

2022 TONGWEI CO., LTD.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



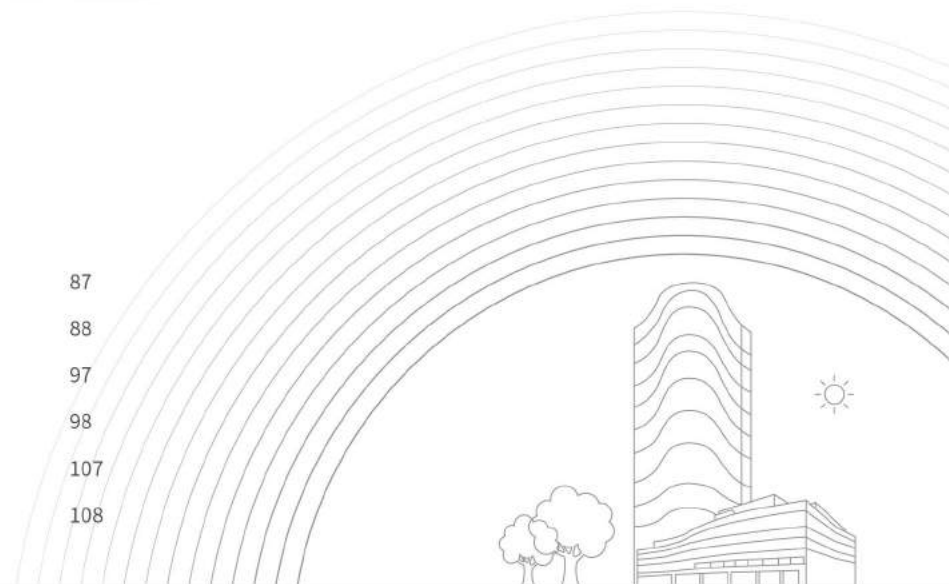
通威股份
TONGWEI CO., LTD.



FOR BETTER LIFE

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About this Report

This is the third Environmental, Social, and Corporate Governance (ESG) report (this “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, 2022 to December 31, 2022 unless otherwise specified.

Scope

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

Data Sources

All information and data used in this report are from 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 amounts are expressed in Chinese yuan unless otherwise stated.

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 text.

Basis

This Report has been prepared with reference to the *GRI Sustainability Reporting Standards* (GRI Standards) of the Global Sustainability Standards Board, *Guidelines for Environmental Information Disclosure of Listed Companies on the Shanghai Stock Exchange, Environmental, Social and Governance Reporting Guide* in Appendix 27 to the *Listing Rules* of the Stock Exchange of Hong Kong, *Recommendations of the Task Force on Climate-related Financial Disclosures* (TCFD), and United Nations Sustainable Development Goals (SDGs).

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.

Form

This report is issued electronically and available in the Sustainable Development under Investor Relations of the website of Tongwei Co., Ltd., (www.tongwei.com.cn) and the 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 for comments from readers (refer to Reader's Opinion Form for details). Please send your opinions and comments to twesg@tongwei.com.

Message from the Chairman

2022 was an extremely important year in our development history, and also a critical year for us to review the 40 years' struggles and embark on a new journey. In the face of a complex and severe international environment and increasingly intensified economic downturn in China, the Company has exerted great efforts into the core strengths and steadily improved the quality and efficiency of development, thus demonstrating its resilience in operations again. In 2022, the Company recorded a revenue of 142.423 billion Chinese yuan, with a year-on-year growth of 119.69%, allowing it to jump by 39 places to the 217th place in the *Fortune* China 500 list.

Tongwei is a large-scale private technology-based enterprise with its own ESG gene. Upholding the mission of "Striving for Excellence and Contributing to Society" and the vision "For Better Life", we put into practice the concept of "collaboration, participation and common interests" to create a sustainable and wonderful new life.

In 2022, we adhered to our original mission and service tenet, and stood a severe test in the face of great challenges such as drought, power shortage and earthquake. We made concerted efforts to overcome all kinds of difficulties, thus creating a new record of listed companies in revenue, profit and market capitalization.

In 2022, we constantly improved the efficiency of corporate governance and took vigorous actions to guarantee the compliance of our business practices with the highest professional and ethical standards; enhanced the quality of information disclosure and operated openly and transparently; deepened our anti-corruption efforts to prevent risks.

In 2022, we continued to improve our sustainable management system, achieved system-based, professional and standardized sustainable development, and promoted the full integration of sustainable development into our corporate governance and business development, with an effort to create sustainable value for the environment, society and economy. In 2022, we unswervingly followed the path of green development, exerted our influence as an industry chain leader and a leading

enterprise, and took climate-related actions to promote the green and low-carbon transformation of the industry chain. With an aim to be a world-class safe food supplier and a world-class clean energy operator, we set carbon reduction targets and action paths covering the whole value chain, promoted the development of clean and low-carbon energy structure, joined hands with value chain partners to build a green supply chain, enhanced our external influence and cooperation, and contributed our wisdom to the global response to climate change.

In 2022, we pursued bold innovation and sustainable development, continued to improve the quality and performance of PV products, and established strategic cooperative relations with many enterprises to jointly accelerate the development of China's PV industry; actively explored the overseas markets, and further enhanced our brand awareness and reputation, thus laying a more solid foundation for our long-term development.

In 2022, we upheld the "people-oriented" concept, treated talents as the first resource for our innovation and development, and took multiple measures to enhance our talent recruitment and retention; improved the diversity in workplace, paid attention to



the care for staff, and reinforced the team cohesion; improved the talent team building, and developed the talent development strategies with Tongwei characteristics; created a healthy and safe working environment, and promoted our development hand in hand with our employees; actively impelled employees to take part in public welfare, and enhanced employees' sense of social responsibility and awareness of public welfare, thus contributing to social harmonious development.

What's past is prologue. In the future, we will continue to stay motivated, actively respond to the market and policy changes, constantly innovate and optimize our products and services, build a high-quality corporate image, contribute to sustainable development and create a bright future.

Board Statement

The Company's Board of Directors ("Board") strictly abides by the *Code of Corporate Governance for Listed Companies, Guidelines for Environmental Information Disclosure of Listed Companies on the Shanghai Stock Exchange, Environmental, Social and Governance Reporting Guide* of the Stock Exchange of Hong Kong and other relevant requirements, and has actively established a standardized and effective environmental, social and governance ("ESG") system and a sound management and information disclosure process to promote the sustainable development in an orderly manner. As of the date of this Report, the Board of Directors has reviewed and adopted the *Environmental, Social and Governance Report 2022 of Tongwei Co., Ltd.*

Board's Role in ESG Management

The Board of Directors takes ultimate responsibility for the ESG management of the Company. Particularly, the Board is responsible for fully deciding and supervising ESG matters, deliberating, approving and updating ESG-related guidelines, policies, strategic objectives and plans in combination with the management and operation practices and stakeholders' concerns, and regularly examining the Company's performance in ESG, so as to better fulfill the responsibility of sustainable development.

ESG Management Strategy

Attaching great importance to the possible significant impact of ESG risks on the Company, the Company has constantly improved ESG topics based on ESG risk identification, macro policies, hot spots and results of communication with stakeholders, and evaluated the significance of ESG topics through stakeholder interview and questionnaire to prioritize ESG topics and define its ESG management focus.

Review of Progress toward ESG Goals

The Company has established and improved its high-quality development indicator system, covering key ESG performance indicators such as greenhouse gas (GHG) emissions, pollutant emissions, occupational health and safety, anti-corruption and supply chain management. In addition, the Company has directly linked the key ESG performance indicators to the review of economic responsibility system, and put into practice the work accountability system. The Board regularly reviews the progress toward relevant goals.



About Tongwei

About Tongwei

Headquartered in Chengdu, Sichuan, Tongwei Co., Ltd. is a large-scale private technology-based listed company with the dual main businesses of green agriculture and green energy as its core which is controlled by Tongwei Group.

The Company now has more than 200 branches and subsidiaries all over the country and overseas, with more than 40,000 employees. With developments in leaps and bounds over the past years, the Company has become a nationwide leader in agriculture, a key producer of aquatic feed in the world, a global leader in high-purity silicon and a leading manufacturer of silicon crystal cells.

Based on the two main businesses, agriculture and new energy, Tongwei has created unique competitiveness from the Fishery and Photovoltaic 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 aquacultural 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.



Tongwei 40th Anniversary: Developing Fishery and Photovoltaic Integration and Fulfilling “Dual Carbon” Dream

Since its inception in 1982, Tongwei has integrated the concept of “sustainability” into its DNA of development in the past 40 years, striving to promote the implementation of SDGs.

In 1994—Implanting the elements “S” and “G” in ESG into our DNA

- Define the management philosophy of “Honesty, Trust, Fairness, and Excellence” and the mission of “Striving for Excellence and Contributing to Society”
- Uphold the spirit of sincerity, and insist on lawful operation

In 2004—Setting the vision “For Better Life”, which is highly consistent with the ESG concept

- Constantly improve the quality of products and services, and better human life

In 2006—Strengthening our requirements for environmental protection (“E”)

- Set the strategic objective of being “a world-class safe food supplier” and “a world-class clean energy operator”
- Create a green, healthy and reliable agricultural industry chain, and provide safe and stable “zero-pollution” clean energy

In 2022—Focusing on energy saving and emission reduction, and promoting green development

- Put forward the internal control requirements of “energy consumption on budget and energy development as planned”

Tongwei always keeps pace with the times and national development. Every important strategic choice of Tongwei is to meet the greatest needs of the present society.

Time flies.

Living and growing toward the light, we implement the Fishery and Photovoltaic Integration, and fortunately become a participant and witness in the global energy transition

The past enlightens the future.

We will make unremitting efforts and seize the opportunity To contribute our wisdom and strength to build a sustainable future for all mankind, open a new chapter of “Beautiful China”, and fuel the solar energy revolution.



Tongwei Events in the Past 40 Years

1982

The founder Mr. Liu Hanyuan invented the fish farming technology with the use of metal wire mesh, which helped break the record of fish yield per unit area in the history of Sichuan

2002

Tongwei Fish, the first fish brand in China, was made available in Chengdu

2004

Tongwei Co., Ltd. (600438) was listed on Shanghai Stock Exchange

2013

Tongwei formally entered the market of efficient silicon solar cells, reshaping the global PV development pattern

2014

Chairman Liu Hanyuan proposed the green concept Fishery and Photovoltaic Integration

2016

PV assets like Tongwei New Energy and Yongxiang Co., Ltd. were injected to the Company which then held two main businesses

2019

Tongwei Solar's world's first 10GW high-efficiency solar cell production base was born

2020

The market capitalization of the Company broke 100 billion Chinese yuan

2021

Tongwei joined the United Nations Global Compact Organization and China Enterprise Climate Action

2022

The market capitalization of the Company broke 300 billion Chinese yuan, making the Company the most valuable listed private company in Sichuan Province





Business Development

Tongwei Co., Ltd. develops a coordinated development mode with the integration of resources from agriculture and photovoltaics, and is committed to providing the whole society with healthy and safe green food and clean energy that have you assured.

Agriculture and Animal Husbandry

The agriculture and animal husbandry business focusing on the feed industry has been extended to aquaculture and livestock and poultry industry. With continuous efforts, it strives to create a green industry chain that is safe, healthy and traceable, thereby becoming a world-class safe food supplier.



Feed Industry

In term of the feed business, the Company is engaged in research, production and sale of aquaculture feeds, and livestock and poultry feeds. By the end of this reporting period, the annual capacity of the Company exceeded 10 million tons, which helped maintain its leading position in the global aquaculture feed industry.



Intelligent Aquaculture

The Company maintains an intelligent aquaculture mode where all processes such as water quality monitoring, environment monitoring, water quality regulation, precise feeding, and regulation and management of growth status are digit-driven, precise, automatic and environment-friendly.



Food Processing

The Company performs the entire process food quality monitoring from the source to table and enhances the value and competitiveness of the modern aquaculture chain.



Sales Terminal

The Company strives to build the first fish brand “Tongwei Fish” in China, and realize “one code for one fish” and the traceability of the whole feeding process, with an aim to provide consumers with healthy and safe high-quality food.

PV Industry

Tongwei has become a PV enterprise integrating the production of high-purity silicon (upstream), production of high-efficiency solar cells and modules (midstream), and construction and operation of PV power stations (downstream), and has built a complete PV new energy industry chain with independent intellectual property rights and leading scale, technology, cost and quality advantages, with the intent to become a world-class clean energy operator.



Production of High-purity Silicon

Tongwei Yongxiang has three high-purity silicon production bases, i.e., Leshan in Sichuan, Baotou in Inner Mongolia and Baoshan in Yunnan, and has created an intelligent manufacturing line that has a large single scale, low comprehensive energy consumption, a new integration of technologies and high quality. Its high-purity silicon products include electronic grade silicon and solar grade silicon. By the end of this reporting period, the annual capacity for high-purity silicon exceeded 260,000 tons, ranking first in the world.



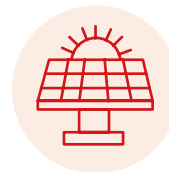
Production of High-efficiency Solar Cells and Modules

Tongwei Solar is a world's leading manufacturer of crystalline silicon cells, ranking first in the shipment of solar cells in the world for seven consecutive years. It now has solar cell and module production bases all over the country, e.g., Hefei, Shuangliu, Meishan and Jintang. By the end of 2022, the Company could produce 70GW of solar cells and 14GW of modules.



Construction and Operation of PV Power Stations

Tongwei New Energy has created a new development mode of Aquaculture-Photovoltaic Integration, helping to really realize the efficient and coordinated development of agriculture and photovoltaics. At present, it has constructed 52 power stations based on Fishery and Photovoltaic Integration in over 20 provinces and cities in China, with a cumulative grid connection of 3.4GW, an annual electricity settlement of 4.06 billion KWh and a carbon emission reduction of 3.09 million tons.



Tongwei Data

During the report period:



Operating income

142.423 Billion yuan



Total assets

145.244 Billion yuan



Basic earnings per share

5.7149 CNY



Total tax

11.8 Billion yuan



Environmental protection

888 Million yuan



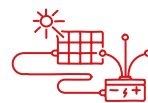
Annual capacity for feeds

10 Million tons



Annual capacity for high-purity silicon

260 Thousand tons



Annual production capacity of solar cells

70 GW



Production capacity of high-efficiency solar modules

14 GW



Fishery and Photovoltaic Integration grid connection

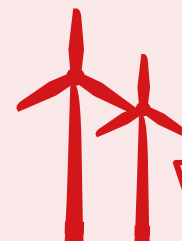
3.4 GW

ESG Highlights

Compared with 2021

20% ↓

Reduction in GHG emissions per million yuan of revenue (based on location)



Reduction in comprehensive energy consumption per million yuan of revenue



19% ↓

Reduction in purchased steam

52% ↓



Increase in clean energy power consumption

113% ↑



Increase in the number of female directors

2 ↑

444 ↑



Increase in the number of anti-corruption trainings



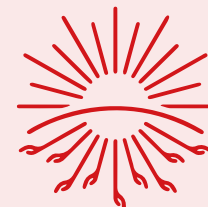
Increase in R&D expenses

116% ↑



Increase in the number of patents and utility models authorized

426 ↑



Participate in the 27th Conference of the Parties to the UNFCCC (COP27)

ESG Rating

- ◆ Rated ESG “A” by Wind
- ◆ Rated ESG “A-” by SynTao Green Finance STaR
- ◆ Rated ESG “A-” by the International Institute of Green Finance, CUFE
- ◆ Rated ESG “AA” by China Securities Index
- ◆ Rated “C” in the first response to the CDP questionnaire for carbon information disclosure



ESG Honors



China’s Top Ten Typical Demonstration Projects of Carbon Neutrality in 2022

Organizing Committee of Chinese Renewable Energy Conference & Exhibition of China Energy Research Society

Forbes China’s TOP50 Sustainable Industrial Enterprises in 2022

Forbes

Social Responsibility Reference: Outstanding Responsible Enterprise in 2022

The 5th Social Responsibility Conference (Organizing Committee of the Social Responsibility Conference)

Most Socially Responsible (ESG) Listed Company

Capital Week

China ESG Golden Awards 2022—Best Environmental (E) Responsibility Award

Sina Finance

“Fishery and Photovoltaic Integration” Project was listed in the First Annual ESG Innovation Experiment List in 2022

Wall Street CN

TNC High-efficiency Cell Technology was awarded “Zero-Carbon China”+ Innovative Technology in 2022

Investment Association of China



Topic 1 Take Accountability for and Act as a Pioneer in Climate Action

Reaction on climate change is an integral part of high-quality and green development. China announced its climate ambition of “Carbon Peak and Carbon Neutrality” in 2020, and completed the top-level policy design for “Dual Carbon” goals in 2021. As a leading enterprise in both agriculture & animal husbandry and PV industries, Tongwei attaches great importance to climate-related issues, focuses on developing green and low-carbon energy, prioritizes ecological conservation, pursues green and low-carbon development, constantly reduces the intensity of carbon emissions, and makes every effort to combat climate change.

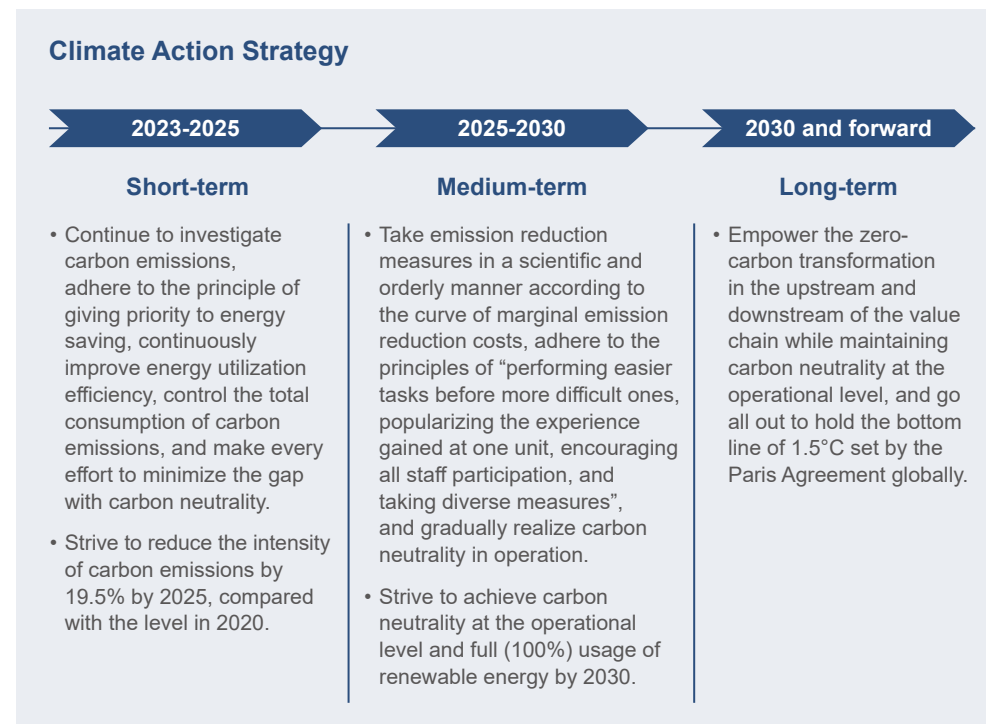
Under the framework of the Task Force on Climate-Related Financial Disclosures (TCFD)¹, Tongwei has fully explained its climate-related risks and corresponding measures from four aspects: governance, strategy, risk management, and metrics & targets.

Governance

As a strong advocate and pioneer of climate action, Tongwei has built an organizational structure where the Board of Directors takes charge of supervision and guidance, the Energy Management Committee sets guidelines for action, and the Energy Management Working Groups and relevant departments execute tasks. The Company links the environmental goals with the performance-related salary of EHS leaders of the Energy Management Committee and relevant departments, and provides incentives to the departments and individuals that achieve goals on time and make significant contributions.

Strategy

Under the guidance of its sustainable development strategy, Tongwei has formulated a climate action strategy to enhance its climate adaptability and resilience to the climate crisis.



¹TCFD: develop recommendations on voluntary and consistent climate-related financial disclosures to help investors have a full understanding of major risks.

Analysis on Risks and Opportunities of Climate Change

In combination with the domestic and international trends and stakeholders' concerns and in consideration of internal and external environmental changes, Tongwei has enhanced the identification and evaluation of climate risks and opportunities and developed relevant measures in terms of policies, regulations, market, technology, reputation, physical risk, etc.

Climate Change Risks and Measures

Climate change risks	Physical risks		Transition risks		
	Acute risk	Chronic risk	Policy and legal compliance risk	Technical risk	Market risk
Risk descriptions	<ul style="list-style-type: none"> Severe weather conditions such as typhoon, flood, drought, and extremely cold or hot weather in the production bases may cause problems such as supply chain interruption. 	<ul style="list-style-type: none"> Sea level rise may cause risks to the production bases or projects in coastal areas 	<ul style="list-style-type: none"> As China continues to strengthen its reaction on climate change, and constantly release various policies, regulations and industry standards, failure to make timely adjustments to the operation strategy may increase the compliance cost of the carbon market. Non-compliance with the law may cause litigation risks and fines. 	<ul style="list-style-type: none"> Failure to develop and utilize energy-saving technologies with higher efficiency and lower energy consumption may lead to the rapid growth of energy consumption and rapid increase of energy costs. 	<ul style="list-style-type: none"> The raw material prices/storage costs/transportation costs may rise due to climate change, or the product prices may change due to policy adjustments, which may cause the risk of cost rise.
	Measures	<ul style="list-style-type: none"> Fully identify and evaluate the financial risks caused by climate change to production and operation, and cooperate with insurance companies to start the emergency plans and claims procedures in time in case of sudden environmental disasters. Prepare emergency drill plans to fully improve the emergency rescue and response capabilities of relevant personnel. 	<ul style="list-style-type: none"> Comprehensively analyze and investigate the natural and social environment elements in construction project areas, and develop optimal planning and design schemes to ensure that the site selection meets the environmental protection requirements. Pay attention to the comprehensive management of the surrounding environment and reduce the negative environmental impact in the process of daily management and operation. 	<ul style="list-style-type: none"> Pay regular attention to relevant new laws and regulations, calculate carbon emissions in time, and evaluate the compliance cost. Manage the environmental issues according to the standards higher than national regulations to avoid compliance risks. 	<ul style="list-style-type: none"> Evaluate the financial impact of energy consumption costs, adopt low-carbon technologies, and phase out high-emission facilities. Explore the way to promote the application of low-carbon technologies jointly with value chain partners.

Potential Opportunities Brought by Climate Change

Reducing costs and increasing efficiency

• **Energy saving and emission reduction will present opportunities for the Company to reduce costs and increase efficiency.** As the Company has a large comprehensive energy consumption and a high carbon emission ratio, energy efficiency improvement can not only reduce emissions at the operational level, but fully lower the Company's energy use cost.

Expanding the market space

• **PV industry contributes to global energy transition.** As a leading company in the PV industry, the Company continues to focus on its core businesses such as silicon materials, cells and modules, constantly explores and innovates PV application scenarios, and provides customers with high-efficiency carbon reduction products and solution, thus seizing a broad market space.

Improving competitive advantages

• **Create the differentiation advantage of products.** PV products with less or even zero carbon footprint will be more likely to have an advantage in the market and form new competitiveness of products.

• **Contribute to social emission reduction.** Through the leading climate action, the Company has accumulated the best practice experience in systematic carbon management, which helps to provide carbon neutrality services for upstream and downstream customers in the value chain.

Metrics and Targets

Tongwei has set systematic climate action goals covering “zero-carbon operation, zero-carbon value chain and zero-carbon products”, unswervingly promoting the implementation of China’s “Dual Carbon” goals and helping the world reach the goal of zero emissions.

At the operational level

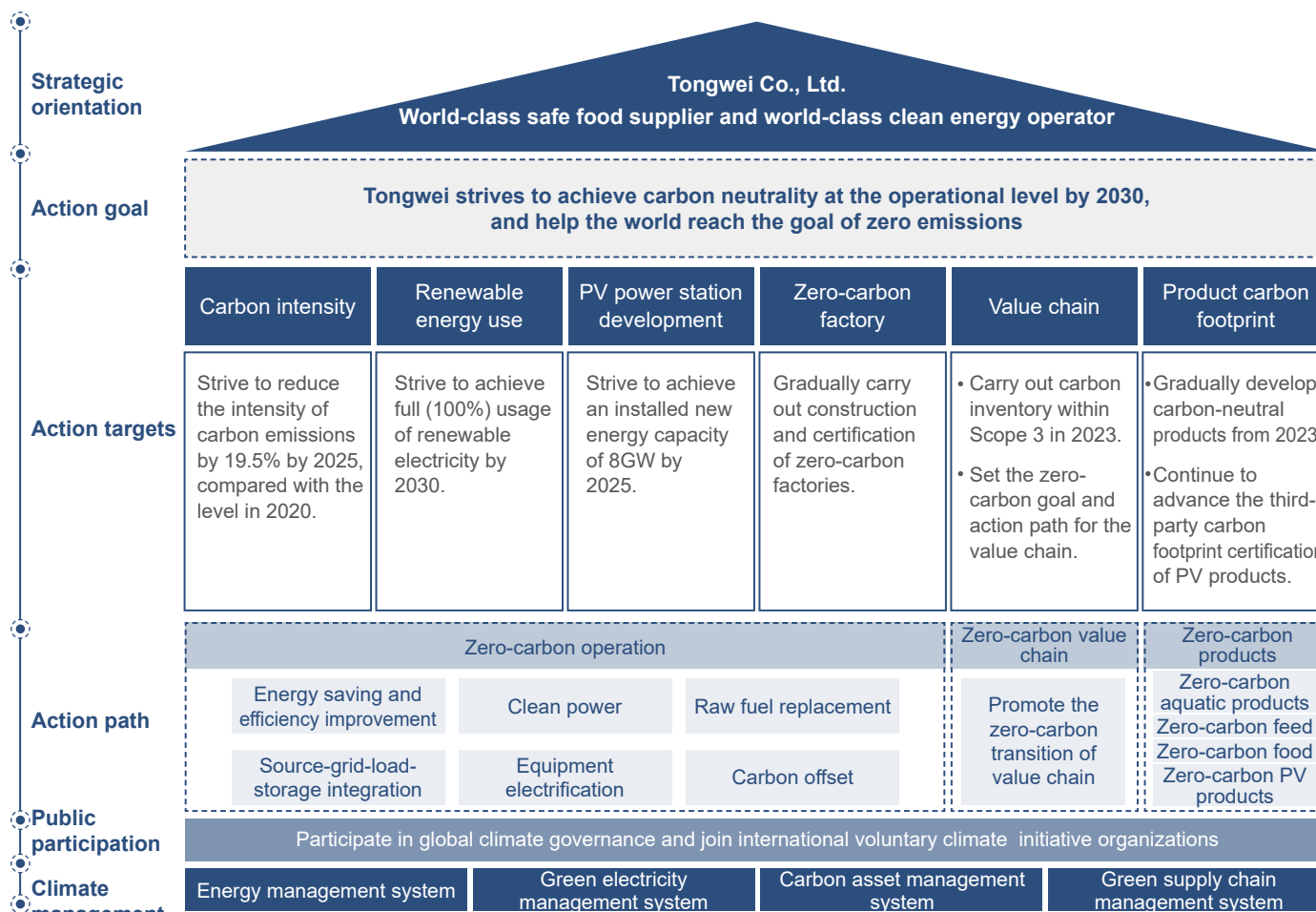
The Company has set the goals in terms of carbon intensity, renewable energy use, PV power station development and zero-carbon factories to support the achievement of carbon neutrality goal at the operational level.

At the value chain level

The Company will give full play to its leadership as a leading company in the industry chain, and advocate and promote the zero-carbon transition of stakeholders in the value chain.

At the product level

The Company will pay constant attention to carbon emissions in the whole life cycle of products, and promote emission reduction in the whole value chain by reducing the carbon footprint of products.



Systematic action goal of “zero-carbon operation, zero-carbon value chain and zero-carbon products”

Action Path

Tongwei has developed its climate action plan from three aspects of “zero-carbon operation, low-carbon value chain and zero-carbon products” to support the achievement of its climate action goals.

Promote carbon neutrality at the operational level

At the operational level, Tongwei has developed a carbon neutrality path based on energy saving & efficiency improvement, raw fuel replacement, equipment electrification, clean power, multi-energy complementarity and carbon offset.

- Energy saving & efficiency improvement: comprehensively improve the energy efficiency of production process through energy management, waste energy utilization and technology improvement;
- Raw fuel replacement: replace coal-fired boilers with clean energy ones, and explore new fuels such as hydrogen energy to replace fossil fuel;
- Equipment electrification: continue to identify the opportunities for equipment electrification, and promote electrification reconstruction projects;
- Clean power: actively consume renewable energy, and increase the usage of renewable electricity through PV roofs, market-oriented trading for distributed power generation, etc.;
- New project planning: explore the energy Internet based on the “source-grid-load-storage” interactive regulation system, and promote multi-energy complementarity;
- Carry out carbon asset operation and management, and neutralize the remaining emissions through carbon offset according to the market mechanism.

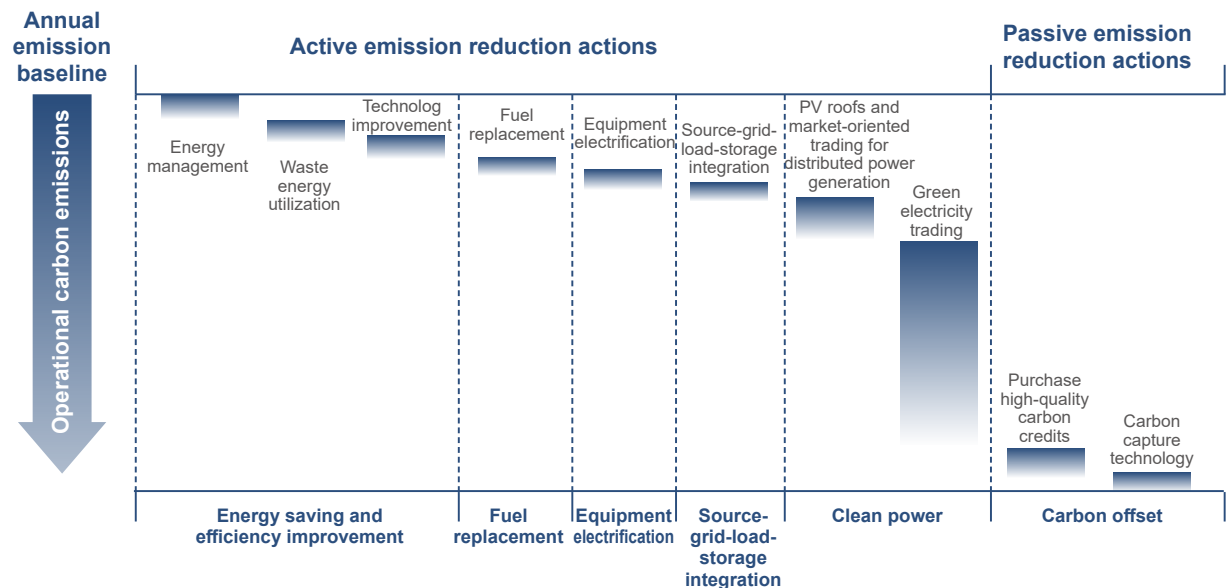
Promote the zero-carbon transition of value chain

Tongwei plans to measure the carbon emissions in the value chain, communicate with major stakeholders on climate management step by step in the principle of significance, and promote the transformation of stakeholders. In order to reduce emissions in the supply chain, Tongwei will gradually build a foundation for supplier climate data management, and incorporate suppliers’ climate performance, emission data accounting and other requirements into supplier management.

Promote emission reduction in the whole life cycle of products

In pursuit of sustainable development, Tongwei builds a closed loop of management in terms of green design, green procurement, green production, green logistics and green recycling of products, promotes the green management of products throughout their whole life cycle, and actively develops green products, low-carbon products and carbon-neutral products.

Schematic Diagram of the Technical Path of Tongwei Carbon Neutrality Action in Operation



Topic 2

“Fishery and Photovoltaic Integration” Draws a Painting of Green Development

Tongwei vigorously promotes the “Fishery and Photovoltaic Integration” mode, constantly boosts the development of large-scale, automatic and intelligent aquaculture, and realizes the production of green and safe aquatic products underwater and clean energy on water surfaces, thus achieving a triple win in fishing, power generation and environmental protection.



Producing clean energy on water surfaces

Tongwei plans to raise the installed capacity of PV power stations to 5GW in 2023, with a total investment of about 20 billion yuan. Tongwei New Energy strives to complete the new energy installations of 8GW by 2025, with an effort to deliver 9 billion KWh clean power to the society every year.

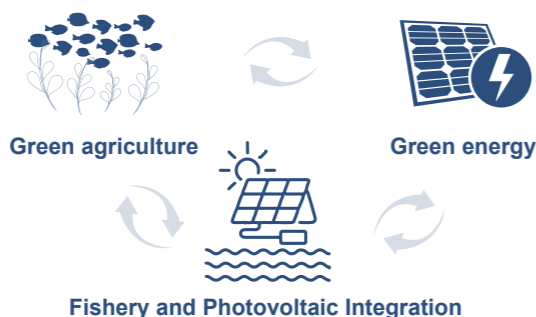
Producing green and safe food underwater

Tongwei Fish has achieved food safety management throughout the industry chain. We have many high-quality fish farming bases nationwide, and several deep processing bases for products in Chengdu, Hainan, etc. Our processing process fully conforms to ISO and HACCP management systems, as well as EU and FDA certification standards. Each production step is subject to strict test and control, and one code is assigned to one fish for digital ID management, so as to deliver healthy, safe and high-quality products.

Strategic System

Tongwei has developed the “Fishery and Photovoltaic Integration” mode which features the integration of three industries, and built a demonstration park integrating new fishery, new energy and new rural area, thus achieving intensive development of one resource and three industries.

Integration of three industries



Fishery and Photovoltaic Integration

A fishery production mode that utilizes the space resources above the aquaculture water areas for PV power generation to realize integrated utilization of water areas

Multiple benefits

Economic benefits

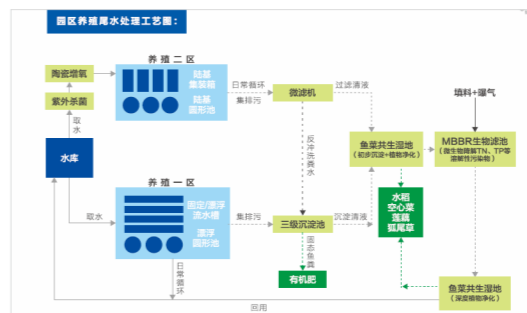
Achieve an organic combination of aquaculture, PV power generation, rural tourism projects and tail water treatment, improve fish farming level and increase unit land efficiency through the integrated utilization of land.

Social benefits

Pursue sustainable development through “ecological protection + agricultural assistance by industrial development”. After it is completed and put into operation, the project will provide a new way for local villages to increase employment and collective income, and advance agricultural transformation and national rural revitalization.

Environmental benefits

Tailwater purification: transport aquaculture wastewater in the pond to the solid-liquid separation tank for treatment, and then transfer supernatant to the wetland for purification before recycling to the aquaculture pond, and transfer the solid sediments to the sun-drying tank where sediments will be dried into organic compost; purify tailwater in the tailwater treatment area, so as to effectively reduce the pollution load of COD and ammonia nitrogen in water.



Systematic sewage: build a supporting bottom sewage system to remove fish excrement and residual baits from aquaculture water to improve the environment of the aquaculture water area;



Biodiversity

- Prohibit project development, construction, operation and maintenance near national protected areas for biodiversity.
- Continue the research on our own breeding technologies to provide technical support for biodiversity and germplasm conservation.
- Improve the nutrition ratio of feed to ensure dietary and nutritional health of animals.
- Ensure that animal health products are mainly composed of traditional Chinese medicine extracts or microecological preparations, without any antibiotics.
- Breed different varieties such as fish, shrimp and crab through reasonable combination to increase biodiversity, and ensure that treated tailwater will not have a negative impact on aquatic animals in nearby rivers and other waters.
- Adhere to the principle of “ecological balance”, reduce harmful algae by using PV panels, and maintain a balanced and stable microecosystem.

Fishery and Photovoltaic Integration power stations

52

Sets

Fishery and Photovoltaic Integration grid connection

3.4

GW

Capacity of Fishery and Photovoltaic Integration projects in progress

>1.2

GW

Electricity settlement of Fishery and Photovoltaic Integration projects in 2022

4.06

Billion KWh



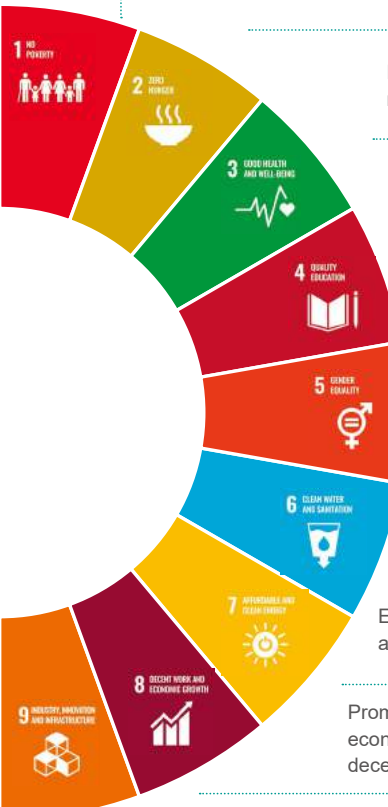
Sustainable Management

As a large multinational enterprise focusing on efficient and coordinated development of green agriculture and green energy, Tongwei Co., Ltd. plays an important role in green and low-carbon transformation and sustainable development. We regard sustainability as the key to our development, and support and implement SDGs to highlight our corporate social responsibility.

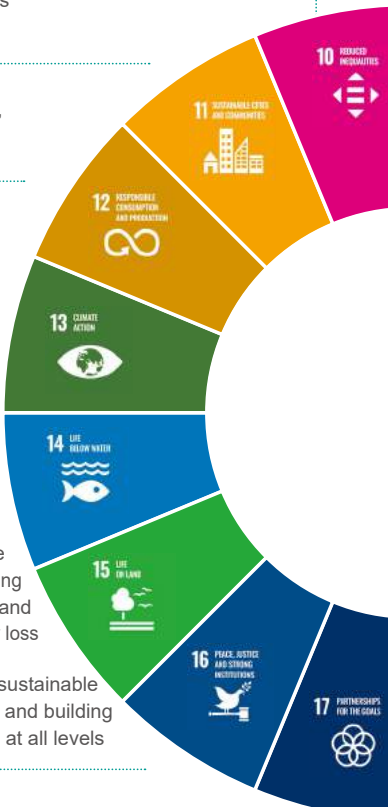


The Sustainable Development Goals (SDGs)

SDGs	Page
Ending poverty in all its forms everywhere	P17
Ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture	P17
Ensuring healthy lives and promoting well-being for all at all ages	P81-84
Ensuring healthy lives and promoting well-being for all at all ages	P78-80
Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all	P32-35 P72-74
Ensuring availability and sustainable management of water and sanitation for all	P66-67
Ensuring access to affordable, reliable, sustainable and modern energy for all	P17 P59-63
Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	P72-74
Building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation	P17



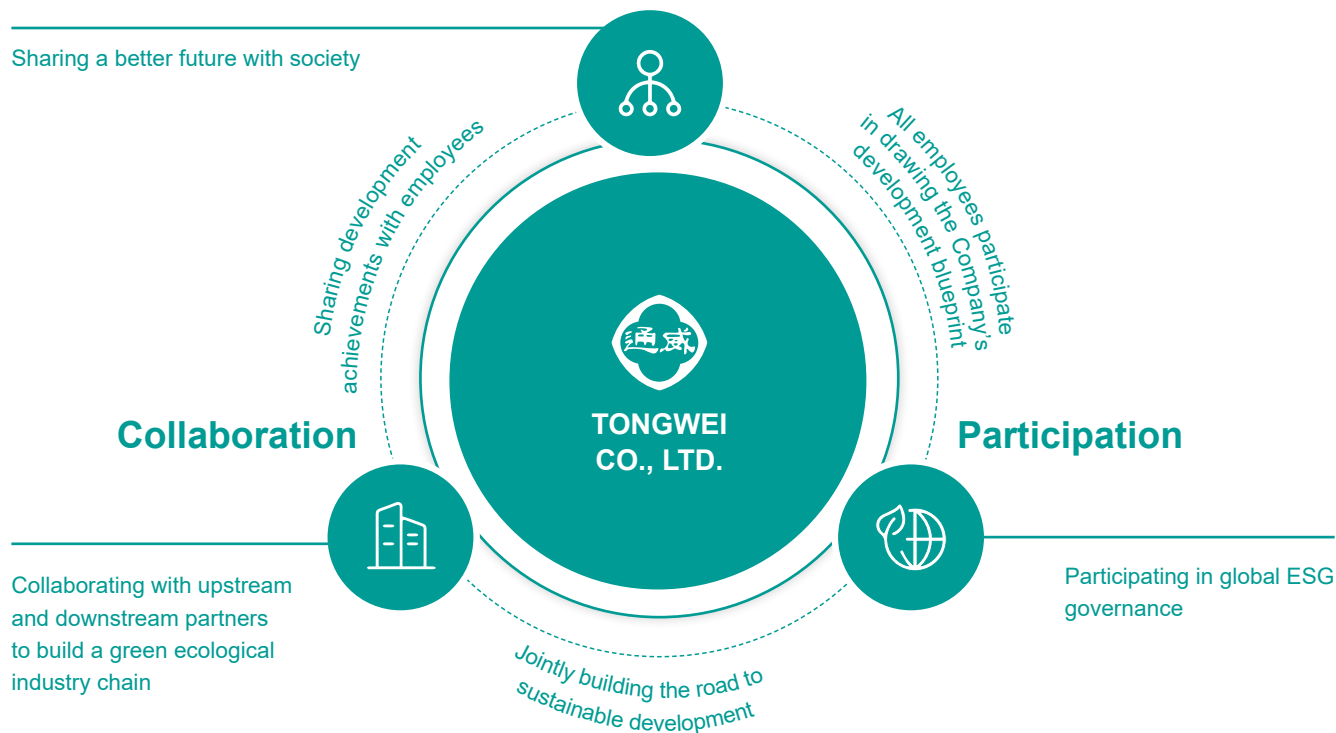
Page	SDGs
P72-74 P78-80	Reducing inequality within and among countries
P17	Making cities and human settlements inclusive, safe, resilient and sustainable
P59-63 P68	Ensuring sustainable consumption and production patterns
P13-16 P59-63	Taking urgent action to combat climate change and its impacts
P17	Conserving and sustainably using the oceans, seas and marine resources for sustainable development
P17	Protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, combatting desertification, and halting and reversing land degradation and halting biodiversity loss
P32-35 P37-39	Promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels
P13-16 P42-45 P56	Strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development



Sustainable Development Strategy

Tongwei has developed an internally and externally integrated strategy of sustainable development to create a sustainable and wonderful new life based on “collaboration, participation and common interests”.

Common interests



Create a sustainable and wonderful new life based on “collaboration, participation and common interests”





Sustainable Development Commitment

Tongwei profoundly understands that the integration of our development with national expectations and social needs based on high-quality business development is an ongoing concern in our future development. Upholding the mission of “Striving for Excellence and Contributing to Society”, we constantly improve our resilience in the face of crisis or uncertainty, and work together with all stakeholders to achieve the balanced development of enterprises, society and environment and create a sustainable future for the earth and human society.

Our Commitments



Business ethics

We commit to operate in an honest and compliant manner, establish and improve our compliance and risk management systems covering anti-monopoly, unfair competition, anti-commercial bribery and anti-corruption, abide by the highest standards of business ethics, and control the risks of business operations according to clear regulations and processes.



Environmental protection

We commit to strictly comply with the regulatory requirements for environmental protection in the region where we operate in terms of resource utilization and emission management; adopt efficient and innovative technologies and measures to combat climate change, thus minimizing the environmental impact of our business operations.



Human rights and labor

We commit to actively respond to the *Universal Declaration of Human Rights*, safeguard and respect the human rights and legitimate rights and interests of all employees, and prohibit child labor, forced labor and human trafficking in our operation and management; resolutely oppose discrimination, harassment and other insulting behaviors; creating a safe and healthy workplace for employees; provide employees with diverse opportunities for learning and career development.



Supply chain management

We commit to incorporate environmental and social factors into our supplier management mechanism in an orderly manner, strengthen supplier performance management in human rights, environmental protection, safety and health, business ethics and other relevant aspects, and build a sustainable supply chain.



Conflict minerals

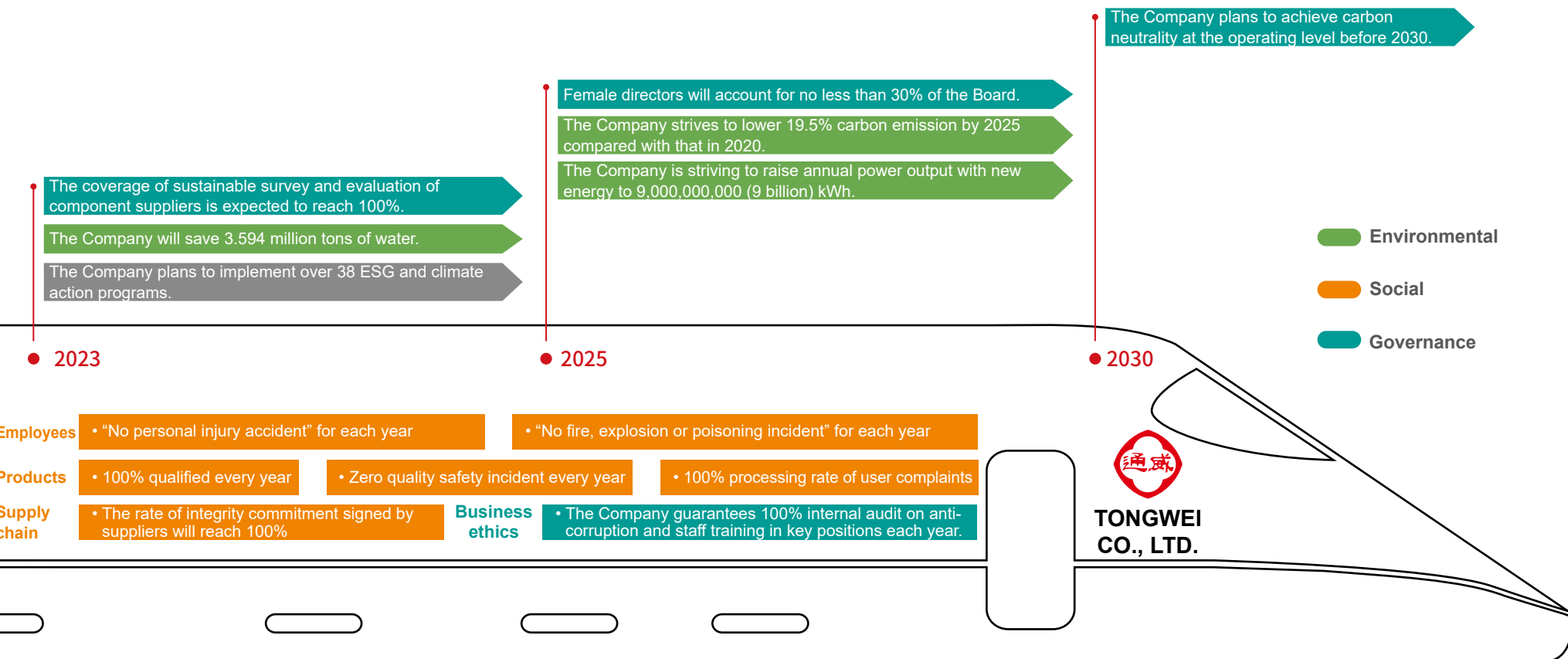
We commit to abide by the international conventions and industry initiatives such as United Nations Global Compact, OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, and Responsible Minerals Initiative, purchase tin, tantalum, tungsten, gold, cobalt and other mineral raw materials used for products in a responsible manner, and make every effort to ensure that all raw materials for products are acquired lawfully.

In the future, we will further improve and deepen our management regulations and measures in all aspects of sustainable development, and encourage and support suppliers and partners to make and fulfill the above commitments.

Sustainable Development Goals

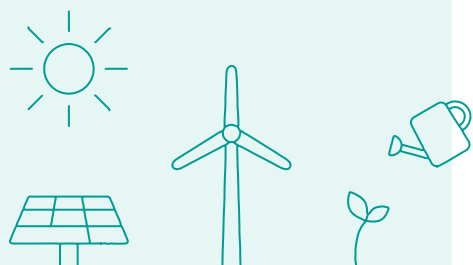
In 2022, we identified, set and disclosed our ESG goals through communication with stakeholders and in combination with our operation and development, fulfilled our commitments to sustainable development, and helped employees, clients, partners and the public understand our achievements in sustainable development. In the future, we will continue to promote and improve the setting and implementation of sustainable development goals.

Sustainable Development Goals



Sustainable Development Management

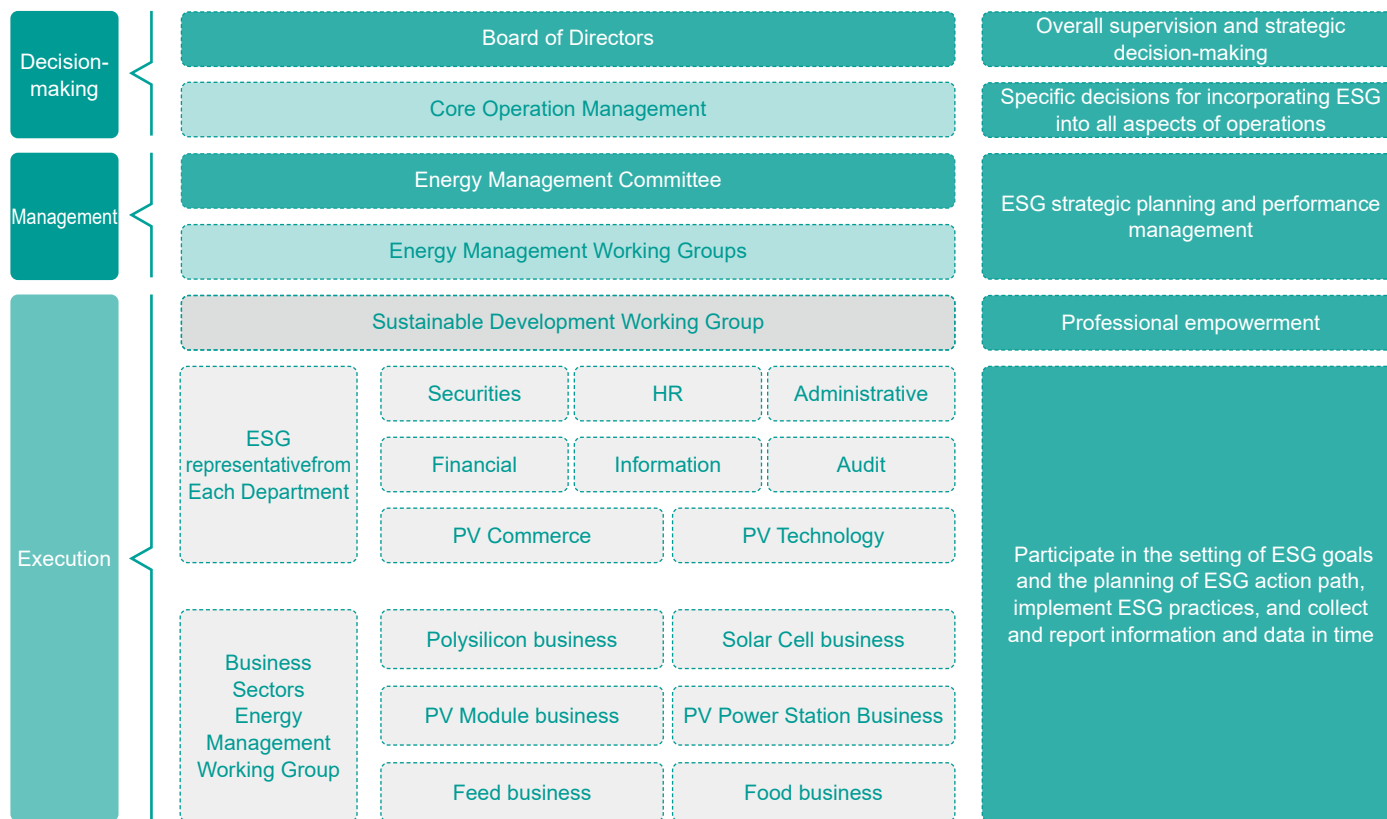
In order to promote system-based, professional and standardized management of sustainable development, Tongwei combines theory with practice, constantly improves ESG management contents and indicators, working mechanism & process, and information disclosure methods, and effectively integrates sustainable development and ESG quantitative management into corporate governance and various business aspects.



ESG Management Structure

In 2021, the Company built a three-level (i.e., decision-making level, management level and execution level) ESG management structure consisting of the Board of Directors, Energy Management Committee, and Energy Management Working Groups/Sustainable Development Management Group. On this basis, the Company incorporated the core operation management, and all functional departments and businesses into the ESG management system, gave full play to the advantages of all levels, and made concerted efforts from top to bottom and from bottom to top to pursue sustainable development comprehensively, systematically and effectively in 2022.

Tongwei ESG Management Structure





Decision-making Level

Board of Directors

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

Core Operation Management

Get to know the progress of ESG management on a monthly basis, solve the key and difficult problems in sustainable development, and provide decision support for ESG management in each operation link.

Management Level

Energy Management Committee

The Energy Management Committee is led by the Chairman, and composed of eight core executives from different businesses.

- Regularly report the progress of ESG management to the Board and core management;
- Determine the significance of ESG matters and take them into business considerations;
- Formulate the review the Company's ESG policies, strategies, regulations and specifications;
- Supervise the implementation of ESG strategies.

Energy Management Working Groups

- Regularly report the ESG management progress and performance to the Energy Management Committee, convey the Board's ESG decisions to all departments, and mobilize all departments and business segments to implement ESG strategies;
- Identify ESG risks and opportunities, improve the ESG risk management process, and urge the management to develop ESG plans and goals that help reduce risks and discover long-term value;
- Determine the departments in charge of sustainable development, and organize and coordinate all departments and business segments to carry out sustainable development practice;
- Organize the communication and participation of ESG stakeholders, coordinate and integrate resources to promote cross-business cooperation, and create a sustainable business ecosystem.

Execution level

Sustainable Development Management Group

Sustainable Development Management Group is a specialized ESG team of the Energy Management Working Groups

- **Capacity building:** organize the management and employees to participate in specialized learning on ESG, mobilize internal and external resources to develop ESG training courses, carry out all-round promotion activities, and promote the Company's innovation in sustainable development;
- **Benchmarking:** follow the world's leading ESG standards, analyze the gap with benchmarking enterprises, analyze and summarize the Company's current situation of ESG, and provide professional support, countermeasures and solutions;
- **Standardization:** establish the Company's ESG indicator system according to the ESG information disclosure principles at home and abroad, and clarify the scope and requirements of information and data reporting;
- **Information disclosure:** prepare and publish ESG reports, and ensure the authenticity, accuracy and timeliness of the Company's ESG-related information disclosure.

ESG Representatives of Departments

Each functional department of the Head Office has an ESG representative who is responsible for participating in the setting of ESG goals and planning of ESG action path, carrying out specialized training on ESG, putting into practice the overall ESG strategy of the Head Office, and reporting the action progress in time.

Energy Management Centers/Working Groups of Business Entities

Depending on its own characteristics, each of the Company's six major business segments sets up an Energy Management Center or Inter-departmental Working Group which is responsible for participating in the Head Office' ESG goal setting and action path planning, carrying out ESG practice within its business segment, putting into practice the overall ESG strategy of the Head Office, and reporting the action progress in time.

ESG topics to be reported to the Board and core Operation management

Develop an incentive system that links the compensation of senior managers and key personnel to ESG (Environmental, Social and Governance) management performance.

Review the ESG Work Plan 2022-2023 of Tongwei Co., Ltd.



Develop and publish the environmental, social and governance indicator system of Tongwei Co. Ltd.

Develop the short-term, medium-term and long-term climate action plans of Tongwei Co., Ltd.

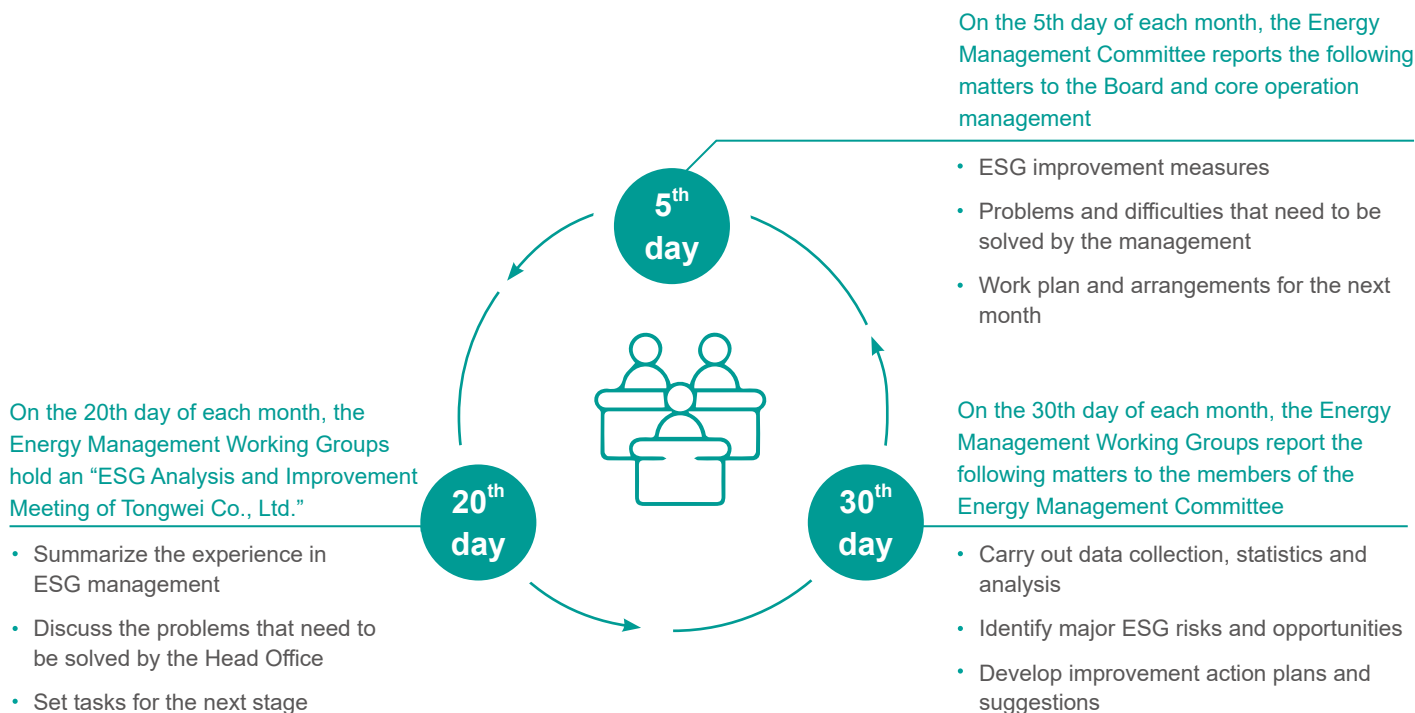
- Attend COP27
- Join the Corporation Carbon Neutral Action (CCNA)
- Participate in public projects, e.g., formulation of carbon-related standards

ESG Management Performance

In 2022, Tongwei further promoted sustainable development management, dynamically identified and controlled ESG risks and opportunities in the process of production and operation, built efficient coordination, communication and decision-making mechanism, and mobilized collective wisdom and strength to advance the whole process of energy management from planning to plan implementation.

Establish an ESG rolling management mechanism

Regularly report ESG management progress to the Board and core management, organize relevant departments and business segments to hold ESG analysis and promotion meetings, analyze ESG-related work progress and performance, and build a long-term ESG management promotion mechanism covering all employees and the whole process by preparing and releasing ESG-related reports.



During this reporting period

Number of reports to the Board and core operation management

9

Number of Tongwei ESG analysis and improvement meetings

8

Number of ESG topics concerned

12

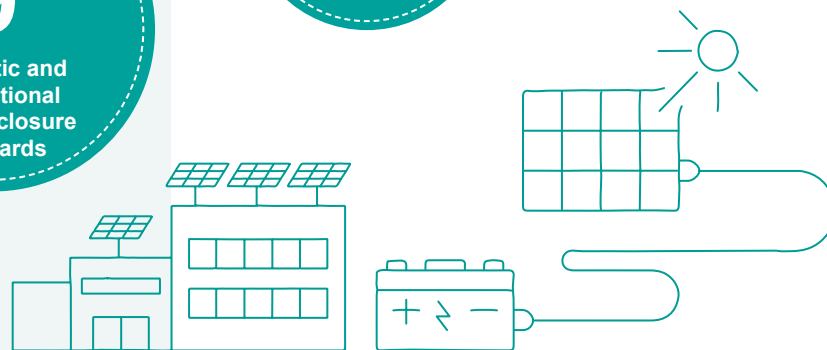
Covering all departments, business segments and energy managers

Promote linkage to ESG performance

Impel the Company to link the key performance indicators related to ESG to the performance of persons in charge of business segments, assess the key performance indicators related to ESG, commend and reward outstanding projects and individuals, and deprive the departments and individuals that fail to meet the pre-defined targets of the eligibility of the assessment of outstanding departments and outstanding individuals.

Build an ESG indicator system

In order to regulate the ESG information disclosure and daily management of Tongwei Co., Ltd. and its business entities, and guide relevant departments to define the ESG indicators, submission methods, information to be submitted, etc., the Sustainable Development Management Group has built an ESG indicator system and prepared the *User Manual for Environmental, Social and Governance (ESG) Indicator System of Tongwei Co., Ltd.*



Comparison with the ESG Management Performance of Benchmarking Enterprises

During this reporting period, the Sustainable Development Management Group comprehensively analyzed and summarized the Company's historical ESG management, and compared the ESG management performance of Company with that of 18 benchmarking enterprises from 5 industries (PV, agriculture & animal husbandry/food, manufacturing, cement and chemical industry).

- Prepare the *ESG Work Summary and Industrial Benchmarking Report of Tongwei Co., Ltd. in 2021.*
- Make the *ESG Work Plan 2022-2023 of Tongwei Co., Ltd.*, and **control the progress of ESG management through checklist-based management.**



Organize ESG-related training

In order to improve the ESG management capacity of each business segment, the Energy Management Committee actively organized training for ESG-related entities, and incorporated ESG-related matters into the training for managers, core business personnel and grassroots employees.

During this reporting period	Number of ESG-related training sessions 10	Number of participants Over 300
ESG-related training	<ul style="list-style-type: none"> ○ Current Status of Development and Management of Environmental Rights and Carbon Assets ○ Interpretation of the Guide to Measurement Methods for Greenhouse Gas Emissions of Enterprises ○ Enterprise ESG Management and Best Practice Sharing ○ Global Trends of ESG Management ○ Current ESG Information Disclosure and Rating Promotion Training ○ Green Electricity-trading Policy ○ Interpretation of Sichuan Provincial Economic and Information Department on the Solicitation and Planning of Key Projects in Green, Low-carbon and Competitive Industries ○ Interpretation of the Green Factory and Energy Measurement Review Policy ○ Interpretation of the Notice on Further Effectively Conducting the Work Concerning Non-inclusion of Newly Added Renewable Energy Consumption in the Total Energy Consumption Control ○ Standard for Measuring Environmental Benefits of PV Power Generation 	

Make ESG and climate action plans









With the aim of “energy consumption on budget and energy development as planned” and in line with the principle of “planning and layout in advance”, the Company has prepared its ESG Action Plan 2023 and short-term, medium-term and long-term climate action plans, made systematic arrangements for the scientific and orderly implementation of “Dual Carbon” goals and ESG projects, and continuously improved its guidelines, policies, specifications, strategic objectives and action plans related to ESG management. The Company plans to carry out the following projects in 2023:

 ESG Action Plan	Number of ESG-related system certification projects 6	Number of sustainable social responsibility supply chain projects 3
	Number of information disclosure projects 2 or more Active participation in response to CDP/CSA questionnaires	Number of other ESG projects 8 System improvement, standard formulation, initiative alliance joining, and training & publicity
 Climate Action Plan	Number of carbon emission accounting and verification projects 1 Scopes 1, 2 and 3	Number of energy saving and carbon reduction technology transformation projects 10 Equipment transformation, energy-saving renovation, quality and efficiency improvement, resource recycling and water-saving projects
	Number of product carbon footprint and life-cycle assessment projects 5 or more	Number of energy carbon digitalization projects 3

Communications with Stakeholders

Tongwei has always placed a high value on the expectations and needs of stakeholders. During this reporting period, the Company kept communications with stakeholders via many channels to understand and respond to their expectations and needs which are taken as an important consideration in decision-making to improve the sustainable development management and achieve a win-win result.

In 2022, Tongwei made over 260 on-site communications with domestic and foreign investment institutions, government agencies, international organizations, and industry associations, with focus on such topics as the Company’s ESG management structure, ESG and Dual Carbon action paths and results, ESG information disclosure, carbon footprint certification, employee management and supply chain management. We actively listened to stakeholders’ suggestions, and made efforts to promote ESG-related work.

Stakeholders	 Governmental bodies and regulators	 Investors /Shareholders	 Employees	 Suppliers	 Clients	 Industry associations	 Media	 Communities
Topic	<ul style="list-style-type: none"> • Compliance • Tax payment • Industrial development 	<ul style="list-style-type: none"> • Return on investments • Stable and robust operation • Communication channels 	<ul style="list-style-type: none"> • Protection of interests • Career development • Training and education • Occupational health • Employee care 	<ul style="list-style-type: none"> • Business ethics • Cooperation for win-win 	<ul style="list-style-type: none"> • Protection of interests • Product quality 	<ul style="list-style-type: none"> • Product quality • Respect and safeguard human rights • Reaction on climate change 	<ul style="list-style-type: none"> • Reaction on climate change • Business continuity 	<ul style="list-style-type: none"> • Volunteering • Public charity
Communication and response	<ul style="list-style-type: none"> • Operate with honesty • Pay taxes on time • Participate in developing standards 	<ul style="list-style-type: none"> • Profit distribution • Enhance risk management • Shareholders’ meeting • Regular reporting • Performance briefing • Daily exchange meeting of investors 	<ul style="list-style-type: none"> • Employee representatives’ meeting • Employee satisfaction survey • Improve promotion mechanism • Enrich training content • Organize occupational health examinations • Set the Employee Care Fund 	<ul style="list-style-type: none"> • Optimize supplier management system • Develop supplier code of conduct • Supplier training and evaluation • On-site interview and visit 	<ul style="list-style-type: none"> • Client satisfaction survey • Optimize product quality management system • Improve the after-sale service 	<ul style="list-style-type: none"> • Industry conference, forum, and working group • Seminar on standard setting • Academic research activities 	<ul style="list-style-type: none"> • Press conference • Exclusive interview • Enhanced disclosure 	<ul style="list-style-type: none"> • Organize volunteering activities • Charitable donation • Poverty alleviation through PV projects

Materiality Assessment

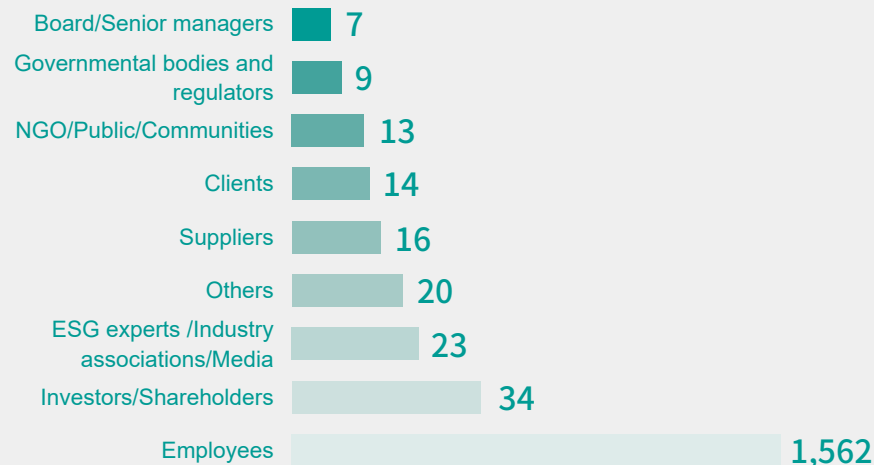
20 material ESG issues were identified from two aspects, i.e., materiality to the Company and materiality to stakeholders, and then ranked to guide the Company to advance targeted ESG management and effectively respond to the development topics of common concern to stakeholders.

Determination of Materiality

We got to know stakeholders' comments on our ESG issues by various means such as questionnaires and ESG interviews, and identified and determined the materiality concerns to stakeholders, so as to conduct more accurate and comprehensive disclosure of ESG information.

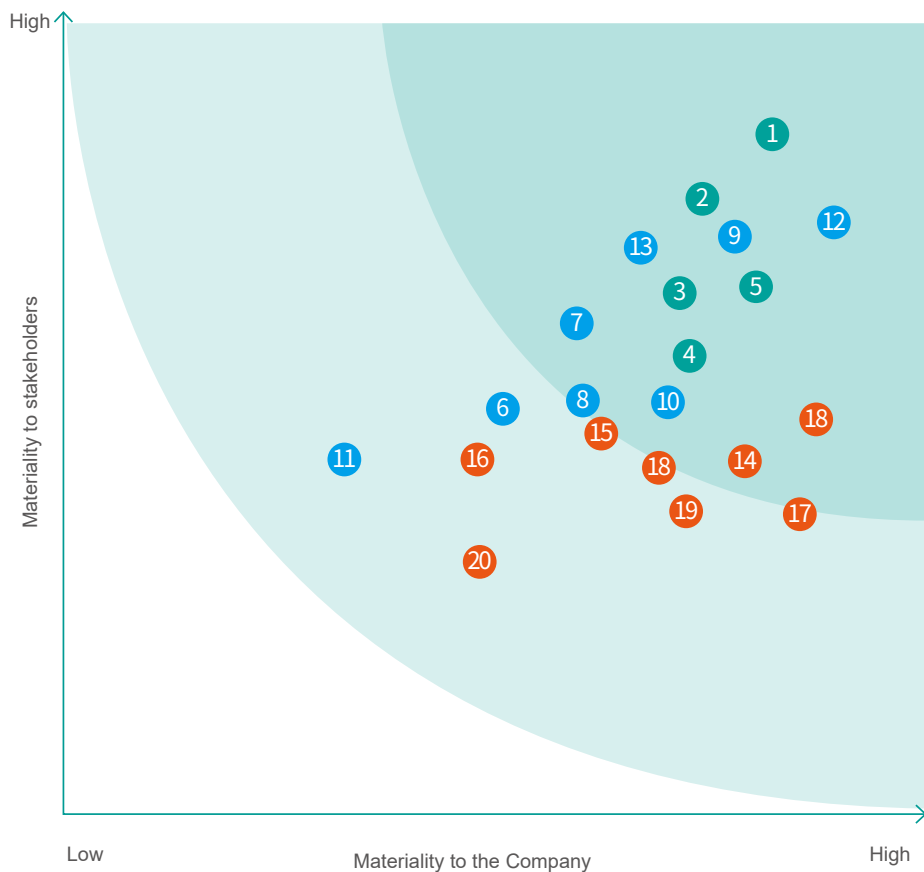


Distribution of 1,698 questionnaires:



Identification of materiality	35 ESG issues	With reference to the <i>Environmental, Social and Governance Reporting Guide</i> in Appendix 27 to the <i>Listing Rules</i> of the Stock Exchange of Hong Kong, and according to the national macro policies, industry standards, and its strategic planning of development, the Company identified the material ESG issues during this reporting period.
Stakeholders' participation	1,698 questionnaires	The Company distributed questionnaires to internal and external stakeholders via many channels such as email and WeChat official account to collect their opinions and comments on the Company's ESG management.
	57 ESG interviews	The Company invited internal and external stakeholders such as capital market investors, enterprises in the same/different industries, NGOs, industry associations and media to participate in ESG-related communications, covering many topics such as supply chain management, ESG management, water resource management, energy saving and emission reduction. Stakeholders' participation has provided an important basis for the ranking of material ESG issues.
Confirmation of materiality	20 significant topics	According to the questionnaires and ESG interviews, the Company confirmed and ranked the material ESG issues in combination with the industrial development, industrial benchmarking and its current ESG management.
Review of materiality	Joint review by 9 directors	Tongwei Matrix of material ESG issues in 2022 was formed upon the review by the senior managers.

2022 Matrix of material ESG issues



>> Environment

- 1 Reaction on climate change
- 2 Promoting energy saving and emission reduction
- 3 Reduction of pollutant discharge
- 4 Water resources management
- 5 Green manufacturing

>> Society

- 6 Sustainable supply chain management
- 7 Digital transformation
- 8 Product and service quality
- 9 Protection of rights and interests of employees
- 10 Occupational health and development of employees
- 11 Public charity
- 12 Work safety
- 13 Technological innovation, research and development

>> Governance

- 14 Risk control and management
- 15 ESG management
- 16 Investor relations
- 17 Business ethics and anti-corruption
- 18 Compliant operations
- 19 Protection of rights and interests of shareholders
- 20 Proportion of female directors

Corporate Governance

Holding in “awe of the market, the rule of law, professionalism, and risks”, Tongwei continued to optimize its corporate governance structure and measures to help stakeholders create long-term sustainable value.

Governance Structure

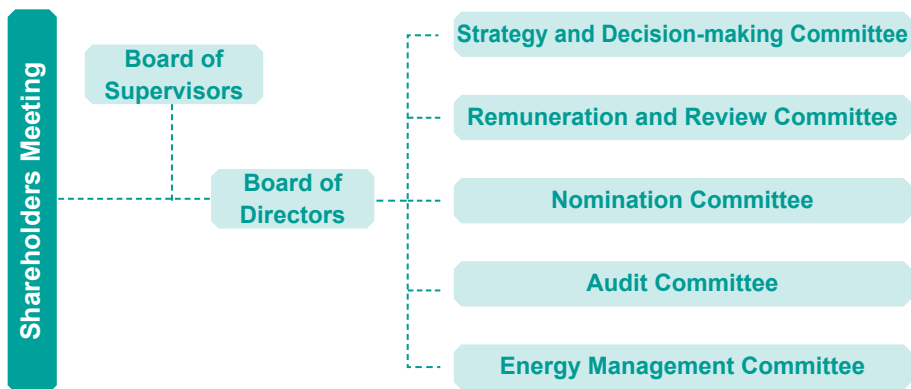
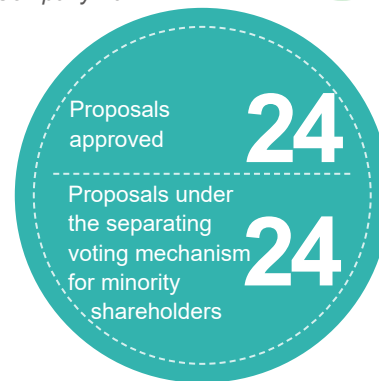
Tongwei kept optimizing its governance structure, and has set a corporate governance structure consisting of the Shareholders’ Meeting, Board of Directors and Board of Supervisors.

The Board of Directors consists of the Audit Committee, Strategy and Decision-making Committee, Nomination Committee, Remuneration and Review Committee, Energy Management Committee and other relevant committees. According to the actual needs of corporate governance, the committees assist the Board of Directors in making professional decisions by making full use of their professional knowledge, and give full play to the role of bridge between the Board of Directors and senior managers, so as to effectively improve the efficiency of corporate governance.



Shareholders’ Meeting

Tongwei actively listens to the opinions and comments from investors, holds and convenes shareholders’ meetings in strict accordance with *the Company Law of the People’s Republic of China and the Rules of Procedure for Shareholders’ Meeting of Tongwei Co., Ltd.*, and carries out notification, deliberation, voting, and information disclosure according to the Rules of Procedure to fully ensure that all shareholders, especially minority shareholders, exercise their right to know, right of participation, right of inquiry and right of voting equally and effectively.



Board of Directors

The Board of Directors has always performed its duties around the corporate governance, and carried out its work in strict accordance with the *Rules of Procedure for the Board of Directors of Tongwei Co., Ltd.* The Company elects directors according to relevant national laws and regulations, urges directors to perform their duties by improving the system and working mechanism, and safeguards the interests of the Company and its stakeholders such as shareholders.

During this reporting period

Except for the normal transition, all directors, supervisors and senior managers other than

1 director who left for job reasons were not changed.

Board Composition of Tongwei Co., Ltd.

Board of Directors				
Strategy and Decision-making Committee	Nomination Committee	Remuneration and Review Committee	Audit Committee	Energy Management Committee
Liu Hanyuan, director	Xie Yi, Chairman	Xie Yi, Chairman	Xie Yi, Chairman	Xie Yi, Chairman/director
Xie Yi, Chairman	Jiang Yumei, independent director	Song Dongsheng, independent director	Jiang Yumei, independent director	Yan Hu, Vice Chairman
Yan Hu, Vice Chairman	Song Dongsheng, independent director	Fu Daiguo, independent director	Fu Daiguo, independent director	Chen Xingyu, executive director
Song Dongsheng, independent director				
Li Peng, director				

By the end of this reporting period (2022)

	Directors	Executive directors	Non-executive directors
 Proportion of female directors 33%	9	4	2
	Internal directors	Independent non-executive directors	External directors
	4	3	5

During this reporting period

	Board meetings	Percentage of directors attendance	Proposals approved	Board trainings	Directors trained
	11	100%	57	8	8

Independence of Directors

In accordance with the *Rules for Independent Directors of Listed Companies*, the Company requires independent directors not to be re-elected for more than two terms (three years for one term), and the proportion of independent directors in the Board of Directors not to be less than 1/3. By the end of 2022, the Company had 3 independent directors, accounting for 1/3 of the total number of directors. Independent directors participate fully in the work of committees. In the Audit Committee, Nomination Committee, and Remuneration and Review Committee, independent directors account for 2/3.

The Company had 3 independent directors, accounting for

1/3

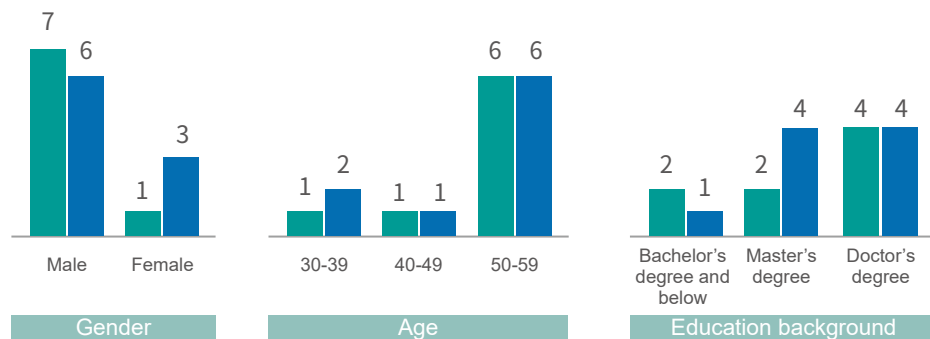
Diversity of Directors

Directors are elected in the principle of diversity and in combination with the Company's actual situation, business model and operational needs. By the end of 2022, the proportion of female directors had reached 1/3, with a great increase compared to the level in 2021.

Director information

2021

2022



Professionalism of Directors

The Company's directors have a well-balanced combination of professional knowledge and skills, including but not limited to those of the agriculture and animal husbandry, PV industry and financial industry. Directors constantly improve their professional competence to make more effective decisions for the Company.

Background Information of Tongwei Directors									
Industries	Liu Hanyuan	Xie Yi	Liu Shuqi	Yan Hu	Li Peng	Ding Yi	Fu Daiguo	Song Dongsheng	Jiang Yumei
Agriculture and Animal Husbandry	○	○		○					
PV Industry	○	○	○			○		○	
Finance		○			○	○			
Financial Management				○	○		○		○
Risk Management				○	○	○	○	○	○
Investments	○	○			○	○			○
Corporate Governance	○	○	○	○			○	○	○

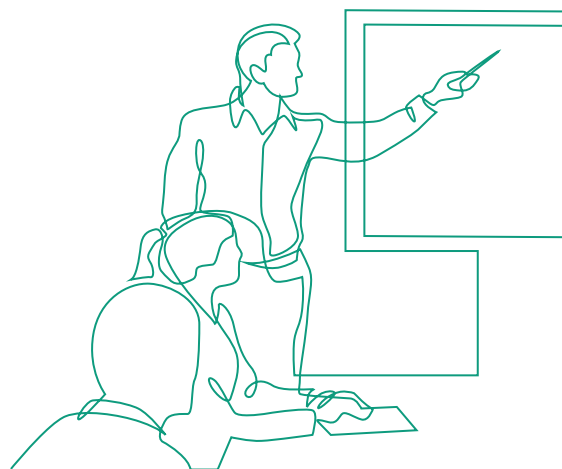
Board of Supervisors

The Board of Supervisors perform its duties independently and regulate the operations of *the Company in strict accordance with the Company Law, the Articles of Association, the Rules of Procedure for the Board of Supervisors* and other relevant regulations. In order to effectively safeguard the rights and interests of the Company and its shareholders, members of the Board of Supervisors actively participate in the shareholders' meetings, attend board meetings as non-voting delegates, review financial reports and supervise the performance of duties by directors and senior managers.

By the end of this reporting period:

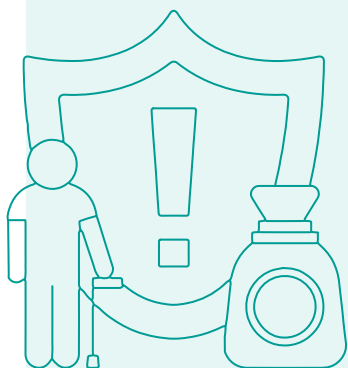
Supervisors	Employee supervisors
3	1

Meetings of the Board of Supervisors	Proposals approved
10	39



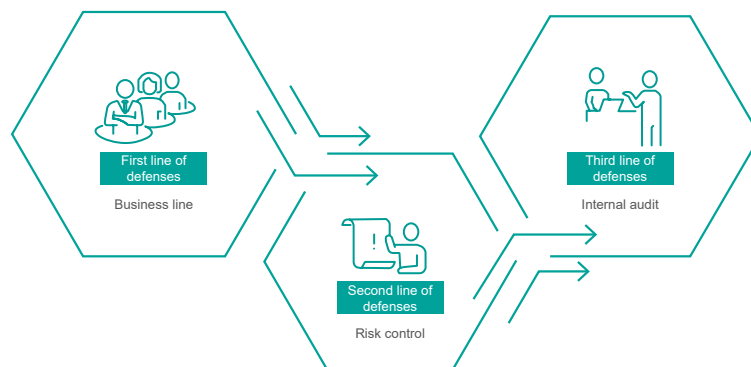
Risk Management

Focusing on improving internal control, preventing risks and enhancing compliance, Tongwei has developed its internal control procedures and policies such as *Tongwei Policy on Internal Control Evaluation and Risk Assessment*. It constantly strengthens the construction of internal control systems, defines the objectives, requirements and contents of risk management, and improves the management level and risk prevention ability to ensure its smooth operation.



Risk Management System

Tongwei has set up a risk management and internal monitoring system, defined the roles and responsibilities of the Board of Directors and its Audit Committee, the Board of Supervisors and the management level in the internal control mechanism, established a set of effective internal control procedures, and strengthened the coordinated management of “three lines of defenses” (business line, risk control and internal audit), which are considered in control of risk sources to ensure the effective operation of the risk management mechanism.



Risk Identification and Control

Tongwei has assessed the major risks in various fields such as major investment management, funds management, credit management, and production quality management, and realized closed-loop management of major risks through risk identification, risk assessment, risk measurement, action-taking and action evaluation.



Risk Management Training

Tongwei constantly improves employees' concept and awareness of compliance by holding all kinds of risk management training events to enhance its risk management level.

Case: Training on Implementation of Tongwei Audit Policy and System

Tongwei New Energy actively organized the training on the *Implementation of Tongwei Audit Policy and System* via online and onsite modes, which focused on the audit reporting and rectification procedures and covered more than 60 managers and business line and functional line employees of Tongwei New Energy and its branches and subsidiaries. Through the audit training, Tongwei New Energy has effectively enhanced its managers' understanding of Tongwei's audit policies and their implementation.



Business Ethics

Tongwei abides by the Criminal Law of the People's Republic of China, the *Anti-monopoly Law of the People's Republic of China*, the *Anti-unfair Competition Law of the People's Republic of China* and other relevant laws and regulations, upholds the management philosophy of "Honesty, Trust, Fairness and Excellence" and high standards of business ethics, and opposes any form of corruption and unfair competition.

The Company has formulated the *Employee Code of Conduct* to regulate and manage the behaviors of the Company and its employees in conducting business, exercising rights and performing duties.

Anti-corruption

Tongwei strictly abides by the *Criminal Law of the People's Republic of China*, the *Supervision Law of the People's Republic of China*, the *Anti-unfair Competition Law of the People's Republic of China*, the *Company Law of the People's Republic of China*, the *Interim Provisions on Prohibition of Commercial Bribery* and relevant laws and regulations on prohibition of bribery, extortion, fraud and money laundering applicable in the region where it operates, and resolutely combats corruption, bribery and other illegal acts.

Anti-corruption System Construction

Tongwei has made continuous improvements in its management mechanism, and formulated management policies such as *Tongwei Policy on Authorization for Business Entities*, *Tongwei Management Regulations on Financing*, *Tongwei Policy on Funds Management* and *Tongwei Management Regulations on Funds Settlement*. Under the leadership of the Board of Supervisors, the Supervision Department independently supervises and inspects issues concerning business ethics and corruption.

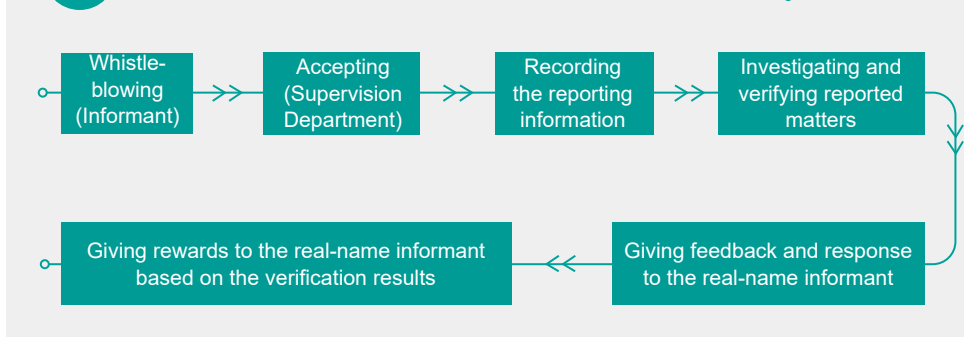
For employees, the Company has developed *Tongwei Employee Reward and Punishment Management Policy* under which all employees are required to comply with applicable laws and regulations and occupational ethics in performing services and relevant activities, and corruption, bribery and money laundering are defined as malpractices and subject to punishments according to the severity. Key positions like purchase, quality control, sale and finance are required to sign the *Letter of Undertaking on Compliance with Laws and Rules for Clean Performance*, making commitments on the honesty of themselves and their relatives.

Full-time employees in the anti-corruption role

34

In 2022, the Company experienced no legal cases regarding corruption, bribery, money laundering, etc.

Anti-corruption Whistle-blowing Procedure



Protection of Informants

Attaching great importance to the protection of informants, Tongwei has established a complete whistle-blowing mechanism and system, set up a whistle-blowing center, and made clear provisions on the protection of the rights and interests of informants, under which reporting information is well protected and rewards are given to the informants who have provided proven valuable information.

Whistle-blowing channels

- Hotline for whistle-blowing and complaints (applicable for all branches and subsidiaries): (028)86168834, (028)86168838
- Mobile phone: 15608175053 (also WeChat ID)
- QQ: 2461011915
- E-mail: jcb@tongwei.com
- Mailing address: Supervision Department, Tongwei International Center, No. 588, Middle Section of Tianfu Avenue, Chengdu, Sichuan Province



Anti-Corruption Training

Tongwei attaches great importance to the development of anti-corruption culture and compliance ability through irregular anti-corruption training sessions provided by the Supervision Department.

The anti-corruption training for directors is provided in the form of annual review, covering the publicity and implementation of anti-corruption policies regarding corruption, fraud and dereliction of duty. The anti-corruption training for managers and employees is provided in the form of “anti-corruption” training event, financial training, manager training, regular audit and supervision via online and onsite modes, covering the publicity and implementation of anti-corruption policies regarding duty corruption and bribery.

Number of participants by rank:

Number of training sessions by rank

Directors	/	6
Managers	/	122
Employees	/	421

Number of participants by rank

Directors	/	34
Managers	/	1,741
Employees	/	17,657

Pass rate by rank

Directors	%	100%
Managers	%	100%
Employees	%	100%

During the reporting period:

Number of anti-corruption training sessions

470

Number of training hours

506.5

Anti-corruption Audit

Placing a high importance on the audit of anti-corruption policies, Tongwei strictly audits the integrity and effectiveness of its control. If any risk of corruption is identified in business activities such as procurement and sale, auditors will follow up the risk and report the verification results in time. Corruption acts that violate the law will be submitted to the public security organs; acts that violate rule but do not violate the law will be subject to punishments according to the *Employee Reward and Punishment Policy*.

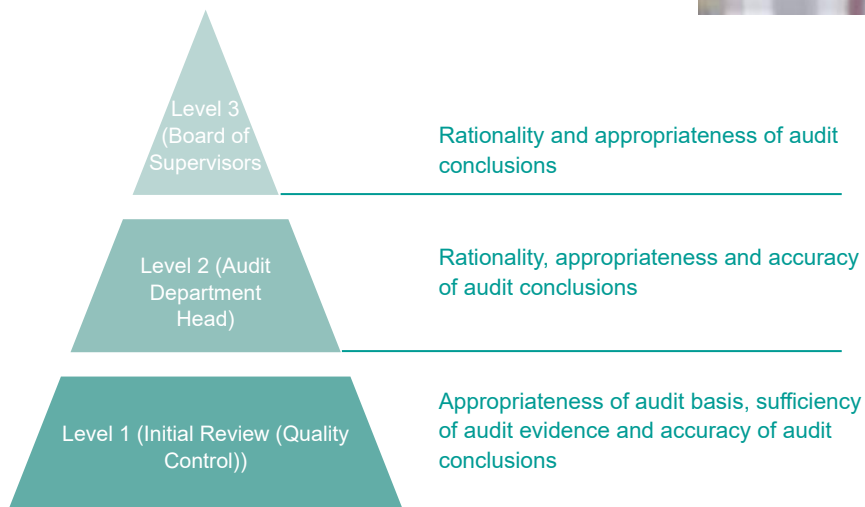
Internal Audit

To increase the management level, the Company applies internal audits. For the sake of information security, the Audit Department assumes the responsibilities of supervision, assurance and audit. The Audit Department specifies audit scopes in accordance with applicable laws and regulations and the Company’s bylaws, and performs audits on ecological environmental protection, protection of employee rights and interests, product quality management and other areas, forming a three-level review mechanism for audit reports.

In 2022, the Company performed 97 internal audits, thus creating a fair and just internal competition environment and a clean work atmosphere, and safeguarding its smooth operation.



Three-level Review for Audit Reports



Tax Payment under Laws

The Company complies with applicable laws and regulations including the *Law of the People’s Republic of China on Enterprise Income Tax*, performs its taxpayer obligations, and opposes tax evasion to make contributions to social benefits. During this reporting period, the Company paid taxes of 11.8 billion yuan, making it a Grade A Taxpayer in a row.



During this reporting period, the Company paid taxes of

11.8 billion yuan

making it a **Grade A Taxpayer** in a row

Investor Relations

With the commitment to safeguard the legitimate rights and interests of its shareholders, creditors and other stakeholders, Tongwei has developed *Tongwei Investor Relations Management Policy*. Upholding the principles of authenticity, accuracy, completeness, fairness and timeliness, the Company strengthens its effective communications with investors and shareholders, and actively presents its management philosophy, work performance and future direction of development to investors, to promote the sustainable and healthy development of investor relations.

Communications with Investors

Tongwei actively broadens the communication channels with investors for effective bi-way communication.



Information Disclosure

The Company has developed *Tongwei Information Disclosure Management Policy* and *Tongwei Insider Registration Management Policy*, with an effort to strengthen the confidentiality of insider information and ensure open, just and fair information disclosure.

In 2022, the Company published 166 announcements to investors, with 4 regular announcements and 122 interim announcements, covering company performance, dividend distribution, employee share incentive plan, and other matters of materiality.



Exchange on Investment

“Bringing in” site surveys

68

“Going out” external exchanges

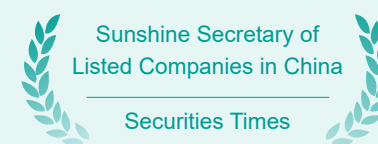
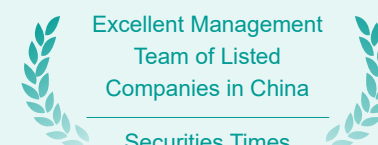
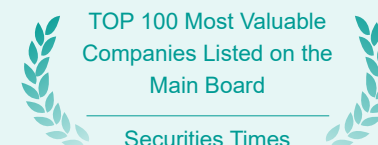
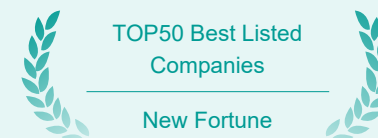
421

Response rate of small and medium-sized investors via telephone and online nearly

100%

With the commitment to improve the transparency and integrity and upholding the communication policy of “Bringing in, Going out”, the Company maintains frequent communications with investors in multiple ways, so as to ensure that investors have a comprehensive and intuitive understanding of the Company and the Company’s information is equally available to all investors.

Awards on Communication with Investors





Product Innovation and R&D

Striving to be a practitioner of responsible products, Tongwei makes unwavering efforts to enhance its R&D ability, focuses on improving the design quality of green products, and is committed to providing customers with better and safer products and creating and sharing product value with customers.

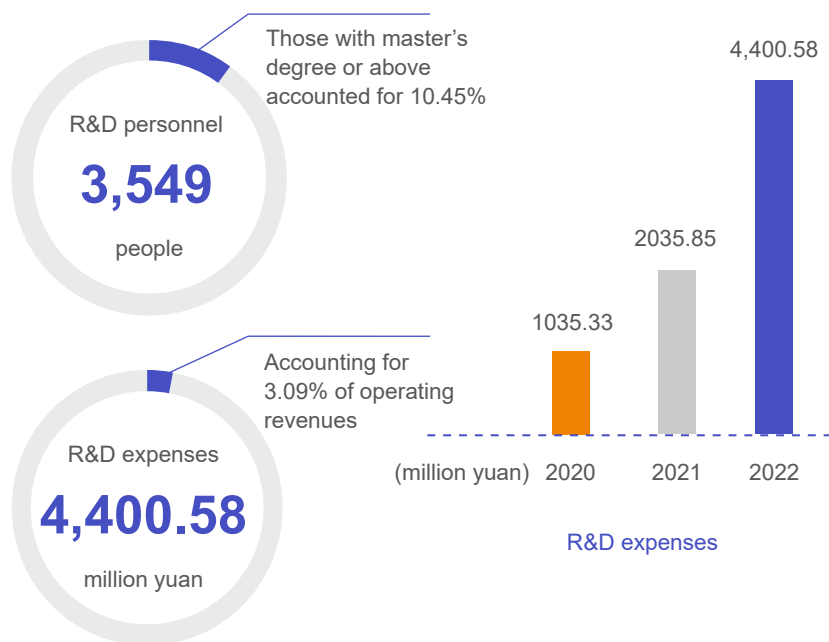
17 PARTNERSHIPS
FOR THE GOALS



MAXWELL
R51

Innovation and R&D

During this reporting period, the Company had a total of 3,549 R&D personnel, of which those with master’s degree or above accounted for 10%. In 2022, the Company invested 4,400.58 million yuan in R&D, accounting for 3.09% of the operating revenues. During 2020-2022, the Company’s R&D expenses were about 1,035.33 million yuan, 2,035.85 million yuan and 4,400.58 million yuan respectively, showing an increasing trend in the past three years.



Tongwei always believes that product R&D is an important way to promote development. Hence, it makes constant technological innovations, increases its investments in R&D, follows the law of market development, and provides high-quality products to seize development opportunities.

Innovation and R&D Strategy

Agriculture and animal husbandry

Strategic objective Develop a strategic variety, 2 stably upgrading varieties, 3 rapidly upgrading varieties, and 4 varieties of great concern and breakthrough.

Strategic focus In the next 3-5 years, further focus on breeding varieties such as Penaeus vannamei, Largemouth bass and Longsnout catfish, explore the facility-based and factory-based breeding modes under different breeding conditions, make a technological breakthrough, and enhance the competitiveness of Tongwei aquaculture industry chain system, thus holding the industry leading position.

PV industry

Strategic objective Establish and improve the industry-leading R&D platform to lay a solid foundation for the sustainable development of Tongwei Solar.

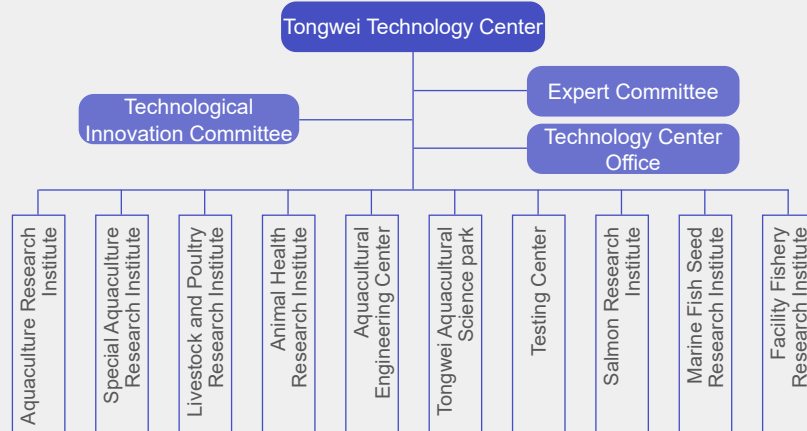
Strategic focus Complete the transformation of TNC technological achievements, and develop the most economical and stable mass production plan; build an advanced metallization test line, a back-contacted solar cell pilot line and a perovskite tandem cell laboratory; complete the half-cell module R&D pilot line, and start R&D and mass production of new large-size PERC and TNC modules.

Development of Innovative S&T Talents System

Tongwei has developed the *Procedures for Formulation of Technology Development Plans* to actively promote the construction of an innovative talent pool, which has gathered a large number of high level S&T talents, including experts receiving special allowance from the State Council, specially-invited experts of Sichuan Province, academic leaders at the province or city level, members of “Tianfu Ten-thousand Talents Program”, assessment experts of the National Science Progress Award, and outstanding talents of Chengdu.

Agriculture and animal husbandry

Upholding the philosophy of “Technological innovation, Quality first”, Tongwei has made great efforts to technological innovation, set up ten research institutes, including Aquaculture Research Institute, Special Aquaculture Research Institute, Livestock and Poultry Research Institute and Animal Health Research Institute, and hired top experts from industry research institutes to jointly develop innovation strategies and guide technological innovation.



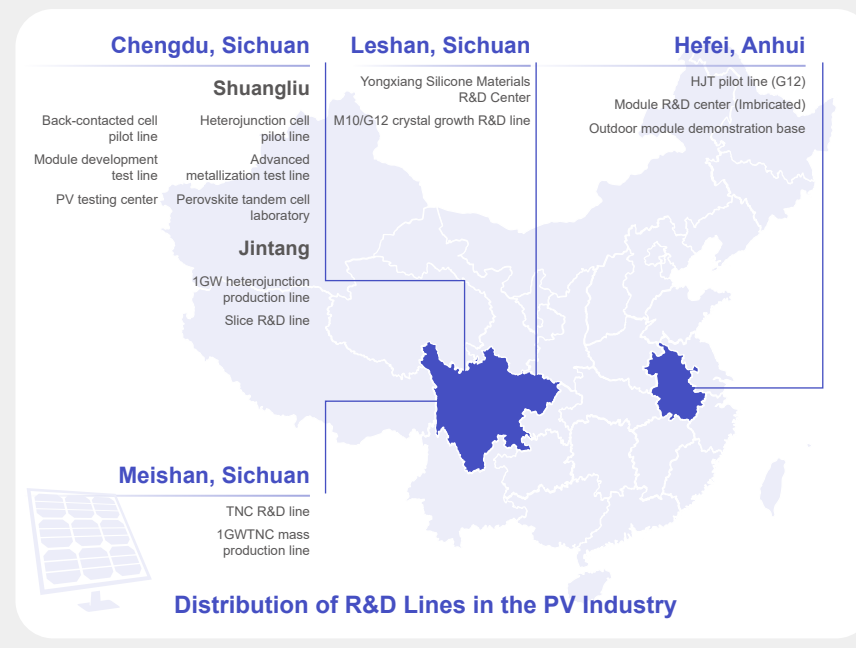
Organizational Structure of Tongwei Agricultural Development Technology Center

Tongwei has 3 national-level technology centers:



PV industry

The Company has built an industry-leading scientific research platform which covers the research and development of PV silicon materials and the mainstream technologies of solar cells and modules.



Innovation Incentive Policy

Tongwei has made continuous improvements to its incentive mechanism for scientific and technological innovation, formulated the *Reward Procedures for Scientific and Technological Achievements* to further regulate the management of scientific and technological rewards, and specially developed the *Special Incentive Program for PV Technology Department* to encourage the PV Technology Department to make constant innovation.

Product Innovation

With the aim to promote the industry development through scientific and technological innovation, Tongwei has been actively exploring a development path with its own characteristics in agriculture & animal husbandry and PV industry. Up to now, the average conversion efficiency of Tongwei’s P-type and N-type modules in mass production has reached 23.98% and 25.50% respectively, and the highest conversion efficiency in research and development has reached 26.18%.

Number of patents	Agriculture and animal husbandry		PV industry		Total	
	2022	2021 ¹	2022	2021	2022	2021
Patents authorized	5	4	26	5	31	9
Utility models authorized	134	107	469	92	603	199
Patent applications	10	14	214	23	224	37
Utility model applications	85	146	430	115	515	261

¹ The number of total patented inventions in agriculture and animal husbandry industry of 2021 has been adjusted from "157" to "271".

Awards in 2022

Tongwei Co., Ltd.	»»	Passing the review for “National Intellectual Property Advantage Enterprise” in 2022 (awarded “National Intellectual Property Advantage Enterprise” in 2017)
Tongwei Solar (Anhui)	»»	Wining Anhui Patent Silver Award 2022
Tongwei Solar (Chengdu)	»»	Awarded “National Intellectual Property Advantage Enterprise” in 2022
Tongwei Solar (Hefei)	»»	Awarded “National Intellectual Property Advantage Enterprise” in 2022 in a row
Tongwei Solar (Chengdu)	»»	Selected for Sichuan Province Strong IPR Enterprise Cultivation Program
Tongwei Solar (Hefei)	»»	Winning the Patent Award of Hefei High-tech Zone in Anhui Province

Case: Technological innovation accelerated the development of PV industry

In recent years, Tongwei has continuously increased its investment in research and development of new technologies. Since 2020, it has developed “TNC” cell technology with its own characteristics, giving a strong impetus to the new cycle of industry development.

At present, the conversion efficiency of TNC in mass production has exceeded 25.4%. TNC has the performance advantages of high bifaciality, low attenuation, excellent temperature coefficient and good low light response. The gain in average power generation of double-sided modules produced by this technology is 3%-5% higher than that of traditional PERC double-sided modules, helping to achieve a high gain of power generation.



Business-Education-Research Institution Cooperation

Tongwei actively promotes the business-education-research institution cooperation, deepens its cooperation and exchanges with top universities and research institutions in China, and strives to create and transform high-level scientific and technological achievements.



Agriculture and animal husbandry

	Partner	Cooperation plan
External cooperation	Freshwater Fisheries Research Center of Chinese Academy of Fishery Sciences	Sign a five-year cooperation plan, including the cooperation in science and technology projects, construction of scientific research projects, training and export of high-end talents, etc.
	Sichuan Agricultural University	Development of key new products, research of strategic varieties and cooperation plan for training of high-end talents.
	Shanghai Ocean University	Carry out a "joint development program" of masters to provide a source of high-end talents for the Company.
Awards	Sichuan Agricultural University	The common achievements in traditional Chinese medicine for swine diseases won the "Second Prize for Scientific and Technological Progress in Sichuan Province in 2022".
	Ocean University of China	The achievements of the joint project <i>Research on Precise Nutrition of Lateolabrax Japonicus and Development and Application of Green and Efficient Artificial Compound Feed</i> won the "First Prize for Scientific and Technological Progress in Shandong Province in 2022".

PV industry

Cooperation and Exchanges with Universities and Research Institutes in China		Technology Sharing in Industry Forums	
Songshan Lake Materials Laboratory and Foshan University	Project—"R&D and Industrialization of Paste for New and High-efficiency Silicon Solar Cells" project	July 2022	"8 th Solar Cell Paste and Metallization Forum"
Sichuan University	Project—"R&D and Industrialization of Key Technologies of Perovskite-Silicon Tandem Cells"	August 2022	"PVtech Industry Hotspot Live Broadcasting" Conference
Southwest Petroleum University, Xihua University, and Panzihua University	Project—"Research and Application of Highly Weather-Resistant PV Modules and Key Technologies of Energy Management"	October 2022	"PV CellTech extra" International Conference "8 th TOPCon and IBC Forum"
		November 2022	"The First China New Materials Technology Application Conference and the First China New Materials Investment Conference in 2022" "18 th China SoG Silicon and PV Power Conference (Taiyuan)"

Digital Transformation

Over the past 40 years, Tongwei has always pursued scientific and technological innovation as one of its core competences. It has advanced digital transformation in different scenarios of industrial application, in an effort to promote the efficiency of production and operation, optimize operating costs, and create a new development ecosystem.

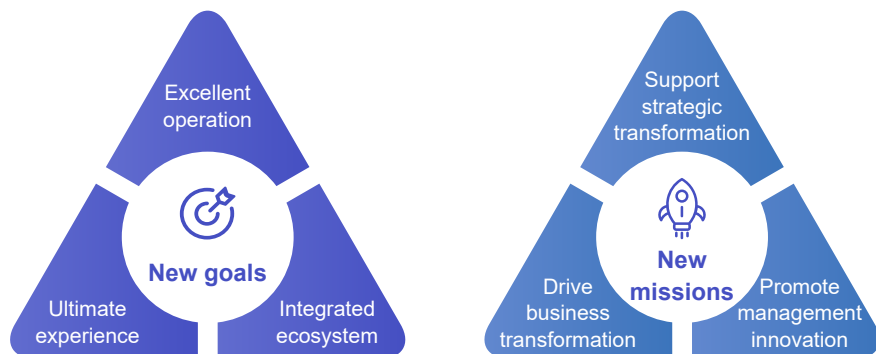
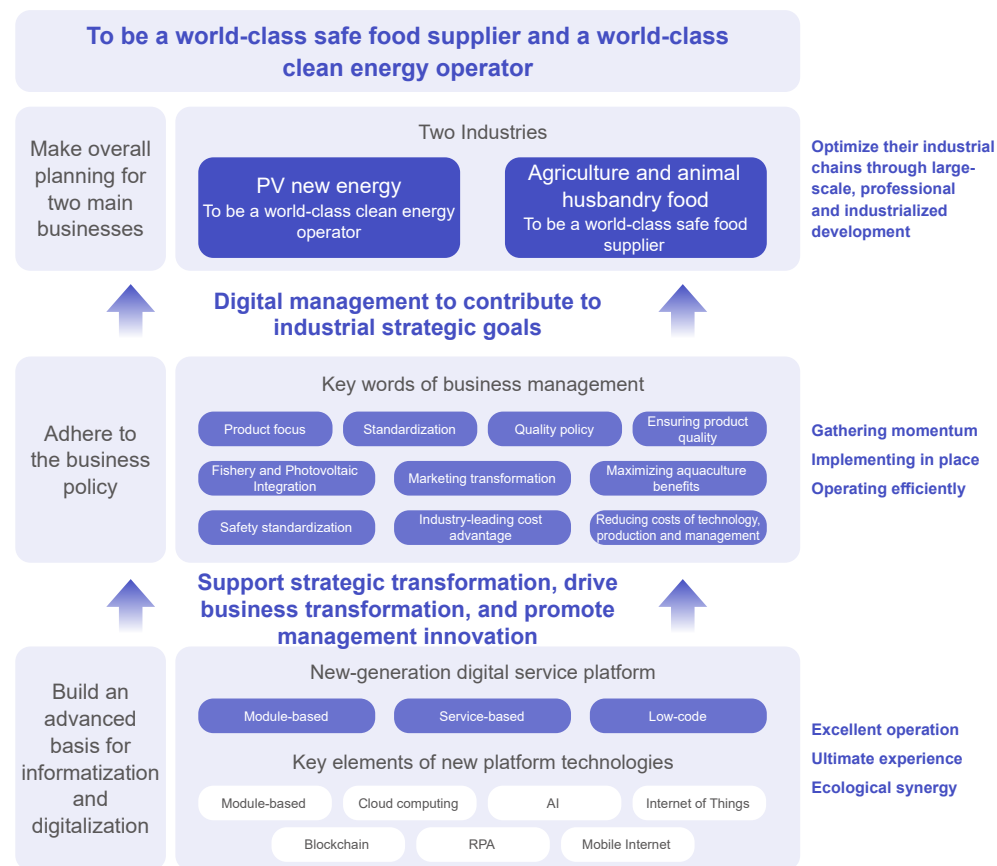
Strategic Goals of Digital Transformation

Focusing on “excellent operation, ultimate experience and integrated ecosystem”, Tongwei has embarked on a new journey of digital transformation, and put forward three objective goals of digital transformation:

- **Excellent operation:** make full use of new technological means to improve the efficiency of operation and optimize operating costs, so as to achieve industry-leading operation efficiency and cost advantage.
- **Ultimate experience:** improve the working efficiency of employees, optimize the service experience of users, and enhance the loyalty and satisfaction of users.
- **Integrated ecosystem:** create a future development ecosystem, achieve an ecological synergy of the industry chain, and promote the integrated development of the upstream and downstream of the industry chain.

Strategic Planning of Digital Transformation

Based on the “new goals” and “new missions” of digital transformation, the Company has planned a new digital construction blueprint and a digital transformation structure in combination with its business needs. The new-generation digital service platform aims to achieve comprehensive digital operation featuring high data sharing, and improve the standard and efficiency of operation, management and decision-making.



Case: Tongwei created a “5G+ Industrial Internet” benchmark project in the PV industry

Tongwei has built the first 5G application base in the global PV industry-Tongwei Solar Jintang Base. With the aim of “building a model of 5G smart park for the global PV industry”, Jintang Base has joined forces with China Telecom and Huawei to promote world’s leading 5G industrial application. Commercial 5G is available in the whole park. In the park, there are 17 intelligent manufacturing lines, with a daily output of 2.5 million cells. Compared with traditional manufacturing lines, the 5G manufacturing lines in Jintang Base have reduced the number of workers by about 60% and energy consumption by about 30%, and raised the production efficiency by as much as 160%. By making full use of the advantages of 5G, including high bandwidth, short latency, broad connection and excellent resistance to interference, the base has fully realized man-to-device, device-to-device and man-to-man interconnection.



Compared with traditional manufacturing lines, the 5G manufacturing lines in Jintang Base

Reducing the number of workers by

60% ↓

Reducing the energy consumption by

30% ↓

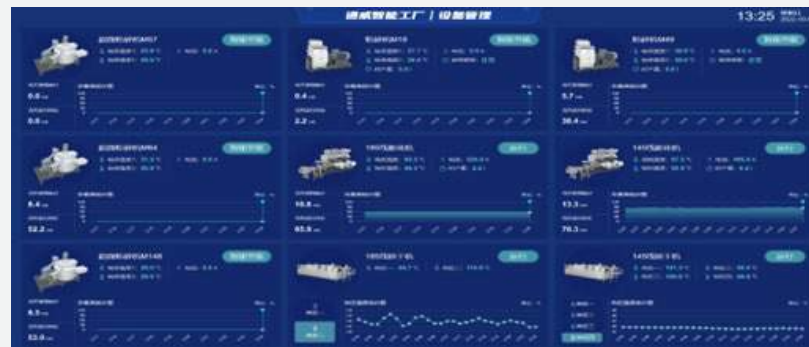
Raising the production efficiency by

160% ↑

Case: Tongwei built benchmark factories in the feed industry, driving the transformation and upgrading of China’s feed industry

Tongwei has always been committed to driving the transformation and upgrading of China’s feed industry, and becoming a model enterprise in the industry. It carried out system transformation and standard upgrading, aiming to reach the industry-leading level in terms of field management, quality management, equipment management, process management and team management. On this basis, Tongwei has made the following achievements: rate of products qualified: 100%; quality safety incident: 0; rate of equipment in good condition: 100%; unscheduled shutdown of production equipment: 0.

Digital transformation has greatly improved the efficiency of production management, and standardized the decision-making process, thus helping to avoid the potential safety risks in production.



Rate of products qualified

100%

Quality safety incident

0

Rate of equipment in good condition

100%

Information Security Management

Tongwei has formulated the *Management Procedures on Information Security*, and adopted a strict information security management mechanism. The Director of the Information Department is responsible for supervising network security and reporting relevant information to Tongwei's CEO. Each branch and subsidiary has an information security engineer who is responsible for inspecting important systems every day. The Company audits its information security policies and systems on an annual basis, conducts penetration tests on the intranet on a quarterly basis and then fix the vulnerability, so as to improve the network security management system and achieve standardized and systematic closed-loop management of network security risks.

Information Security Management Mechanism

The Company has developed *Tongwei Confidentiality Management Policy*, and set up a Confidentiality Working Group for confidentiality management, in order to avoid the risk of secret disclosure, and regulate and strengthen the protection and management of secrets.

Information Infrastructure Security

In terms of infrastructure construction, the Company adopts an application firewall to block network attacks, a vulnerability scanning system to scan server vulnerability regularly and fix them after evaluation, and a network access system to authenticate the devices attempting to access the network before granting the access.

Data and Information Security

Tongwei undertakes to use the data collected for its daily operation only, and to manage the viewing and use permissions in strict accordance with relevant national laws and regulations. The Company's business systems and data are automatically backed up on a regular basis, and the back-up data is available to data administrators only.



Information security management training sessions

Information Security Training

Tongwei provides privacy protection and information security training for all employees to improve their security awareness and build a culture of data security protection.

During this reporting period, the Company organized 136 training sessions on information security, with a training duration of 2,732 hours and covering 40,934 participants.

Number of information security training (sessions)		Number of training (hours)		Number of participants (person)	
2022	136	2022	2,732	2022	40,934
2021	9	2021	27.5	2021	2,996

Client Privacy Protection

Tongwei believes that client privacy protection is the first prerequisite for creating excellent client experience. We attach high importance to data security and privacy protection, complies with the applicable policies and regulations such as the *Civil Code of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China*, and the *Cybersecurity Law of the People's Republic of China*, and develop diverse measures for protection of client rights and privacy in light of our businesses and operations:

Collect client information on the premise that clients are informed

Keep confidential the key information imported by new clients

Clearly specify the confidentiality obligations of both parties in the formal contract

During this reporting period, no data breach on client information occurred.

Product Quality Control

Attaching great importance to product quality, Tongwei has established and adopted ISO 9001 compliant quality management system and ISO 22000 compliant food safety management system. In addition, Tongwei complies with the laws and regulations applicable in the countries and regions where its products are sold, constantly improves and strengthens product quality control, formulates internal quality management policies, and performs whole-process product quality control.

Quality Policy and Goal

Quality Policy

Quality, market and benefits are the eternal topics in enterprise development, and quality is the basis and premise of market and benefits.

The Company makes constant improvements to its quality management system, and strives to build an industry chain that is efficient, continuously value-added and irreplaceable, so as to provide safe and stable products for the society and realize common development with clients.

Quality Goal

Quality goal: rate of products qualified: 100%; quality safety incident: 0; ratio of user complaints resolved: 100%; industry-leading product benefits and rapid development.

Product Quality Management

Agriculture and animal husbandry	Management process	Company policies	Management measures
	Source control	<ul style="list-style-type: none"> Supplier Assessment and Re-assessment Policy Raw Material Procurement Management Policy Raw Material Acceptance Policy Raw Material Storage Management Policy, etc. 	<ul style="list-style-type: none"> Strongly promote the multi-level spot-check mechanism, including pre-inspection of raw materials and procurement review
	Process control	<ul style="list-style-type: none"> Product Inspection Policy of Tongwei Agricultural Development Co., Ltd. On-site Quality Inspection Policy, etc. 	<ul style="list-style-type: none"> Define the inspections in the feed production process, and abnormalities and abnormality disposal methods Automatic monitoring of the whole production process, real-time risk alarm and timely correction of instructions <p>During this reporting period, Tongwei improved the moisture content of feed products by 50% year-on-year, reduced the proportion of reworked materials by 25% year-on-year, and made the quality traceability up to 100%.</p>
	Quality risk prevention and control	<ul style="list-style-type: none"> Procedures of Tongwei Agricultural Development Co., Ltd. on Prevention and Control of Product Quality and Safety Risks 	<ul style="list-style-type: none"> Effectively identify the risk points in all stages from raw material procurement to sales, and develop effective prevention and control measures
	Product recall management	<ul style="list-style-type: none"> Food Recall Management Procedures Non-conformance Management Policy Product Recall Policy, etc. 	<ul style="list-style-type: none"> Establish an emergency mechanism for product recall Organize product recall drills <p>During this reporting period, there were no recalls of food and feed products.</p>

PV industry	Management process	Company policies	Management measures
	Raw material procurement management	<ul style="list-style-type: none"> Supplier Management and Control Procedures Procurement Control Procedures Management Procedures on Introduction of New P-type Materials Incoming Inspection and Test Control Procedures, etc. 	<ul style="list-style-type: none"> Clarify the requirements for raw material procurement to prevent non-conforming raw materials from being put into use
	Process quality control	<ul style="list-style-type: none"> Specification for Crystalline Silicon Solar Cells Management Procedures for Reliability of PV Modules Monocrystalline Silicon Cell Process Document Management Procedures for Abnormal Shutdown of Cell Production Line, etc. 	<ul style="list-style-type: none"> Control the quality standards in the production process Spot-check the reliability of key product and process parameters
	Product acceptance management	<ul style="list-style-type: none"> Product Identification and Traceability Control Procedures Non-conforming Product Control Procedures Standards for Acceptance of Monocrystalline Silicon Solar Cells Instructions for Outgoing Quality Control, etc. 	<ul style="list-style-type: none"> Carry out incoming inspection for products, and dispose of non-conforming products Regularly deliver products to a third-party testing company for type test
	Product recall management	<ul style="list-style-type: none"> Non-conforming Product Control Procedures Product Recall Process, etc. 	<ul style="list-style-type: none"> Establish a product recall mechanism

Quality System Certification

Tongwei has established and adopted ISO 9001 compliant quality management system and ISO 22000 compliant food safety management system. Up to now, 49 subsidiaries of Tongwei have got ISO 9001 and ISO 22000 certified, and all subsidiaries in the PV industry have got ISO 9001 certified.

Quality Management Honors

Awarding unit	Awards
China Association for Quality Inspection	“Leading Enterprise of Quality in China Agriculture and Animal Husbandry Industry” “Leading Brand of Quality in China Agriculture and Animal Husbandry Industry” “Stable Qualified Product in Nationwide Quality Inspection” “National Quality and Integrity Benchmarking Enterprise”
China Association for Quality	Benchmarking Enterprise for Customer Satisfaction (National Credit Rating: AAA)
Organizing Committee of China Food Safety Conference	Integrity Unit of Food Safety



Case

Tongwei Solar performed total quality management (TQM)

In order to strengthen its core competitiveness, Tongwei Solar has developed a set of total quality management (“TQM”) procedures with a sound organizational structure, continuously improving TQM regulations, reasonable incentive systems and a continuous TQM culture. It advocates employees’ participation in corporate management to improve its operating efficiency.



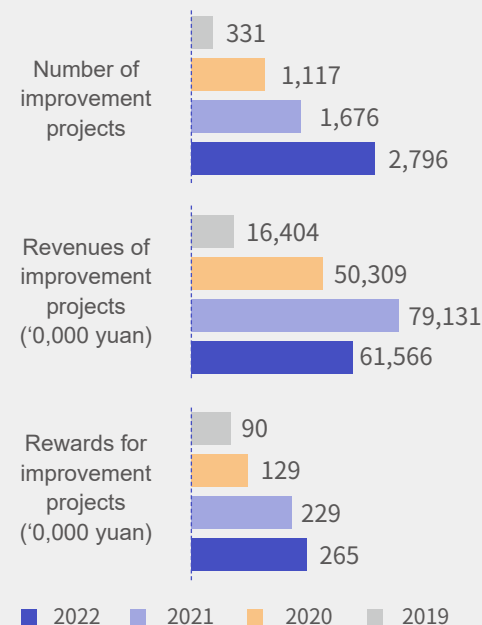
Display Board of Employees' Participation in Management Improvement Activities

From 2019 to 2022, the Company's TQM experienced continuous development and improvement. In the four years:

Number of improvement projects:
5,920

Revenues of improvement projects:
2,074.10 million yuan

Rewards for improvement projects:
7.13 million yuan



Protection of Client Rights

Tongwei adheres to honest management, and attaches high importance to the protection of client rights. It is committed to maintaining good communication with clients, continuously improving client satisfaction, safeguarding client privacy and safety, and carrying out compliant and authentic marketing propaganda. It takes diverse measures to maintain friendly relations with clients.

Handling Client Complaints

Based on the “client-oriented” management philosophy, Tongwei has developed the *Client Complaint Handling Process* and *Standard Handbook on Client Complaint Handling*. It attaches great importance to every feedback from clients, and solves client complaints in a prompt and effective manner.

Improving Client Satisfaction

With the aim of improving the client experience, Tongwei has formulated many internal management procedures such as *Control Procedures for Client-related Processes*, *Procedures for Handling of Client Returns*, *Detailed Rules for Evaluation of Client Complaints*, *Identification and Traceability Control Procedures*, *Control Procedures for Client Satisfaction Measurement*, and *Client Satisfaction Measurement Methods*, optimized the client service mechanism and after-sales service process, and built a bridge of communication with clients to collect comments and opinions from clients in time.

Indicators	Tongwei Agricultural Development	Tongwei Food	Tongwei Solar	Tongwei Modules	Tongwei Yongxiang
Sales satisfaction	97%	95%	95.74%	97.44%	98.21%
Client satisfaction	90%	90%	98.75%	97.44%	98.3%
After-sales service satisfaction	100%	95%	99.50%	97.93%	98.76%

Responsible Marketing

To regulate the use of trademarks and external publicity, Tongwei has established a mechanism of supervision and review by the Head Office and execution by branches. All external publicity activities must be reviewed and approved by the Brand Management Department and Safety Management Department to ensure the authenticity and compliance of product publicity.

Supply Chain

Tongwei has always attached great importance to long-term cooperation and mutual development with suppliers, and fully integrated sustainable development into the supply chain management. It actively fulfills its social responsibilities, and makes focused efforts in responsible procurement and labor safety and health of supply chain, striving to create a green and sustainable supply chain in the information age.




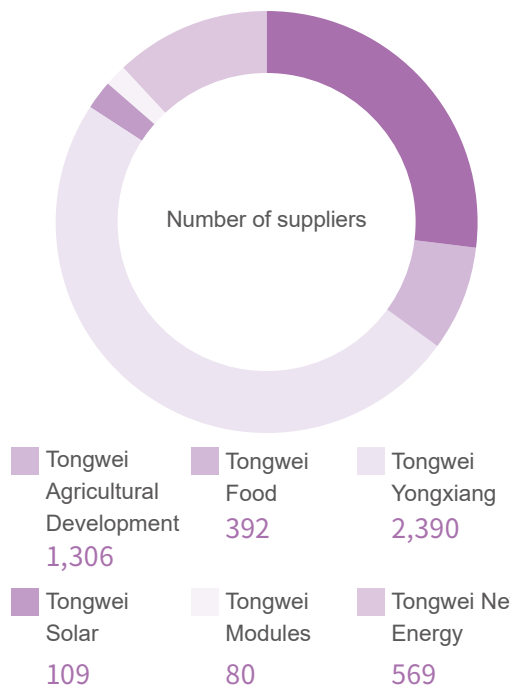
Overview of Suppliers

Tongwei has a “Supplier Relationship Management (SRM)” system in place to perform information-based management of supplier life cycle. It constantly improves the information communication and cooperation with suppliers, and supports suppliers in performance improvement to facilitate the coordinated development of upstream and downstream of the supply chain.

By the end of this reporting period

Total number of suppliers

4,846

Number of suppliers by region¹

Tongwei Agricultural Development

Guangdong Province	Shandong Province	Jiangsu Province
87	80	79

Tongwei Food

Sichuan Province	Hainan Province	Guangdong Province
310	52	9

Tongwei Yongxiang

Sichuan Province	Jiangsu Province	Inner Mongolia
782	364	157

Tongwei Solar

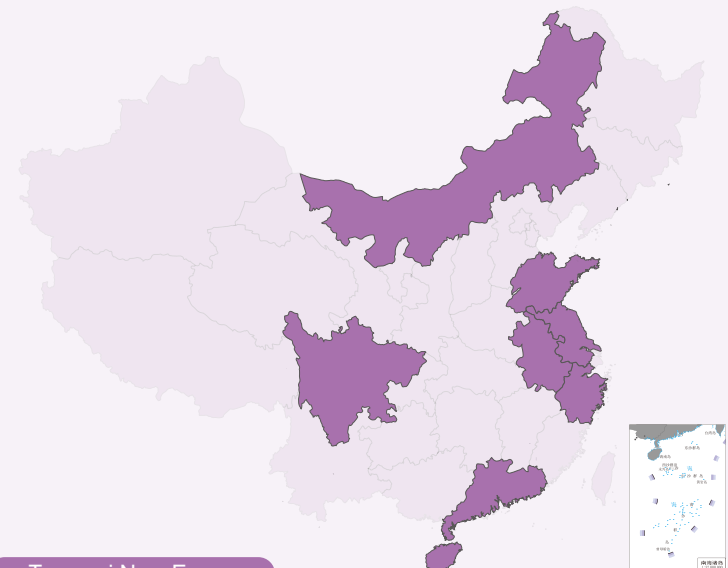
Jiangsu Province	Sichuan Province	Zhejiang Province
36	20	12

Tongwei New Energy

Jiangsu Province	Sichuan Province	Shandong Province
116	69	46

Tongwei Modules

Jiangsu Province	Anhui Province	Zhejiang Province
37	26	6



¹ Disclose the top three regions in terms of number of suppliers

Supplier Management Principles

In accordance with relevant laws and regulations such as the *Environmental Protection Law of the People’s Republic of China*, the *Company Law of the People’s Republic of China*, and the *Social Insurance Law of the People’s Republic of China*, Tongwei identifies and assesses the environmental and social risks in the supply chain, and has formulated the Supplier Code of Conduct to facilitate the sustainable operation of suppliers. Meanwhile, Tongwei impels suppliers to manage and supervise the supply chain.

Supplier Code of Conduct



Environmental Protection

Suppliers are required to avoid environmental pollution and eliminate environmental pollution factors or risks during the contract period with Tongwei.



Anti-discrimination/Anti-harassment

Suppliers are required not to discriminate or harass any employee in work.



Health and safety

Suppliers are required to identify hazards, reduce workplace hazards, and provide appropriate labor protection and occupational disease inspection.



Business ethics

Suppliers are required not to violate any law, and not to transfer or subcontract any right or obligation to a third party. Meanwhile, suppliers are required to eradicate and oppose business corruption and unfair competition, to sign the *Agreement on Fair Cooperation and Competition (Letter of Undertaking on Anti-corruption)*, the *Anti-business Corruption Agreement* and the like, and receive complaints and whistle-blowing via the public whistle-blowing hotline (028-86168838/86168834) and email (jcb@tongwei.com).



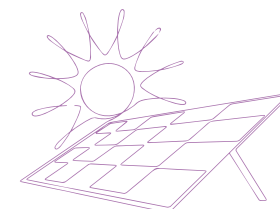
Labor

Suppliers are required to oppose child labor and forced labor, and comply with the local regulations on working hours.



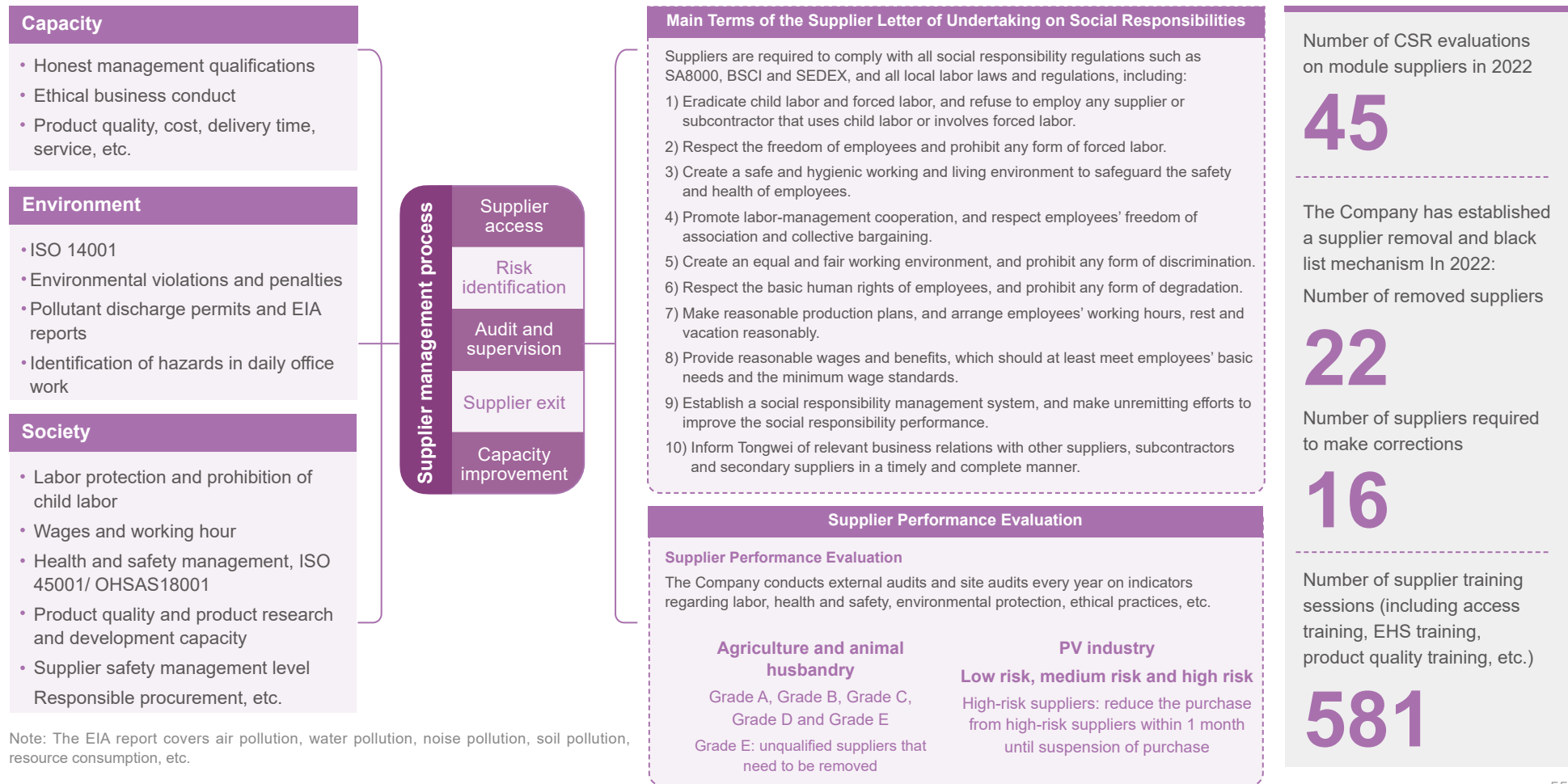
Wages

Suppliers are required to pay wages according to law, and avoid forced overtime.



Supplier Management Process

The Company has developed the policies such as *Supplier Management and Control Procedures*, *Survey Form and Access Criteria for Developing Suppliers of Various Categories*, *Procurement Control Procedures*, *Management Procedures on Suppliers of Animal Feed Materials*, *Management Procedures on Suppliers of Non-raw Materials* and *Supplier Access Policy* to manage suppliers from five aspects of supplier access, risk identification, audit and supervision, supplier exit and capacity improvement, and has incorporated ESG into all supplier management processes.



Note: The EIA report covers air pollution, water pollution, noise pollution, soil pollution, resource consumption, etc.

Sustainable Supply Chain

Tongwei joins hands with suppliers to create a respectful and ethical working environment and protect workers' rights in the supply chain. We pay constant attention to suppliers' environment and safety management, and are committed to establishing a green and responsible supply chain and promoting the sustainable development of suppliers.

Supplier Labor Safety and Health

In order to further protect the health and safety of suppliers' workers, Tongwei performs targeted management on supply chain labor by distributing the *Questionnaire on Basic Information of Suppliers* to trace labor situations. Further, Tongwei conduct surveys on topics such as child labor, forced labor, working hours, and labor safety and health to ensure that suppliers respect workers' rights and provide a safe and healthy working environment.

Responsible Mineral Procurement

Tongwei has developed a responsible procurement process according to the best industry practices, and conveyed its policies and requirements regarding conflict minerals to its suppliers. At present, Tongwei Modules has incorporated the factor of whether suppliers have purchased conflict minerals into site audits and investigations, requiring major suppliers to fill out the *Questionnaire on Conflict Minerals*. Suppliers are required not to purchase or use mineral resources from conflict areas or in violation of Tongwei policies, and required to convey this principle to lower-level suppliers.

In 2022, Tongwei Yongxiang carried out a thorough investigation and supply chain traceability demonstration for **all** of its main raw material suppliers.

Green Supply Chain

Tongwei has incorporated green development into the traditional supply chain management. With a focus on promoting green procurement, Tongwei keeps enhancing the green production level of suppliers and advancing the green and low-carbon transformation of the supply chain.

In terms of green procurement

1. Give priority to local suppliers to reduce energy consumption for transportation
2. Give priority to suppliers with excellent performance in environmental protection
3. Give priority to energy-efficient equipment to improve energy efficiency
4. Give priority to products with low carbon footprint

In terms of energy saving

In 2023, the Company plans to incorporate indicators such as the proportion of power consumption, proportion of natural gas consumption and intensity of carbon emissions into the management of core suppliers.

In terms of water resources management

In 2023, the Company plans to impel suppliers to set water saving targets and develop water saving measures, and incorporate them into the annual supplier evaluation.

In terms of public participation

In active response to the green and low-carbon supply chain initiative, the Company actively publicizes green products, promotes the circular development of upstream and downstream of the supply chain, and supports the construction of an industry-wide green and low-carbon coordinated development system.

Case: Join hands with industrial partners to build a green supply chain

With the aim of joining hands with industrial partners to build a green supply chain, Tongwei cooperated with China Datang Corporation Green and Low-Carbon Development Co., Ltd. to carry out carbon emission accounting and verification for the module supply chain at the organization and product level. The two sides integrated their resource advantages and shared their advanced experience and practice in green and low-carbon development, striving to promote the reform and development of green and low-carbon supply chain and facilitate the realization of the Dual Carbon goals industry-wide.

Supplier Incentive

In 2022, Tongwei conducted an annual supplier performance evaluation from the aspects of supplier labor safety and health, responsible procurement, business ethics and environment management. Suppliers with excellent performance were upgraded and given priority in supplier selection. In 2023, we will motivate suppliers in multiple ways such as commendation and awards to enhance their performance in ESG and jointly create a green ecological industry chain.

Environment

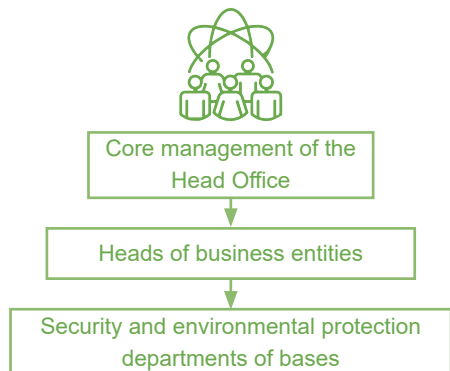
With an aim to be a world-class safe food supplier and a world-class clean energy operator, Tongwei actively takes part in global climate governance, implements China's "Dual Carbon" strategy, pursues green and low-carbon operations, supports global energy transition, and makes joint efforts to build a green ecosystem.



Environment Management

Organizational Structure of Environment Management

Upholding the philosophy of green and low-carbon development, Tongwei has established a sound environment management system, and built a three-level management structure consisting of “the core management of the Head Office, the heads of business entities, and the security and environmental protection departments of bases”, and defined the responsibilities for GHG emission management, pollutant management, water resources management, etc. Tongwei has incorporated environment management performance into the annual assessment of relevant persons in charge, and increased its efforts into environmental accountability.



Environment Management System

Tongwei fully complies with the laws and regulations related to environmental protection in the regions where projects are located and has formulated and adopted policies on environment management such as energy-saving management, water-saving management, and pollutant discharge management.



Laws, regulations and standards

- Environmental Protection Law of the People's Republic of China*
- Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*
- Law of the People's Republic of China on the Prevention and Control of Water Pollution*
- Law of the People's Republic of China on the Prevention and Control of Soil Pollution*
- Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*
- Standard for Pollution Control on Hazardous Waste Storage*
- National Catalogue of Hazardous Wastes*
- Emission Standards for Odor Pollutants*
- Emission Standard of Pollutants for Battery Industry, etc.*

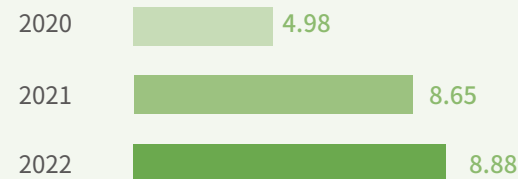


Internal policies

- Environment Management Policy*
- Energy Saving and Emission Reduction Policy*
- Environmental Protection Management Policy*
- Management Policy for Hazardous Solid Wastes*
- Management Policy for Waste Supplies*
- Management Policy for Scrapping of Production Materials*
- Wastewater Discharge Management Policy*
- Waste Gas Discharge Management Policy, etc.*

Environmental Protection Investment

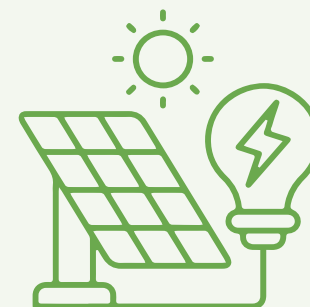
Environmental protection investment ('00 million yuan)*



* In 2022, Tongwei improved the statistical coverage and calculation method of environmental protection investment indicators.

Environment Management System Certification

Tongwei makes every effort to pass external management system certifications and audits. By the end of 2022, Tongwei's 12 subsidiaries in the PV manufacturing industry had got ISO 14001 certified.



GHG Management

Firmly supporting the climate goals set by the Paris Agreement and China’s “Dual Carbon” strategy, Tongwei has developed industry-leading GHG emission reduction goals and measures. It attaches great importance to carbon emission accounting and verification, adopts a monthly energy carbon data reporting mechanism for subsidiaries and branches, calculates GHG emissions of each subsidiary and branch every year, and then develops and takes appropriate measures based on the calculated carbon emissions to achieve the emission reduction goals.

In 2022, Tongwei prepared its **GHG emission inventory** in accordance with ISO 14064, GHG protocol and China’s measurement requirements for carbon emissions applicable to different sectors. In addition, we employed a third-party agency to conduct carbon emission verification on Tongwei Modules at the operational level and the value chain level to facilitate accurate control, and took targeted emission reduction measures for key emission points.

GHG Emissions

GHG emissions of Tongwei and its subsidiaries and branches at the operational level in 2022:

GHG emissions per one-million-yuan revenue (market-based)/ (tCO₂e/million yuan)



GHG emissions per one-million-yuan revenue (market-based)/ (tCO₂e/million yuan)



GHG emissions ¹	Unit	2021	2022
Total GHG emissions (market-based)	tCO ₂ e	3,367,710.18	2,743,055.82
Total GHG emissions (location-based)	tCO ₂ e	6,098,687.81	10,988,089.08
Scope 1 GHG emissions	tCO ₂ e	855,694.25	899,131.66
Scope 2 GHG emissions (market-based)	tCO ₂ e	2,512,015.93	1,843,924.16
Scope 2 GHG emissions (location-based)	tCO ₂ e	5,242,993.56	10,088,957.42

Note: In 2022, Tongwei improved the statistical coverage and calculation method of indicators. As a result, the total GHG emissions (location-based) in 2021 were adjusted from “6,554,463.64 tCO₂e” to “6,098,687.81 tCO₂e”.

¹ GHG emissions in Scope 1 are calculated with reference to the *Guidelines for Accounting and Reporting of GHG Emissions for Other Industrial Enterprises*; the emission factor of purchased electricity in Scope 2 is calculated with reference to the *Notice on the Reporting and Management of Greenhouse Gas Emissions of Power Generation Enterprises in 2023-2025*.

Energy Saving and Carbon Emission Reduction Management

With the aim of “energy consumption on budget and energy development as planned”, Tongwei strictly controls its own energy consumption and carbon emissions by improving the energy efficiency and the ratio of renewable energy used and reducing the carbon footprint of products.

Improve Energy Efficiency

The Company has developed an Energy Management System Manual based on its actual situation, improved its energy management system, and raised energy efficiency utilizing energy saving through management, energy saving through technology, information construction, etc.

By the end of this reporting period,

6

companies had passed ISO 50001 energy management system certification



Technical Measures for Energy Saving and Carbon Emission Reduction

- Independently develop advanced technologies such as large energy-saving reduction furnace, large-scale energy-saving cold hydrogenation technology and high-efficiency coupled distillation technology, and successfully create “Yongxiang Approach”, an internationally leading high-purity silicon production technique.
- Apply the stepped utilization technology of by-product steam, make full use of waste heat steam instead of steam supplied by the gas boiler, and promote quality and efficiency improvement, energy saving and carbon emission reduction of high-purity silicon production through continuous innovation and upgrading.
- Actively develop PV power generation technologies, install PV panels in factories, and increase the use of green energy.
- Replace the vacuum generator with vacuum pump, which can reduce energy consumption by **81.6%**.
- Explore the best energy saving program of ice machine, and optimize its operation mode, which can reduce energy consumption by **15%**.
- Reduce the power consumption of lighting tubes by **18kW** on the premise of meeting the illumination requirements of workshops, which can cut electricity charges by about **86,200** yuan/year.
- Build a workshop environment operation model and optimize the air handling system through **MAU¹+FFU²** to reduce the energy consumption of the air conditioning system.
- Carry out **PCW³** transformation for the slicing workshop, and optimize the refrigeration and cooling water pumps of power station to reduce the energy consumption of refrigeration system.

¹ MAU: Make-up Air Unit is an air conditioning plant that provides fresh air. Depending on the operating environment, MAU can keep constant temperature and humidity or just provide fresh air.

² FFU: Fan Filter Unit is a self-powered modular terminal air supply device with filtering function.

³ PCW: Process Cooling Water is mainly used for cooling process equipment, i.e., air conditioning system of process equipment.

Tongwei's energy consumption in 2022 (The specific data of subsidiaries and branches is detailed in the appendix)

Soft coal¹/(t)



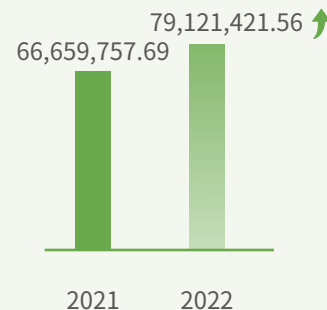
Gasoline²/(L)



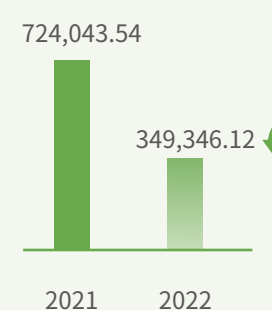
Diesel /(L)



Natural gas /(m³)



Purchased steam³/(GJ)



Purchased electricity⁴/(MWh)



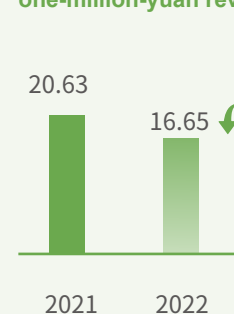
Sold steam /(GJ)



Comprehensive energy consumption /(tce)



Comprehensive energy consumption per one-million-yuan revenue /(tce/million yuan)

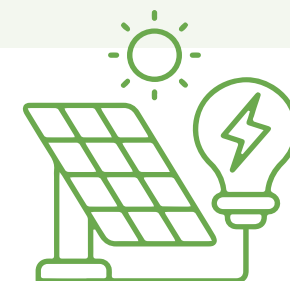


Note 1: In 2022, Tongwei improved the statistical coverage and calculation method of indicators. As a result, the consumption of soft coal in 2021 was adjusted from 118.83 tons to 117,426.00 tons.

Note 2: In 2022, the consumption of gasoline and diesel declined significantly compared with that in 2021, mainly because that in 2022, Tongwei improved the energy efficiency through equipment transformation and digital energy management, and promoted green office in operation.

Note 3: In 2022, the consumption of purchased steam declined significantly compared with that in 2021, mainly because that in 2022, Tongwei continued to increase the use of waste energy and effectively reduced steam consumption by applying technologies such as stepped recycling of waste heat.

Note 4: In 2022, the consumption of purchased electricity and the comprehensive energy consumption increased significantly compared with those in 2021, mainly because that in 2022, Tongwei increased its PV products and several new projects started mass production, which led to the increase of power consumption and comprehensive energy consumption.



Use of Renewable Energy

Tongwei has obtained the Clean Electricity Consumption Certificate issued by Sichuan Power Exchange Center, making renewable electricity traceable. During this reporting period, Tongwei consumed 14,457,361.49MWh of renewable electricity, which accounted for 81.73% of the total electricity consumption, accurately reflecting the scale and source of renewable electricity consumed by Tongwei.

The consumption of renewable electricity accounted for **81.73%** of the total electricity consumption.



Carbon Footprint Certification

Tongwei had its PV products certified for the carbon footprint. By 2022, Tongwei had obtained 11 carbon footprint certifications for various products (silicon materials, cells, and modules), including ISO 14067 and French carbon footprint certification (ECS). In 2023, Tongwei plans to further obtain at least 5 product carbon footprint certifications and to reduce carbon emissions through life-cycle carbon emission evaluation.

Obtain **11** carbon footprint certifications including ISO and ECS certification

Environmental Rights Trading

We actively participate in the trading of green electricity certificates in China. During this reporting period, Tongwei traded 350,000 green electricity certificates, with revenue of nearly ten million yuan. Meanwhile, Tongwei actively explores the development of overseas GCC carbon reduction mechanism. Relying on its own PV power stations, Tongwei participated in the development of 5 GCC projects in 2022.

350,000 green electricity certificates traded



Participated in the development of **5 GCC** projects in 2022

Digital Platform for Energy and Carbon Management

To facilitate carbon emission management and planning, the Company began to build the "Tongwei Energy and Carbon Management Platform" in 2022, which covers all businesses of the Company and integrates the statistics, analysis, and management of energy consumption and carbon emission data. The platform provides an effective tool for the Company to develop and implement energy-saving and carbon-reduction measures in the future.

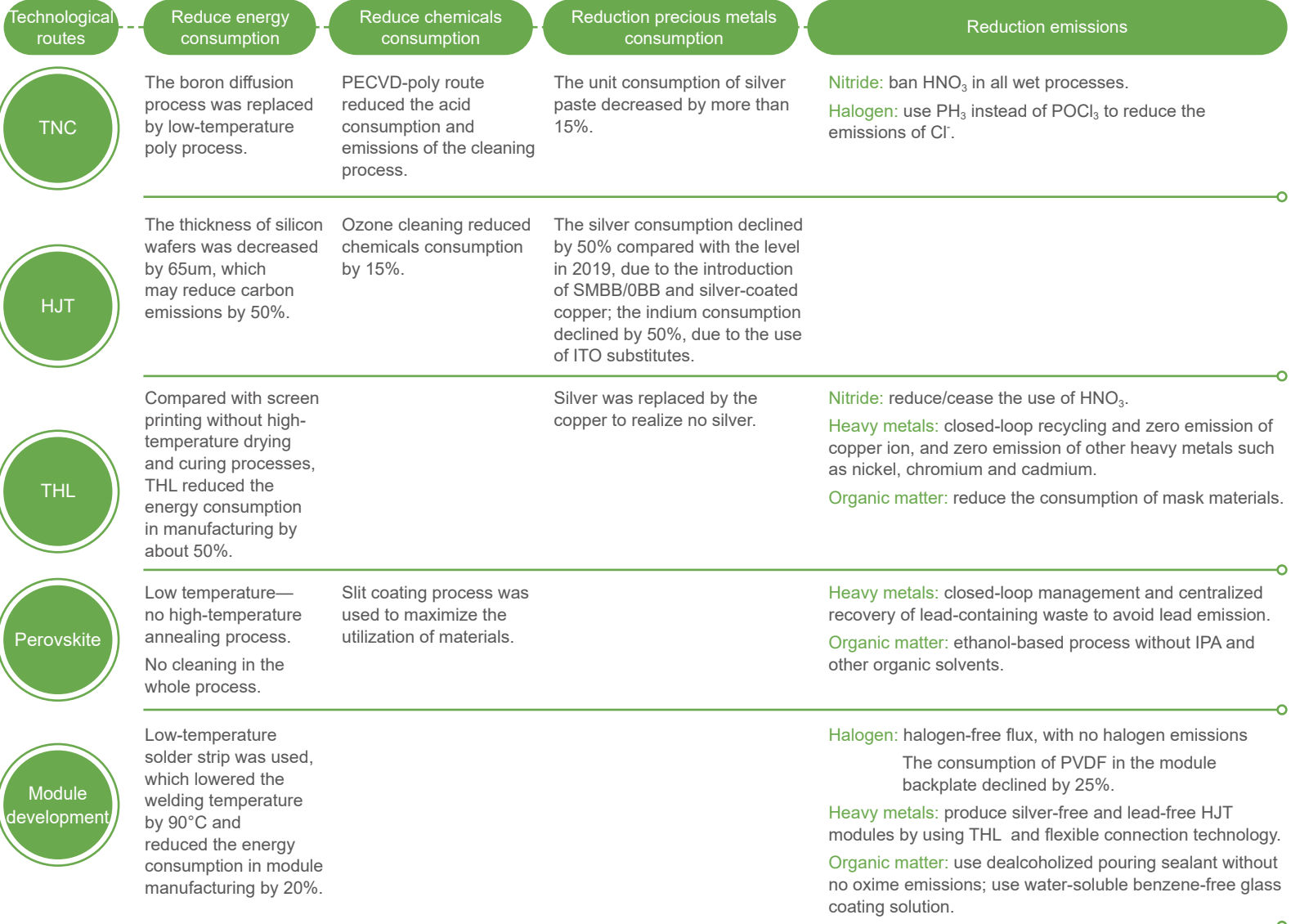


Green Manufacturing

Actively responding to the *14th Five-Year Green Development Plan* of the Ministry of Industry and Information Technology, Tongwei incorporates green design and green product management into the entire manufacturing process to build green factories.

Green Design

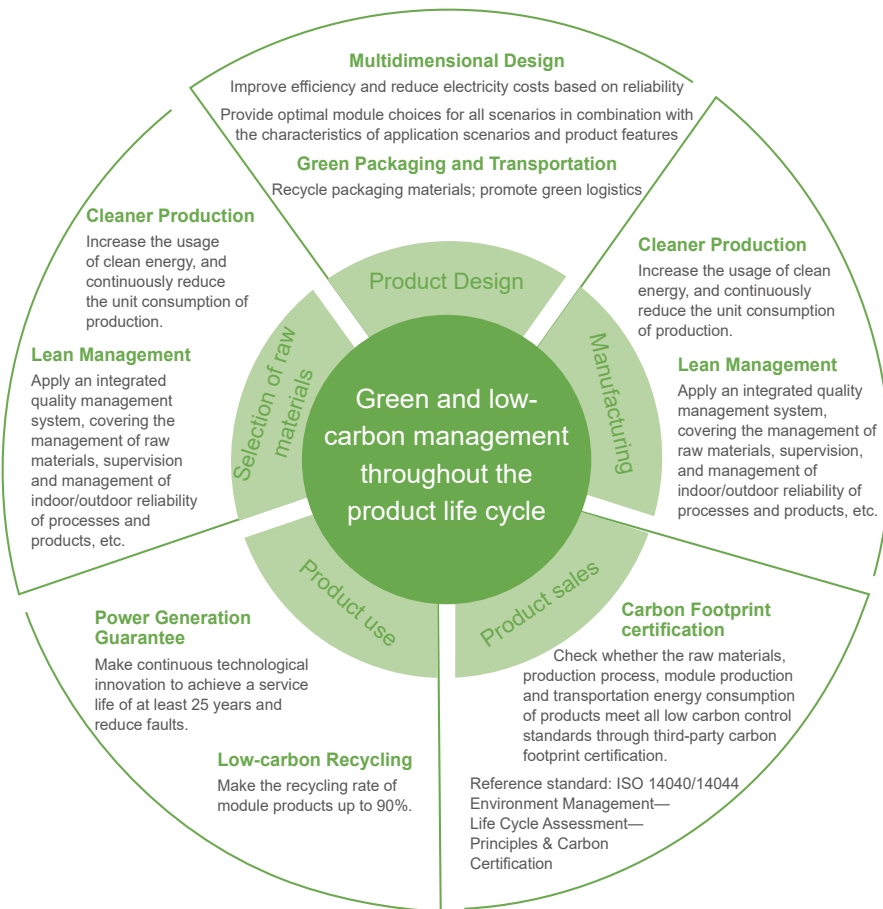
Tongwei incorporates greenness, low carbon, and environmental protection into product design, and makes every effort to choose product design schemes with the minimum environmental impact. Taking cells as an example, Tongwei evaluates the environmental benefits of each technological route, improves its ecological design ability, and increases the green attributes of products.



Green Product Management

Tongwei has built a green product management system covering product design, raw material procurement, manufacturing, product transportation and system application, so as to minimize the resource consumption and ecological environmental impact and maximize the recycling rate.

Life-cycle Green and Low-carbon Management



Green Factory

Actively responding to *Made in China 2025*, Tongwei has made a medium- and long-term plan of green factories to build garden-style green factories through technological innovation and systematic management.

Honors in Green Manufacturing

- 6 National green factory
- 1 Provincial green factory
- 4 National green supply chains
- 3 National green design products



Pollutant Management

Tongwei regards waste discharge management as an important part of environment management, fully complies with relevant laws and regulations, and develops appropriate policies to control pollutant discharge.

Management Measures for Pollutant Discharge

Waste

- Maintain stock-in and stock-out records of waste and formulate specifications for in-plant transfer
- Set up waste storage rooms for in-plant transfer, which should be equipped with anti-leakage, anti-volatilization and recycling facilities
- Employ qualified third parties to dispose of waste

Waste Gas

- Eliminate backward production processes, transform engineering equipment and optimize existing processes to reduce pollutant discharge
- Regularly carry out atmospheric environmental monitoring
- Spot-check the waste gas treatment equipment every day, and maintain the waste gas treatment equipment regularly

Waste Water

- Install industrial and domestic wastewater treatment facilities, and appoint relevant personnel to take charge of system inspection and maintenance
- Reduce wastewater discharge through pipeline network transformation, spraying transformation, etc.
- Build online sewage monitoring equipment, make annual monitoring plans and entrust a third party to carry out tests regularly

Pollutant Discharge

Tongwei's pollutant discharge in 2022 (see the appendix for specific data on subsidiaries and branches)



Safe disposal rate of industrial solid waste and hazardous waste:

100%



The comprehensive utilization rate of non-hazardous waste:

over 95%



Total amount of hazardous waste generated:

878.03 tons



Density of hazardous waste discharge:

0.01 ton/one-million-yuan revenue





Total amount of non-hazardous waste generated:

416,766.74 tons



Density of non-hazardous waste discharge:

2.93 ton/ one-million-yuan revenue



Total emissions of waste gas pollutants:

432.32 tons



Total discharge of wastewater pollutants:

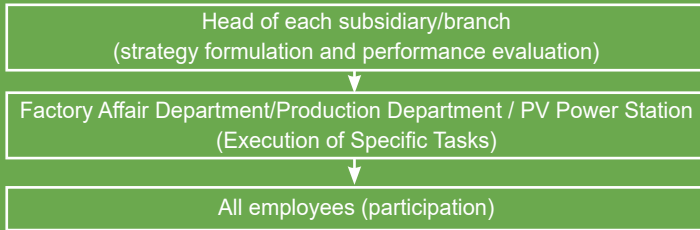
4,800.05 tons

65

Water Resources Management

Tongwei's development in PV and agriculture is inseparable from water resources. Hence, Tongwei pays close attention to water risks, continuously optimizes the water use structure, strengthens water saving at the source, and enhances reasonable and effective water management to reduce operational risks.

Organizational Structure of Water Management:



Tongwei incorporates the relevant indicators of water resources utilization into performance evaluation, and has them linked to salary to stimulate the initiative of managers.

Tongwei's water consumption data in 2022 (see the appendix for specific data on subsidiaries and branches)

Municipal water consumption

47,854,348 tons



Density of water consumption

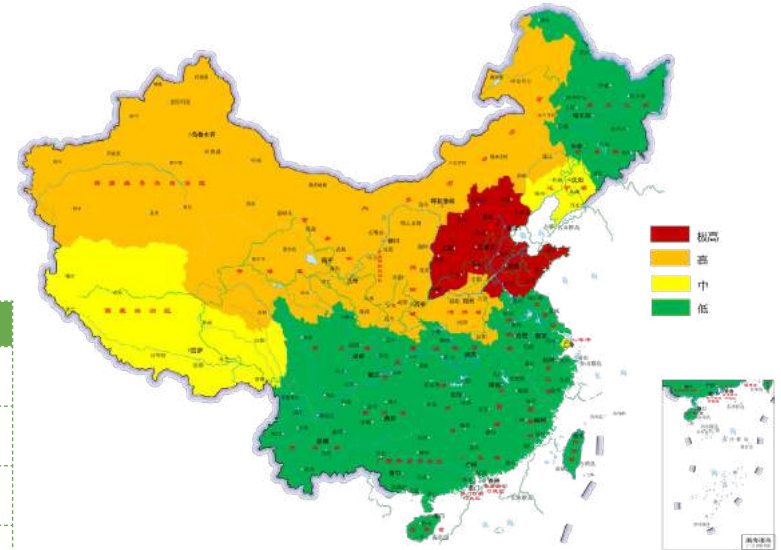
336 Ton/ one-million-yuan revenue

Proportion of recycle water

83.05%

Water Risk Management

With reference to the water risk tools developed by the public database of the World Resources Institute (WRI), and in accordance with *China Water Resources Bulletin 2021* released by the Ministry of Water Resources and *China Environment Status Bulletin 2021* released by the Ministry of Ecology and Environment, Tongwei has identified the water risks of each subsidiary and branch, thus driving each subsidiary and branch to strengthen water risk management.

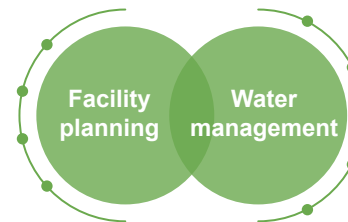


Water risk identification	
Subsidiaries/branches in low-risk areas	127
Subsidiaries/branches in medium-risk areas	4
Subsidiaries/branches in high-risk areas	5
Subsidiaries/branches in extremely high-risk areas	18

Note: excluding the data of companies outside China

Water risk mitigation measures

- Raise the height of the facility foundation
- Set water dams
- Calculate the water balance of tap water, recycled water and process cooling water in facilities every year



- Reuse reclaimed water
- Set comprehensive indicators of water pollution
- Require suppliers to carry out water resources management according to the Supplier Code of Conduct
- Monitor water consumption and discharge, and promote water saving

Water Saving Goal

Tongwei aims to save

3,594,000 tons of water in 2023, detailed as follows:



Feed

The water consumption per ton of feed will decline by **9%** in 2023, compared with that in 2020



Food

The water consumption per ton of products will decline by **6%** in 2023, compared with that in 2020



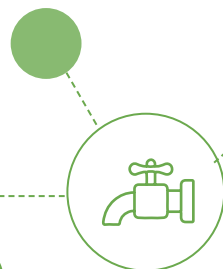
High-purity silicon

The water consumption per unit product will be less than **75** tons/ton of silicon materials in 2023



Solar cells

The water consumption per unit product will be less than **245** tons /MW in 2023



Water Saving Measures and Their Effects

Attaching high importance to water saving, Tongwei regularly carries out pipeline network investigation and water consumption analysis, monitors water consumption in real-time, and keeps contact with the competent municipal authority to ensure a stable and sufficient water supply. In addition, Tongwei reduces water consumption and wastewater discharge by taking various water-saving measures such as recycling condensed water/concentrated water, restricting high-water consumption projects and reforming equipment processes.

Water saving measures and their effects in some bases in 2022:

Tongwei Solar (Meishan) reduced pure water consumption by **720,000** m³/year and tap water consumption by **960,000** m³/year by recycling the cleaning water from texturing and alkaline polishing processes

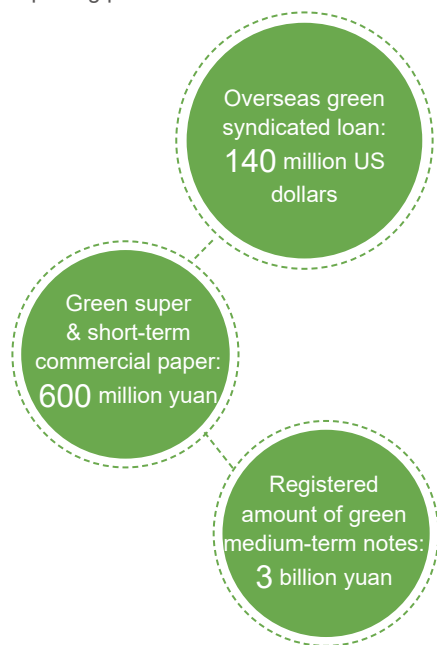
By introducing new energy-saving devices such as direct-fired dryers and steam generators, Tongwei Agricultural Development reduced the water consumption per ton of feed to **41.27** kg, which is **3.26** kg lower than that in 2021.

By recycling raw materials cleaning water and improving processes, Tongwei Food reduced the water consumption per ton of fish fillets by **8.33%** year-on-year and saved **0.16** tons of water for producing a single pig in 2022.

In 2022, Yongxiang Co., Ltd. and Sichuan Yongxiang New Energy Co., Ltd. won the title of "Provincial **Water-saving Enterprise** in 2022" respectively.

Green Finance

With its outstanding performance in green and low-carbon development, Tongwei gained the following funds during this reporting period:



Tongwei invested the green loans for its green and sustainable projects to accelerate the sustainable empowerment of the ecological environment.



Green Operation

Tongwei communicates the “All-people Environmental Protection” and “Green Lifestyle” to all employees for driving social sustainability.

Paperless Office

In 2022, Tongwei updated several platforms including FBC, FMC and EBS to further optimize office processes, reduce printing and resource waste, and improve office efficiency.

Green Travel

Tongwei advocates “3510” green travel, that is, going out by walking within 3 km, by bike within 5 km and by public transportation within 10 km. Subsidiaries and branches provide shuttle bus services for employees to encourage them to practice the concept of environmental protection in daily life.

In 2022, the employees of Tongwei Solar walked 8,795,370 steps with a mileage of 5,497.1 km, reducing carbon dioxide emissions by 1,050.6kg.

Energy Saving and Emission Reduction Initiative

To actively respond to the government action, Tongwei has issued the Energy Saving and Emission Reduction Initiative to all subsidiaries and branches to guide all employees to pursue green and low-carbon production and lifestyle, and make contributions to energy saving and consumption reduction.

Environmental Protection Activities for the Public Interest

Under the theme of “Saving Energy for Green and Low-carbon Development”, our subsidiaries and branches carried out many environmental protection activities for the public interest. In 2022, we totally organized more than 30 series of activities.



“Constant Carbon Reduction for Green Future” Activity

Tongwei Modules held a handicraft competition in which all works were made of the Company’s general solid waste, advocating environmental protection in daily life. A total of 2,316 people participated in this activity. The activity greatly improves employees’ awareness of waste recycling, and encourages employees to reduce white pollution and make their contribution to energy saving and carbon reduction.

Implement the “Dual Carbon” Action to Build a Beautiful Home Together

On June 13, Tongwei Yongxiang carried out the Energy Saving Publicity Week activity under the theme of “Saving Energy for Green and Low-carbon Development” to “Implement the ‘Dual Carbon’ Action to Build a Beautiful Home Together”. During the activity, the Company publicized the knowledge related to energy saving and carbon reduction through display boards, billboards, electronic displays and internal software, and promoted the concept of green development to increase all employees’ awareness of energy saving and carbon reduction.



Tree Planting Activity themed “Planting a Green Hope for a Beautiful Yongxiang”



“Turning Waste into Wealth” Competition



Tree Planting Activity themed “Planting a Hope to Grow Together”



Employee and Society

Tongwei regards talents as the primary resource for innovative development, and attaches great importance to the all-round development of talents. It is committed to providing diverse development platforms for employees, and improving their satisfaction and sense of belonging; creating a safe and healthy working environment for employees, safeguarding the basic rights and interests of employees, and achieving a win-win situation between employees and the Company. In addition, Tongwei actively fulfills its social responsibilities and participates in activities for the public interest to give momentum to the high-quality advancement of common prosperity.



Employee Overview

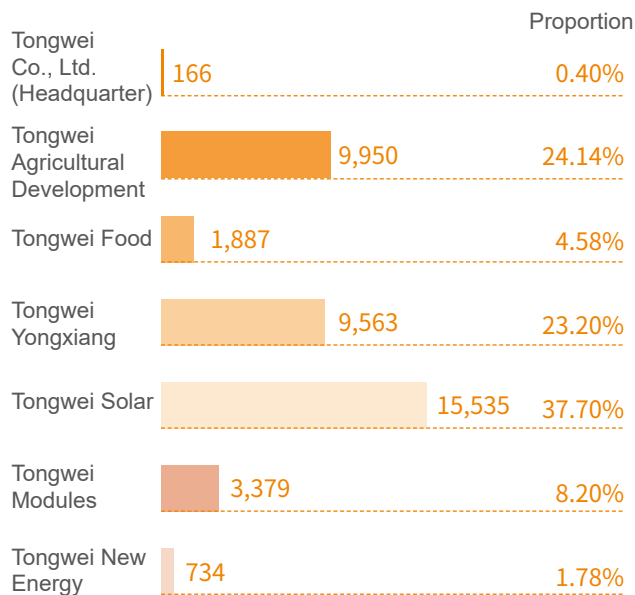


During this reporting period, Tongwei had

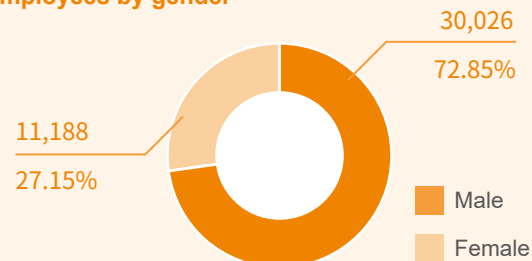
41,214 employees worldwide

Detailed as follows:

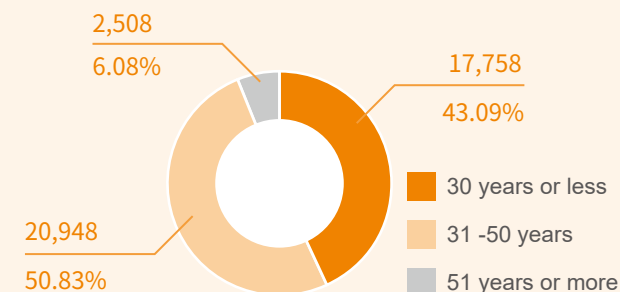
Total employees



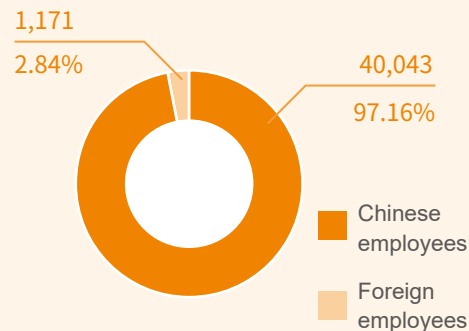
Employees by gender



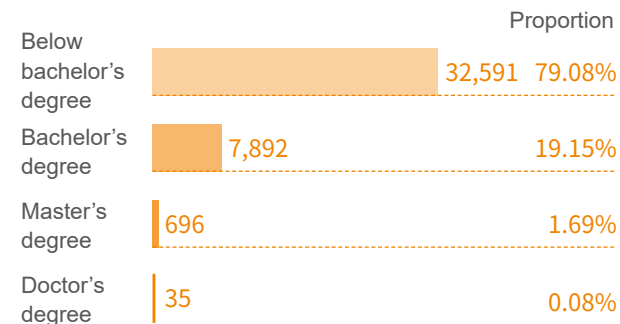
Employees by age



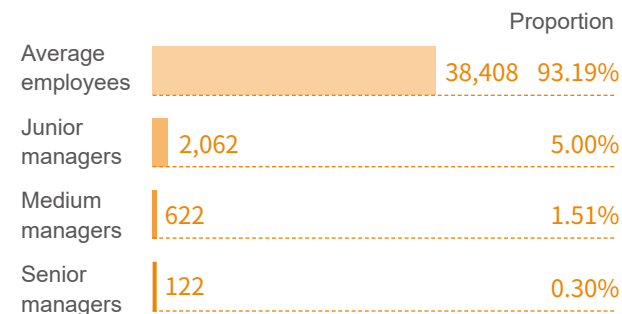
Employees by region



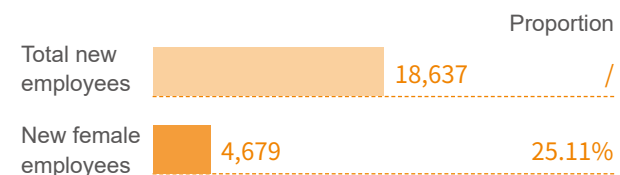
Employees by academic degree



Employees by rank



New employees



Protection of Employees' Rights and Interests

Tongwei always puts people first, and fully complies with the *Civil Code of the People's Republic of China*, the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Employment Promotion Law of the People's Republic of China* and other laws and regulations to safeguard the rights and interests of employees in labor, remuneration, benefits and democratic participation, oppose any form of discrimination and harassment in employment, and improve diversity in employment.

Labor Rights

Tongwei has a sound labor protection system in place, and strictly identifies, assesses and examines the possible risks in human rights to safeguard the rights of all employees granted by law.

During this reporting period, the coverage of supplementary insurance for on-the-job employees:

100%

There was **No** discrimination in employment, child labor and forced labor throughout the year.

Regulate Employment Management

Formulate employment procedures according to laws and regulations, and sign labor contracts in time.

Eradicate Child Labor

Develop the *Recruitment and Allocation Management Procedures* and the *Management Policy on Protection and Women and Minors* which state that child labor is prohibited.

Eradicate Forced Labor

Any form of forced labor by the means of coercion, fraud, threat, kidnapping or the like is prohibited. Employees are free to work or leave. No retaliation against any employee who has left the Company is accepted. Illegal holding of ID documents is prohibited.

Remuneration and Benefits

Tongwei has formulated the *Salary Management Procedures* and *Performance Management Procedures*, optimized salary and performance management policies, and developed different salary and incentive mechanisms for employees in different businesses and development stages.

Basic Benefits

- Social insurance, commercial accident insurance and housing provident fund

- Paid leaves (including annual leave, marriage leave, home leave, maternal leave, breastfeeding leave, parental leave, etc.)
- Holiday red packet, care red packet and birthday benefits

Caring Benefits

- Employee canteen, customized work uniforms and relative visit
- Travel allowance, team building, traffic allowance and shuttle bus
- Cooling supplies and high-temperature allowance in summers
- Warm supplies
- Tongwei souvenir prize, employee loyalty prize and retirement care

Stock Incentive

- Implement the employee stock incentive plan. During this reporting period, employees held 3.91% of the Company's shares in total.



Democratic Management

Tongwei builds channels for democratic participation, encourages employees to participate in company management and construction, listens to employees' opinions and comments and collects employees' views and needs via multiple channels, conducts regular employee satisfaction surveys, and protects employees' rights to know, comment, participate in, negotiate and supervise matters involving their own interests.

During this reporting period

Coverage of the Labor Union

100%

Ratio of employees signing collective agreements

Over 85%

Satisfaction of employees in each business sector

Over 90%

Dedicated email address to receive proposals from employees

Set a dedicated email address to receive proposals from employees, and set up a democratic management committee to screen, feed back, adopt and publish proposals and reward the individuals putting forward proposals conducive to the Company's management.

Workers' Congress

Select the representatives of workers and labor union members, and hold the workers' congress and members' congress in March every year to review and vote on the rules and regulations or major issues involving the vital interests of employees and evaluate the performance of the Labor Union.

Labor Dispute Mediation Committee

Set up a Labor Dispute Mediation Committee, provide ideological education for employees through various means such as WeChat, suggestion box and symposium, and collect and handle opinions and proposals in time.

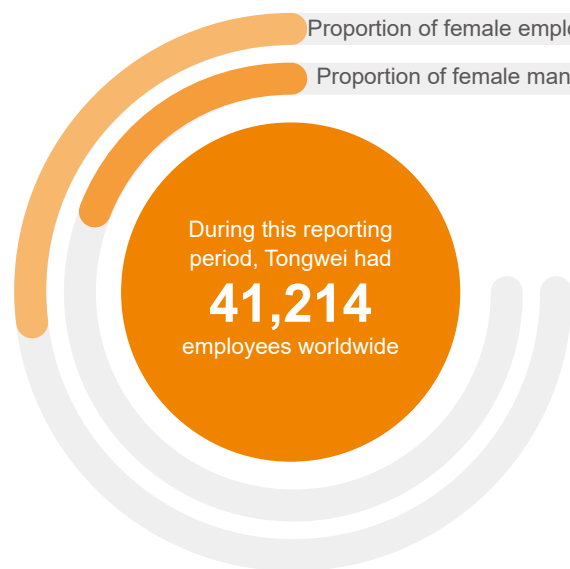


Diversity, Anti-discrimination and Anti-harassment

Tongwei upholds equality of men and women, and follows the principles of fairness, openness and justice in recruitment, employment, training, promotion, salary and welfare, without any form of discrimination based on ethnic group, race, gender or religion/belief.

We are committed to creating an inclusive, equal, caring and friendly workplace, offering strong support for our employees, and attracting, training and retaining diverse employees. With reference to international standards, we create a zero-harassment and zero-discrimination working environment, and incorporate harassment and discrimination into the scope of ethical supervision and review for employees. Violators will be subject to punishments according to the *Employee Reward and Punishment Management Policy*.

During this reporting period, Tongwei had 41,214 employees worldwide, of which female employees took up 27.15% and female managers took up 18.85%. Meanwhile, Tongwei had employees from many ethnic groups such as Jing, Hui, Zhuang, Mongol and Man.



Top 8 ethnic groups in terms of number of employees

Jing ethnic group: 824	Mongol ethnic group: 85
Hui ethnic group: 369	Li ethnic group: 76
Zhuang ethnic group: 146	Tujia ethnic group: 46
Yi ethnic group: 186	Bai ethnic group: 23



Care for Employees

Tongwei attaches high importance to the care for employees, and often organizes various caring activities to enhance employees' sense of belonging and team cohesion.

Care for Employees

Placing a high value on the physical and mental health of employees, Tongwei has carried out diverse welfare projects and set up the Employee Care Fund.

Employee Care Fund:

Medical expense subsidies for employees and their spouses, parents and children

Gifts for employees' children for admission by universities

Condolence money



In 2022, the Labor Union grant

455 times



Total amount of care funds granted

1,752,200 yuan



Care for Female Employees

In order to safeguard the rights and interests of female employees, the Company strictly fulfills its obligations set forth in the *Policy on Protection of Women and Minors*. Female employees are entitled to various leaves, such as pregnancy leave, maternal leave, breastfeeding leave and extended maternal leave (for exclusive breastfeeding, cesarean delivery and multiple births). The Company advances salaries to female employees during their pregnancy leave, maternal leave and breastfeeding leave, and organizes exclusive activities for female employees on Women's Day.

We provide convenience for women in breastfeeding period

In terms of office configuration

- Provide refrigerators and microwave ovens where female employees can store breast milk;
- Provide pure water, boiling water and washing tables in the tea room for cleaning and disinfection.

In terms of space function

- Set a breastfeeding room in the office building to solve the difficulties of female employees in physiological hygiene and breastfeeding.

In terms of everyday work

- Care more for breastfeeding women, and avoid business travels and overtime of breastfeeding women, so that they can have enough time for caring babies and families.

In terms of workload

- Do not arrange for breastfeeding women to engage in any work of grade 3 strength level or other activities prohibited by the State.



Recreational and Sports Activities

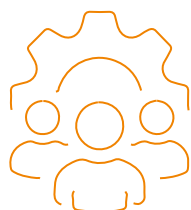
With a focus on increasing employee satisfaction, Tongwei has organized diverse, healthy and beneficial employee activities, and created a positive, vibrant and energetic team atmosphere. Activities include various garden activities, fun sports meetings, cooking competitions, outdoor training, mountain climbing competitions, variety shows, reading activities and so on. Also, Tongwei has set up interest groups such as yoga, basketball and badminton to satisfy the interests of employees.

- 1 Tongwei Solar (Shuangliu) Table Tennis Competition
- 2 Staff birthday party
- 3 Tongwei Agriculture and Animal Husbandry Industry Park Basketball Friendship Competition
- 4 Tongwei Sunshine Running Race



Employee Development

Tongwei is not only an enterprise that produces goods, but also a school and a melting pot that cultivates talents. Tongwei respects and pursues talents with the spirit of continuous learning and innovation, because learning injects momentum into Tongwei and innovation helps Tongwei maintain strong competitiveness. After years of development, Tongwei has trained a number of middle and senior managers with modern management concepts and consciousness of innovation.



Employment Policy:

Value the capable ones, replace the mediocre ones, and dismiss the incapable ones

Place people where they can put their abilities into full play, and choose only those who are really talented

Put those who are virtuous and talented in important positions, cultivate those who are virtuous but untalented, and refuse those who are talented but unvirtuous

Talent Development Strategy:



Talent Development Policies and Procedures

- Tongwei Recruitment and Employment Procedures
- Tongwei Talent Recommendation Management Procedures
- Tongwei Position and Rank Management Procedures
- Tongwei Training and Development Management Measures
- Tongwei Management Procedures for Self-development Training of Employees
- Tongwei Management Procedures for Internal Lecturers and Course Development
- Tongwei Management Procedures for the Evaluation and Appointment of Professional and Technical Positions
- Tongwei Cadre Management Policy

Employee Recruitment

In order to advance stability on the six fronts and security in the six areas, and to meet the government advocacy and social expectation for employment, Tongwei actively absorbs college graduates and local laborers, carries out enrollment and training programs in colleges and universities such as Sailing Program, and takes many measures for talent recruitment and retention. During this reporting period, 18,637 employees were recruited through campus recruitment, social recruitment and internal recruitment.

Employee Promotion

The Company has developed talent promotion policies such as *Promotion Management Procedures*, *Manager Promotion Management Procedures*, *Internal Competition Management Procedures* and *Management Procedures for the Evaluation and Employment of Professional and Technical Positions* to regulate the promotion and promotion process. In addition, the Company has built horizontal and vertical career development channels for employees, and promotion channels for managers, professionals and operators.

Vertical Development:

Managers are subject to a policy of competitive employment on a selective basis. The Company offers opportunities for promotion to employees who meet the promotion conditions every year. The promotion of professionals is subject to the *Management Procedures for Evaluation and Employment of Professional and Technical Positions*.

Promotion channel for managers: M0-M12

Promotion channel for professionals: P1-P7

Horizontal Development:

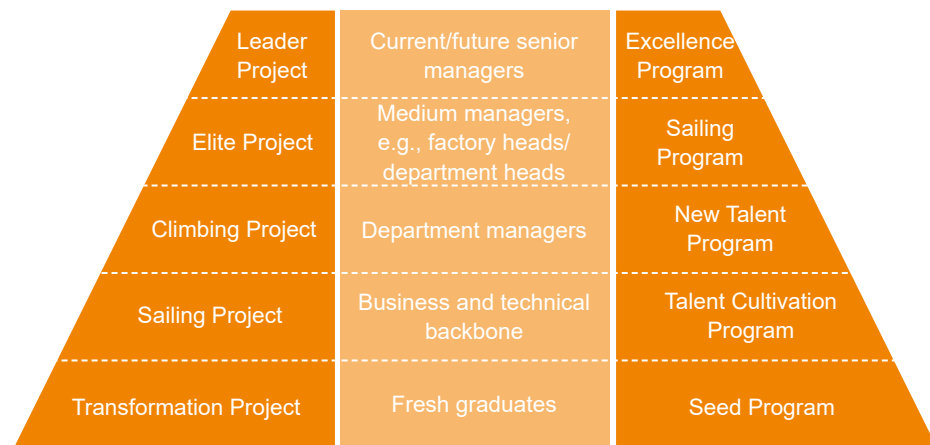
The Company encourages employees to learn diverse skills, and offers opportunities for job transfer and rotation within different job responsibilities.

Promotion channel for operators: 01-05

Employee Training

Tongwei has developed targeted training plans for employees at different levels, and set up “Tongwei Learning Center (Agriculture and Animal Husbandry)” and “PV Learning Center (PV Industry)”. Adhering to the concept of “training elites and producing quality products”, Tongwei has built an inter-disciplinary talent center integrating basic learning, post practice, technical practice and management practice through classic case sharing, lectures by industry experts, learning of cutting-edge technologies and business-education-research institution cooperation programs.

“Five Programs” for Employee Learning and Training



Talent Team Building of PV Learning Center

Trainees

Five Programs of Tongwei Learning Center

During this reporting period,

Number of participants:

40,301

Number of training sessions:

66,189

Average training hours per person:

86.88

The training covers occupational safety, skill development, professional knowledge, management training, corporate culture, etc., and the training methods include online and offline course learning and quality development activities.

In agriculture and animal husbandry, the Company has carried out management trainee programs for 4 consecutive years, retaining over 100 trainees, of which trainees with the qualification of manager assistant accounted for 20%. In 2022, the retention rate of management trainees exceeded 85%.

In the PV industry, the Company has built an E-learning platform, created an offline learning space, promoted the rapid growth of employees through nearly 20 talent development programs under the “Five Talent Projects”, and shortened the promotion cycle of employees by 20%.



University-Enterprise Cooperation

Adhering to the concept of "University-Enterprise Cooperation in Talent Cultivation", Tongwei establishes cooperative relations with universities, promotes the cultivation of applied talents and innovative talents, and continuously provides an innovative platform for talent accumulation and growth, so as to provide strong talent support for its development. In addition, Tongwei further explores the introduction and training of talents in Generation Z and post-00s generation by organizing summer camps and experiential learning activities, selecting outstanding campus ambassadors and setting up order-based classes.

By 2022, Tongwei had established cooperative relations with 18 universities, and set up 10 order-based classes with them, thus forming a pool of hundreds of talents.



Employee Health and Safety

Taking work safety and occupational health as its foothold, Tongwei continuously advances the construction of a long-term mechanism for work safety, and fully enhances the management of work safety.

Management policy
 putting safety first, laying stress on prevention, and taking comprehensive measures

Management goal
 no human injury; no fire, explosion and poisoning incident

Laws, regulations and standards	Internal policies
<p>Work Safety Law</p> <p>Regulations on the Reporting, Investigation and Handling of Work Safety Accidents</p> <p>ISO 45001 occupational health and safety system certification</p> 	<p>More than 30 management policies, including but not limited to:</p> <p>Management Policy on Work Safety Responsibility</p> <p>Management Policy on Investigation and Treatment of Accident Hazards</p> <p>Procedures for Identification and Evaluation of Environmental Factors and Hazards</p> <p>Management Policy on Safety in Hazardous Operation</p> <p>Security and Environmental Protection Assessment and Incentive Policy</p> <p>Emergency Preparedness and Response Procedures</p> <p>Management Policy on Emergency Rescue for Work Safety Accidents</p>

Work Safety

In 2022, we experienced no major safety accidents and realized safe production throughout the year.

Performance in Work Safety	2022
Number of especially serious safety accidents	0
Number of serious safety accidents	0
Days of absence resulting from work-related injury	1,636
Work safety expenses (million yuan)	163.29

By the end of this reporting period, 12 companies under Tongwei had got ISO 45001 (Occupational Health and Safety Management System) certified.

Deaths due to work for three consecutive years:

0



ISO 45001 Certification

Safety Responsibility and Performance Review

The Company attaches high importance to safety, and appoints the heads of business entities as the first responsible persons for work safety. All subsidiaries and branches have safety engineers and environmental protection engineers as business support, and full-time EHS managers for daily safety work, forming an all-round safety responsibility system.

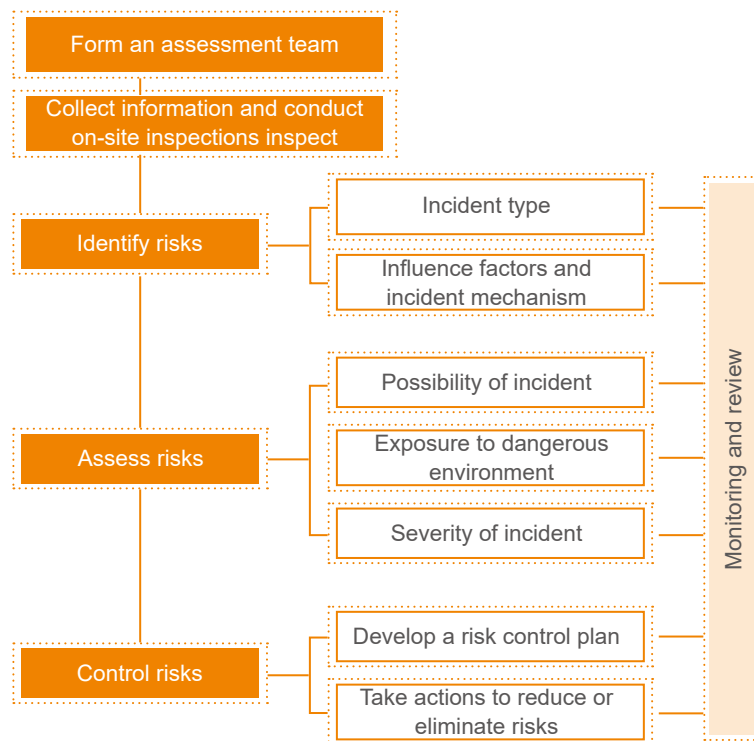
Putting higher requirements for leadership with accountability applied, the Company has fully implemented the *Work Safety Law* and improved the assessment mechanism for work safety responsibility.

In 2022, the safety and environmental protection department of each production base and each section chief signed the *Letter of Responsibilities for Safety and Environmental Protection Objectives in 2022*, which sets the safety management objectives and defines the management responsibilities for safety and environmental protection.

Safety Risk Prevention and Control

Tongwei has established hazard identification and risk assessment procedures to identify and assess the possible risks and hazards in the production process. It applies LEC¹ evaluation method to classify risks, and takes risk prevention and control measures to minimize safety risks and safeguard the safety of employees.

Safety Risk Assessment Process



¹ LEC evaluation method: a semi-quantitative safety evaluation method for hazard sources in potentially dangerous operating environment.

Emergency Drill

Tongwei continuously improves its emergency management mechanism and strengthens the construction of its emergency rescue capability. It has developed a number of emergency management plans for fire, pressure vessel explosion, chemical leakage, special gas leakage, natural disasters, etc. according to the *Guidelines for Preparation of Emergency Plans for Work Safety Accidents of Production and Business Units*. The Company regularly conducts emergency drills and emergency capacity assessment, develops annual emergency drill plans every year, and organizes emergency drills on fire control, mechanical injury, heatstroke and typhoon prevention, so as to enhance the emergency rescue capacity of all employees.



Occupational Health Management

Tongwei carefully implements the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases*, and has formulated such policies as *Occupational Health Management Policy*, *Occupational Disease Management Procedures*, *Occupational Hazard Incident Handling and Reporting Policy* and *Labor Protection Articles Management Policy*. All subsidiaries and branches have an office of occupational health leading group, which is responsible for regularly monitoring all kinds of occupational hazards, reporting occupational hazards, creating and maintaining occupational health registers and providing occupational health education.



Workplace Health and Safety



Occupational Hazard Detection

- Attach high importance to the detection and evaluation of occupational hazards, and invite third-parties at regular intervals to detect occupational hazards in the workplaces
- Regularly prepare occupational hazard detection reports, and take targeted measures.
- Ensure that the workplaces where occupational hazards exist according to the annual detection report do not exceed the limit set by the State



Workplace Protection Measures

- Publicize the occupational hazards in workplaces and take various measures to prevent, control and eliminate occupational diseases
- Reduce health hazards from the source by using dust cleaning equipment, low-noise equipment, thermal insulation materials and an air purification system
- Provide employees exposed to chemicals, noise and high temperature with protective articles of different types and protection levels, and supervise the use of these articles

Case: Yongxiang actively identifies potential hazards and takes adequate security measures

Yongxiang carries out safety and environmental protection inspections every month, eliminates all potential hazards, takes adequate measures for safety management and control, and fully implements the safety production system, thus laying a solid foundation for safe and sustainable development.

The Company carries out constant equipment management to ensure long-term, safe and stable operation of devices and reduce the probability of safety accidents. In addition, the Company frequently inspects the auxiliary material warehouse, oil product warehouse and gas cylinder warehouse, as well as the operation specifications for external contractors to ensure the quality of materials and provide strong support for safe production.



Occupational Health Protection

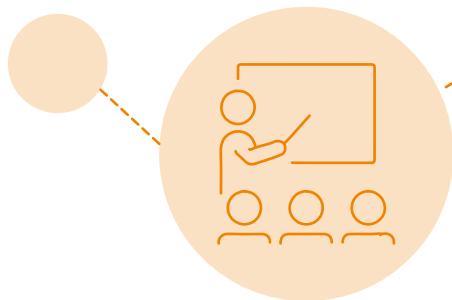
Tongwei invites qualified organizations to conduct occupational health examinations for operators exposed to occupational hazards, establishes an occupational health monitoring system, creates and maintains occupational health monitoring records for employees, truthfully informs employees of the results of occupational health examinations and the recommendations of examination organizations in writing, and promptly arranges for job transfer if any occupational contraindication is found.





Safety and Occupational Health Training

Tongwei places a high value on the work safety and occupational health training for employees. Through the training combining theory and practice, Tongwei greatly improves the matching degree between the safety capability of employees at all levels and the job needs, fully enhances employees' awareness of occupational health, and protects employees' rights and interests in occupational health.



Case: Tongwei Solar places a high value on safety protection and makes great efforts in work safety education

Tongwei Solar Jintang Base always puts work safety first in its production and operation, and advocates the concept that safety protection is everyone's business and priority must be given to prevention. The Company organizes diverse activities such as safety month and fire control month, and regularly provides safety training, such as safety accident case training, traffic safety training, fire safety training and other special safety training and invites experts to spread work safety knowledge by giving traffic safety lectures, mental health lectures and emergency training lectures. In 2022, the Company provided induction training for all new employees, and organized 50 special training sessions on safety, 18 special training sessions on fire control, and several other special training sessions with a total of 72 participants.



Public Interest

“ While achieving sustainable development, how to stand at the height of the times and closely integrate the development of enterprises with national expectations and social needs is a problem that Tongwei will continue to respond to in the future development. ”

——Liu Hanyuan, Chairman of Tongwei Group

Tongwei is always committed to integrating its development with the sustainable development of the regions where it operates, sharing development opportunities and resource value with local communities, and actively participating in local community construction, in an effort to drive harmonious economic and social development.

In 2022, Tongwei donated a total of 50 million yuan to Ya'an Red Cross Society and Ganzi Red Cross Society through Sichuan Society for Promotion of the Guangcai Program for emergency rescue, transitional resettlement and post-disaster reconstruction in earthquake-stricken areas in Luding.

During this reporting period, Tongwei donated a total of 57.8898 million yuan in China.

Community Benefit Service

Tongwei gives full play to its advantages in resources, platform, personnel and technology to participate in local community construction and solve the problems in local community development. Upholding the philosophy of “combining poverty alleviation with confidence building”, Tongwei makes continuous investments in education, cultural and sports construction and other fields in poverty-stricken areas to create a better future for local communities.

Case: “Sweet Cause” Activity to Support Farmers and Agriculture

Tongwei Solar actively facilitates the development of “Sweet Cause” in conjunction with local communities, and combines public welfare care with rural revitalization. It actively advances local rural revitalization by purchasing local agricultural products such as fruits as staff welfare. While fulfilling its corporate social responsibilities, Tongwei Solar shows its care for employees, which helps to increase employees' sense of belonging and working enthusiasm and promotes its benign development.



Case: Provide a Green Impetus to Tibetan Plateau

In November 2022, Tongwei brought light and warmth to “Zheduoshan Post Station” and “Litang Post Station”, two green stations along the Sichuan-Tibet highway, by building and donating a 35.1 kW off-grid PV power generation system to practice the green and low-carbon development initiative and jointly build an ecological barrier in the upper reaches of the Yangtze River.

In order to appreciate Tongwei for its support for the Green Post Station project and its positive contribution to China's environmental protection for many years, Green River awarded Tongwei the honorary title of “Carbon Neutrality Pioneer”. Tongwei's contributions to the public benefit have been reported and praised by mainstream media such as China News Service and National Business Daily.

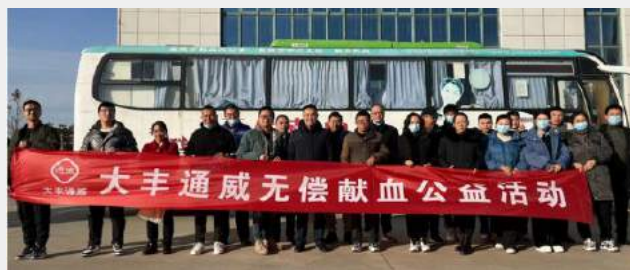


Volunteering

By arranging for employees to participate in volunteering activities, Tongwei encourages employees to perform social responsibilities, fosters employees' social consciousness, creates a harmonious corporate atmosphere and builds a responsible corporate image.

Case: "Heart-to-Heart" Voluntary Blood Donation Activity

In December 2022, Dafeng Tongwei, a subsidiary of Tongwei Co., Ltd., held a "Heart-to-heart" voluntary blood donation activity in conjunction with Yancheng Blood Center. All employees enthusiastically participated in the activity to fulfill their social responsibilities, jointly promote the local programs for the public benefit, and pass on their love.



Case: Greeting Activity Themed "Striving for a New Journey and Paying Tribute to Women Workers"

In October 2022, the Party-Mass Volunteering Team of Tongwei New Energy organized a series of greeting activities for frontline women sanitation workers in local communities. The Volunteering Team presented gifts to the women sanitation workers and expressed sincere thanks for their hard work. We attach high importance to the protection of women's rights and interests, actively promote and spread our "Home" culture, and place a high value on women's voices, with an aim to advance company development and social progress.



Future Prospect

Nowadays, a clean, low-carbon, safe and efficient modern energy system has become a global consensus. An energy revolution centered on green and low-carbon transformation has begun. In the wave of China's economic restructuring, Tongwei will continue to promote the strong development of its business entities by taking climate change response, technological innovation, sustainable supply chain and talent cultivation as the fundamental drivers for sustainable development. With a focus on food safety and energy transformation, we will work with more business partners to produce safe aquatic products and green energy, and subtly combine energy transformation, pollution control, and aquaculture production to find the fundamental solution to the current energy security and environmental protection problems in China and even the world. With the great vision of "For Better Life", we will work with stakeholders to create a "double green future", hoping this unique career will help retain green mountains, clear waters, white clouds and blue sky for future generations.



Performance Presentation

Economic Performance

Indicator	Unit	2022
Total assets	'00 million yuan	1,452.44
Net assets attributable to shareholders	'00 million yuan	607.97
Operating revenues	'00 million yuan	1,424.23
Operating costs	'00 million yuan	880.60
Net profits attributable to shareholders	'00 million yuan	257.26
Total tax	'00 million yuan	118
Basic earnings per share	CNY	5.7149
ROE	%	52.36

Governance Performance

Indicator	Unit	2022
Anti-corruption		
Number of legal cases regarding corruption or bribery	/	0
Number of anti-corruption training hours	Hour	506.5
Number of anti-corruption training sessions	/	470
Number of anti-corruption training sessions by rank		
Directors	/	6
Managers	/	122
Employees	/	421
Number of anti-corruption training participants by rank		
Directors	/	34
Managers	/	1,741
Employees	/	17,657
Pass rate of anti-corruption training by rank		
Directors	%	100%
Managers	%	100%
Employees	%	100%

Environment Performance

Indicator	Unit	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar					Tongwei Modules	Tongwei New Energy ¹	Total in 2022
					Solar Anhui	Solar Jintang	Solar Meishan	Solar Chengdu	Solar Tonghe			
Total GHG emissions (market-based)	tCO ₂ e				2,743,055.82							
GHG emissions per one- million-yuan revenue (market-based)	tCO ₂ e/one- million- yuan revenue				19.26							
Total GHG emissions (location-based)	tCO ₂ e				10,988,089.08							
GHG emissions per one- million-yuan revenue (location-based)	tCO ₂ e /one- million- yuan revenue				77.15							
Scope 1 GHG emissions	tCO ₂ e				899,131.66							
Scope 2 GHG emissions (market-based)	tCO ₂ e				1,843,924.16							
Scope 2 GHG emissions (location-based)	tCO ₂ e				10,088,957.42							
Density water consumption	Ton/one- million- yuan revenue				336.00							
Density of packaging material consumption	Ton/one- million- yuan revenue				2.14							
Density of hazardous waste	Ton/one- million- yuan revenue				0.01							

¹ Tongwei New Energy operations cover planning, design, and intelligent operation and maintenance for PV terminal investments, without waste gas, solid waste and energy consumption data.

Indicator	Unit	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar					Tongwei Modules	Tongwei New Energy ¹	Total in 2022
					Solar Anhui	Solar Jintang	Solar Meishan	Solar Chengdu	Solar Tonghe			
Density of harmless waste emissions	Ton/one-million-yuan revenue				2.93							
Comprehensive energy consumption	tce				2,371,678.69							
Comprehensive energy consumption per one-million-yuan revenue	tce/one-million-yuan revenue				16.65							
Total emissions of waste gas pollutants	Ton	35.25	/	225.52	17.31	41.76	24.74	58.11	25.84	3.79	/	432.32
Sulfur dioxide	Ton	3.66	/	6.39	/	0.00	0.00	0.00	0.00	0.00	/	10.05
Nitrogen oxide	Ton	29.81	/	142.50	0.30	6.48	8.17	27.97	2.96	0.00	/	218.19
Tin and its compounds	Ton	/	/	0.00	/	0.00	/	0.00	0.00	0.00	/	0.00
Ammonia	Ton	/	/	0.00	4.73	25.97	3.94	3.64	2.06	0.00	/	40.34
Fluoride	Ton	/	/	0.00	1.55	0.45	6.11	0.85	7.19	0.00	/	16.15
VOCs	Ton	/	/	34.93	9.64	2.02	2.46	12.58	4.65	3.03	/	69.31
Hydrogen chloride	Ton	/	/	3.51	0.71	5.22	2.06	11.11	5.18	0.00	/	27.79
General dust	Ton	/	/	18.22	/	0.00	/	0.00	0.00	0.00	/	18.22
PM	Ton	1.78	/	4.24	0.38	1.63	1.75	1.56	3.80	0.77	/	15.90
Smoke	Ton	/	/	15.73	/	0.00	/	0.00	0.00	0.00	/	15.73
Sulfuric acid mist	Ton	/	/	0.00	/	0.00	0.25	0.40	0.00	0.00	/	0.65
Total emissions of wastewater pollutants	Ton	198.60	49.95	63.25	226.76	712.41	1,040.34	319.66	2,128.84	29.82	30.42	4,800.05
Chloride	Ton	/	0.00	0.00	/	548.65	742.87	0.00	1,326.67	0.00	0.00	2,618.19
CODcr	Ton	95.58	9.35	36.06	121.38	60.56	113.46	90.56	536.20	14.88	0.00	1,078.03

Indicator	Unit	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar					Tongwei Modules	Tongwei New Energy ¹	Total in 2022
					Solar Anhui	Solar Jintang	Solar Meishan	Solar Chengdu	Solar Tonghe			
Suspended solids (SS)	Ton	42.48	4.83	15.52	35.15	11.82	14.06	96.33	27.59	6.31	0.00	254.09
BOD5	Ton	53.10	3.75	0.80	2.78	19.10	1.94	44.51	109.60	3.32	0.00	238.90
Total nitrogen	Ton	/	7.92	6.20	43.56	33.02	79.67	48.04	57.56	3.36	22.01	301.34
Fluoride	Ton	/	0.00	0.00	11.99	11.17	18.98	27.31	15.33	0.00	0.00	84.78
Ammoniacal nitrogen	Ton	6.37	22.52	4.15	9.77	27.85	67.91	10.08	54.40	1.88	6.40	211.33
Total phosphorus	Ton	1.06	1.58	0.52	2.13	0.24	1.45	2.83	1.49	0.06	2.00	13.36
Clean electricity consumption	MWh	5,132.42	3,247.17	12,159,088.34	6,226.12	384,302.86	647,764.48	637,947.62	602,533.44	11,119.05	/	14,457,361.50
Hydropower	%	94.52%	100 %	86.40%	0 %	100 %	100 %	100 %	100 %	0 %	/	72.30
Wind power	%		0 %	13.60%	0 %	0 %	0 %	0 %	0 %	0 %	/	/
Solar power	%	5.48 %	0 %		100 %	0 %	0 %	0 %	0 %	100 %	/	/
Biomass power	%		0 %	0%	0 %	0 %	0 %	0 %	0 %	0 %	/	/
Municipal water consumption	Ton	265,504.69	658,244.00	24,187,570.65	2,253,036.00	3,336,747.00	4,771,234.00	5,725,680.00	5,768,096.00	888,236.00	0.00	47,854,348.34
Percentage of recycled and reused water	%	0%	12.30%	98.00%	95.00%	95.60%	97.93%	98.00%	96.70%	0%	/	83.05
Total amount of packaging materials used	Ton	/	2,223.52	6,778.38			6,600.00			289,758.38	/	305,360.28
Total amount of hazardous waste generated	Ton	0.00	2.82	585.66	34.18	3.53	51.13	39.92	88.56	72.23	0.00	878.03
HW06 waste organic solvents and waste containing organic solvents	Ton	0.00	0.00	0.56	1.10	0.00	1.67	0.00	0.00	0.48	/	3.81
HW34 waste acids	Ton	0.00	0.33	61.64	4.10	0.00	0.00	0.00	28.72	0.00	/	94.79
HW35 waste alkalis	Ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.96	0.00	/	38.96
Waste mineral oil and waste containing mineral oil	Ton	0.00	1.55	97.62	2.54	0.47	0.62	3.13	11.98	0.82	/	118.73

Indicator	Unit	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar					Tongwei Modules	Tongwei New Energy ¹	Total in 2022
					Solar Anhui	Solar Jintang	Solar Meishan	Solar Chengdu	Solar Tonghe			
Amount of other waste generated	Ton	0.00	0.94	425.85	26.44	3.05	48.84	36.79	8.90	70.92	/	621.73
Amount of non-hazardous waste generated	Ton	1,717.65	957.10	307,932.84	6,483.41	10,109.74	20,947.76	28,959.93	26,911.13	12,747.18	/	416,766.74
Total discharge of office waste	Ton	1,717.65	3.00	6.00	0.00	0.00	0.00	0.00	25.00	2,783.50	/	4,535.15
Waste residue	Ton	/	0.00	299,211.29	0.00	8,525.36	0.00	0.00	0.00	0.00	/	307,736.65
Sludge	Ton	/	933.10	467.60	5,520.67	843.06	18,510.12	26,758.04	24,781.91	0.30	/	77,814.80
Waste wood	Ton	/	0.00	1,230.37	339.32	448.86	1,280.02	44.94	870.56	4,857.09	/	9,071.16
Waste paper	Ton	/	9.60	361.40	314.44	0.00	625.70	1,155.32	315.92	1,285.91	/	4,068.29
Waste steel	Ton	/	0.90	1,896.44	0.00	288.06	0.62	0.00	6.66	0.00	/	2,192.68
Waste supplies	Ton	/	0.00	1,550.66	300.94	4.40	521.64	976.23	911.08	0.00	/	4,264.95
Waste metals	Ton	/	0.00	1,679.58	8.05	0.00	9.66	25.40	0.00	348.36	/	2,071.05
Comprehensive energy consumption	tce	/	10.50	1,529.50	0.00	0.00	0.00	0.00	0.00	3,472.03	/	5,012.03
Comprehensive energy consumption	tce	103,229.01	2906.53	1,939,576.21	32,003.17	47,304.88	79,768.41	78,579.26	74,004.46	14,276.77	/	2,371,678.69
Soft coal	t	1,189.82	0.00	126,100.66	0.00	0.00	0.00	0.00	0.00	0.00	/	127,290.48
Gasoline	L	0.00	11,672.00	28,239.25	0.00	4,367.61	0.00	0.00	1,010.55	7,200.00	/	52,489.41
Diesel	L	536,815.12	72,435.00	338,923.17	0.00	0.00	12,600.00	5,871.00	0.00	0.00	/	966,644.29
Natural gas	m ³	34,137,090.55	64,125.00	44,567,133.01	0.00	52,153.00	107,040.00	126,422.00	0.00	67,458.00	/	79,121,421.56
Purchased steam	GJ	110,000.00	22,779.00	216,567.12	0.00	0.00	0.00	0.00	0.00	0.00	/	349,346.12
Purchased electricity	MWh	427,590.86	15,791.00	14,597,587.01	260,644.20	384,302.86	647,764.48	637,947.62	602,142.96	115,372.77	/	17,689,143.76
Sold steam	GJ	0.00	0.00	341,721.28	0.00	0.00	0.00	0.00	0.00	0.00	/	341,721.28

Social Performance

Indicator	Unit	2022
R&D		
R&D expenses	Million yuan	4,400.58
Ratio of R&D expenses to operating revenues	%	3.09
Number of R&D staff	Person	3,549
Patents authorized	/	31
Utility models authorized	/	603
Patent applications	/	224
Utility model applications	/	515
Charitable donation		
Amount of donation	'0000 yuan	5,788.98
Work safety		
Work safety expenses	Million yuan	163.29

Indicator	Unit	2022
Information security training		
Number of training sessions	/	136
Number of participants	/	40,934
Number of training hours	Hour	2,731.90
Suppliers		
Number of suppliers	/	4,846
Number of suppliers removed due to violation of the Code of Conduct	/	22
Number of supplier training sessions	/	581
Products		
Percentage of product recalls	%	0
Number of product and service complaints	/	143
Response ratio of client complaints	%	100

Employment Performance

Indicator	Unit	Tongwei (Head- quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total in 2022
Proportion of labor union members	%	100%	100%	100%	100%	100%	100%	100%	100%
Coverage of supplementary insurance	%	100%	100%	100%	100%	100%	100%	100%	100%
Total number of employees	Person	166	9,950	1,887	9,563	15,535	3,379	734	41,214
Number and proportion of female managers in total managers									
Number	Person	4	143	33	36	233	69	11	529
Proportion	%	2.41%	17.40%	41.25%	0.38%	22.60%	19.90%	12.50%	18.85%
Number and proportion of female junior managers									
Number	Person	0	121	29	6	223	63	3	445
Proportion	%	0%	14.70%	44.62%	0.06%	24.92%	21.30%	6.67%	21.58%
Number and proportion of female senior managers									
Number	Person	3	3	4	4	1	0	1	16
Proportion	%	1.81%	0.4%	26.67%	0.04%	15.38%	0%	9.09%	13.11%
New employees									
Number of new employees	Person	56	3,042	346	3,226	7,086	4,596	285	18,637
Number of female employees among new employees	Person	19	543	179	568	2,138	1,168	64	4,679
Number of ethnic minority employees among new employees	Person	5	543	192	121	351	94	37	1,343
New employees by age, gender and rank									
30 years or less	Person	27	1,359	99	1,842	4,587	2,941	181	11,036

Indicator	Unit	Tongwei (Head- quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total in 2022
31-50 years	Person	28	1,485	226	1,362	2,497	1,655	98	7,351
51 years or more	Person	1	198	21	22	2	0	6	250
Male	Person	37	2,499	167	2,658	4,948	3,428	221	13,958
Female	Person	19	543	179	568	2,138	1,168	64	4,679
Junior managers or below	Person	23	3,029	342	3,222	7,079	4,577	233	18,505
Medium manager	Person	26	12	4	4	6	18	51	121
Senior managers	Person	7	1	0	0	1	1	1	11
Employees from internal recruitment by age, gender and rank									
Number of employees aged 30 or less	Person	19	155	1	31	2,986	361	1	3,554
Proportion of employees aged 30 or less	%	24.36%	26.80%	20.00%	36.90%	57.94%	55.28%	9.09%	54.15%
Number of employees aged 31-50	Person	55	345	4	53	2,165	292	10	2,924
Proportion of employees aged 31-50	%	70.51%	59.70%	80.00%	63.10%	42.01%	44.72%	90.91%	44.55%
Number of employees aged 51 or more	Person	4	78	0	0	3	0	0	85
Proportion of employees aged 51 or more	%	5.13%	13.50%	0	0%	0.06%	0%	0%	1.30%
Number of male employees	Person	44	503	3	58	3,756	524	6	4,894
Proportion of male employees	%	56.41%	87.00%	60.00%	69.05%	72.88%	80.25%	54.55%	74.57%
Number of female employees	Person	34	75	2	26	1,398	129	5	1,669
Proportion of female employees	%	43.59%	13.00%	40.00%	30.95%	27.12%	19.75%	45.45%	25.43%
Number of junior managers or below	Person	27	526	2	70	5,087	640	6	6,358

Indicator	Unit	Tongwei (Head- quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total in 2022
Proportion of junior managers or below	%	34.62%	91.00%	40.00%	83.33%	98.70%	98.01%	54.55%	96.88%
Number of medium managers	Person	34	48	3	14	62	13	4	178
Proportion of medium managers	%	43.59%	8.30%	60.00%	16.67%	1.20%	1.99%	36.36%	2.71%
Number of senior managers	Person	17	4	0	0	5	0	1	27
Proportion of senior managers	%	21.79%	0.69%	0%	0%	0.10%	0%	9.09%	0.41%
Number and proportion of employees by age									
Number of employees aged 30 or less	Person	51	2,698	340	3,969	8,603	1,822	275	17,758
Proportion of employees aged 30 or less	%	30.72%	27.00%	18.02%	41.50%	55.38%	53.92%	37.47%	43.09%
Number of employees aged 31-50	Person	103	5,524	1,225	5,205	6,919	1,552	420	20,948
Proportion of employees aged 31-50	%	62.05%	56.00%	64.92%	54.43%	44.54%	46%	57.22%	50.83%
Number of employees aged 51 or more	Person	12	1,728	322	389	13	5	39	2,508
Proportion of employees aged 51 or more	%	7.23%	17.00%	17.06%	4.07%	0.08%	0.15%	5.31%	6.08%
Number and proportion of employees by academic degree									
Number of employees below bachelor's degree	Person	32	7,183	1,762	7,704	12,848	2,691	371	32,591
Proportion of employees below bachelor's degree	%	19.28%	72.20%	93.38%	80.56%	82.70%	79.64%	50.54%	79.08%
Number of employees with bachelor's degree	Person	88	2,402	117	1,775	2,561	626	323	7,892
Proportion of employees with bachelor's degree	%	53.01%	24.10%	6.20%	18.56%	16.49%	18.53%	44.01%	19.15%
Number of employees with master's degree	Person	42	347	8	83	115	62	39	696

Indicator	Unit	Tongwei (Head- quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total in 2022
Proportion of employees with master's degree	%	25.30%	3.50%	0.42%	0.87%	0.74%	1.83%	5.31%	1.69%
Number of employees with doctor's degree	Person	4	18	0	1	11	0	1	35
Proportion of employees with doctor's degree	%	2.41%	0.20%	0%	0.01%	0.07%	0%	0.14%	0.08%
Number and proportion of employees by gender									
Number of male employees	Person	96	7,888	934	7,515	10,646	2,360	587	30,026
Proportion of male employees	%	57.83%	79.00%	49.50%	78.58%	68.53%	70%	79.97%	72.85%
Number of female employees	Person	70	2,062	953	2,048	4,889	1,019	147	11,188
Proportion of female employees	%	42.17%	20.70%	50.50%	21.42%	31.47%	30%	20.03%	27.15%
Number and proportion of employees by region									
Number of Chinese employees	Person	166	8,779	1,887	9,563	15,535	3,379	734	40,043
Proportion of Chinese employees	%	100%	88.20%	100%	100%	100%	100%	100%	97.16%
Number of foreign employees	Person	0	1,171	0	0	0	0	0	1,171
Proportion of foreign employees	%	0%	11.8%	0%	0%	0%	0%	0%	2.84%
Number and proportion of employees by rank									
Number of average employees	Person	148	9,127	1,815	9,123	14,504	3,045	646	38,408
Proportion of average employees	%	89.16%	91.73%	96.18%	95.40%	93.36%	90.12%	88.01%	93.19%
Number of junior managers	Person	0	533	51	222	919	292	45	2,062
Proportion of junior managers	%	/	5.35%	2.70%	2.32%	5.92%	8.64%	6.13%	5.00%
Number of medium managers	Person	4	265	17	166	99	39	32	622
Proportion of medium managers	%	2.41%	2.66%	0.90%	1.74%	0.64%	1.15%	4.36%	1.51%

Indicator	Unit	Tongwei (Head-quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total In 2022
Number of senior managers	Person	14	25	4	52	13	3	11	122
Proportion of senior managers	%	8.43%	0.25%	0.21%	0.54%	0.08%	0.09%	1.50%	0.30%
Number and proportion of employees trained by gender									
Number of male employees trained	Person	40	7,575	934	7,515	10,646	2,360	587	29,657
Proportion of male employees trained	%	41.67%	96.03%	100%	100%	100%	100%	100%	98.77%
Number of female employees trained	Person	37	1,551	953	2,048	4,889	1,019	147	10,644
Proportion of female employees trained	%	52.86%	75.22%	100%	100%	100%	100%	100%	25.83%
Number and proportion of employees trained by rank									
Number of average employees trained	Person	74	8,863	1,866	9,345	15,423	3,337	691	39,599
Proportion of average employees trained	%	50%	91.75%	100%	100%	100%	100%	100%	97.85%
Number of medium managers trained	Person	3	242	17	166	99	39	32	598
Proportion of medium managers trained	%	75%	91.32%	100%	100%	100%	100%	100%	96.14%
Number of senior managers trained	Person	0	21	4	52	13	3	11	104
Proportion of senior managers trained	%	0%	84%	100%	100%	100%	100%	100%	85.25%
Number of training sessions for employees	/	10	3,299	128	60,527	373	300	1,552	66,189

Indicator	Unit	Tongwei (Head-quarters)	Tongwei Agricultural Development	Tongwei Food	Tongwei Yongxiang	Tongwei Solar	Tongwei Modules	Tongwei New Energy	Total in 2022
Number of employees trained	Person	77	9,126	2,875	9,563	17,707	3,379	12,531	55,258
Average number of training hours for employees	Hour/Person	9.30	182.50	5.70	84.32	56.63	29.52	52.58	88.88
Proportion of employees trained	%	46.39%	91.72%	100%	100%	100%	100%	100%	97.78%
Average number of training hours for employees by gender									
Average number of training hours for male employees	Hour/Person	8	177.32	3.67	86.41	57.42	30.1	3.015	-
Average number of training hours for female employees	Hour/Person	10.80	149.10	3.81	92.53	56.32	29.80	2.90	-
Average number of training hours for employees by rank									
Average number of training hours for average employees	Hour/Person	9.30	184.30	3.62	85.91	69.57	26.12	3.09	-
Average number of training hours for medium managers	Hour/Person	8.80	203.77	11.67	63.38	54.66	36	5.37	-
Average number of training hours for senior managers	Hour/Person	0	62.5	11.67	67.67	24.84	36	6.47	-
Number of legal cases regarding labor dispute	/	0	3	1	4	3	0	1	12
Employee satisfaction	%	100%	95.40%	100%	91.37%	97.33%	93.40%	-	-
Number of days lost due to work-related injury	Day	0	0	204	1,255	90	87	0	1,636
Ratio of employees receiving physical examinations	%	100%	100%	100%	100%	100%	100%	100%	100%

Other Designations

Designation	Description
Tongwei Co., Ltd., Tongwei, the Company, We	Tongwei Co., Ltd.
Tongwei Group	Tongwei Group Co., Ltd.
Tongwei Agricultural Development	Tongwei Agricultural Development Co., Ltd.
Tongwei Food	The collective name of Sichuan Tongwei Food Co., Tongwei (Chengdu) Aquatic Products Co., Ltd., Tongwei (Hainan) Aquatic Products Co., Ltd., and Chengdu Xintaifeng Agriculture 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 New Materials Co., Ltd., Inner Mongolia Tongwei High-purity Crystalline Silicon Company, and Sichuan Yongxiang Silicon Materials Co., Ltd.
Yongxiang	Yongxiang Co., Ltd.
Yongxiang New Energy	Sichuan Yongxiang New Energy Co., Ltd.
Tongwei Modules	Tongwei Solar (Hefei) Co., Ltd.
Tongwei Solar	The collective name of Tongwei Solar (Anhui) Co., Ltd., Tongwei Solar (Chengdu) Co., Ltd., Tongwei Solar (Meishan) Co., Ltd., Tonghe Solar (Jintang) Co., Ltd., and Tongwei Solar (Jintang) Co., Ltd.

Solar (Anhui)	Tongwei Solar (Anhui) Co., Ltd.
Solar (Meishan)	Tongwei Solar (Meishan) Co., Ltd.
Solar (Jintang)	Tongwei Solar (Jintang) Co., Ltd.
Solar (Chengdu)	Tongwei Solar (Chengdu) Co., Ltd.
Solar (Tonghe)	Tonghe Solar (Jintang) 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., and Sichuan Yuguang IoT Technology Co., Ltd.
Tongwei Agriculture and Animal Husbandry	Branches and subsidiaries related to agriculture, food and animal husbandry
PV industry	Branches and subsidiaries under Tongwei Yongxiang, Tongwei Solar, Tongwei Modules, and Tongwei New Energy
Tongwei PV	Branches and subsidiaries under Tongwei Yongxiang, Tongwei Solar, and Tongwei Modules

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GRI 304-2	Significant impacts of activities, products and services on biodiversity	P17
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GRI 305: Emissions		
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GRI 305-4	Intensity of GHG emissions	P59-64
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GRI 308: Assessment on Supplier Environment		
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GRI 401: Employment		
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GRI 404: Training and Education		
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GRI 407: Freedom of Association and Collective Bargaining		
GRI 407-1	Operations and suppliers in which the freedom of association and collective bargaining may be at risk	P54,72
GRI 408: Child Laborers		
GRI 408-1	Operations and suppliers at significant risk for incidents of child laborers	P54,72
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GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	P54,72

GRI 410: Security Practices		
GRI 410-1	Security personnel trained in rights policies or procedures concerning human rights	/
GRI 413: Local Communities		
GRI 413-1	Operations with local community engagement, impact assessments and development programs	P85-86
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GRI 411: Rights of Indigenous Peoples		
GRI 411-1	Incidents of violations involving rights of indigenous peoples	/
GRI 414: Social Assessment on Suppliers		
GRI 414-1	New suppliers screened by using social criteria	P55
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GRI 416: Customer health and safety		
GRI 416-1	Assessment of the health and safety impacts of product and service categories	P49-50
GRI 416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	P49-50
GRI 417: Marketing and Labeling		
GRI 417-1	Requirements for product and service information and labeling	P49-50

GRI 417-2	Incidents of non-compliance concerning product and service information and labeling	/
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GRI 418: Customer Privacy		
GRI 418-1	Substantiated complaints concerning breaches of customer privacy and loss of customer data	P48

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No.	Description	Page
	General Disclosure	
A1 Emissions	Information on: (a) Policies; and (b) Compliance with relevant laws and regulations with a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, as well as generation of hazardous and non-hazardous waste. Note: waste gases include nitrogen oxides, sulfur oxides, and other pollutants regulated by national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Hazardous waste refers to those defined by national regulations	P58-59,65
A1 Emissions	A1.1 The types of emissions and respective emissions data.	P59-66
A1 Emissions	A1.2 Total greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of the production volume, per facility).	P59-66
A1 Emissions	A1.3 Total hazardous waste produced (in weight or size) and, where appropriate, intensity (e.g. per unit of the production volume, per facility, per regular employee).	P65-66
A1 Emissions	A1.4 Total non-hazardous waste produced (in weight or size) and, where appropriate, intensity (e.g. per unit of the production volume, per facility, per regular employee).	P59-66
A1 Emissions	A1.5 Description of emissions target(s) and steps taken to achieve them.	P59-66
A1 Emissions	A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) and steps taken to achieve them.	P59-66

	General Disclosure	
A2 Use of Resources	Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources can be used for production, storage, transportation, buildings, electronic equipment, etc.	P59-66
A2 Use of Resources	A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh/1,000s) and intensity (e.g. per unit of the production volume, per facility)	P59-66
A2 Use of Resources	A2.2 Water consumption in total and intensity (e.g. per unit of the production volume, per facility)	P66-67
A2 Use of Resources	A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.	P59-66
A2 Use of Resources	A2.4 Description of whether there is any issue in sourcing water which fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P66-67
A2 Use of Resources	A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	P89-92
A3 The Environment and Natural Resources	General Disclosure	
A3 The Environment and Natural Resources	Policies on reducing the issuer's significant impacts on the environment and natural resources	P58
A3 The Environment and Natural Resources	A3.1 Description of the significant impacts of activities on environment and natural resources and the actions taken to manage them.	P13-17
A4 Climate Change	General Disclosure	
A4 Climate Change	Policies on identification and mitigation of significant climate related issues which have impacted, and those which may impact the issuer.	P13-17
A4 Climate Change	A4.1 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	P13-17

2022 ESG Report	About this Report	Message from the Chairman	Board Statement	About Tongwei	Topic	Sustainable Development	Product Innovation and R&D	Supply Chain	Environment	Employee and Society	Future Prospect	Appendix
B1 Employment	General Disclosure				P72,75-80							P93
	Information on: (a) Policies; and (b) Compliance with relevant laws and regulations with a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, work- hours, rest periods, equal opportunity, diversity, anti- discrimination, and other benefits and welfare.											
B1 Employment	B1.1 Total workforce by gender, employment type, age group and geographical region.				P71							P72
B1 Employment	B1.2 Employee turnover rate by gender, age group and geographical region.				P78							P72
B2 Health and Safety	General Disclosure				P81-82							P73
	Information on: (a) Policies; and (b) Compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe work-environment and protecting employees from occupational hazards											
B2 Health and Safety	B2.1 Number and rate of work-related fatalities.				P81-82							P54
B2 Health and Safety	B2.2 Lost work-days due to work injury.				P81-82							P53
B2 Health and Safety	B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.				P81-82							P54-55
B3 Development and Training	General Disclosure				P78							P55
	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.											
Note: Training refers to vocational training. It may include internal and external courses paid for by the employer.												

B5 Supply Chain Management	B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P56
B6 Product Responsibility	General Disclosure Information on: (a) Policies; and (b) Compliance with relevant laws and regulations with a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress.	P49-50
B6 Product Responsibility	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P49-50
B6 Product Responsibility	B6.2 The number of products and service related complaints received and how they are dealt with.	P51
B6 Product Responsibility	B6.3 Description of practices relating to observing and protecting intellectual property rights	P43-45
B6 Product Responsibility	B6.4 Description of quality assurance process and recall procedures.	P49
B6 Product Responsibility	B6.5 Description of protection for consumer data and privacy policies, and how they are implemented and monitored.	P48
B7 Anti-corruption	General Disclosure Information on: (a) Policies; and (b) Compliance with relevant laws and regulations with a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	P37-38

B7 Anti-corruption	B7.1 The number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	P88
B7 Anti-corruption	B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P37
B7 Anti-corruption	B7.3 Description of anti-corruption training provided to directors and staff.	P38
B8 Community Investment	General Disclosure Policies on community engagement to get to know the needs of the communities and to ensure that its activities should take into consideration the community's interests.	P85
B8 Community Investment	B8.1 Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	P85-86
B8 Community Investment	B8.2 Resources contributed (e.g. money or time) to the focus area.	P85

TCFD Recommendations

	Indicator	Page
Governance	The organization's governance around climate-related risks and opportunities	P13
Strategy	The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	P13
Risk Management	The processes used by the organization to identify, assess and manage climate-related risks	P14
Metrics & Targets	The metrics and targets used to assess and manage relevant climate-related risks and opportunities	P15



Assurance Statement of ESG Report

TUV NORD (Hangzhou) Co., Ltd. (hereinafter referred to as "TUV NORD") has been entrusted by Tongwei Co., Ltd. (hereinafter referred to as "Tongwei") to carry out an independent third-party verification on Tongwei Co., Ltd. ESG Report in 2022 (hereinafter referred to as "ESG Report").

Tongwei collected, analyzed, complied, and disclosed information mentioned in the report. The assurance of TUV NORD was conducted within the authorized scope specified in the agreement with Tongwei, which is the designated user of this statement.

This statement is based on the *Tongwei 2022 ESG Report* and the Company guarantees the integrity and authenticity of the information and data in the report.

Assurance Scope

For the 2022 sustainability report, the assurance evaluated:

- Economic, environmental, and social indicators disclosed in the sustainability report for the period from 1 January 2022 to 31 December 2022;
- This verification was conducted at No. 588, Middle Section of Tianfu Avenue, High-tech Zone, Chengdu, Sichuan Province, the Head Office of Tongwei Co., Ltd.;
- The process of collecting, analyzing, and examining the data and information involved in the report;
- Excluding economic data, which was audited by another third, so no repeated verification this time.

The assurance was conducted from April 3 - 4, 2023.

Assurance Methodology

Assurance process including following activities:

- Review the document information which provide by Tongwei;
- Interview the person who collected the report information;
- View the related websites and media reports, verify the data and information through sampling method;
- Evaluate the ESG Report according to the requirements for ESG reports in the Environmental, Social and Governance Reporting Guide of the Stock Exchange of Hong Kong;
- Assessed the report according to the requirements of the GRI Standards in terms of balance, comparability, accuracy, timeliness, clarity, and verifiability;
- Complied with the AA1000 Assurance Standard (V3);
- Followed the TUV NORD CSR report assurance management procedure.

Assurance Conclusion

The ESG Report 2022 prepared by Tongwei has objectively reflected Tongwei's development status and performance in ESG in 2022. According to the sampling audit, the data in the report is found to be reliable and objective. TUV NORD found no systematic or substantive errors.

- **Balance:** The ESG Report has objectively disclosed the number of client complaints, the number of suppliers removed, the number of suppliers required to make corrections, etc., which has a certain balance.
- **Comparability:** The ESG Report has disclosed the number of patents, training information, GHG emission data and other relevant data of years 2021 and 2022, with a preferable comparability;
- **Accuracy:** According to the sampling audit, the cases and data disclosed in the ESG Report are objective and accurate;
- **Timeliness:** The reporting period of the ESG Report is 2022, and most of the data and cases in the ESG Report are information in the reporting period, which has a good timeliness;

- **Clarity:** The ESG Report has used various forms such as pictures and cases, to make the information in the report easy to understand.
- **Reliability:** The Report Preparation Team led by Tongwei Energy Management Committee is responsible for collecting, recording, arranging and analyzing the information and processes required for the preparation of the ESG report. The data sampled during the verification process is traceable, which ensures the quality and substance of the information to a certain extent.

Suggestion for improvement

Through assurance and evaluation, we had following improvement suggestion on CSR practice and management:

- It is recommended to combine the key ESG performance indicators with the business activities of relevant departments, and assess them regularly;
- It is recommended to include more external stakeholders in the investigation of material topics, so as to improve the balance of samples;
- It is recommended to disclose the key economic and governance performance data of at least three years, so as to improve the comparability of the ESG Report.

Special statement

This statement excluding:

- The activity outside information reveal;
- The position, idea, faith, object, future developing direction, and promise which stated by Tongwei.

Statement of Independence and Competence

TUV NORD Group is the world's leader in inspection, testing and verification, operating in more than 70 countries throughout the world and providing services which includes management systems and product certification; quality, environmental, social and ethical auditing and training; environmental; social responsibility and sustainability report assurance.

As one of the global branches of TUV NORD Group, TUV NORD (Hangzhou) Co. Ltd affirms its' independence from Tongwei and confirms that there is no conflicts of interest with the organization or any of its subsidiaries and stakeholders when performing the assurance of the Report. All information in this report was provided by Tongwei, TUV NORD did not participate in the report writing process.

TUV NORD (Hangzhou) Co., Ltd.

Organization authorizer: Mr. Song Haining
Date: April 13, 2023

Verification leader: Ms. Huang Li
Date: April 13, 2023

Note: In case of any discrepancy between the Chinese version and the English version, the Chinese version shall prevail.

Reader's Opinion

Respected readers:

Thank you for reading this report. We appreciate and look forward to your feedback as your opinions and comments are important for us to continuously improve corporate ESG information disclosures and promote corporate ESG management and practice. Welcome and sincerely thank you for your valuable opinions!

1. Your overall assessment of our ESG performance is:

excellent good average bad very bad

2. Your overall assessment of this report is:

excellent good average bad very bad

3. What do you think of our performance of communication with stakeholders?

excellent good average bad very bad

4. What do you think of our performance of product responsibility?

excellent good average bad very bad

5. What do you think of our performance of environment, safety and occupational health?

excellent good average bad very bad

6. What do you think of our performance of employee responsibility?

excellent good average bad very bad

7. What do you think of our performance of ESG?

excellent good average bad very bad

8. What are your opinions and suggestions for our ESG performance and this report?



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