaging materials to regulate processes and workflows, providing solid data support for advancing packaging reduction and green initiatives.

### | Measures for Packaging Lightweighting, Reduction, and Recycling

 <p><b>Packaging design optimization</b></p>	<ul style="list-style-type: none"> <li>• Expand packaging specifications for solar panel products to reduce packaging material consumption.</li> <li>• Adopt low-grammage, high-strength corrugated paperboard to minimize material use while ensuring durability, facilitating recycling.</li> </ul>
 <p><b>Packaging material substitution</b></p>	<ul style="list-style-type: none"> <li>• Replace wooden pallets with steel pallets to reduce wood waste and energy inefficiency.</li> <li>• Introduce lightweight and high-strength plastic films to replace conventional heavy-duty materials.</li> </ul>
 <p><b>Recyclable packaging use</b></p>	<ul style="list-style-type: none"> <li>• Establish a recycled packaging materials warehouse to enable rational reuse of hollow-case packaging, finished product crates, and wooden pallets for solar panel products.</li> <li>• Transition from cardboard boxes to collapsible crates for certain raw material packaging, enabling repeated reuse and achieving packaging recycling and reduction.</li> </ul>

| During the reporting period,

Tongwei's total packaging material use reached

**114,900** tons

compared to 2023, representing a reduction of

**0.51** %

### Case | Tongwei Solar Technology optimizes packaging materials to enhance efficiency

In 2024, Tongwei Solar Technology implemented measures including the circular use of metal pallets, innovation in cushioning materials, and refined waste sorting processes to improve packaging efficiency and minimize environmental impact. By collaborating with upstream and downstream partners in the supply chain, Tongwei Solar Technology achieved recycling utilization of metal pallets, saving approximately 5,000 cubic meters of wood annually. Tongwei Solar Technology also introduced new biodegradable cushioning materials, reducing environmental pollution while enhancing packaging efficiency. Through strengthened on-site management controls and optimized waste sorting, the proportion of packaging waste was reduced from 8% to below 6%, maximizing the recycling and reuse of packaging materials.

## Noise Management

To prevent and control noise pollution while safeguarding the health of employees and surrounding residents, Tongwei strictly complies with national laws and regulations, and industry standards such as the *Law of the People's Republic of China on the Prevention and Control of Noise Pollution* and the *Technical Specification for Application and Issuance of Pollutant Permit-Industrial Noise (HJ 1301-2023)*. All branches, subsidiaries and production bases conduct quarterly noise monitoring at factory boundaries through accredited third parties in accordance with national and local noise control policies. Notably, TW Solar Technology has established the Noise Management and Control Procedures, which defines noise emission limits and management requirements for noise pollution control facilities. During the reporting period, Tongwei received no reports or complaints related to noise pollution.



# Ecosystem and Biodiversity Conservation

Biodiversity loss has emerged as one of the three major global environmental crises, threatening human well-being and the sustainability of nature. The Kunming-Montreal Global Biodiversity Framework adopted at the COP15 in 2022 established the ambitious

## “30×30”

goal, which means to protect at least 30% of global terrestrial and marine areas by 2030

However, the *Global Biodiversity Outlook 5* indicates that biodiversity loss continues unabated, with

approximately	<b>75</b> %	and	<b>66</b> %	of marine ecosystems severely altered or degraded by human activities,	and over	<b>1</b>	million species facing extinction risks
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Amid this critical situation, Tongwei upholds the principles of ecological civilization and strictly complies with domestic and international biodiversity regulations, including the *Convention on Biological Diversity*, *Kunming Declaration*, *Biodiversity Conservation in China*, and *China's Biodiversity Conservation Strategy and Action Plan (2023-2030)*. We have formulated and implemented the *Biological Diversity Conservation Commitment and Policy* and the *Forest Protection Commitment and Policy*. Moving forward, Tongwei plans to adopt management approaches aligned with recommendations from the Taskforce on Nature-related Financial Disclosures (TNFD) to minimize impacts on natural ecosystems across our operations and value chain. We will actively engage in ecosystem conservation and restoration, contributing to the achievement of the "30×30" biodiversity goals.

## Governance

Building on our sustainable governance framework, Tongwei will enhance a multi-tier biodiversity conservation governance system spanning from the head office to business units and from strategic to executive levels. Biodiversity conservation will be incorporated into our environmental performance evaluations to ensure the fulfillment of biodiversity commitments.

## Strategy and Management Method

By mapping biodiversity linkages across all operational activities and leveraging existing best practices, Tongwei has identified five priority areas for future biodiversity conservation efforts and will present Tongwei's biodiversity solutions to all stakeholders.

### ◆ Biodiversity Conservation Commitment

Tongwei fully understands and assesses the impacts and dependencies of our value chain, organizational operations, and products on biodiversity and ecosystem services. We have made a strong commitment to biodiversity conservation and conduct regular reviews.





### In 2023, we put forward the *Tongwei Co., Ltd. Biological Diversity Conservation Commitment*

- In order to achieve the United Nations' Sustainable Development Goals in 2030 and the beautiful vision of harmonious coexistence between humanity and nature in 2050, Tongwei's headquarters, its subsidiaries and affiliated companies promise to conduct biodiversity risk assessments, formulate biodiversity-related goals, avoid adverse impacts on biodiversity, and jointly strengthen public awareness of biodiversity protection with various stakeholders.



### In 2024, we put forward the *Tongwei Co., Ltd. Forest Protection Commitment*

- Tongwei commits to strictly abide by the laws and regulations on forest protection in the countries (regions) where the projects are located during the business operation process. It works to eliminate the risk of forest destruction caused by business operations, monitor and manage projects in the industrial chain that involve the risk of forest destruction, jointly carry out forest protection actions with suppliers and partners, and respect the legitimate rights of local community residents.



### In the future, we will carry out a quantitative assessment of the biodiversity and vulnerability of production bases

- The Company plans to conduct a quantitative assessment of the biodiversity and vulnerability of production bases in the future, identify biodiversity risks and opportunities, and continuously review and optimize existing commitments.

## ◆ Biodiversity Impact Mitigation

Tongwei takes necessary measures to eliminate the negative impacts of our operations on biodiversity and optimizes our business patterns to be more nature-friendly.

### Promote the harmless substitution of product materials

Reduce the environmental footprint of products from the source and minimize the negative impact on the ecosystem through measures such as the substitution of environmentally friendly materials, the reduction of consumable use, the improvement of low-carbon processes, and the green design of products.

### Improve waste disposal with the policy of "reuse and zero emission"

Continuously work to eliminate the environmental impact of waste emissions through the reasonable treatment and recycling of waste gas, wastewater, and general solid waste.

Tongwei's Biodiversity Impact Mitigation Initiative

## ◆ Biodiversity Restoration Plan

Tongwei contributes positively to biodiversity through our operations and actively participates in global biodiversity restoration efforts.

### Ecological environment restoration

- In the aquaculture base, aquatic plants and microorganisms are used to purify the aquaculture water body and restore the ecological environment of the aquaculture water body; tree-planting activities are carried out in the production base to restore the local forest coverage.

### Prevention and control of ecological degradation risks

- In scenarios such as deserts and grasslands, the "Photovoltaic+" model is cooperatively promoted. The characteristics of Photovoltaic modules are used to absorb radiation, reduce water evaporation, prevent wind and fix sand, and prevent and control the ecological risks of desertification.

### Integration of the "Photovoltaic+ ecology" industry

- The Company plans to explore more integration models of the Photovoltaic + Ecology" industry in the future, build ecological defense lines in ecologically fragile areas such as plateaus and red soil areas, and achieve a win-win scenario between commercial value and ecological value.



### Case | Aquaculture-PV integration creates a micro-ecological aquaculture system

Tongwei's "Fishery & PV Integration" projects integrate ecological aquaculture, healthy farming, and polyculture technologies to address the challenges of traditional aquaculture, which include low technical levels, high disease risks, weak management capabilities, high investment costs, and significant operational risks. By providing clean energy through photovoltaic power generation, these projects support the transformation and upgrading of aquaculture into more industrialized, intelligent, and modernized operations, thereby reducing ecological and environmental costs.

As for pollution discharge management, Tongwei's Fishery & PV ponds are equipped with bottom sediment discharge systems to remove fish excrement and residual feed from the aquaculture water, improving the aquatic environment. We handle the wastewater from the ponds by transferring it to solid-liquid separation tanks for treatment. The clarified liquid is then purified in constructed wetlands before being recirculated back to the aquaculture ponds for reuse. The solid sediments are transported to manure drying beds to be sun-dried and used as organic fertilizer. This closed-loop system significantly reduces pollution discharge during the aquaculture process.

For the promotion of ecological balance, Tongwei's Fishery & PV bases are equipped with a tailwater treatment system consisting of microfiltration machines, three-stage sedimentation ponds, biological filter tanks, constructed wetlands, and ecological channels to treat the tailwater produced during fish farming. This system utilizes aquatic plants and microorganisms to naturally purify and absorb nutrients from the tailwater, enabling aquaculture operations without water exchange or water quality concerns and allowing vegetables to grow normally without fertilizers, thus establishing a harmonious ecological balance among fish, vegetables, and aquatic microorganisms.



Tongwei's Fishery & PV Ecological Aquaculture Pond

## ◆ Biodiversity Management Across the Value Chain

Tongwei extends biodiversity conservation principles to all upstream and downstream partners across our value chain, building an eco-friendly value chain.

### Procurement of ecologically friendly raw materials

- In the procurement process, biodiversity indicators are included in the supplier assessment indicators, and ecological protection requirements are conveyed to suppliers through the code of conduct. Cooperation with suppliers is carried out to explore ecologically friendly improvement solutions in the production process of raw materials.



### Suppliers cooperation

- Tongwei plans to cooperate with suppliers in the future for key natural risk materials such as agricultural product raw materials and packaging materials. Through methods such as training empowerment and formulating improvement plans, the damage to biodiversity caused by procurement will be reduced.



Tongwei's Biodiversity Management Practices across the Value Chain

### Case | Exploring zero-deforestation alternatives for key raw materials and achieving the first SSAP certification in the feed sector

As a joint venture subsidiary of Tongwei, BioMar-Tongwei Biotech (Wuxi) Ltd (hereinafter referred to as "Biomar-Tongwei ") is dedicated to building a sustainable product brand and fulfilling its solemn commitment to supporting sustainable aquaculture. In 2022, Biomar-Tongwei applied for and obtained the U.S. Soybean Sustainability Assurance Protocol (SSAP) certification, making it the first company in China to receive this certification.

By annually sourcing over 3,000 tons of certified sustainable U.S. soybean products, Biomar-Tongwei labels its feed products with sustainability credentials. Biomar-Tongwei's aquafeed products—including those for sturgeon, rainbow trout, turbot, California bass, and large yellow croaker—feature the Sustainable U.S. Soy (SUSS) label prominently on packaging. This initiative meets downstream aquaculture enterprises' demands for sustainable development while promoting eco-friendly farming practices among consumers, thereby playing a pivotal role in driving green transformation within the aquafeed industry.



U.S. Soy Sustainability Assurance Protocol (SSAP) Certification

EFICO Expanded Compound Feed for Aquaculture Bearing the Sustainable U.S. Soy (SUSS) Label



## ◆ Enhancing Stakeholder Awareness

Tongwei communicates the principles, progress, and outcomes of biodiversity conservation to stakeholders, raising awareness of biodiversity risks among internal and external parties.

### 1 Join natural conservation initiative organizations

- Up to now, the Company has joined 8 international organizations or initiatives related to natural conservation. Through these platforms, we conduct extensive exchanges and cooperation with society, calling on all parties to jointly protect the green homeland.

### 2 Carry out popular science activities on natural conservation

- Using the achievements in green agriculture and green energy, the Company conducts public welfare popular science activities with the theme of PV and agriculture, and conveys the concept of ecological protection through Tongwei's practices.

### 3 Strengthen public communication on natural conservation

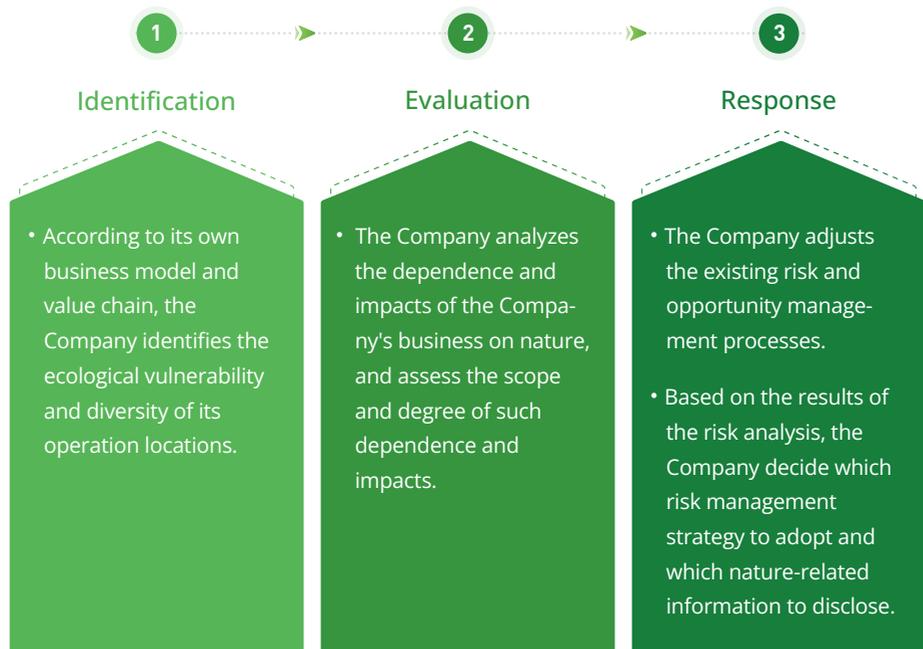
- In the future, the Company will carry out more public communication activities based on natural issues, join more natural conservation plans and initiatives, and integrate nature-friendliness into the corporate brand culture.

▼ Biodiversity Training Targeted at Students



# Risk Management

Tongwei plans to assess biodiversity risks and impacts in alignment with the GRI 101 Standard and the TNFD LEAP Approach, and develop corresponding risk and impact management strategies to support the establishment of our biodiversity conservation goals and indicators.



Tongwei's Biodiversity Risk Management Process

# Metrics and Targets

Tongwei plans to formulate quantifiable biodiversity conservation goals by referencing the action goals of the Kunming-Montreal Global Biodiversity Framework and integrating key risks across different phases with our ecological commitments. Progress toward these goals will be regularly monitored through established indicator systems.

To fully integrate biodiversity management into operational practices, we have developed a five-year biodiversity improvement plan following the TNFD recommendations, with phased biodiversity management goals as follows:



Tongwei's Biodiversity Management Goals





# 05

## Together to Strengthen Collaboration: Diverse and Inclusive Partnership

Tongwei has always upheld a "people-oriented" management philosophy, advocating a merit-based employment principle of "valuing the capable ones, replacing the mediocre ones, and dismissing the incapable ones". The Company is committed to protecting employees' lawful rights and interests, eliminating all forms of forced labor within its operations and value chain, and building a comprehensive training system and career development path to support employees' professional growth and personal development. Tongwei strives to create a diverse, inclusive, healthy, and safe working environment, promoting mutual progress and win-win development between the company and its employees. Additionally, Tongwei continues to deepen its commitment to social responsibility by actively participating in public welfare and charitable initiatives, demonstrating the company's sense of social responsibility and humanistic care through concrete actions.

### Material ESG issues covered in this chapter:

- Employees' Rights and Interests Protection
- Equality and Diversity
- Employee Training and Development
- Occupational Health & Safety
- Social Responsibility and Community Development

### SDGs addressed in this chapter:



# Employees' Rights and Interests Protection

Against the backdrop of increasing structural imbalances in the global economy, the employment market is facing severe challenges. According to the *World Employment and Social Outlook: Trends 2025* released by the International Labour Organization,

the 2024 global unemployment rate reached

# 5 %

with

## youth and women

experiencing significantly higher rates than the average, placing pressure on efforts to build a sustainable and equitable employment environment.



As an active practitioner of social responsibility, Tongwei adheres to the principles of fairness and justice, safeguarding the fundamental rights of every employee<sup>27</sup>. The Company is committed to creating a diverse and inclusive workplace atmosphere, establishing a comprehensive compensation structure and a robust benefits system to provide employees with competitive remuneration and comprehensive support, enabling mutual growth between employees and the enterprise.

27. Employees include formal employees and non-formal labor (such as interns, part-time workers, and agency labor)

## Compliant Employment

Tongwei has always adhered to compliant and legal employment. In 2024, in accordance with the requirements of the ISO 37301 compliance management system and the SA8000 standard, the Company systematically established a more stringent labor compliance management mechanism. It also entrusted a third-party authoritative institution to conduct a special audit of labor employment, focusing on key areas such as the compliance investigation of labor employment, due diligence investigation of employees' human rights, protection of the rights and interests of female employees and minors, social security contributions, and employee benefits. By doing so, the Company comprehensively consolidates the foundation of the legality of labor employment, effectively improves the level of protection of employees' rights and interests, and creates a fair, safe, and sustainable working environment in all aspects.

### Response to initiatives

- Actively respond to *The Universal Declaration of Human Rights of the United Nations*, and support *United Nations Guiding Principles on Business and Human Rights* and *International Labour Organization Declaration on Fundamental Principles and Rights at Work*.

### Compliance with laws

- Strictly abide by laws and regulations such as *The Labor Law of the People's Republic of China*, *The Labor Contract Law of the People's Republic of China*, and *The Trade Union Law of the People's Republic of China*.

### Policies and systems

- Publicly release commitments and policies such as *The Human Rights Commitment and Policy of Tongwei* and *The Anti-discrimination and Anti-harassment Commitment and Policy of Tongwei*.
- Formulate internal management systems such as *The Recruitment and Hiring Management Measures*, *The Management System for the Protection of Female Workers and Minors*, *The Provisions on the Prevention of Discrimination, Harassment and Abuse*, *The Attendance and Leave Management Measures*, *The Employee Welfare Management Measures*, and *The Management Measures for Employee Reward and Punishment*.

### Stipulation content

- Employee recruitment, employee code of conduct, attendance and leave, compensation and benefits, training and development, performance management, reward and punishment system, communication and feedback, labor relations and dispute resolution.

### Elimination of forced labor

Prohibit any form of forced labor such as intimidation, threat, kidnapping, and fraud.

Protect employees' right to choose and leave their jobs, prohibit punitive retaliation against those who leave their jobs, and prohibit the illegal withholding of employee documents.

Conduct supplier reviews on issues such as forced labor and working hours to ensure that suppliers respect labor rights.

### Protection of employees' basic rights and interests

Eliminate the gender pay gap, and provide employees with various welfare programs and care funds.

Provide employees with diverse learning and career development opportunities, and smooth the channels for career development.

Provide employees with a safe and healthy working environment, and continuously promote the construction of a long-term mechanism for work safety.

### Respect the freedom of association and the freedom of collective bargaining

Respect employees' freedom of association and the right to participate in trade unions, and respect the right of employees' collectives to negotiate with the company.

Smooth the channels for employees' democratic participation, encourage employees to participate in the Company's operation and management, and ensure employees' rights to know, express, participate, negotiate and supervise matters related to their own interests.

### Prohibition of child labor

Legally and effectively identify the age and other applicant information during the recruitment process to prevent wrongful recruitment due to the provision of false age information by applicants.

Include the prohibition of child labor in the supplier social responsibility survey and commitment letter, and seriously deal with and eliminate suppliers who use child labor.

### Prohibition of workplace discrimination and harassment

Prohibit any form of discrimination, harassment, or abuse of employees in the workplace.

Detect and prevent discrimination and harassment, and encourage employees to report and complain in a timely manner when they encounter or discover such incidents.

### Promotion of diversity and inclusion

Practice the principle of fair employment, and prohibit any form of violent punishment against employees.

Respect individual differences, and actively attract, develop, and retain diverse employees.

Build a working environment of mutual respect, free from harassment and discrimination, with reference to international standards.

#### Human Rights Policy of Tongwei

In 2024,

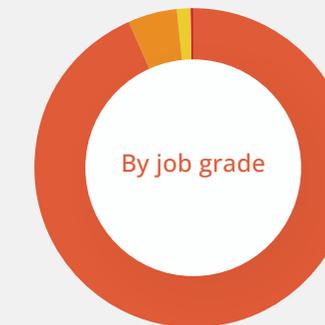
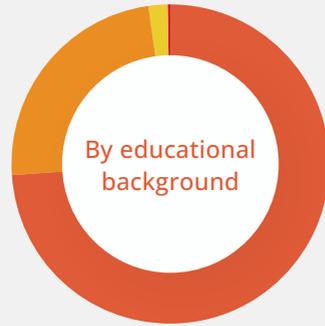
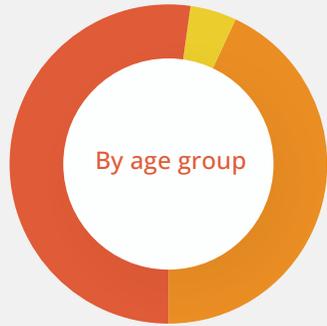
Tongwei's labor contract signing rate

100%

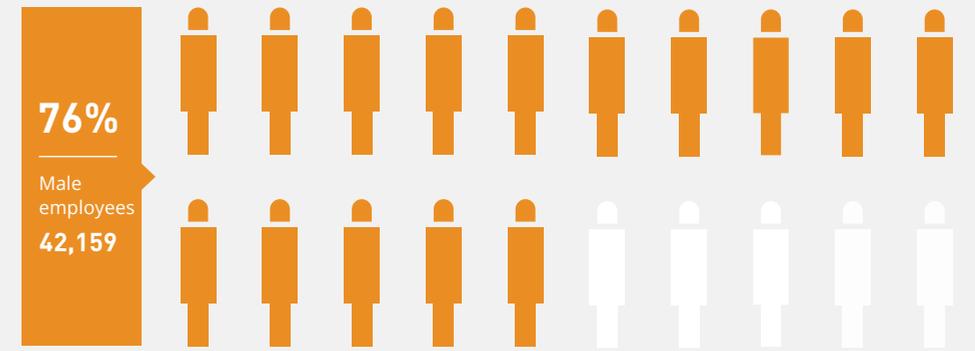
There were no incidents such as the employment of child labor, forced labor, workplace harassment, or discrimination.

## ◆ Employee Overview

During the reporting period, Tongwei has **55,724** employees worldwide.



### By gender



# Inclusion and Diversity



As a signatory to the *Women's Empowerment Principles (WEPs)*, Tongwei promotes diversity and equality in the workplace environment. It upholds and respects the human rights and legitimate rights and interests of every employee. Tongwei particularly focuses on safeguarding the rights and interests of female employees and vulnerable groups, ensuring that employees can receive fair compensation. It provides exclusive benefits and career development support for female employees, ensuring that every employee can realize their own value and achieve career development in an environment of respect and support.

## ◆ Women's Rights and Benefits Protection

Tongwei strictly complies with relevant national laws and regulations, set up the *Regulations for the Protection of Female Workers and Minors*, and clearly prohibits all departments from refusing to hire, dismissing female employees, or reducing their salary and benefits on the grounds of marriage, pregnancy, childbirth, breastfeeding, etc. In the aspects of employee grading, promotion, salary adjustment, and other links, the company firmly eliminates any form of gender discrimination, and always adheres to the principle of "valuing the capable ones, replacing the mediocre ones, and dismissing the incapable ones", ensuring that female employees enjoy fair compensation and career development opportunities.

The company attaches great importance to the protection of the health and rights of female employees. *The Management Measures for Attendance and Leave* clearly stipulate that female employees are entitled to paid prenatal check-up leave, maternity leave, and breastfeeding leave. In the company's annual physical examination plan, special physical examination items for women are set up to provide targeted health examination services for female employees. A mother and baby room is established in the company's rest area to help pregnant employees quickly return to the workplace, and the company is committed to creating a more humanized and caring working environment for female employees.

In 2024, as a global signatory corporate member of *UN Women's Empowerment Principles (WEPS)*, which supports and upholds women's access to reasonable and equal rights in the workplace, Tongwei will further strengthen the company's gender equality practices in the future, deepen the company's internal policies on gender equality, and actively publicize and promote the concept of gender equality through a variety of methods and channels.

## ◆ Caring for Vulnerable Groups

The Company attaches great importance to the employment placement of people with disabilities and is committed to ensuring the equal employment rights of employees with disabilities. Through measures such as connecting with subdistricts, disabled persons' federations, and internal employee referrals, the Company provides employment opportunities for employees with disabilities, and offers training and career development support to help them improve their own abilities and better integrate into the social group. During the reporting period, there were 469 employees with disabilities and 3,078 employees from ethnic minorities in Tongwei.

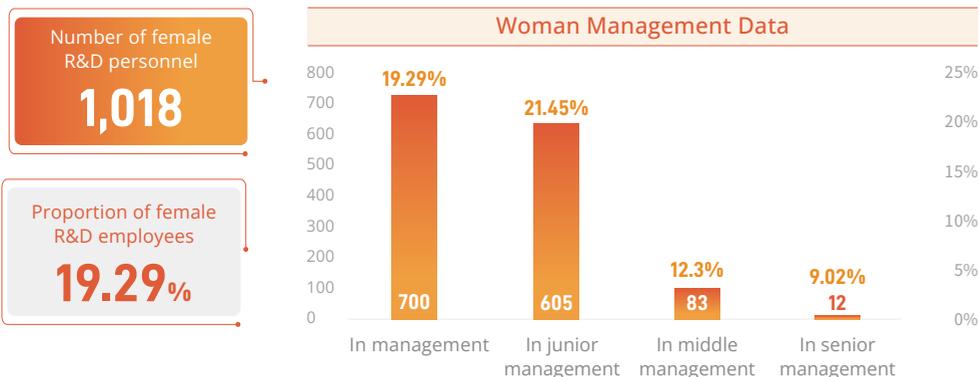


◀ Distribution of Benefits to Female Employee of Tongwei



▶ Beauty Salon Activity of Tongwei

### ◆ Company's Diversity Overview



## Remuneration and Benefits

### ◆ Compensation Management

Tongwei continues to establish and improve a scientific employee compensation management system. We have formulated *Salary Management Measures* and made it public to all employees, and carried out internal compensation management accordingly. We strictly abide by the laws and regulations of the operation location, provide employees with more competitive and satisfactory salaries and benefits, and ensure that the starting salary and reward standards of employees are not affected by factors such as gender, religion, or marital status. In terms of compensation, the Company fully considers the economic level and living costs of the location where employees are located, and combines the inflation rate and economic changes to scientifically calculate the decent living wage standard required by employees, so as to better meet the basic living needs of employees.



Employee Compensation System of Tongwei

### ◆ Benefits Protection

Tongwei provides all employees with comprehensive welfare protection, including compensation benefits and non-compensation protection measures (statutory social welfare, Tongwei-exclusive welfare, employee mutual assistance projects, employee care projects, etc.), comprehensively improving employees' job satisfaction and happiness. During the reporting period, Tongwei ensured that all employees were covered by 100% social security contributions.

#### Statutory Social Welfare

- **Paid leave:** statutory holidays, annual leave, sick leave, marriage leave, maternity leave, breastfeeding leave, etc.
- **Five social insurances and one housing fund:** medical insurance, pension insurance, unemployment insurance, work-related injury insurance and maternity insurance, plus a housing provident fund
- **Labor protection:** occupational health check, high-temperature subsidy

#### Tongwei-exclusive Welfare

- **Life care amenities:** welfare canteen, refreshments, personalized uniforms, holiday and care gifts, employee care and mutual assistance fund, and retirement support, etc.
- **Family visit benefits:** family visit vacation, travel expense reimbursement, etc.
- **Health protection:** health checkups, insurance against accidental injury, etc.
- **Loyal employee rewards:** trophies and commemorative bonuses for employees who have completed 10 years of continuous service.
- **Incentive perks:** opportunities for studying abroad, travel, development training, etc.

Employee Welfare System of Tongwei

### ◆ Employee stock ownership incentives

In order to better attract, motivate, and retain outstanding talents, Tongwei has implemented an employee stock ownership plan. By the end of 2024, the employee stock ownership plans of each period of the Company held a total of **175,778,505** shares of the Company's stock, accounting for **3.90%** of the Company's total share capital.

# Employee Care and Communication

Tongwei is committed to building a warm and inclusive working environment. Through a series of employee care and mutual assistance projects, it encourages employees to achieve a harmonious balance between work and life. The Company respects employees' rights to freedom of association and freedom of collective bargaining, establishes smooth employee communication channels and a sound employee appeal system, and ensures that the voice of every employee can be seriously heard.

## Care for Employees

Tongwei practices the concept of "happy work, healthy life", establishes an employee care and mutual assistance fund, actively organizes a variety of cultural and sports activities, pays close attention to employees' mental health, and helps employees achieve a balance between work and life.

In 2024, Tongwei Solar (Jintang) Co., Ltd. was shortlisted for the national typical cases of building family-friendly workplaces, in recognition of its excellent practice in building family-friendly workplaces and constructing harmonious and stable labor relations.

### Employee Mutual Assistance Project

- The Company establishes an employee care and mutual assistance fund, and employees join the fund on a voluntary basis.
- The use of the fund is based on the purpose of "mutual assistance", and the fund is used for subsidizing the medical expenses of employees and their spouses, parents, and children, congratulatory gifts for employees' children who are admitted to universities, and condolences.

### Employee Care Project

- Sports competitions: badminton competitions, basketball competitions, etc.
- Team building activities: fun sports meetings, collective birthday parties, family parent-child days, festival-themed activities, cultural theme months, etc.
- Employee interest groups: badminton, yoga, dessert interest groups, etc.
- Mental health care project: The Company establishes an "Emotional Stress Relief Cabin". Through regular mental health activities such as sand table games, on-site lectures, online remote lectures, one-on-one psychological counseling, interactive lectures, and health consultations, it relieves employees' workplace pressure and improves their ability to manage physical and mental health.

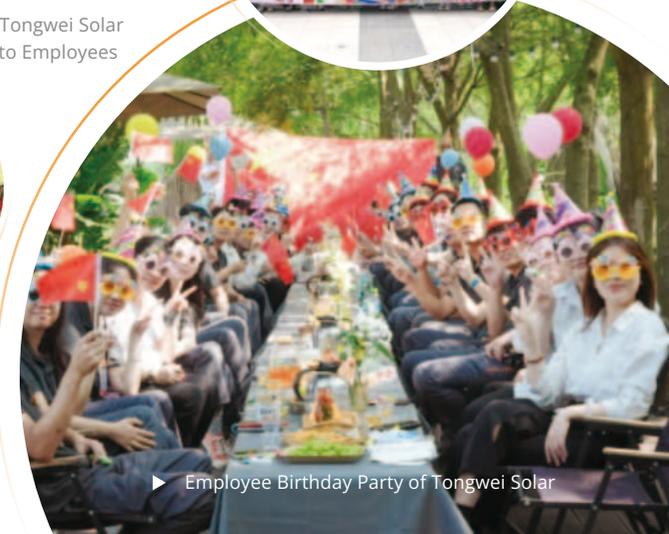
▼ Daily Welfare Distribution of Tongwei Solar



▼ Family Open Day Activity of Yongxiang



▼ The Labor Union of Tongwei Solar Gives Milk and Care to Employees



▶ Employee Birthday Party of Tongwei Solar

## ◆ Employee Care and Mutual Assistance Fund

The employee care and mutual assistance fund of Tongwei was established in 2007. It always adheres to the purpose of mutual assistance to provide practical help for employees and their families. The sources of the fund mainly include allocations from trade union funds and mutual assistance funds voluntarily paid by employees. When employees encounter major illnesses or disasters, the fund will provide financial support to help them overcome difficulties.

In order to standardize the use and management of the fund and enhance transparency and public credibility, the trade union of Tongwei formulated the *Management Measures for Employee Care and Mutual Assistance Fund* in 2024 to regulate the fundraising, use, and management of the fund.

| In 2024,

Members received employee care

**203**

Mutual assistance funds on a cumulative basis  
Care funds allocated

RMB **73.16**

Members received care

**111** person-time

Fare funds allocated for members

RMB **391,000**

Family members of fund members who received care

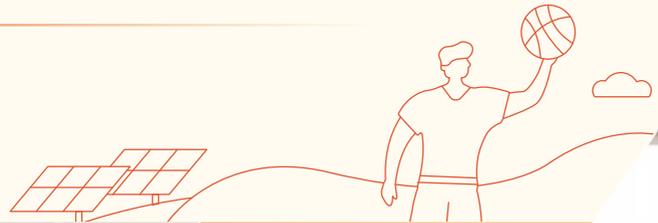
**92** person-time

Care funds allocated for family members of fund members

RMB **340,600**



# Colorful Employee Cultural and Sports Activities



▼ Badminton League of Tongwei



Tongwei Solar's Basketball Competition

◀ Tongwei Group Organized the First Employee Sports Meeting



◀ Fitness Club Activity



◀ Tug-of-war Competition of Tongwei Solar



## Democratic Communication

Tongwei attaches great importance to employees' democratic rights by establishing smooth employee communication channels, regularly collecting employees' opinions and suggestions, and upholding employees' rights to information, participation, and oversight. The Company also regularly holds corporate culture salon activities, in which the management participates and listens to the opinions and suggestions of grassroots employees, guides employees to express their demands rationally, and promptly handles labor disputes and labor disputes.

In 2024, the Company formulated *The Management System of the Trade Union Committee*, and established an audit committee for funds and a labor law supervision committee. We also continuously improved the organizational structure of the trade union, and constructed a complete management system. The Company further specified that the mediation of labor disputes must be jointly participated by three parties of representatives, namely employee representatives, employer representatives, and trade union representatives, giving full play to the functions of democratic consultation and labor dispute mediation of the trade union.

### ◆ Proposing Suggestions

The Company has developed *Employee Suggestions and Complaints Management Measures*. The Company has established a democratic management committee and a dedicated mailbox for receiving suggestions and feedback, implemented a democratic management committee, and effectively screened, fed back, adopted, publicized, and rewarded all suggestions and advice, fully protecting employees' rights to participate in the Company's management and stimulating employees' enthusiasm. At the same time, the Company sets up suggestion boxes in office places, production places, etc., to increase the accessibility of employees to feedback channels.

Tongwei mailbox for receiving suggestions: [TWGFJYXC@TONGWEI.COM](mailto:TWGFJYXC@TONGWEI.COM)



Employee Symposium Held by Tongwei



Team Building Activity Held by the Trade Union Committee of Tongwei

### Case | Tongwei holds an employee representative conference to promote the process of corporate democratic management

On March 11, 2024, the First Session of the First Workers' Congress and the Second Session of the First Trade Union Members' Congress of Tongwei were successfully held in Tongwei International Center. This meeting aims to better protect employees' legitimate rights and interests, enhance employees' sense of belonging and satisfaction, and promote the harmonious and stable development of the Company.

During the preparatory meeting of the Workers' Congress, the congress strictly followed the procedures to review and pass the report on the qualification examination of employees representatives; reviewed and voted on the *Rules for the Implementation of the Workers' Congress*, the list of members of the presidium of the Workers' Congress, and the list of members of the joint meeting of the groups of the Workers' Congress.

In accordance with the requirements of the *Standards for Workers' Congress*, the congress reviewed and voted on the list of members of three special groups of the Workers' Congress, namely the proposal review group, the production and operation inspection group, and the living welfare inspection group; reviewed and passed 7 relevant system documents of the Human Resources Department; 3 representatives were elected for the review of the collective labor contract.



Workers' Congress Held by Tongwei

In 2024,

Held Workers' Congress

1 time

Employee trade union coverage rate

100%

Collective contract signing rate

100%

## Employee Complaint

Tongwei attaches great importance to employees' rights to complain and report. The company has formulated *Employee Suggestions and Complaint Management Measures*. It specifies the applicable scope of the employee complaint mechanism, the diversified channels for employee appeals, the standardized process of employee complaints, etc.

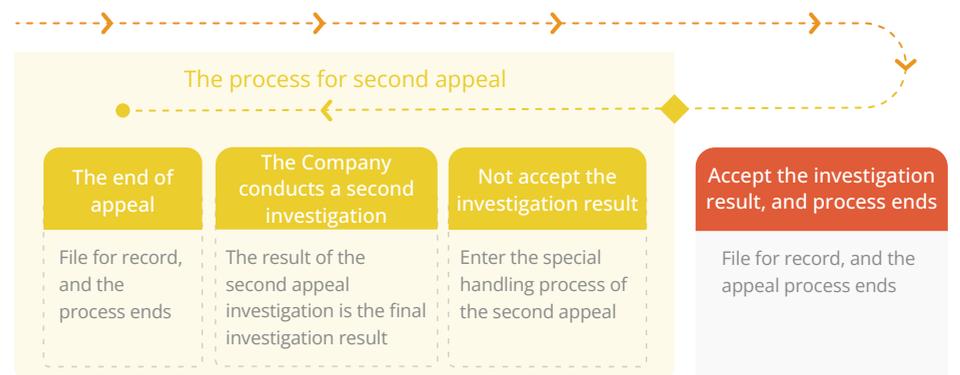
The employee complaint mechanism applies to all Tongwei employees. Various channels are available for lodging complaints, including but not limited to telephone, official account, email, and suggestion box. The Company promises to strictly keep the appellant and their information confidential, and promptly carry out verification and investigation work to ensure that employees' legitimate rights and interests are protected.

## Employee Satisfaction

Tongwei regularly conducts a satisfaction survey covering all employees every year, and the survey is distributed to all employees in the form of an anonymous electronic questionnaire. The survey content covers multiple dimensions such as the current development situation of the company, managers' support, employee training and growth, team cooperation, employee retention, occupational health and safety, etc., to comprehensively understand the satisfaction of employees. By analyzing employees' feedback, the Company formulates targeted improvement plans, continuously improves its management and service capabilities for employees, and enhances employees' sense of belonging and loyalty.

28. According to the satisfaction evaluation rules, employees who have been employed for less than 3 months are not within the scope of the satisfaction evaluation.

### Communication between receivers and whistleblowers in a single line during an investigation



The information related to the case is only known to the department head and the person in charge of the investigation, and the identity of the whistleblower and the case information are strictly confidential

Standardized Employee Complaint Process of Tongwei

In 2024,

Employee satisfaction survey coverage

95%<sup>28</sup>

Overall employee satisfaction rate

95%



# Talent Attraction and Development

The year 2024 witnessed unprecedented leaps in technological innovation and AI evolution, leading to a comprehensive reshaping of professional trajectories worldwide. The *ILO World Employment and Social Outlook: Trends 2025* pointed out that the green economy is becoming the core engine of high-quality employment growth, and the number of jobs in renewable energy has exceeded the threshold of

**16.2** million



As a global leader in the renewable energy and agriculture industries, Tongwei continues to build a diversified talent cultivation system and smooth career development channels, providing employees with all-round career development opportunities and clear career planning. The Company continuously optimizes the performance management and commendation incentive mechanism, empowers employees' career development, helps employees quickly integrate into the Company, be competent for their positions, and realizes the shared growth of talent capacity building and corporate development.

## Talent Attraction

Tongwei prioritizes evaluations that focus on abilities, performance, and character, and we employ a merit-based approach in personnel appointments, disregarding seniority. We adhere to the recruitment principles of "openness, fairness, and impartiality", and formulate an annual talent recruitment plan according to the overall strategic plan and business development needs. The Company introduces outstanding fresh graduates through deepening school-company cooperation, creates a multi-level and diversified talent team, and provides a solid talent guarantee for the Company's sustainable development.

### ◆ Talent Recruitment Principles and Strategy

The Company continuously strengthens the planning of talent introduction. According to the *Recruitment and Hiring Management Measures*, we formulate a precise employee recruitment plan every year in combination with business development needs and changes in the talent market, optimize the talent selection mechanism, and deepen the construction of the employee team. In the implementation of the recruitment plan, the employing department and the human resources department closely cooperate in the recruitment work, dynamically adjust the demand, and continuously maintain the talent pool. We formulate scientific talent management strategies and recruitment plans to provide a solid talent guarantee for the development of the Company.

#### Principle of strategic orientation

Formulate the recruitment plan based on the overall strategic planning and business objectives.

#### Principle of internal recruitment before external recruitment

Adhere to the priority allocation of internal human resources, particularly for key positions, where internal candidates are given preference under equal conditions.

#### Principle of matching person and job

Clearly define job requirements and objectives, and effectively allocate human resources.

#### Principle of openness and fairness

Follow the principle of equal competition, maintain an open and transparent recruitment process and results, and select the most qualified candidates.

#### Principle of streamlining and efficiency

Rationally use recruitment channels, and implement a concise and efficient recruitment process.



## ◆ Multi-Channel Talent Attraction

The Company employs various recruitment methods including campus recruitment, channels, internal referrals, and other strategies to attract outstanding talents. This three-dimensional recruitment system not only ensures a high degree of matching and quality in talent supply but also establishes a comprehensive talent attraction mechanism for the Company.

In 2024, Tongwei accelerated the upgrading of its talent structure in the technical field. By deepening cooperation with universities, the company carried out 23 special recruitment sessions and introduced 64 master's and doctoral degree holders. By the end of 2024, the number of master's and doctoral employees in the Company reached 1,175, representing a year-on-year increase of 23.4%. The Company plans to continuously increase the proportion of master's and doctoral employees to further enhance the overall quality of the Company's team.

## Talent Development

Tongwei has always regarded talent cultivation as the core strategy of enterprise development. Through systematic talent cultivation programs, it provides customized growth pathways for employees at different stages, and is committed to building a rich, diverse, and complementary talent reserve system for the Company.

## ◆ Talent Development System

Tongwei highly values talent development. It has formulated a series of management systems, such as the *Employee Training Management System*, *Training and Development Management Measures*, *Employee Self-development Training Management Measures*, and *Internal Lecturer and Course Development Management Measures*, and has established an all-round, diversified, and hierarchical talent cultivation system for all employees, helping employees continuously improve their professional skills and broaden their career development paths.

In 2024,

employees received training

**56,542**

training sessions were offered

**75,945**

Average training duration per employee

**82.03** hours

Tongwei Talent training system	Photovoltaic Sector - Five Projects					Agriculture Sector - Five Programs				
	Sailing Project	Turn-around Project	Climbing Project	Elite Project	Leader Project	Seedling Program	Spark Program	Rising-star Program	Sailing Program	Excellence Program
Targets	Employees from campus recruitment Management Trainees Top talent	New employees from social recruitment	Planning/current 1-6 grade technical talents	Reserve team and current minister/factory director	Planning and current executives	Employees from campus recruitment/Management trainees	Business backbones	Outstanding department managers	Reserve general managers	Outstanding general managers
Cultivating competence	Strengthen key business					professional knowledge and skills				
	Enhance general literacy					improve academic and professional qualifications, strengthen communication and collaboration skills				
	Cultivate management capabilities					meet job requirements, support team development, hunt for potential talents, and expand business presence				
Assessment methods	Theory test + practical assessment + online learning + presentation + comprehensive performance									
Resource sharing	E-learning + offline courses (internal instructors / external experts) + training base practice + case library									

Talent Development System of Tongwei

## ◆ Academic and Qualification Support Program

Tongwei has formulated the *Employee Self-development Training Management Measures* to encourage employees to obtain relevant professional qualification certificates and improve their academic qualifications. It specifies the reimbursement of expenses for personal academic qualification improvement and the allowance subsidies for obtaining certificates. In addition, the Company provides different types of resource support to all employees<sup>29</sup> according to different job levels to help employees with their self-development and growth.



Employee Academic and Qualification Support Program of Tongwei

29. All employees include all employees of Tongwei and its subsidiaries (including contract workers and part-time workers); in 2024, there were no part-time workers in Tongwei.

## ◆ Management Trainees Program

Tongwei attaches great importance to the cultivation and development of new hires and campus recruits. Through various methods such as the mentor/apprentice system, customized course training, online learning platforms, and case compilation, the Company provides new employees with comprehensive training covering corporate culture, company systems, and job-specific professional knowledge, helping them quickly adapt to their positions and integrate into the team.

The Company has established the "Sailing Project" in the PV sector and the "Seedling Program" in the agricultural and animal husbandry sector. Aiming at campus recruits, management trainees, and outstanding students, it integrates various online and offline training resources to carry out training in professional business skills, comprehensive qualities, and management capabilities, and is committed to cultivating potential young talents.

### ○ PV Sector - Sailing Project

In the PV sector, the Company began to implement the Sailing Project in 2016 and added the Top Talent Project in 2022. The Company has formulated and implemented the *Top Talent Development Management Measures*. Every year, a group of more potential "top talents" are selected from the sailing students, and a 5-year systematic development plan is customized. This program improves the comprehensive abilities of high-potential talents through various methods such as cross-departmental job rotation, practical experience, management empowerment, leadership improvement, and benchmarking learning. It is designed to cultivate compound middle-level reserve talents with both professional qualities and management capabilities.

#### College-Enterprise Order Class

Deploying internal lecturers to educational institutions for teaching, facilitating student internships at the Company's facilities, and providing special scholarships to establish a direct pathway for students transitioning from school to Tongwei.



#### Sailing Project

The Sailing Program targets fresh university graduates, offering a training regimen that includes 15 days of intensive training, followed by 2.5 months of mentor-apprentice coaching and a subsequent 3-month job competency training phase. Participants undergo rigorous training to develop into key personnel within 1-3 years.



#### Top Talent Program

Top Talent Program identifies outstanding students from the latest cohort, nurturing them into future digital factory managers through a comprehensive 5-year program that encompasses guidance from plant managers, practical work experience, and holistic learning opportunities.



Tongwei Carries Out Sailing Project Training

Management Trainee Development Pathway for Tongwei's PV Sector

### ○ Agricultural and Animal Husbandry Sector — Seedling Program

In the agricultural and animal husbandry sector, the company has launched a one-year "Seedling Program" for management trainees, fresh graduates, and interns. The training covers three developmental phases: introduction to company culture, practical job experience, and role transformation, with the primary goal of nurturing young talents with ethical integrity and competence for the enterprise.



"Spark Program" Summer Camp Activity for Fresh Graduates Carried Out by Tongwei Agricultural Development

### ○ Job Development Training

For technical talents and core talents in key positions, Tongwei has established the "Climbing Project" and the "Spark Program" based on the "Five Projects" and the "Five Programs". By integrating various training resources and assessment methods, it provides systematic training for technical talents in the PV sector and core talents in key positions in the agricultural and animal husbandry sector, helping them improve their professional skills and comprehensive qualities, and laying a solid talent foundation for the Company's technological innovation and business development.



Tongwei Solar Technology Carries Out Capability Modeling Workshop Activity



Tongwei Solar Technology's Capability Modelling Workshop Group Brainstorming

### ◆ Leadership Training

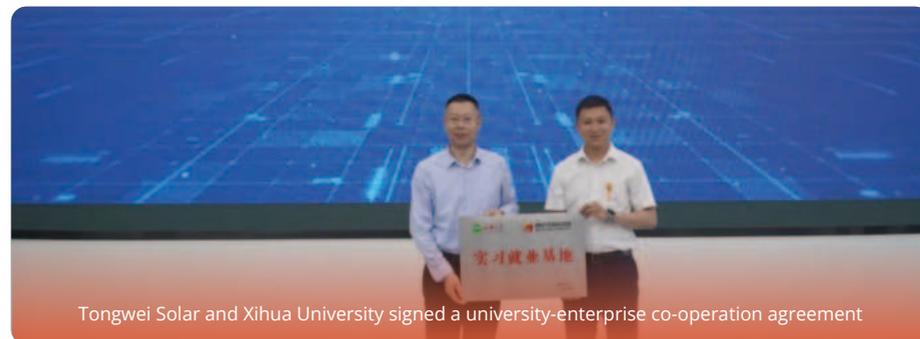
Based on the "Five Projects" and the "Five Programs", Tongwei has established the "Elite Project" and the "Leader Project" in the PV sector, as well as the "Rising-star Program", the "Sailing Program", and the "Top Talent Program" in the agricultural and animal husbandry sector for all management talents at different levels, including preparatory and current department heads, factory directors, senior executives, excellent department managers, reserve general managers, and excellent general managers. These projects and programs aim to build a high-quality management talent echelon. Through a systematic development system, they carefully cultivate reserve leaders, providing solid management talent support for the sustainable development of the Company.

### ◆ Deepened College-Enterprise Cooperation

Tongwei has forged profound partnerships with esteemed academic institutions such as Fudan University, Sichuan Agricultural University, Huazhong Agricultural University, Jilin Agricultural University, and other premier domestic colleges and research organizations. These collaborations extend across technology research, talent cultivation, skills training, and employment recommendations. Through initiatives like the "Tongwei Class" "Tongwei Elite Training Camp," and "Vocational Training Camp," a strategic cooperation framework has been established at three key educational levels: Doctor's and Master's, Bachelor's, vocational and technical programs, to deepen industry-university-research collaboration. This cooperation system not only provides students with a platform to transform theoretical knowledge into practical abilities, but also supplies a large number of high-quality professional talents for the Company.



Tongwei Agriculture Development Management Talent Training



Tongwei Solar and Xihua University signed a university-enterprise co-operation agreement



Youth Talent Cultivation Program of Tongwei



"Double-talented Teacher" Ability Improvement Training Carried Out by Tongwei Agricultural Development

# Talent Development

Tongwei prioritizes the retention and promotion of talents. It has formulated management systems such as the *Employee Promotion Management Measures*, the *Career Development Channel Management System*, the *Cadre Management System*, and the *Internal Competitive Recruitment Management Measures* to provide each employee with a clear career development path and smooth promotion channels. The Company has also established a complete performance management and commendation incentive mechanism, and continuously optimizes the internal job competition and job rotation mechanisms to ensure that employees can obtain fair development opportunities based on their abilities and performance.

## ◆ Career Development and Promotion

To align with both job requirements and employees' career aspirations, Tongwei has established a structured career development framework across six specialized tracks: Management, R&D, Technology, Function, Marketing, and Operations. The Company adopts a dual-path model integrating horizontal mobility and vertical progression, ensuring transparent, equitable, and dynamic growth opportunities for all employees. This approach empowers individuals to advance within their chosen expertise, fostering professional fulfillment and organizational excellence.



Employee Development Model of Tongwei

## ◆ Internal Competitive Promotion and Job Transfer

Tongwei has formulated the *Internal Job Competition Management*, and established a standardized and transparent internal job competition process and a fair and just assessment mechanism. This mechanism not only helps to motivate employees to keep mastering business knowledge, and improving their professional skills and work performance, but also extends their career development paths, providing solid human resources support for the development of the Company's operations.

## ◆ Performance Appraisal and Management

Tongwei has formulated the *Performance Management Measures*. Through the establishment of performance management mechanisms such as indicator formulation, assessment implementation methods, result feedback, and complaints, it regularly conducts quarterly and annual assessments of employees, providing a basis and support for employees' salary distribution, talent promotion, and cultivation. Employees can verify their performance appraisal results by confirming through the online system or signing offline. If they have objections to the performance appraisal results, they can file a complaint by submitting through the online system or giving feedback level by level offline.

## ◆ Talent Commendation and Incentive

Tongwei has formulated the *Employee Reward and Punishment Management System*, and specified the basis, standards, and processes for rewards and punishments to ensure the openness, fairness, and justice of the reward and punishment procedures. It stipulates the reward situations for employees with outstanding performance and sets corresponding reward and commendation standards. For employees who receive rewards, the relevant reward information will be recorded in the personnel files and will be given priority in employment and promotion.

including the annual performance review of core senior executives, recognition of outstanding contributors in component marketing, mid-year assessments for managerial employee in the PV business division, organizational climate research within the overseas marketing team, and competency evaluations for high-potential technical talent reserves. These initiatives engaged a total of 1,000 participants, delivering robust insights to enhance precision in talent assessment and selection across the organization. The Company has proactively pursued participation in prestigious talent subsidy programs, including the "Chengdu Talent Introduction Plan" and "Tianfu Emei Plan." We were successfully selected as one of Sichuan Province's first pilot enterprises authorized to conduct independent evaluations for senior professional titles. These achievements have significantly expanded employee career development opportunities while substantially enhancing the Company's attractiveness to talents and competitive advantage in the market.

### Case | Tongwei wins multiple May 1 labor honors at all levels

On May 1 Labor Day in 2024, employees and collectives of Tongwei won May 1 Labor honors at all levels. Niu Xiaoyu, an employee of Inner Mongolia Tongwei, won the "National May 1 Labor Medal" and received a commendation in Beijing. During the 7 years in the Company, Niu Xiaoyu has adhered to the spirit of model workers, the spirit of labor, and the spirit of craftsmanship, and has successively won many honors such as the company's "Meritorious Employee," "Baotou Craftsman," and "May 1 Labor Medal in Inner Mongolia Autonomous Region," setting a benchmark for the Company's employees with actions.



Niu Xiaoyu, an Employee of Inner Mongolia Tongwei, Won the "National May 1 Labor Medal" and Received a Commendation in Beijing.

Personnel/collective commended	Content of commendation
<ul style="list-style-type: none"> <li>• Li Bin, Vice President of Tongwei and General Manager of Yongxiang</li> <li>• Niu Xiaoyu, an employee of Tongwei Inner Mongolia</li> </ul>	<p><b>National May 1 Labor Medal</b></p>
<ul style="list-style-type: none"> <li>• Yunnan Tongwei High-purity Silicon</li> </ul>	<p><b>National May 1 Labor Award</b></p>
<ul style="list-style-type: none"> <li>• Li Ying, an employee of Yongxiang PV Technology</li> </ul>	<p>May 1 Labor Medal of Sichuan Province</p>
<ul style="list-style-type: none"> <li>• Zhou Tao, Deputy Minister of the Production Department of Yongxiang New Energy</li> </ul>	<p>May 1 Labor Medal of Leshan City</p>
<ul style="list-style-type: none"> <li>• Hu Fuqing, an employee of Yongxiang Polysilicon</li> </ul>	<p>May 1 Labor Medal of Kunlun District, Baotou</p>
<ul style="list-style-type: none"> <li>• Tian Zhifei, Deputy Minister of the Production Department of Tongwei Inner Mongolia</li> </ul>	<p>"Wutongqiao Craftsman" in Wutongqiao District</p>
<ul style="list-style-type: none"> <li>• Huang Qin, an employee of Yongxiang New Energy</li> <li>• Cao Chao, an employee of Yongxiang Energy Technology</li> </ul>	<p>May 1 Labor Award of Leshan City</p>
<ul style="list-style-type: none"> <li>• Yongxiang PV Technology</li> <li>• Yongxiang Energy Technology</li> </ul>	<p>Worker Pioneer of Kunlun District, Baotou</p>
<ul style="list-style-type: none"> <li>• The second distillation section of Tongwei Inner Mongolia</li> </ul>	

# Occupational Health & Safety

The multi-dimensional challenges faced by the resilience of the Company's operations have significantly increased the occupational health risks and security cost pressures of employees. The investigation report of the International SOS organization reveals that :

**78 %**

of surveyed enterprises who believe that job burnout and work pressure will lead to a structural upward trend in labor health and safety costs.



Tongwei has always regarded employees' occupational health and work safety as the cornerstone of enterprise development. The Company is committed to continuously improving the safety management system, strengthening work safety management, improving employees' safety awareness and occupational health literacy, and striving to create a safe and healthy working environment.

## Safety Management System

Tongwei strictly complies with the *Production Safety Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, the *Administrative Measures for Emergency Response Plans for Work Safety Accidents*, and other relevant national laws and regulations, as well as those of the regions where it operates. The Company has formulated systems such as the *Workplace Safety Responsibility Assessment System*, *Workplace Safety Reward and Punishment System*, the *Safety Training and Education Management System*, and the *Safety Investment Management System*. Through measures including safety risk management, hazard identification and remediation, occupational health management, emergency incident management, and safety education and training, the Company has established an efficient occupational health and safety management system, providing a solid foundation for sustainable corporate development and the health and safety of its employees.



Occupational Health and Safety Management System of Tongwei

| In 2024, all manufacturing facilities within the Company's PV sector obtained **ISO 45001** Occupational Health and Safety Management System certification.

Number of internal or external audits of the occupational health and safety management system conducted to ensure effective operation of the system: at least

**once** a year

## ◆ Occupational Health & Safety Goal

Tongwei adheres to the safety management policy of "safety first, prevention first, people-oriented, and comprehensive management", and sets safety management objectives of "zero accidents," "zero work-related injuries," and "zero occupational diseases". Each subsidiary and affiliated company of Tongwei formulates work safety objectives that meet the management requirements according to the safety objectives of the company headquarters and in combination with the completion of the previous year's objectives. From the general manager to front-line grassroots employees of each subsidiary and affiliated company, work safety objective responsibility letters are signed at each level to clarify the safety responsibilities of personnel at all levels. Meanwhile, continuous supervision, review, and evaluation are carried out during the implementation process, so as to continuously improve the Company's safety management efficiency.

### Occupational Health and Safety Objectives and Completion Status of Tongwei in 2024

#### Occupational health and safety targets in 2024

#### Occupational health and safety targets completion in 2024

The incidence rate of major safety and environmental protection accidents and occupational diseases: **0**

Completed

The injury rate per thousand people: **below 1%**

Completed

Coverage rate of safety training: **100%**

Completed

Completion rate of safety audits: **100%**

Completed

Safety hazard rectification rate: **100%**

Completed

To ensure the achievement of occupational health and safety objectives, the Company has formulated the *EHS Incentive Plan*, the *ERT Personnel Assessment and Incentive Plan*, and the *Safety Officer Empowerment Incentive Plan*, established and improved the work safety incentive and restraint mechanism, and set up two incentive plans: employee safety behavior incentive and group safety improvement incentive. Specifically, the employee safety behavior incentive plan adds the empowerment incentive projects for part-time safety officers and ERT personnel on the basis of the original safety sunshine coins. The group safety improvement incentive plan adds incentive projects such as safety TQM improvement, department EHS evaluation, excellent work safety teams, and excellent work safety contractors.

### Million Working Hours Incentive



Each company sets safety performance assessment standards, which are incorporated into the company's pay ratio accounting, and conducts monthly safety assessments and public announcements based on the standards.

### Safety Risk Deposit



Establish an incentive mechanism for safety risk deposits; if there are no safety abnormal accidents in a month, rewards will be given according to multiples of the principal proportion.

### Incentive for Hazard Scrutiny and Management



Employees are encouraged to take the initiative to conduct hidden danger investigation and risk assessments, and provide incentives based on the results.

### Safety Evaluation



Commend outstanding employees and collectives through safety evaluation activities, and implement rewards in accordance with relevant systems.

Work Safety Incentive Mechanism of Tongwei

The Company has also established and improved the safety performance management mechanism, and continuously optimized and updated the assessment standards and methods of safety performance. It continuously improved the safety performance assessment management to play a positive role of safety performance assessment and promote the sustainable development of the Company's occupational health and safety system.

### Monthly appraisal

Each company sets safety performance assessment standards, incorporates them into the calculation of the Company's salary proportion, and conducts safety assessments and public announcements according to the standards every month.



### Ranking of professional lines

The Safety Committee Office of the Company's Headquarters checks the implementation of the management systems and standards of each company, and conducts a safety professional line evaluation of the safety responsible persons.



### Annual debriefing

The Company conducts an annual professional debriefing evaluation, and rewards employees with promotions or salary increases for those who rank high.



### Safety performance analysis and improvement

Analyze and sort out the problems existing in the safety performance assessment, and adopt a step-by-step approach to gradually solve the existing safety problems.



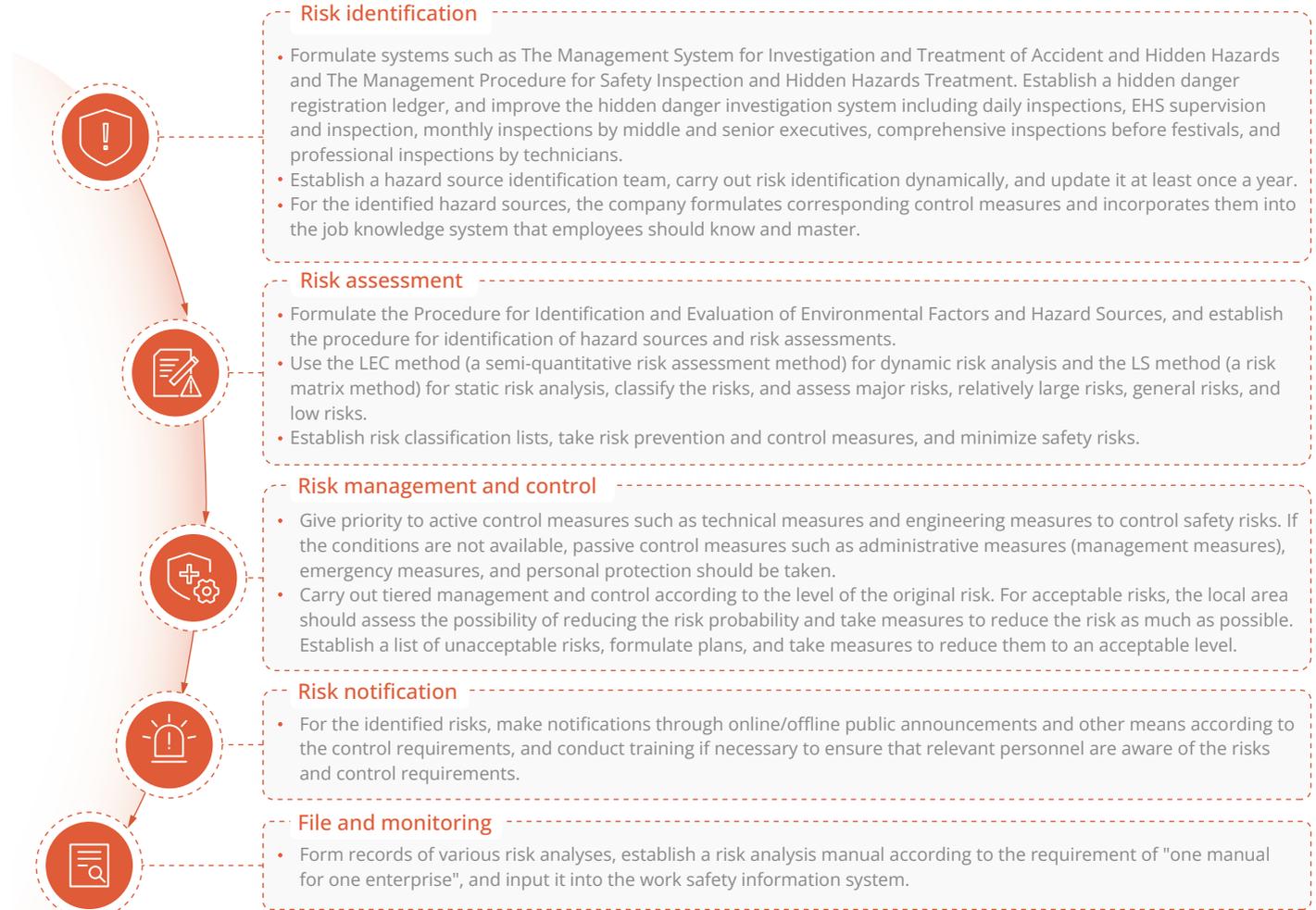
Work Safety Incentive Measures of Tongwei

# Security Risk Management

Tongwei integrates work safety risk management into all aspects of production and operation. The Company is committed to building a comprehensive safety risk management system and emergency management mechanism, ensuring the company's compliance in work safety, effectively protecting the health and safety of employees, and promoting the realization of the Company's occupational health and safety objectives.

## ◆ Security Risk Management

The Company has constructed a complete safety risk management process, covering five key links of "risk identification, risk assessment, risk control, risk notification, and filing and monitoring". By doing so, it has formed a systematic closed-loop management process to ensure the whole-process control and effective response to safety risks.



Safety Risk Management Process of Tongwei

## ◆ Occupational Health & Safety Audit

Tongwei regularly conducts audits of work safety and occupational health every year. Through the combination of internal self-inspection and external supervision, it continuously strengthens and improves the construction of the work safety system to ensure the life safety and physical health of employees.

## ◆ Safety Emergency Management

Tongwei has formulated the *Emergency Response Plan for Production Safety Accidents* and the *Emergency Response Plan for Environmental Emergencies*. It has also established a complete emergency management process, continuously improved the emergency management mechanism, prepared various emergency response plans, regularly carried out emergency drills and emergency capability assessments, and strengthened the construction of the Company's emergency rescue capabilities.

### Organization of emergency work



- Set up an emergency rescue leading group according to the needs of emergency rescue
- Set up full-time or part-time emergency rescue teams and carry out regular training
- Establish an emergency duty system and implement 24-hour emergency duty
- Carry out tiered management of the emergency command system, clarify the responsibilities of emergency commanders at all levels, and be responsible for the on-site emergency response command and coordination



### Emergency response plan

- Prepare an emergency plan according to the results of the risk assessment, and organize relevant personnel to review the plan
- Prepare on-site emergency response cards according to the content of the emergency plan for personnel to quickly respond and carry out relevant response operations on site
- Review and revise the content of the emergency plan at least once every three years



### Emergency rescue measures

- Based on the risk analysis, implement the control of emergency rescue facilities for possible accident types, special chapters of fire protection facilities, and emergency plans
- Equip with sufficient emergency rescue equipment, fire protection facilities, and equipment according to regulations
- Each local area organizes training and assessment to ensure that on-site operators are familiar with the use of protective and rescue equipment



### Emergency training and drills

- Incorporate the emergency plan into the training plan, organize the training of emergency rescue plans for employees, and evaluate and assess the trainees
- Formulate an emergency plan drill plan and carry out emergency drills regularly



### Emergency response

- After an abnormal accident occurs, the on-duty personnel reports immediately and carry out early response work
- Initiate the emergency response plan in accordance with the procedures, report information in a timely manner, and emergency response personnel handle the situation in accordance with the plan

Case | Tongwei Solar (Chengdu) organizes a comprehensive emergency drill

May 12 2024 was the 16th National Disaster Prevention and Mitigation Day. Taking this as an opportunity, Tongwei Solar (Chengdu) designated May as the "Disaster Prevention and Mitigation Month" and carried out a series of disaster prevention and mitigation activities. On May 24, the Company successfully organized a comprehensive emergency drill, aiming to improve employees' earthquake response capabilities and safety awareness through the drill.

The Safety and Environment Department of the Company formulated a detailed earthquake emergency evacuation plan and provided employees with training and guidance on earthquake emergency knowledge. During the drill, each emergency response team demonstrated a high level of coordinated combat capabilities and rapid response capabilities. The successful holding of this earthquake emergency drill not only enhanced employees' safety awareness and self-rescue and mutual rescue capabilities, but also provided a strong guarantee for the Company's work safety.



Tongwei Solar (Chengdu) Organizes a Comprehensive Emergency Drill

In 2024,

Tongwei and its subsidiaries and affiliated companies organized emergency drills

Total participants

**5,008** sessions

**80,351**

◆ Chemical Safety Management

Tongwei has formulated and improved the *Chemical Safety Management System*, the *Hazardous Chemicals Management System*, the *Safety Management System for Explosive Hazardous Chemicals Prone to Manufacture*, the *Safety Management System for Narcotic Drugs and Psychotropic Substances Prone to Manufacture*, and the *Safety Management System for Hazardous Chemicals Vehicles Entering the Factory*. It implements full-lifecycle management of hazardous chemicals to ensure compliance in the procurement, transportation, storage, use, and disposal of hazardous chemicals.

The Company regularly conducts on-the-job training for personnel working with hazardous chemicals every year to enhance the safety awareness of operators. At the same time, it strengthens emergency response drills for chemical leakage accidents to improve the emergency rescue capabilities of personnel.



Management Process of Hazardous Chemicals of Tongwei

## ◆ Contractor Safety Management

Tongwei always places work safety management at the core of enterprise operations and attaches great importance to contractor safety management. The Company has formulated systems such as the *Safety Management Regulations for Relevant Parties*. It focuses on source management, process control, and assessment management, so as to comprehensively strengthen the contractor safety management system, thereby ensuring all-round risk control from the source to the process, further improving the safety management level, and safeguarding the safety and stability of the overall operation of the Company.



Contractor Safety Management System of Tongwei

## Occupational Health Management

In accordance with relevant laws and regulations such as the *Law on the Prevention and Control of Occupational Diseases of the People's Republic of China and the Regulations on Occupational Health Management in the Workplace*, Tongwei has developed a series of internal management systems, including the *Occupational Health Management System, the Responsibility System for the Prevention and Control of Occupational Diseases, the Management System for Monitoring and Evaluating Occupational Disease Hazards, and the System for Workers' Occupational Health Guard and File Management*. The Company has established a robust occupational health management mechanism, regularly conducts awareness campaigns and training on occupational health, and provides labor protection equipment for personnel exposed to hazardous factors such as chemicals, noise, and high temperatures. For employees in roles with occupational risks, the company conducts pre-employment, on-the-job, and post-employment occupational health examinations and maintains detailed occupational health monitoring records, ensuring comprehensive protection of employees' health and safety.

Additionally, we routinely contract third-party accredited firms to monitor workplaces with potential occupational hazards, ensuring a safe and healthy work environment. During the reporting period, none of Tongwei's subsidiaries or affiliated companies exceeded the limit set by the state for occupational hazards.

### Warning and notification

- Conduct pre-employment and annual occupational health training for employees exposed to occupational disease hazards
- Inform the relevant information about occupational disease hazards in the labor contract and update it when the job position changes
- Set up and regularly inspect the warning signs of occupational disease hazards to ensure they are clear and accurate

### Management of protective equipment and facilities

- Install protective facilities such as dust and toxic gas alarms, and equip employees with first aid supplies and flushing equipment
- Establish a management ledger for protective and rescue equipment and conduct special inspections every quarter

### Training, education and publicity

- Train the Company's responsible persons, occupational health management personnel, and employees exposed to occupational disease hazards
- Carry out publicity activities during the publicity week of the Law on the Prevention and Treatment of Occupational Diseases to improve awareness of the prevention and treatment of occupational diseases.
- Organize employees to conduct occupational health examinations before taking up their posts, during their tenure, after emergencies, and when leaving their posts

### Occupational hazard monitoring and evaluation

- Establish and maintain a list of occupational disease hazard factors
- Regularly conduct detection and evaluation of occupational disease hazards
- Immediately take corresponding control measures for the hazard factors that do not meet the standards and make timely rectifications

### Occupational health record management

- Establish personal health monitoring records for employees exposed to occupational disease hazard factors
- Companies involved in exposure to occupational disease hazards need to establish occupational health records

### Occupational disease emergency and rescue

- Establish an emergency rescue plan for occupational disease hazards and incorporate it into the management of the work safety emergency rescue system
- When an occupational disease accident occurs, immediately take emergency measures and report to the safety management department

### Declaration of occupational disease hazard projects

- Units with occupational disease hazards should take the initiative to declare occupational disease hazard factors to the government authorities in charge, and declare once a year

Occupational Health Management Mechanism

| In 2024,

Tongwei's employees occupational health examinations rate

100%

## Safety Culture Development

To strengthen employees' safety awareness and improve their self-protection capabilities, Tongwei has formulated and implemented internal management systems such as the *Safety Training and Education Management System* and the *Occupational Health and Safety Training Management System*. The company regularly carries out safety education and training programs for employees, covering topics such as three-level safety training, special equipment operation, case studies of safety incidents, occupational disease prevention, and first aid. In addition, it organizes safety-themed initiatives, such as Safety and Fire Prevention Month, to continuously advance the development of a strong occupational health and safety culture and to comprehensively enhance the Company's overall safety management standards.

### Case | Tongwei Solar (Jintang) organizes a fire-fighting skills competition

To actively respond to the 33rd National Fire Prevention Month, themed "Fire Prevention for All, Life First," and to further practice the Company's safety-oriented culture of "Preventing Emergencies and Valuing Safety," Tongwei Solar (Jintang) organized a fire-fighting skills competition on November 13, 2024. The event aimed to enhance employees' fire safety awareness as well as their self-protection and emergency response capabilities. Eight representative teams of the Company participated in this skills competition.

This fire-fighting skills competition set up six obstacle links, including wearing fire-fighting suits, using SCBA (Self-Contained Breathing Apparatus), extinguishing fires with fire extinguishers, transporting the injured with stretchers, and hitting specified items with water guns. This fire-fighting skills competition not only enhanced employees' awareness and capabilities in fire safety, but also fostered a strong atmosphere of full participation in fire prevention, promoting the in-depth and effective implementation of fire safety practices in the workplace.



Tongwei Solar (Jintang) Carries Out a Fire-Fighting Skills Competition

In 2024,

Tongwei and its subsidiaries and affiliated companies carried out occupational health and safety training

**13,106** sessions

employees received the training

**64,648** participants

### Investment in Occupational Health and Safety

Tongwei has formulated the *Safety Investment Management System* to establish a sustainable mechanism for investing in workplace safety, promoting the adoption of new technologies, processes, and equipment, ensuring regular maintenance of safety equipment, strengthening the emergency response team building and training, and enhancing safety education and awareness initiatives to guarantee the effective implementation of production safety measures.

In 2024,

Tongwei's investment in occupational health and safety

**166.73** million RMB

# Social Contribution and Rural Revitalization

The global economic order is undergoing a profound transformation, as diminishing liquidity of economic factors and the accumulation of social vulnerabilities create a compounded effect. Research by the World Bank reveals that the next 25 years represent a critical window to bridge development gaps. *The Global Risks Report 2025* has also identified structural polarization and regional economic downturns as two of the top ten systemic global risks.

## The path to equitable and inclusive development remains long and challenging



Tongwei has always regarded fulfilling social responsibility as a core mission, striving to share the fruits of development with all sectors of society. The Company actively engages in various fields such as public welfare and rural revitalization, and takes concrete actions to fulfill its corporate social responsibility and promote sustainable social development.

## Social Welfare

Tongwei continues to advance its social responsibility framework, practices corporate responsibility through real action, and strives to achieve a harmonious balance between economic performance and social value.



### Case | Tongwei sponsors the Sichuan University student management consulting challenge

In June 2024, the finals of the "2024 Sichuan University Student Management Consulting Challenge" were successfully held. The event was guided by the Sichuan Provincial Department of Education and the Sichuan Provincial Teaching Steering Committee for Business Administration, and co-hosted by the Institute of Economics and Management, School of Business Administration, and School of Accounting at Southwestern University of Finance and Economics. As a key co-organizer, Tongwei provided financial support for the event in collaboration with ABC Good Society Consulting.

The competition, themed "Youth Innovation for a Sustainable ESG+ Future," aimed to enhance participants' understanding of core ESG topics through real case analysis, contributing to the development of a new generation of consulting professionals equipped with both technical skills and innovative thinking. The event attracted 106 teams and nearly 500 undergraduate and postgraduate students from over 30 universities, including Sichuan University, University of Electronic Science and Technology of China, Wuhan University, Beijing Foreign Studies University, Southwestern University of Finance and Economics, and Sichuan Agricultural University.

As a co-organizer, Tongwei not only ensured the smooth running of the event but also provided students with a valuable practical platform, promoting resource sharing and synergy between universities and enterprises to jointly advance sustainable development goals.



Tongwei Co-Organizes the Sichuan University Student Management Consulting Challenge

**Case** Tongwei New Energy volunteer team carries out the "salute to workers, care for sanitation workers" service activity

On April 28 2024, in celebration of International Labor Day, the Tongwei New Energy volunteer team organized a service activity themed "salute to workers, care for sanitation workers". During the event, volunteers expressed holiday greetings and distributed care packages, including rice and cooking oil, to sanitation workers, while reminding them to balance work and rest. This heartfelt gesture reflected the Company's respect and care.

Through this initiative, the volunteer team not only conveyed gratitude and appreciation to sanitation workers, but also encouraged employees to be more attentive to this vital yet often overlooked group. Tongwei New Energy (Jintang) will continue fulfilling its social responsibilities by encouraging more young employees to participate in volunteer work, raising environmental awareness and respect for sanitation work, and contributing to the sustainable development of cities.



Tongwei New Energy Carries Out "Salute to Workers, Care for Sanitation Workers" Service Activity

**Case** The Party branch of Tongwei Solar (Pengshan) organizes an environmental education social practice activity

In June 2024, the Party branch of Tongwei Solar (Pengshan), in collaboration with the Working Committee for the Care of the Next Generation of Qinglong Subdistrict, organized a social practice activity themed on environmental protection for local elementary school students. Over 30 students took part.

Students participated in a wastewater treatment experiment and toured the wastewater treatment facility. Through detailed explanations, they gained a deeper understanding of Tongwei's development and wastewater treatment processes. The activity sparked students' enthusiasm and interest in learning, encouraging them to explore environmental issues and the mysteries of the Earth.

By bringing students into the Company to experience the power of science and technology up close, the event aimed to cultivate their spirit of independent thinking and innovation. Tongwei Solar will continue strengthening school-enterprise collaboration, leveraging its science and education resources to enrich extracurricular education and provide valuable experiences and inspiration for youth, while promoting environmental awareness.



Environmental Education Event at Tongwei Solar (Pengshan)

In 2024,

Tongwei invested in public welfare and charity initiatives

RMB **2.977** million

including monetary donations

RMB **2.5325** million

worth of material contributions

RMB **444.5** thousand

## Rural Revitalization

Tongwei actively participates in rural revitalization efforts, responds to the national strategy, striving to align the Company's growth with regional economic development for mutual benefit and win-win outcomes.

### Case | Tongwei participates in funding the "Tongwei Sunshine Education Assistance Program" in Daofu County

In response to the All-China Federation of Industry and Commerce's initiative to support key counties in national rural revitalization and the Sichuan Federation of Industry and Commerce's call for private enterprise participation in the development of 39 underdeveloped counties, Tongwei Group, the parent company of Tongwei, took the initiative to engage with Daofu County. After thoroughly understanding the local challenges and needs, Tongwei Group pledged an annual donation of RMB 300,000 for four years, totaling RMB 1.2 million, to implement the "Tongwei Sunshine Education Assistance Program" in Daofu County. Under the guidance of its parent company, Tongwei actively participated in the program, aiming to improve the living and learning conditions of disadvantaged students in high-altitude regions and support the development of local education.

In 2024, the program funded the construction of a hot water system at the newly built Bamei Nine-Year School in Daofu County by means of "assistance through education", addressing the winter hot water and drinking needs of 1,112 boarding students. Tongwei Group and Tongwei also jointly carried out charitable and procurement assistance initiatives to further support rural revitalization in Daofu County.

Through targeted engagement and scientific planning, Tongwei has implemented impactful assistance programs tailored to underdeveloped regions, from education support to industrial development, from infrastructure improvement to public well-being, bringing about tangible change while injecting momentum into rural revitalization and showcasing the company's sense of responsibility and social value.

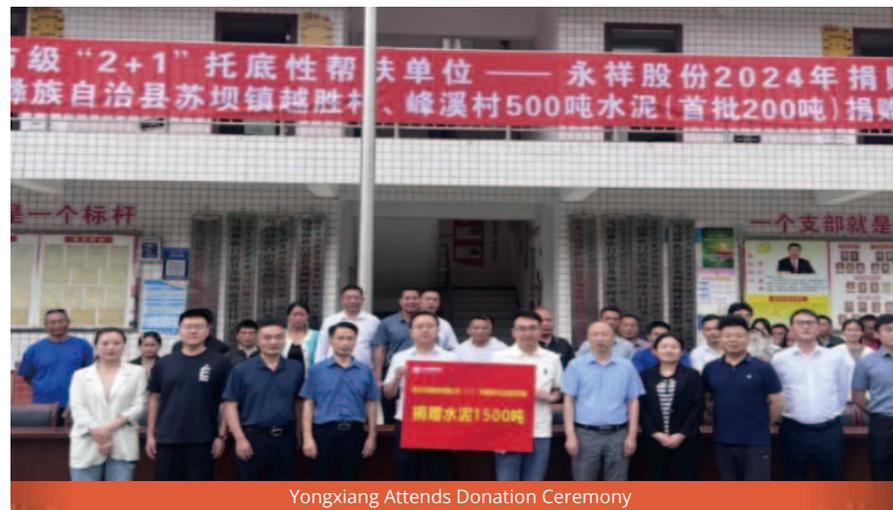


Tongwei Group Attends the Launch Ceremony of the "Ganzi Support" Paired-Up Assistance Initiative

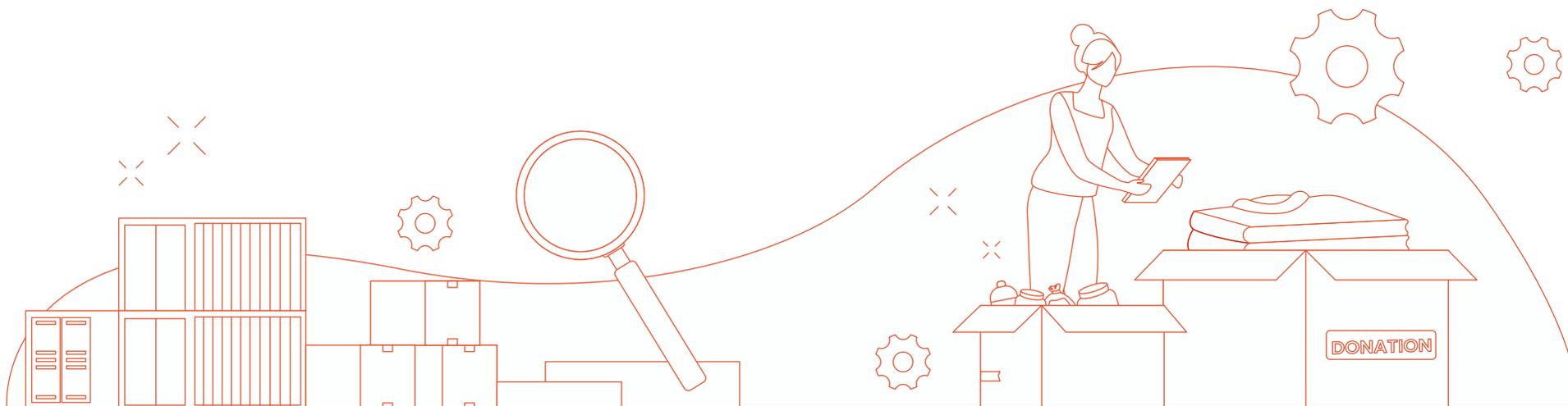
### Case | Yongxiang donates 1,500 tons of cement to paired-up assistance unit to support rural revitalization efforts

To support rural revitalization and regional coordinated development, Yongxiang plans to donate a total of 1,500 tons of high-quality cement over three years to Suba Town in Mabian Yi Autonomous County. In June 2024, the first batch of 200 tons of donated cement was officially delivered to the county. This donation not only demonstrates Yongxiang's support for local infrastructure development but also serves as a concrete example of the Company's alignment with the national rural revitalization strategy.

Yongxiang integrates social responsibility into its core development philosophy and has achieved significant results in areas such as educational support, poverty alleviation, and rural revitalization. This donation is a part of the Company's "2+1" paired-up assistance program, which aims to provide building materials to help underdeveloped areas improve living conditions and infrastructure, thereby stimulating local economic vitality.



Yongxiang Attends Donation Ceremony





## Overview of Sustainability Data

### ◆ Economy Data

Indicator	Unit	2024	2023
Total assets	RMB 100 million	1,959.17	1,643.63
Net assets attributable to shareholders of listed company	RMB 100 million	484.56	615.29
Operating revenue	RMB 100 million	919.94	1,391.04
Operating costs	RMB 100 million	861.17	1,023.28
Net profit attributable to shareholders of listed company	RMB 100 million	-70.39	135.74
Basic earnings per share	RMB/share	-1.5790	3.0151
Weighted average return on net assets	%	-12.77	22.59
Total tax	RMB 100 million	26.00	128.00

### ◆ Governance Data

Indicator	Unit	2024	2023
<b>Anti-Corruption</b>			
Dedicated staff for anti-corruption positions	Person	38	36
Number of anti-corruption training hours	Hour	167	201
Number of anti-corruption training sessions	Session	180	467
<b>Number of Anti-Corruption Training by Rank</b>			
Directors	Session	9	11
Managers	Session	180	230
Employees	Session	179	226

Indicator	Unit	2024	2023
<b>Number of Anti-Corruption Training by Rank</b>			
Directors	Participant	24	32
Managers	Participant	3,864	3,744
Employees	Participant	62,275	52,488
<b>Number of Anti-Corruption Training Participants by Rank</b>			
Directors	%	100	100
Managers	%	100	100
Employees	%	100	100
<b>Monitoring and Auditing</b>			
Number of Complaints handled	Item	222	219
Handling rate of monitoring and auditing	%	100	100
Times of business ethics audits	Time	117	113
<b>Anti-Competition</b>			
Number of lawsuits due to unfair competition	Number	0	0
Amount of money involved in litigation due to unfair competition	RMB 10,000	0.00	0.00
<b>Compliance management</b>			
Number of subsidiaries covered by ISO 37301 compliance management system	Number	6	4
ISO 37301 Compliance Management System Specialised Training Sessions	Session	1,539	102
ISO 37301 Compliance Management System Specialised Training Total Duration	Hour	755	114
ISO 37301 Compliance Management System Specialised Training Coverage	Participant	87,158	67,158

◆ Environment Data

Indicator	Unit	2024							Total in 2023	
		Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total		
<b>Greenhouse Gas Emission</b>										
Total GHG scope 1 emissions	tCO <sub>2</sub> e				2,312,905.79					1,212,243.29
Total GHG scope 2 emissions (market-based)	tCO <sub>2</sub> e				8,032,770.17					/
Total GHG scope 2 emissions (location-based)	tCO <sub>2</sub> e				20,160,530.74					13,980,776.04
Total GHG scope 3 emissions	tCO <sub>2</sub> e				33,045,754.45					50,902,399.97
Total GHG emissions at operational level (market-based)	tCO <sub>2</sub> e				10,345,675.96					/
Total GHG emissions at operational level (location-based)	tCO <sub>2</sub> e				22,473,436.53					15,193,019.33
Carbon emission intensity at operational level (market-based)	tCO <sub>2</sub> e/RMB 1 million of revenue				112.46					/
Carbon emission intensity at operational level (location-based)	tCO <sub>2</sub> e/RMB1 million of revenue				244.29					109.22
<b>Waste Gas Pollutants</b>										
Total emissions of waste gas pollutants	Ton	31.13	0.00	206.90	71.07	116.84	/	425.94		591.01
gas pollutants emission intensity	Ton/RMB 1 million of revenue				0.005					0.004
Sulfur dioxide	Ton	3.21	0.00	3.04	0.00	0.00	/	6.25		7.34



Indicator	Unit	2024							Total in 2023
		Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Nitrogen oxide	Ton	20.22	0.00	131.86	8.07	0.00		160.15	200.05
Tin and its compounds	Ton	0.00	0.00	0.00	0.00	0.34	/	0.34	0.25
Ammonia	Ton	0.00	0.00	3.84	38.53	0.05	/	42.42	114.44
Fluoride	Ton	0.00	0.00	2.26	9.44	0.00	/	11.70	20.25
VOCs	Ton	0.00	0.00	14.55	4.03	102.95	/	121.52	172.88
Hydrogen chloride	Ton	0.00	0.00	11.60	6.48	0.00	/	18.08	19.02
General dust	Ton	0.00	0.00	11.39	0.00	0.00	/	11.39	8.84
Particulate matter	Ton	7.7	0.00	21.86	4.52	13.50	/	47.58	33.63
Mercury	Ton	0.00	0.00	0.00	0.00	0.00	/	0	/
ODS	Ton	0.00	0.00	0.00	0.00	0.00	/	0	/
Smoke	Ton	0.00	0.00	6.50	0.00	0.00	/	6.50	13.72
Sulfuric acid mist	Ton	0.00	0.00	0.0048	0.00	0.00	/	0.0048	0.60
<b>Waste Water Pollutants</b>									
Total emissions of wastewater pollutants	Ton	496.13	99.84	1,778.07	1,072.30	345.64	2,096.65	5,888.63	8,916.25
Wastewater pollutants intensity	Ton/RMB 1 million of revenue				0.06				0.06
Chloride	Ton	0.00	0.00	1,532.93	616.72	0.00	0.00	2,149.65	5,337.41
CODcr	Ton	204.00	27.69	149.03	221.83	188.08	1,400.70	2,191.33	1,680.58
Suspended solids (SS)	Ton	163.2	27.56	27.56	46.78	85.15	400.20	741.18	724.46
BOD5	Ton	122.4	34.01	34.01	0.76	9.47	250.13	428.45	397.74
Total Nitrogen	Ton	0.00	24.22	24.22	89.13	36.31	33.02	206.33	422.06
Fluoride	Ton	0.00	3.48	3.48	29.43	0.00	0.00	36.91	93.17
Ammonia nitrogen	Ton	6.12	5.41	5.41	65.17	23.24	9.60	114.18	240.03
Total phosphorus	Ton	0.41	1.45	1.45	2.48	3.39	3.00	20.61	20.80



Indicator	Unit	2024							Total in 2023
		Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
<b>Hazardous Wastes</b>									
Total emissions of hazardous wastes	Ton	0.00	3.164	1,316.31	97.84	1,601.23	/	3,018.54	2,065.59
Hazardous waste emission intensity	Ton/RMB 1 million of revenue	0.03							0.01
Waste organic solvents and waste containing organic solvents	Ton	0.00	0.00	1.84	2.29	7.61	/	11.73	42.12
Waste acid	Ton	0.00	1.12	439.16	0.00	0.00	/	440.28	463.70
Waste alkali	Ton	0.00	0.00	0.74	0.00	0.00	/	0.74	0.50
Waste mineral oil and waste containing mineral oil	Ton	0.00	1.85	179.92	5.7954	18.97	/	206.53	124.32
High-radioactive wastes	Ton	0.00	0.00	0.00	0.00	0.00	/	0.00	/
Other hazardous wastes	Ton	0.00	0.20	694.65	89.76	1,574.66	/	2,359.27	1,434.95
<b>Non-Hazardous Wastes</b>									
Total emissions of non-hazardous wastes	Ton	2,550.00	51.82	356,313.59	26,131.62	40,259.50	/	426,603.03	534,797.90
Non-hazardous waste emission intensity	Ton/RMB 1 million of revenue	4.64							3.84
Office waste	Ton	2,550.00	1.00	651.20	392.5	4,347.77	/	7,549.97	8,991.54
Waste slag	Ton	/	0.00	337,871.34	0.00	0.00	/	337,871.336	299,636.59
Sludge	Ton	/	1,313.96	2,522.48	21,415.86	127.50	/	2,5379.8	120,730.90
Waste wood	Ton	/	0.05	3,242.28	3,014.08	16,963.25	/	23,219.66	30,616.89
Waste paper	Ton	/	5.90	661.01	520.20	11,446.05	/	12,633.16	15,908.64
Waste steel	Ton	/	1.50	622.27	9.98	0.00	/	633.75	1,251.78



Indicator	Unit	2024							Total in 2023
		Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Waste materials	Ton	/	1.20	358.58	740.02	1,335.08	/	2,434.88	5,971.37
Waste metals	Ton	/	22.8	3,807.03	142.50	992.29	/	4,964.62	2,798.84
Other non-hazardous waste	Ton	/	1.92	6,577.40	288.98	5,047.55	/	11,915.85	48,891.37
Non-hazardous waste recycled	Ton	0.00	0.00	356,021.36	26,131.62	36,163.39	/	418,316.37	524,441.22
Rate of non-hazardous waste recycled	%	98.36							98.06
<b>Water</b>									
Total water withdrawal	Ton	1,833,300.00	592,825.50	35,242,275.41	25,254,918.00	1,518,457.00	4,339.00	64,446,114.91	83,832,560.55
Water withdrawal-municipal water supply	Ton	1,833,300.00	161,141.00	35,242,275.41	24,001,606.00	1,507,477.00	4,339.00	62,750,138.41	/
Water withdrawal-others	Ton	0.00	431,684.50	0.00	1,253,312.00	10,980.00	0.00	1,695,976.50	/
Total water consumption	Ton	40,705,013.84							57,076,719.25
Water consumption intensity	Ton/RMB 1 million of revenue	442.47							410.32
Percentage of recycled and reused water usage	%	98.04							91.72
Total discharge	Ton	0.00	886,112.1	4,756,003.75	18,271,540.39	746,659.93	/	24,660,316.17	26,155,841.30
<b>Packaging Material</b>									
Total packaging materials used	Ton	20,381.92	549.03	18,801.33	14,259.94	60,870.18	/	114,862.39	115,451.62
Packaging material usage intensity	Ton/RMB 1 million of revenue	1.25							0.83

30. In 2024, Tongwei further optimized the water consumption calculation method according to "GRI 303: Water and Effluents 2018", and Water Consumption = Water Intake - Discharge.

Indicator	Unit	2024							Total in 2023
		Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Paper	Ton	1,718.43	0.00	5,989.34	4,187.91	0.00	/	11,895.68	41,653.46
Glass	Ton	0.00	0.00	0.00	2.76	0.00	/	2.76	8.40
Plastic	Ton	18,663.49	549.03	8,312.89	7,293.33	60,870.18	/	95,688.92	26,998.67
Others	Ton	0.00	0.00	4,498.22	2,775.94	0.00	/	7,274.16	46,791.10
<b>Environmental Management Training</b>									
Number of environmental management training	Session	4	4	20	27	16	0	71	295
Environmental management training attendance	Person	800	177	12,852	2,284	1,987	0	18,100	37,692
Total hours of environmental management training	Hour	4.00	5.00	22,760.00	40.50	1,854.00	0.00	24,663.50	12,186.50



## ◆ Energy Data

Issue	Indicator	Unit	2024								Total in 2023
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Energy Consumption	Direct Energy Consumption										
	Bituminous coal	Ton	/	0.00	0.00	112,418.75	/	/	/	112,418.75	113,787.87
	Gasoline	Litre	/	144,411.91	15,915.48	58,541.45	16,851.53	18,590.64	/	254,311.01	308,409.86
	Diesel oil	Litre	/	669,371.94	90,570.66	3,337,407.85	94,940.50	18.24	/	4,192,309.19	1,200,973.58
	Biodiesel	Ton	/	/	/	403.78	/	/	/	403.78	486.89
	Natural gas	Cubic meter	639,326.00	34,453,389.00	41,093.00	31,797,178.57	537,869.78	190,850.59	/	67,659,706.93	79,528,610.25
	Liquefied natural gas	Ton	/	2,828.66	0	/	/	/	/	2,828.66	113,049.57
	Liquefied petroleum gas	Ton	/	83.02	0	/	/	/	/	83.02	22.97
	Indirect Energy Consumption										
	Purchased steam	Ton	/	265,161.84	8,639.29	25,390.00	/	/	/	299,191.13	351,083.71
Purchased electricity	Megawatt-hour	7,199.75	538,962.72	17,099.42	31,563,275.29	4,645,656.78	668,059.84	668,059.84	37,440,253.80	24,330,084.33	
Comprehensive Energy Consumption											
Total comprehensive energy consumption	Tons of standard coal	1,588.11	132,527.55	2,462.65	4,022,474.96	571,679.06	82,335.03	82,335.03	4,813,067.35	3,423,569.21	
Comprehensive energy consumption intensity	Tons of standard coal/ per RMB 1 million of revenue	52.32								24.61	
Renewable Energy	Renewable electricity consumption	Megawatt hour	/	267.61	563	2,0816,938.00	2,907,313.00	141,613.00	98,574.90	23,965,269.51	18,722,308.47



## ◆ Social Data

Issue	Indicator	Unit	2024	2023
Technology Research and Development	Research and Development (R&D)			
	Patents for inventions	Number	183	97
	Patents for utility model	Number	454	544
	Application for patents for inventions	Number	340	351
	Application for patents for utility model	Number	982	621
Innovation Incentives	Total number of people who received rewards due to patents in the reported year	Person	2,077	1,351
	total amount of rewards received due to patents in the reported year	RMB 10,000	534.00	1,706.68
Social Welfare	Charitable Donation			
	Total social donation	RMB 10,000	297.7	741.75
Occupational Health and Safety	Occupational Health and Safety			
	Total times of OHS training sessions conducted	Session	13,106	999
	Participants of OHS training sessions	Participant	64,648	/
	Total OHS training hours	Hour	738,921.00	/
	Number of fire drills conducted	Session	5,008	846
	Participants of fire drills	Participant	80,351	32,154
Information Security	Information Security			
	Information security training sessions	Session	39	37
	Information security trainees	Trainee	9,298	33,436
	Confirmed information security incidents	Time or item	0	0
	Customer privacy breach incidents	Time or item	0	0



Issue	Indicator	Unit	2024	2023
Structure of Suppliers	<b>Suppliers</b>			
	Total number of suppliers	Number	5,269	4,547
	Domestic suppliers	Number	4,745	4,198
	Suppliers outside China	Number	524	349
Product Quality and Safety	<b>Products</b>			
	Percentage of product recalls	RMB 10,000	873.83	0.00
	Number of product recall simulation drills.	Number	65	/
	Number of administrative penalty incidents due to the safety and quality issues of products and services	Number	0	/
	Frequency of internal audits of the company's quality management system	Time	116	/
	Frequency of third-party audits regarding product quality and safety issues	Time	86	/
Protection of Client Rights and Interests	Complaints about product and services	Number	90	39
	Reaction rate of customer compliants	%	100.00	100.00
	Sales satisfaction rate	%	96.96	96.34
	Customer satisfaction rate	%	96.29	95.67
	Aftersales service satisfaction rate	%	98.15	97.95
Product and Services Training	Product quality training sessions	Number	8,112	4,887
	Employees participated product quality training	Person	56,668	24,651
	Total hours of product quality training sessions	Hour	74,836.20	29,193.00
	Responsible marketing training sessions	Time	1,312	874
	Employees participated responsible marketing training	Person	45,912	26,452
	Total hours of responsible marketing training	Hour	2,494.00	2,064.00



## ◆ Employment Data

Issue	Indicator	Unit	2024								Total in 2023
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Employment Status	Total employees	Person	2,016	10,146	1,762	15,111	18,063	7,670	956	55,724	56,406
	<b>By Employment Types</b>										
	Formal employment	Person	1,999	9,822	1,697	14,936	18,061	7,670	886	55,071	55,731
	Labor (part-time)	Person	1	2	0	164	0	0	0	167	183
	Labor (full-time)	Person	2	0	31	0	0	0	9	42	48
	Intern	Person	14	203	19	3	2	0	61	302	401
	Labor dispatch worker	Person	0	107		3	0	0	0	110	4
	Others	Person	0	12	15	5	0	0	0	32	39
	<b>By Age</b>										
	30 and below	Person	1,099	2,842	237	6,441	9,435	3,443	349	23,846	26,326
	31 to 50	Person	893	5,707	1,152	8,153	8,587	4,214	536	29,242	27,710
	51 and above	Person	24	1,597	373	517	41	13	71	2,636	2,370
	<b>By Educational Background</b>										
	Below bachelor's degree	Person	707	6,781	1,600	11,770	13,992	5,894	540	41,284	42,975
	Bachelor's degree	Person	998	2,874	143	3,209	3,964	1,704	373	13,265	12,444
	Master's Degree	Person	296	470	19	131	104	70	41	1,131	952
	Doctor's degree	Person	15	21	0	1	3	2	2	44	35
	<b>By Gender</b>										
	Male employees	Person	1,383	8,210	903	12,204	12,907	5,769	783	42,159	42,289
	Female employees	Person	633	1,936	859	2,907	5,156	1,901	173	13,565	14,117
<b>By Geographic Location</b>											
Domestic	Person	2,015	9,014	1,762	15,111	18,063	7,670	956	54,591	55,293	
Overseas	Person	1	1,132	0	0	0	0	0	1,133	1,113	



Issue	Indicator	Unit	2024								Total in 2023
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Employment Status	By Rank										
	General employee	Person	1,932	9,282	14,632	16,685	7,053	827	1,685	52,096	52,737
	Junior management	Person	39	594	237	1,271	551	69	59	2,820	2,820
	Middle management	Person	28	247	185	95	59	47	14	675	712
	Senior management	Person	17	23	57	12	7	13	4	133	137
	By Health Status										
	General employee	Person	2,016	10,060	1,749	14,931	17,894	7,658	947	55,255	55,988
	Disabled employee	Person	0	86	13	180	169	12	9	469	418
	By Ethnicity Type										
	Ethnic minority	Person	69	1,595	77	644	472	141	80	3,078	2,977
Non-ethnic minority	Person	1,947	8,551	1,685	14,467	17,591	7,529	876	52,646	53,429	
Research and development personnel	Total R&D personnel	Person	1,205	1,453	25	1,297	1,117	124	56	5,277	4,157
	By Educational Background										
	Below bachelor's degree	Person	605	574	9	516	512	32	10	2,258	1,671
	Bachelor's degree	Person	460	577	4	721	590	79	43	2,474	2,053
	Master's Degree	Person	127	288	12	59	15	12	3	516	409
	Doctor's degree	Person	13	14	0	1	0	1	0	29	24
	By Gender										
	Male employees	Person	905	1,073	19	1,143	976	93	50	4,259	3,332
Female employees	Person	300	380	6	154	141	31	6	1,018	825	
Female Leadership	Number of Women in Management										
	All management	Person	18	150	36	31	361	82	22	700	829
	Junior management	Person	8	125	31	7	349	77	8	605	620
	Middle management	Person	8	22	4	22	10	5	12	83	194
	Senior management	Person	2	3	1	2	2	0	2	12	15



Issue	Indicator	Unit	2024								Total in 2023
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Female Leadership	Percentage of Women in Management										
	Percentage in all management levels	%	21.43	17.36	46.75	6.47	26.20	13.29	17.05	19.29	22.59
	Percentage in junior management	%	20.51	91.75	50.82	2.95	27.46	12.48	36.36	21.45	21.99
	Percentage in middle management	%	28.57	8.91	29.41	11.89	10.53	0.81	54.55%	12.30	26.83
	Percentage in senior management	%	11.76	13.04	25.00	3.51	16.67	0.00	9.09	9.02	10.95
New Employee	Total new employee (including those who have left the company)	Person	809	1,219	691	4,979	3,022	1,286	447	12,453	31,010
	By Gender										
	Male employees	Person	601	1,043	421	4,336	2,358	1,006	404	10,169	24,366
	Female employees	Person	208	176	270	643	664	280	43	2,284	6,644
	By Age										
	30 and below	Person	571	622	258	2,765	2,045	710	256	7,227	19,807
	31 to 50	Person	235	587	374	2,186	973	571	185	5,111	11,026
	51 and above	Person	3	10	59	28	4	5	6	115	177
	By Geographic Location										
	Domestic	Person	808	1,063	691	4,979	3,022	1,286	447	12,296	30,875
	Overseas	Person	1	156	0	0	0	0	0	157	135
	By Rank										
	General employee	Person	800	1,162	690	4,955	2,930	1,221	408	12,166	30,189
Junior management	Person	4	43	1	20	90	60	32	250	752	
Middle management	Person	3	12	0	2	2	4	5	28	64	



Issue	Indicator	Unit	2024								Total in 2023	
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total		
	Senior management	Person	2	2	0	2	0	1	2	9	5	
Number of employees trained	Total number of employees trained	Person	2,016	8,793	1,762	17,282	18,063	7,688	938	56,542	56,616	
	Total sessions of employee trained	Session	247	495	225	62,856	2,892	8,051	1,179	75,945	3,616	
	% of employee trained	%	100.00	87.00	100.00	100.00	100.00	100.00	98.00	98.00	/	
	By Gender											
	Male employees	Person	1,383	7,913	903	14,099.0	12,907	5,789	770	43,764	43,244	
	Female employees	Person	633	880	859	3,183	5,156	1,899	168	12,778	13,372	
	By Rank											
	General employee	Hour	1,932	7,929	1,685	16,755	16,685	7,065	718	52,769	51,254	
	Junior management	Hour	39	594	59	268	1,271	557	160	2,948	4,251	
	Middle management	Hour	28	247	14	196	95	59	49	688	942	
Senior management	Hour	17	23	4	64	12	7	11	138	169		
Average employee training hours	Average employee training hours	Hour	82.03								82.52	
	By Gender											
	Male employees	Hour	72.55								73.22	
	Female employees	Hour	67.30								56.54	
	By Rank											
	General employee	Hour	62.41								67.02	
	Junior management	Hour	196.89								80.06	
Middle management	Hour	192.02								71.95		
Senior management	Hour	210.97								61.60		



Issue	Indicator	Unit	2024								Total in 2023
			Tongwei Co., Ltd. (Head quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Solar Technology	Tongwei New Energy	Total	
Employee development	Percentage of employees receiving regular performance and career development evaluation	%	100.00	100.00	100.00	97.72	100.00	100.00	100.00	99.00	100.00
	Number of internal recruits	Person	198	785.0	2	449	1,877	1,070	63	4,442	4,587
Employee rights & benefits	Coverage rate of supplementary insurance	%	100.00	100.00	100.00	100.00	100.00	100.00	99.00	100.00	100.00
	Rate of employees covered by Social Security	%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Number of labor lawsuits	Number	0	5	0	10	5	4	9	33	26
	Rate of employees signing labor contracts	%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Employee satisfaction	Rate of employee satisfaction survey participation	%	97.00	90.00	100.00	94.00	98.00	97.00	100.00	95.00	90.00
	Employee satisfaction	%	97.00	90.00	94.00	98.00	97.00	100.00	100.00	95.00	92.00
Employee health and safety	Number of working days lost due to work-related injuries	Day	3.40	480	268	849	89	1,180	6	2,876	3,233
	Work injury rate per 200,000 hours	%	0.13								0.08
	Employee medical examination coverage	%	1,523	9,516	1,762	12,478	18,063	7,670	645	49,895	56,153



## Other Designations

Designation	Definition
Tongwei Co., Ltd., Tongwei, the Company, We	Tongwei Co., Ltd.
Tongwei Group	Tongwei Group Co., Ltd.
Tongwei Agricultural Development	The collective name of Tongwei Agricultural Development Co., Ltd, Sichuan Tongwei Feed Co., Ltd, Tongwei (Dafeng) Feed Co., Ltd, Tianjin Tongwei Feed Co., Ltd and Foshan Gaoming Tongwei Feed Co., Ltd.
Tongwei Food	The collective name of Tongwei Chunyuan Food Co., Ltd., Tongwei (Chengdu) Aquatic Products Co., Ltd., Tongwei (Hainan) Aquatic Products Co., Ltd., Chengdu Xintaifeng Agricultural Development Co., Ltd.
Tongwei Yongxiang	The collective name of Yongxiang Co., Ltd., Sichuan Yongxiang Polysilicon Co., Ltd., Sichuan Yongxiang New Energy Co., Ltd., Sichuan Yongxiang Energy Technology Co., Ltd., Inner Mongolia Tongwei High Purity Crystal Silicon Company, Yunnan Tongwei High Purity Crystal Silicon Co., Ltd., Sichuan Yongxiang Silicon Materials Co., Ltd., Sichuan Yongxiang Photovoltaic Technology Co., Ltd
Tongwei Solar	The collective name of Tongwei Solar Energy Co., Ltd., Tongwei Solar (Anhui) Co., Ltd., Tongwei Solar (Chengdu) Co., Ltd., Tongwei Solar (Meishan) Co., Ltd., Tonghe Solar (Jintang) Co., Ltd., Tongwei Solar (Jintang) Co., Ltd., Tongwei Solar (Pengshan) Co., Ltd
Tongwei Solar Technology/ Tongwei Modules	The collective name of Tongwei Solar (Hefei) Co., Ltd., Tongwei Solar Energy (Sichuan) Co., Ltd., Tongwei Solar Energy (Yancheng) Co., Ltd., Tongwei Solar Energy (Nantong) Co., Ltd., Tongwei Solar Energy Technology Co., Ltd
Tongwei New Energy	The collective name of Tongwei New Energy Co., Ltd., Tongwei New Energy (Shenzhen) Co., Ltd., Tongwei New Energy Technology (Beijing) Co., Ltd., Sichuan Yuguang IoT Technology Co., Ltd
Tongwei Agriculture and Animal Husbandry Industry /Agriculture and Animal Husbandry	Branches and subsidiaries of Tongwei Agricultural Development and Tongwei Food
Tongwei Photovoltaic Industry/ Photovoltaic Sector	Branches and subsidiaries of Tongwei Yongxiang, Tongwei Solar, Tongwei Modules, and Tongwei New Energy
Tongwei Photovoltaic Manufacturing Industry/Photovoltaic (PV) Manufacturing Sector	Branches and subsidiaries of Tongwei Yongxiang, Tongwei Solar, and Tongwei Modules

# Indicator Index

## ◆ Guidelines for the Disclosure of Sustainability Reports on the Shanghai Stock Exchange

Dimension	Topic	Section/Index
Environment	Climate response	Response to Climate Change
	Pollutant discharge	Pollution and Waste Management
	Waste disposal	Pollution and Waste Management
	Ecosystem and biodiversity protection	Ecosystem and Biodiversity Conservation
	Environmental compliance management	Environmental Compliance Management
	Energy utilization	Energy Management
	Water resources utilization	Water Resources Management
	Circular economy	Innovation-driven Development Pollution and Waste Management
Community	Rural revitalization	Rural Revitalization
	Social Contributions	Social Welfare
	Innovation	Innovation-driven Development
	Ethics of science and technology	N/A

Dimension	Topic	Section/Index	
Community	Supply chain security	Supply Chain Security	
	Equal treatment of SMEs	Investor Relations	
	Product and service safety and quality	Product Quality & Safety	
	Data security and customer privacy	Data Security and Privacy Protection	
	Employees		Employees' Rights and Interests Protection
			Employee Care and Communication Talent Attraction and Development
Sustainability-related governance		Occupational Health & Safety	
	Due diligence	Sustainable Development Management System	
	Stakeholder engagement	Sustainable Development Management System	
	Anti-commercial bribery and anti-corruption	Business Ethics	
	Anti-unfair competition	Anti-Unfair Competition	

## ◆ GRI Indicator Index

### Statement of Use

The information cited in this GRI Content Index is reported by Tongwei Co., Ltd. from 1 January 2024 to 31 December 2024 by reference to the GRI Standard.

### GRI 1 The title of GRI 1 used

GRI 1: Foundation 2021

Section of The Report		GRI Standards
About this Report		2-2、2-3、2-4
Message from the Chairman		2-6
About Tongwei		2-1、2-6、2-28、201-1
Topics of the Year		/
Sustainable Development Management	Sustainable Development Management System	2-14、2-16、2-19、2-22、2-23、2-24、2-26、2-29
	Sustainable Development-related Honors and Awards	/
	Stakeholder Communication	2-29
	Assessment of Double Materiality Issues	3-1、3-2、3-3
Steward of Robust Operational Excellence	Corporate Governance	2-9、2-10、2-11、2-12、2-13、2-17、2-18、2-19、405-1
	Investor Relations	2-29
	Compliance and Risk Management	2-27、207-1、207-2、207-3
	Business Ethics	205-1、205-2、205-3
	Anti-Unfair Competition	206-1
	Data Security and Privacy Protection	2-27、418-1
Leader of Innovation and R&D	Innovation-driven Development	/
	Digital Transformation	/
	Product Quality & Safety	2-27、417-1、417-2、417-3
	Protection of Client Rights and Interests	2-25、416-1、416-2、418-1

Section of The Report		GRI Standards
Intelligent Solutions for Responsible Procurement	Supply Chain Management	2-27、3-3、308-1、308-2、414-1、414-2、409-1
	Supply Chain Security	/
	Sustainable Supply Chains	308-1、308-2
	Environmental Compliance Management	2-27
Guardian of Green and Low-Carbon Development	Response to Climate Change	2-27、2-28、3-3、201-2、302-1、302-2、302-3、302-4、302-5、305-1、305-2、305-3、305-4、305-5
	Energy Management	302-1、302-3、302-4、302-5
	Water Resources Management	2-27、303-1、303-2、303-3、303-5
	Pollution and Waste Management	2-27、301-1、301-2、301-3、303-4、305-7、306-1、306-2、306-3、306-4、306-5
Ecosystem and Biodiversity Conservation		304-2
Partnering for Diversity and Collective Progress	Employees' Rights and Interests Protection	2-27、2-7、2-19、2-20、201-3、401-1、401-2、401-3、405-1、406-1、408-1、409-1
	Employee Care and Communication	2-30、407-1
	Talent Attraction and Development	404-1、404-2、404-3
	Occupational Health & Safety	2-27、403-1、403-2、403-3、403-4、403-5、403-6、403-7、403-8、403-9、403-10
	Social Contribution and Rural Revitalization	203-1、203-2、413-1、413-2
	Other Designations	2-2
Indicator Index	/	
Assurance Report	2-5	
Reader Feedback	/	

## ◆ IFRS S2 Recommended Disclosure Index

	Recommended Disclosure	Section/Index
Governance	Disclose the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities.	Response to Climate Change-Governance
	Disclose management’s role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities	Response to Climate Change-Governance
Strategy	Disclose the climate-related risks and opportunities that could reasonably be expected to affect the entity’s prospects	Response to Climate Change-Strategy
	Disclose the current and anticipated effects of those climate-related risks and opportunities on the entity’s business model and value chain.	Response to Climate Change-Strategy
	Disclose the effects of those climate-related risks and opportunities on the entity’s strategy and decision-making, including information about its climate-related transition plan	Response to Climate Change-Impact, Risk and Opportunity Management
	Disclose the effects of those climate-related risks and opportunities on the entity’s financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity’s financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity’s financial planning	Response to Climate Change-Strategy, Impact, Risk and Opportunity Management
	Disclose the climate resilience of the entity’s strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity’s identified climate-related risks and opportunities.	Response to Climate Change-Strategy Response to Climate Change -Impact, Risk and Opportunity Management



	Recommended Disclosure	Section/Index
Risk Management	Disclose the processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks.	Response to Climate Change -Impact, Risk and Opportunity Management
	Disclose the processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities.	Response to Climate Change -Impact, Risk and Opportunity Management
	Disclose the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.	Response to Climate Change -Impact, Risk and Opportunity Management
Metrics and Targets	Disclose information relevant to the cross-industry metric categories.	/
	Disclose the industry-based metrics that are associated with particular business models, activities or other common features that characterize participation in an industry.	/
	Disclose the targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets	Response to Climate Change - Metrics and Targets

# Assurance Report



## Independent Assurance Statement

### Introduction

TUV Rheinland (Shanghai) Co., Ltd., a member of TUV Rheinland Group (hereinafter "TUV Rheinland" or "We"), was entrusted by Tongwei Co., Ltd. (hereinafter "Tongwei" or "the Company") to conduct an independent third-party assurance of 2024 Sustainability Report of Tongwei (hereinafter, "Report"). The report disclosed sustainability information for the fiscal year 2024 (January 1, 2024 to December 31, 2024) of Tongwei.

### Responsibilities

Tongwei is not only responsible for the preparation of sustainability report and the collection and submission of sustainability information in accordance with applicable reporting standards, but also has the obligation to implement and maintain effective internal control of information and data to support the report compilation process.

TUV Rheinland is a global service provider that provides CSR and sustainability services in more than 65 countries, with experienced and technical expertise in the areas of environment, CSR, sustainability and stakeholder engagement. TUV Rheinland Assurance team follows the TUV Rheinland Global Business Ethics Compliance Policy and Procedures, covering the principles of integrity compliance and conflict of interest. Therefore, our assurance services are based on the principles of independence and impartiality, and we do not participate in the writing and preparation of the report of Tongwei. It is the duty of TUV Rheinland to carry out independent assurance in accordance with the assurance agreement and the agreed scope of assurance work, and to make independent and impartial judgments on sustainability reporting.

### Assurance Standard

TUV Rheinland undertook assurance work for the sustainability information disclosed in sustainability report of Tongwei in accordance with the AccountAbility AA1000 Assurance Standard v3 (AA1000AS v3), Type 1 and Moderate level.

### Assurance Objectives

The purpose of the assurance was to provide management of Tongwei and stakeholders concerned with the company's sustainability information and performance to provide an independent view of the assurance, including assessment of whether the content of the report adhered to the AA1000AP (2018) Assurance Principles (including inclusivity, materiality, responsiveness and impact), and verification of sustainability information disclosure.

### Assurance Criteria

The following assessment criteria were used in undertaking the work:

- Self-Regulatory Guidelines for Listed Companies on the Shanghai Stock Exchange No. 14 - Sustainability Report (Trial)
- The Global Reporting Initiative (GRI) Sustainability Reporting Standards ("GRI Standards")
- IFRS S2 Framework Recommendations for Climate-related Disclosures (IFRS S2)
- The United Nations Sustainable Development Goals (UN SDGs)
- Adherence to the AA1000 AP AccountAbility Principles, i.e., *Inclusivity, Materiality, Responsiveness, and Impact*

### Methodology

Our assurance activities and procedures include:

- Inquiring management and those personnel responsible for collecting and aggregating sustainability performance information to understand the management processes, systems, and controls for sustainability performance information.



- Reviewing and assessing the availability, adequacy, and relevance of performance information based on sampling principles.
- Applying analysis program to assess the accuracy of the information available for performance data.
- Collecting and examining the supporting evidence of available performance information to assess the extent to which the relevant evidence and information related to the scope of the assurance in the sustainability report supports and adheres to the AA1000AP AccountAbility Principles.
- Reporting assurance observations or recommendations to give the company's management an opportunity to correct errors before the assurance process is completed.

### Limitations

TUV Rheinland planned and executed the verification in accordance with the scope of the assurance agreed upon in order to obtain all the information, evidence and necessary explanations to provide the basis for the conclusion of the assurance in accordance with the moderate level of AA1000AS v3.

The information and performance data relating to the assurance is limited to the disclosure of the contents of this report. Our assurance work did not include financial report and its financial data, as well as other information not related to the topic of sustainability.

### Conclusions

Based on the above assurance procedures and methodology performed and the evidence obtained, we conclude that there are no instances or information that would be contrary to the following statements:

- 2024 Sustainability Report of Tongwei and its contents are in adherence to the AA1000AP AccountAbility Principles and align with the information disclosure requirements of Self-Regulatory Guidelines for Listed Companies on the Shanghai Stock Exchange No. 14 - Sustainability Report (Trial).
- Tongwei has implemented processes and systems (such as human resource management system, energy management digital system, carbon emission management digital system, etc) to collect and aggregate performance information and data related to materiality issues within the reporting boundary, and the company's management practices have also shown that the company conducted double materiality analysis and evaluation of issues.
- The sustainability-related information and performance disclosed in the report have been assessed and supported by documentary evidence, which can truly reflect management of Tongwei in the field of sustainable development.

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

### Adherence to the AA1000AP AccountAbility Principles

#### Inclusivity

The key stakeholders identified by Tongwei included government and regulators, investors and shareholders, employees, suppliers, customers, sustainability experts, media and industry associations, and local communities. Evidence showed that in 2024, Tongwei interacted with these stakeholders in its business activities in the areas of sustainable development, such as carbon emissions, water resources, occupational health and safety, conflict minerals procurement, business ethics, etc. The company also conducted online questionnaire surveys with internal and external stakeholders, covering topics such as product and service quality and safety, response to climate change, and risk control. The company considered the input of its stakeholder groups in its sustainability decision-making process.

#### Materiality

Evidence indicated that in 2024, Tongwei has implemented a double materiality assessment. By reference to national macro policies, international standards and disclosure frameworks related to sustainable development, capital market rating indicators, industry benchmarking, and analysis of its own business development, the company identified and screened sustainability issues and evaluated the importance of these issues from two dimensions: impact materiality and financial materiality based on the specific feedback from stakeholders' online questionnaire surveys. The matrix showed the key issues of the year, including those that are both financial materiality and impact materiality (such as pollutant emissions, product and service quality and safety, response to climate change, compliance management,



employee rights protection, energy management, etc.). The Board considered and approved the results of the materiality assessment.

#### Responsiveness

Tongwei's interactions with its key stakeholders are diversified, and the company responded to the major concerns of the relevant stakeholders on sustainability issues in a timely and appropriate manner. The main channels of stakeholder communication included government supervision and inspection, investor information disclosure, employee training and satisfaction surveys, supplier review and training, customer service and satisfaction surveys, engagement of the formulation of industry or national standards, complaint and reporting mechanisms, industry forums, community public welfare activities, etc. Evidence showed that in 2024, the company has launched its engagement in the "Pollution and Carbon Reduction Synergy Empowerment Program", signed the UN Women Empowerment Principles (WEPs) and other initiatives.

The report used a four-element disclosure framework of governance, strategy, risk and opportunity management, and metrics and targets to disclose information on financial materiality topics (e.g., response to climate change, energy management, sustainable supply chains, etc.). The report disclosed data on key performance indicators (such as energy consumption, water consumption, greenhouse gas emissions (including Scope 1, 2, and 3 emissions), pollution and waste, employee employment, supply chain, etc), which are historically comparable, and also disclosed the achievement or progress of the Sustainable Development Goals (SDGs) and targets, including the establishment of phased biodiversity management targets in response to the United Nations Sustainable Development Goals (SDGs).

#### Impact

Tongwei has built nine systems for sustainable development (including strategy system, stewardship system and solution system), and put forward a systematic climate goal and action framework of "Zero-carbon operation, Zero-carbon value chain, and Zero-carbon products". The company also integrated sustainability risk management (including climate risks, environmental and safety risks, procurement and supply chain risks, human rights and labour risks, etc) into the company's operation management and compliance management processes and evaluated and controlled risks related to its own operations and value chain business through an internal control system and implemented a closed-loop verification. The company conducted due diligence on employee human rights, supply chain conflict minerals and audits of supply chain traceability.

The report disclosed an analysis of climate impacts, risks and opportunities, including impact cycles, financial impacts, and response measures. Evidence indicated that in 2024, Tongwei has taken relevant measures (such as clean energy substitution, carbon reduction at source, supply chain coordination, and carbon emission management) to reduce the impact on corporate operations and the upstream and downstream of the value chain.

**Daniel Pan**  
Technical Manager of Corporate Sustainability Services  
TUV Rheinland (Shanghai) Co., Ltd  
Shanghai, China, April 10, 2025

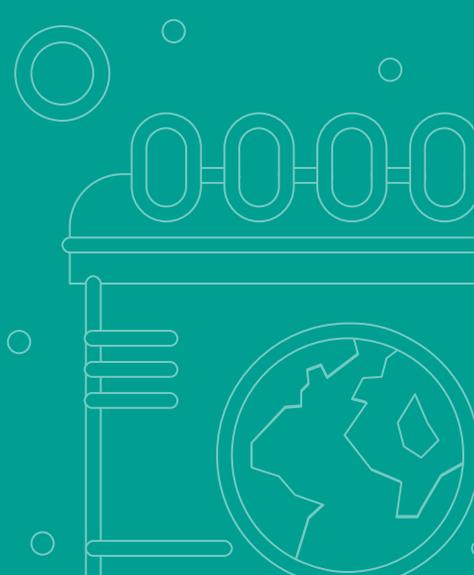




# Reader Feedback

Dear Reader,

Thank you for taking the time to review this report. Your feedback is highly valued and we eagerly anticipate hearing your comments. Your suggestions are instrumental in our ongoing efforts to enhance the quality of corporate ESG disclosure and to advance corporate ESG management and practices. We appreciate and sincerely thank you for your valuable input.



1. Overall, your assessment of our fulfillment of ESG is as follows:

- Very good
- Good
- Average
- Poor
- Bad

2. Your overall rating of this Report is:

- Very good
- Good
- Average
- Poor
- Bad

3. How would you rate our performance in terms of stakeholder communication?

- Very good
- Good
- Average
- Poor
- Bad

4. How would you rate our performance in terms of product liability?

- Very good
- Good
- Average
- Poor
- Bad

5. How would you rate our performance in terms of environment, safety and occupational health?

- Very good
- Good
- Average
- Poor
- Bad

6. How would you rate our performance in terms of employee responsibility?

- Very good
- Good
- Average
- Poor
- Bad

7. How do you think we are doing in terms of ESG?

- Very good
- Good
- Average
- Poor
- Bad

8. Do you have any comments and suggestions on our ESG performance and this report?

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