

2024
Sustainability
Report



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# **About This Report**



### Report Introduction

This is LONGi's eighth Sustainability/Corporate Social Responsibility (CSR) Report, with the inaugural edition published in March 2018 and the previous one published in April 2024. Published in April 2025 following Board approval, the Report covers the period from January 1, 2024, to December 31, 2024 (the "Reporting Period"), aligning with our 2024 Annual Report. Certain thematically relevant events dated beyond the Reporting Period but prior to the publication date of this report in 2025 are also disclosed as supplementary information to ensure comprehensive transparency. All subsequent events occurring in 2025 are explicitly noted throughout the Report where applicable.



### Reporting Scope

The Report covers LONGi's operating companies and controlled entities in the People's Republic of China, along with our manufacturing facilities in the Federation of Malaysia and the Socialist Republic of Vietnam. In case of any deviations from the above-mentioned reporting scope, annotations will be made in the Report.



#### **Data Sources**

The data sources in the Report combine LONGi's internal statistical records and public disclosures with third-party research or interviews, government publications, and institutional open data. All of these are rigorously verified to ensure absence of false entries, misleading representations or material omissions.



### **Designation Clarification**

For clarity and consistency, "LONGi Green Energy Technology Co., Ltd." is herein designated as "LONGi Green Energy". "LONGi Green Energy Technology Co., Ltd." and its subsidiaries are herein collectively designated as "LONGi", "the Company", "the Group" or "we/us/our". References to LONGi's certain subsidiaries and controlled entities are detailed in the Appendix of this report.



### **Reporting References**

- Global Reporting Initiative (hereinafter referred to as "GRI") Sustainability Reporting Standards (GRI Standards)
- IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures by the International Sustainability Standards Board (ISSB)
- Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies— Sustainability Report (Trial) by the Shanghai Stock Exchange
- Guidelines No. 4 of Shanghai Stock Exchange for Self-Regulation of Listed Companies— Sustainability Report Preparation
- A Practical Guide to Sustainability Reporting of Listed Companies by China Association for Public Companies



### **Report Access**

The Report is available for download at our official website. This report is published in both Simplified Chinese and English. The Simplified Chinese version shall prevail in the event of any discrepancies between the two versions. All previous sustainability disclosures and reports of the Company are accessible via the QR codes below:

The Company's Official Website



LONGi's Climate Action White Paper



Shanghai Stock Exchange Website





#### Disclaimer

The Report has been prepared in strict compliance with the laws and regulations of LONGi's operating jurisdictions, aligning with our development strategy. It discloses our environmental, social, and governance (ESG) performance during the Reporting Period. All information and data provided herein are for reference only. Independent research and evaluation of the Report and consultation with professional advisors are recommended prior to any decision–making. We assume no liability for any direct or indirect losses resulting from the use of the Report beyond its intended purpose as stated above.

# Message from the Chairman



Chairman of LONGi Green Energy Technology Co., Ltd. **Zhong Baoshen** 

The year of 2025 marks LONGi's 25th anniversary, a crucial year for reclaiming our championship DNA. From modest beginnings to becoming an industry mainstay, we have pioneered market evolution through technological innovation. Moving forward, the PV industry continues to present extraordinary long-term opportunities. As a proven champion, we are gearing up to advance and play a pivotal role in the global energy transition with our spirit of striving, organizational agility, customer-centric mindset, and commitment to the quality.

At the pivotal moment in advancing global energy transition, LONGi remains committed to sustainability, driving technological innovation to advance the worldwide adoption of clean energy with our contributions to China's expertise. As we release our 2024 Sustainability Report, I am honored to share our progress and commitments on behalf of LONGi.

#### Vision-to-action: pursuing growth through clean energy.

Guided by our vision that "To be the most compelling solar technology company by leading the world's transition to green energy", the Company is dedicated to delivering universally affordable and accessible clean energy solutions. Since 2023, we have structured and refined a three-tier ESG governance framework under our "LIGHT Sustainability Philosophy", with the Board of Directors and its Strategy and Sustainability Committee overseeing top-level decision-making to ensure ESG integration throughout the Company's operations and development. As the first Chinese photovoltaic (PV) manufacturer to pass the Science Based Targets initiative (SBTi) verification, we have stayed at the top in global monocrystalline silicon wafer shipments over the past decade, while maintaining our position among the top two in module shipments for the past six years. Our efforts have been recognized through eight consecutive listings on the Fortune China 500 (ranking 178th in 2024) and the "Chinese ESG Model Enterprise" award conferred by China Media Group. For consecutive years, LONGi has received the PV ModuleTech AAA rating. In the "2024 China Brand Value Evaluation," LONGi's brand value reached 72.264 billion yuan, firmly securing the top position in the photovoltaic industry for brand value, building a green, low-carbon, and sustainable future for our planet.

#### Green innovation: lighting a sustainable future.

We have always regarded technological innovation as the fundamental driver of our growth, consistently pushing the boundaries of PV technology to promote healthy industry competition through differentiated development strategies. In 2024, we were honored with both the National Science and Technology Progress Award and the National Technology Invention Award, while achieving groundbreaking advancements across multiple technical domains. Our TaiRay silicon wafers offer efficient, flexible, and reliable solutions, pioneering the industry's transition into the Terawatt Era of PV. Besides, our self-developed monocrystalline silicon cells achieved a conversion efficiency of 27.81%, while the silicon-perovskite tandem solar cells reached a conversion efficiency of 34.85%, both of which broke world records and cemented our leadership in these two realms. Additionally, the Hi-MO X10 modules, featuring HPBC1 2.0 technology, set a new global benchmark with 24.8% mass-production efficiency. Furthermore, LONGi's Jiaxing base completed its production line upgrade, achieving holistic improvements in product reliability, production efficiency, and energy consumption reduction. All of these achievements fully underscore our innovation and intelligent manufacturing excellence across the PV industrial chain.

#### Shared success: synergizing ESG and business excellence.

We remain steadfast in our belief that exceptional ESG performance and strong business results are mutually reinforcing, collectively building long-term corporate value and competitive advantage. In 2024, we conducted our first identification analysis of impacts, risks, and opportunities related to key ESG topics. We prioritized issues of double materiality, including climate change response, product quality improvement, and sustainable supply chain development. Through this process, we precisely identified multiple dual-purpose drivers that serve as both ESG risk management tools and business opportunities, showcasing to all

stakeholders our ambitious ESG commitments, concrete actions, and tangible progress. In practice, we have effectively translated these insights into collaborative value creation with customers, employees, shareholders, and suppliers. Our groundbreaking solar projects include China's first HPBC 2.0 distributed PV power plant and the world's first BC<sup>2</sup> utility-scale solar power plant, both achieving grid connections and earning high recognition for their outstanding performance. Also, we launched the LONGi Bright products. Besides, we have consistently safeguarded rights and interests of shareholders, earning accolades for Best Practices in Earnings Presentation by China Listed Companies Association for two consecutive years. In addition, we introduced the "LONGi e-Learning Supplier Platform", driving sustainability through multiple measures.

#### Responsibility in action: advancing energy equity.

We harnesses sunlight to empower energy equity with steadfast responsibility while using solar technology to build a more inclusive and sustainable future. We actively boost rural revitalization by proposing raising PV standards for rural buildings and exploring/scaling up "zero - carbon villages" in Shaanxi. At COP29, we amplified our advocacy for renewable energy adoption and climate action. In 2024, in partnership with the UN Refugee Agency (UNHCR), we initiated a three-year partnership (2024-2026) and jointly built a 700-kW solar power plant in Uzbekistan, while providing PV skills training for refugees and host communities. In Pakistan, we created educational opportunities for refugee children, particularly girls, illuminating local education with the beacon of hope. In 2025, we will continue to install solar energy systems for hospitals serving Pakistani refugees to ensure vulnerable groups have access to quality medical services powered by stable green electricity. These efforts underscore our commitment to advancing global energy equity.

<sup>1.</sup> HPBC: Hybrid Passivated Back Contact

<sup>2.</sup> BC: Back Contact

# Message from the Chief Sustainability Officer



Vice President and Chief Strategy and Sustainability Officer of LONGi Green Energy Technology Co., Ltd. **Zhang Haimeng** 

Looking ahead, we will further deepen our LIGHT sustainability philosophy and initiatives to speed up the implementation of the "dual carbon" goals. Through collaborative efforts with all stakeholders, we are gradually building a sustainable development model of "green manufacturing – low-carbon products – responsible ecosystems – global sharing," and contributing wisdom and strength to the global carbon neutrality goals with an open and inclusive approach.

At a critical juncture in global energy transition and climate change, LONGi adheres to its "LIGHT Sustainability Philosophy", which is composed of five elements: Lead, Innovation, Green, Harmonious, Trustworthy. The company deeply integrates its strategy with the United Nations 2030 Sustainable Development Goals, resolutely pursuing the path of sustainable development. In 2024, we deepened the Company's environmental, social, and governance (ESG) practices, achieving multiple sustainable development targets ahead of schedule, reflecting LONGi's relentless efforts to realize "affordable and clean energy for all." In terms of ratings, in 2024, LONGi's MSCI rating rose to BBB, achieving the highest score globally in the semiconductor industry for A+H shares and ranking first in the photovoltaic industry. For the first time, LONGi was honored as the "Industry's Most Improved Company" by S&P Global CSA and was included in the S&P Global Sustainability Yearbook (China Edition) 2025. Achievements such as the EcoVadis Gold Certification (top 5% globally), CDP Water Security A- Leadership Rating, and FTSE Russell ESG Rating 3.8 score (industry-leading) comprehensively demonstrate LONGi's global benchmark status and industry leadership in ESG governance.

#### Advancing climate action with accelerated environmental progres.

As a clean energy provider, we place environmental responsibility at the core of our mission. In 2024, we yielded significant results in decarbonization and resource efficiency. The company's annual green electricity usage ratio steadily increased to 47.5%, equivalent to reducing carbon emissions by approximately 2.5467 million tons. The Scope 1&2 emissions decreased by 37% compared to that in 2023, while Scope 3 emissions reduced by 26% over the same period. Additionally, we saw substantial reductions in electricity intensity across all production units compared with that in 2020. All established targets were not only met but achieved ahead of schedule. Besides, we also made breakthroughs across multiple environmental fronts: investing RMB 370 million in environmental protection, violating zero environmental regulations, achieving 100% ISO 14001 certification compliance across all operational sites, and obtaining clean production certifications for 5 manufacturing bases. In addition, the Jiaxing factory has been awarded the "Zero Carbon Factory" certification after being recognized as a WEF Lighthouse Factory, and LONGi's wafers, modules, and hydrogen energy products obtained 53 carbon footprint certifications globally in 2024, covering France, South Korea, and the international EPD system. These accomplishments demonstrate our environmental accountability and set new benchmarks for the green and low-carbon transition within the global photovoltaic industry.

# Undertaking key projects in uncharted realms to drive national energy transition.

In 2024, LONGi courageously advanced into China's most challenging terrains, high-altitude plateaus and deserts, to support national energy strategic priorities. We played pivotal roles in four landmark projects: the 3GW photovoltaic base in Ordos of West Inner Mongolia, the 10GW wind-solar hybrid base in North-Central Ordos, the Alxa Left Banner solar project in the Tengger Desert, and the 2.1GW Yulin photovoltaic power plant project in Shaanxi. Upon completion, these projects will collectively generate over 13.5 billion kWh of clean electricity annually, transmitted nationwide via ultra-high-voltage power networks to meet the annual electricity demands of more than 3.3 million households. These ambitious undertakings not only demonstrate our commitment as a "lone warrior" in tackling extreme engineering challenges, but also make substantial contributions to regional economic development, energy mix optimization, and ecological civilization advancement.

# Building a sustainable supply chain with multi-dimensional social responsibilities fulfillment.

We are committed to co-creating value with all stakeholders and implementing multi-dimensional social responsibility initiatives. As the first enterprise in our industry to obtain ISO 20400 certification for Sustainable Procurement, we conducted ESG due diligence on 123 new suppliers and 136 qualified suppliers and audited 48 key suppliers on-site in 2024. We completed the first supply chain "Green Partner Empowerment Program," collaborating with 50 suppliers to conduct carbon audits, and jointly building a low-carbon ecosystem network with

organizations such as the China Green Supply Chain Alliance and the Institute of Public and Environmental Affairs, fostering collective growth within the industry. In occupational health and safety, we achieved 100% ISO 45001 certification compliance across all facilities, and maintained zero material safety accidents throughout the year. For employee rights protection, we achieved a 100% collective agreement signing rate and social insurance coverage. Our social contributions included RMB 78.47 million invested in public welfare programs, RMB 28.89 million of which was invested in rural revitalization. These systematic measures demonstrate our fulfillment of corporate citizenship while contributing to a more inclusive industrial ecosystem.

#### Strengthening business ethics with steady governance enhancement.

Sound corporate governance forms the foundation of corporate sustainability. In 2024, we continued to enhance our governance framework, strengthen risk prevention, and advance business ethics initiatives. We achieved certifications for both the ISO 37301 Compliance Management System and ISO 37001 Anti-Bribery Management System while ensuring 100% remediation of identified risk points. Our business ethics training program achieved 100% coverage for Board members, employees, and suppliers, including 47 anti-corruption training sessions, over 4,000 integrity awareness workshops for management personnel, and ethics training for 355 suppliers. All business ethics-related complaints were resolved, and we maintained a clean record with zero major incidents of disclosure violations, fraud and corruption, unfair competition, information security breaches, or privacy disclosure, thereby establishing a solid foundation for long-term value creation.

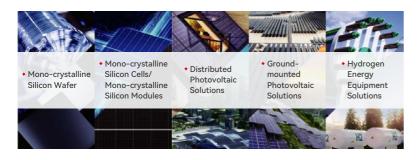
# **About LONGi**

### **About Us**

Founded in 2000 and headquartered in Xi'an, Shaanxi Province, LONGi Green Energy Technology Co., Ltd. was listed on the Shanghai Stock Exchange in April 2012 (Stock Code: SH 601012). We are committed to being the most valuable solar technology company in the world and strive to deliver universally affordable and accessible clean energy solutions.

# **Geographical Presence**

LONGi has dedicated itself to technology innovation and established five business sectors, covering mono-crystalline silicon wafers, mono-crystalline silicon cells/mono-crystalline silicon modules, distributed photovoltaic solutions, utility plant system solutions, and hydrogen energy equipment solutions. It has grown into a Green Power + Green Hydrogen product and solution provider that supports the global zero carbon drive. As a global leader in the PV industry, we have stayed at the top in global monocrystalline silicon wafer shipments over the past decade, while maintaining our position among the top two in module shipments for the past six years. With manufacturing bases strategically located in China, Vietnam, and Malaysia, and sales offices established in the US, Japan, India, Australia, the UAE, and Thailand, our business operations now span over 160 countries and regions worldwide.





To make the best of solar energy to build a green world



To be the most compelling solar technology company by leading the world's transition to green energy



Reliability, Value-add, Fulfillment



# **Honors and Ratings**

# Membership and Related Commitments



• The United Nations Global Compact



• The Science Based Targets initiative (SBTi)



• RE100



EV100



• EP100



• The Solar Stewardship Initiative



• The Women's Empowerment Principles (WEPs)



• The Global Solar Council (GSC)



PV CYCLE



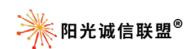
Soren



• The China ESG Alliance



• The China Green Supply Chain Alliance



· The Sunshine Integrity Alliance



• The Enterprise Anti-fraud Alliance



• The China Alliance of Social Value Investment



• International Union for Conservation of Nature

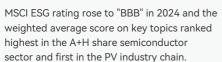
# Honors and Awards in 2024

Honors and awards	Awarded by
Second Prize of National Science and Technology Progress Award for Project: "Key Technological Innovation and Application of High-Efficiency, Low-Cost Monocrystalline Silicon Wafer Manufacturing"	The State Council of the People's Republic of China
Second Prize of National Technology Invention Award for Project: Technology and Application of Inorganic Non-Metallic Wastewater Treatment and Resource Recovery	The State Council of the People's Republic of China
Pioneering Enterprise in China's Quality Development Initiative	State Administration for Market Regulation
Electric Power Innovation Award	China Electricity Council
Ranked 178th on the 2024 Fortune China 500 list	Fortune China
Selected for the 2024 Fortune Tech 50 List	Fortune China
Ranked 95th on the list of 2024 China's Top 500 Manufacturing Enterprises	China Enterprise Confederation China Enterprise Directors Association
Ranked 6th in Global Top 500 New Energy Enterprises in 2024	China Institute of Energy Economics
"Most Admired Enterprise" and "Best Investor Relations Enterprise" in public utilities and alternative energy, and "Best ESG Enterprise" in 2024 Asia (excluding Japan).	Institutional Investor
Industry Mover in the S&P Global Corporate Sustainability Assessment	S&P Global
Chinese ESG Model Enterprise	China Media Group
Sustainability Brand Pioneers Award & Eco-Friendly Award by Huxiu (2024)	Huxiu.com
China ESG Golden Awards 2024 —Best Environmental (E) Responsibility Award	Sina Finance
ESG Golden Dawn Award — Leadership Award (2024)	Weekly on Stocks



# **ESG** Rating





### **BBB**



The Carbon Disclosure Project (CDP) is a global non-profit that runs the world's only independent environmental disclosure system for investors and companies to measure and manage their environmental impacts.

Climate Change B Water Security A-





Institute of Public & Environmental Affairs (IPE) evaluates companies' climate governance and environmental management of supply chain through disclosed information.

### MORNINGSTAR SUSTAINALYTICS

Sustainalytics ESG Risk Rating comprehensively measures and analyzes the potential risks a company may face as well as the company's risk management capacity. LONGi stands at a medium risk management level.

24.8



FTSE4Good

The FTSE4Good ESG Rating, a global index series by FTSE Russell, evaluates companies' Environmental(E), Social(S), and Governance (G) performance. It identifies those meeting international ESG standards, offering investors a transparent and rigorous sustainable investment reference.

Ranking of CATI<sup>1</sup>

Ranking of Green

Supply Chain CITI<sup>2</sup>

21

38

### 3.8

Corporate Climate Action Transparency Index (CATI)

63.8

Green Supply Chain CITI Index

42.37

Ranking **first** among other PV equipment manufacturers for both indices



LONGi received a Group - level gold medal in EcoVadis's 2025 CSR assessment and ranked in the top 5% among 150,000 global companies.

### Gold Medal

# **ISS ESG ▷**

It is a global evaluation framework developed by Institutional Shareholder Services (ISS), which analyzes corporate practices in the environmental (E), social (S), and governance (G) domains. By integrating industry benchmarks and monitoring controversial events, it provides investors with tools and decision-making references for identifying companies with sustainable operations and risk management capabilities.

### **Prime**



Future-Fit Foundation is dedicated to promoting and stewarding the "Future-Fit Business Benchmark" for advancing sustainable business practices.

# S&P Global

S&P Global released the "Sustainability Yearbook (China Edition) 2024". LONGi was selected for its outstanding ESG performance and won the "Industry Mover" award in the S&P Global CSA for the first time.

# 58



It is an evaluation system developed by China Securities Index Co., Ltd., which quantifies the performance of Chinese listed companies in the ESG field. By integrating industry characteristics and localized indicator systems, it provides investors with a basis for identifying corporate sustainability and risk management capabilities, supporting ESG investment practices in China's capital markets.

### ΔΔ



# Sustainable Development Goals and Progress Tracking

			In progress	Achieved
Topics	UN SDGs contribution	2024 target¹	2024 performance	Status
Climate Change and Clean Technology R&D	12 concentry AND PRODUCTION  COO  13 CAMART  ACTOR  COO  COO  COO  COO  COO  COO  COO	To reduce Scope 1 and 2 emissions by 60% compared with 2020 <sup>2</sup> by 2030	Scope 1 and 2 emissions: 23.8% increased compared with 2020 and 37.0% decreased compared with 2023	•
		To reduce the emission intensity per ton of purchased goods and services in Scope 3 by 52% compared with 2020 by 2030	Scope 3 emissions decreased by 41.2%	
Energy	7 ATTERMET AND 9 NOUSTRY NOVINDENT 12 RESPONDING AND PROJUCTION AND PROJUCTION AND PROJUCTION	To complete energy management system deployment by 2025	Ongoing energy management system deployment	<b>(-)</b>
		To improve the energy productivity <sup>3</sup> by 35% compared with 2015 by 2025	31.2%	
		To achieve 70% renewable electricity usage by 2027 and to achieve 100% by 2028	47.5%	
		Charging facilities will be installed at 100% of production and operation sites by 2030	68.6%	<b>(-)</b>
		The Group's overall electricity consumption per unit decreased by 9.14% compared to 2023.	10.7%	<b>⊘</b>

<sup>1.</sup> All targets are set for 2024 unless otherwise specified as medium/long-term sustainable development goals with explicit target years.

<sup>2.</sup> LONGi's Scope 1 and 2 emissions in the base year excluded fire protection system leaks (0.01% of total emissions). These have been included since 2022.

<sup>3.</sup> This target is part of LONGi's EP100 Initiative. Energy productivity is measured as the ratio of corporate revenue to energy consumption.

In	progress	Achieved
111	progress	Acmeved

Topics	UN SDGs contribution	2024 target	2024 performance	Status
Water and Effluents	6 CLEAN WATER AND SANTATION AND SANTATION AND SANTATION AND PRODUCTION AND PRODUC	The Group's water consumption per unit decreased by 13.8% compared to 2023.	24.8%	•
Pollution	11 SIGNAMARI CITES 12 SIGNAMITES AND COMMUNITYS AND PROJECTION AND PROJECTION	No environmental penalties	0	•
Waste	11 SIGNAMARE CITIS  12 RESPONSIBLE AND FOLUCTION AND PROJECTION	Non-hazardous waste recycling rate: ≥ 80%.	82.7%	•
Resource Use and Circular Economy	9 NOISTE ADMINISTER 12 REPORTED AND PROJUCTION AND PROJUCTION	To promote circular economy practices for PV modules	Conducted pilot validation of new module recycling technologies and established demonstration lines through external partnerships	•
Innovation- driven	7 ALTERNATE AND 9 MOUSTRY ANNUARING THE ACTION OF THE ACTI	The proportion of R & D expenditure in operating revenue continued to rise.	6.07%	•
Development and Smart Manufacturing		Through three to five years of digital construction, achieve comprehensive digitization in key areas and become a digital benchmark enterprise in the solar energy industry.	Build the first "Lighthouse Factory" in the photovoltaic industry.	<b>⊘</b>
Product Quality	3 GOOD HEALTH AND WELL-BRING AND WILLD-BRING MOST STORE STITUTIONS	No major product recalls occur.	0	•
Management		Zero major product safety incidents/penalties	0	•

In	progress	Achieved

			→ In progre	ss Achieved
Topics	UN SDGs contribution	2024 target	2024 performance	Status
Customer Relationship Management	3 GOOD HEATH AND BITLE SHING	To maintain the customer satisfaction rate <sup>1</sup> as "Excellent" or above	74.9%	<b>Ø</b>
Sustainable Supply Chain	8 occord moder and 10 negociaties 12 negociaties and production of the production of	The signing rate for the Supplier Code of Conduct and Integrity Agreement is 100%.	100%	<b>Ø</b>
	13 CHANTE 16 PROC. INSTRUCT ASSISTANCE ASSISTANCE STRUCTURE  17 PROTEINSIPE FOR THE GOLDS  ***  ***  ***  ***  ***  ***  ***	E&S screening cover rate for new suppliers: 100%	Environmental Social 100%	•
		Coverage rate for due diligence of key suppliers of conflict minerals: 100%	100%	<b>Ø</b>
		Zero procurement of conflict minerals, zero revenue generated from products containing conflict minerals	0	•
		To drive 8 key suppliers to obtain SA 8000 certification through external audits	8	•
		Coverage rate for on-site audits of high-risk suppliers: 100%	100%	•
		Coverage rate for key suppliers underwent triennial (2024 -2027) third-party audits: 100%	30%	
		By 2028, the procurement value from key Tier 1 suppliers <sup>2</sup> participating in LONGi's ESG capacity building will account for 95% of the total procurement value from key Tier 1 suppliers.	<b>7</b> 3%	<b>(a)</b>

<sup>1.</sup> LONGi classifies customer satisfaction into five levels: Average: below 20%; Good: 20% - 30%; Excellent: 30% - 50%; Outstanding: 50% - 60%; Superb: above 60%.

<sup>2.</sup> Key suppliers are defined as those either posing significant ESG risks to LONGi or having critical business relevance to LONGi.

Social

			In progre	ss 🕏 Achieved
Topics	UN SDGs contribution	2024 target	2024 performance	Status
CO Haman Bisha	5 GENDER 8 DECENT WORK AND CHANNIN CHANNIN	To conduct human rights compliance audits across all business units <sup>1</sup>	100%	<b>⊘</b>
Human Rights	10 REDUCED BEQUIVINES 166 PEACE INSTITUTE INSTITUTIONS INSTITUTIONS	Zero incidents of human rights violations (child labor, forced labor, and discrimination)	0	•
Occupational Health and Safety  3 COOD MULTIN BY COMMON AND THE STATE OF THE STATE	Coverage rate for occupational health and safety training: 100%	100%	•	
		Zero work-related fatalities	0	
Human Capital  Development	NETTITIONS	Collective agreement signing rate: 100%	100%	•
		Social insurance coverage rate: 100%	100%	
		Coverage rate for leadership training for management: 100%	100%	•
		Average training duration exceeds 30 hour per employee	57.73 hour per employee	•
Risk Management and Control	16 PEACE RETIDE AND STRENGS INSTITUTIONS INSTITUTIONS	Full regulatory disclosure compliance with zero major violations	0	•
Business Ethics	16 PEACE, RESTREE AND STRONG INSTITUTIONS	Signing rate for the Integrity Commitment by executives and employees: 100%	100%	•

<sup>1.</sup> The audit and assessment criteria and methods for overseas operations differ from those domestically, thus they are excluded from this business unit's statistics.

In	progress		Achieved
	p. 09. 000	_	, (01110 + 0 0

Topics	UN SDGs contribution	2024 target	2024 performance	Status
Business Ethics	16 PAGE JUSTICE MOST STORM STRUME SCHITTUNGS	<ul><li>Full business ethics training coverage:</li><li>Board of Directors: 100%</li><li>Suppliers: 100%</li></ul>	Board of Directors 100% Employees Suppliers 100% 100%	<b>②</b>
		Resolution rate for business ethics complaints: 100%	100%	<b>Ø</b>
		Coverage rate for business ethics audits <sup>1</sup> : 100%	100%	<b>Ø</b>
		Zero incidents of major ethics violations (fraud, corruption, and unfair competition)	0	•
		Zero litigations or administrative penalties due to unfair competition	0	•
Data Security	16 PEAGL JUSTICE AND STRONG PORTURNS	Zero major information security incidents	0	•
☐⊕ and Privacy Protection		Zero incidents of privacy breaches (customers, suppliers, and employees)	0	•





# LONGi's Partnership with UNHCR: A Dedicated Topic

### Light of Hope: Illuminating the Path to Humanitarian Justice

Across the global humanitarian relief landscape, electricity transcends mere lifeline status—it embodies hope itself. As of May 2024,, the world has witnessed 120 million forcibly displaced individuals, with 75% stranded in climate-vulnerable nations. This means that approximately 90 million people, who are already ravaged by conflict and persecution, now confront the compounding existential threat of climate disasters. Resource-deprived and adaptation-capacity constrained, these populations face inescapable vulnerability, with climate-induced displacement escalating relentlessly.

As the IPCC forecasts impending large-scale climate migration, UNHCR has assumed critical responsibility for mitigating the impacts of climate change and environmental degradation on displaced populations and host communities while protecting and restoring settlement ecosystems. The agency's dual mandate aims to enhance refugee resilience and shrink humanitarian operations' environmental footprint. UNHCR is now pioneering a transformative relief model: forging renewable-powered safety nets and ecologically intelligent communities. This paradigm shift rekindles possibilities for human-nature symbiosis, positioning humanitarian relief as an ecological restoration catalyst that preserves civilizational continuity amidst climate chaos.

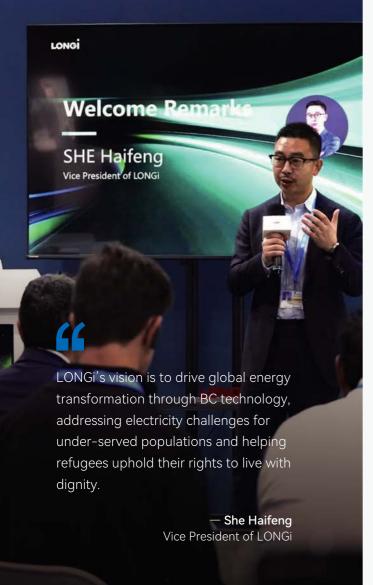
Amid proliferating global emergencies, UNHCR faces escalating operational demands that necessitate both

enhanced emergency preparedness and heightened environmental accountability for its large-scale field operations. The UNHCR has released the UNHCR Supply Strategy 2024-2030 and is committed to reducing GHG emissions from core relief items and emergency responses by at least 30% by 2030. To this end, the UNHCR has introduced new sustainable specifications for core relief items addressing production processes, recyclability, and packaging. Additionally, it implements measures to reduce environmental footprint across transportation and delivery systems to drive comprehensive ecological improvements throughout its supply chains. Building upon these initiatives, achieving carbon neutrality in humanitarian warehousing and logistics centers (where operationally feasible) constitutes the critical success factor for this supply strategy.

Within this climate-humanitarian nexus, LONGi has signed an agreement with the United Nations High Commissioner for Refugees (UNHCR) in 2023 to establish a three-year (2024-2026) global partnership, to drive renewable-powered humanitarian supply chains. As the global leader in the PV sector, LONGi drives global energy equity through technological innovations that continuously reduce solar power costs, enabling people in developing and underdeveloped countries/regions to access affordable clean energy. This commitment reflects our steadfast dedication to fulfilling corporate social responsibilities and contributing to sustainability.



# Green Sunshine Paves the Way for Energy Equity



LONGi is committed to leveraging BC technology to improve living conditions for refugees and accelerate energy equity.

In November 2024, LONGi achieved the first milestone in our partnership with UNHCR: the commissioning of a solar PV powerplant at the UNHCR Regional Humanitarian Logistics Hub in Termez, Uzbekistan As a critical node in UNHCR's global supply chain network, the Logistics Hub boasts 6,000 square meters of warehouse space and a strategic location just two kilometers from the Uzbekistan-Afghanistan border. It serves as a pivotal hub for the rapid deployment of core relief supplies to Afghanistan, Pakistan, and Central Asia, with plans to integrate into UNHCR's global warehousing network by 2025. The Logistics Hub is capable of initiating emergency relief distribution within 72 hours following an emergency, capable of addressing the basic survival needs of up to one million forcibly displaced individuals. Relief supplies include tents, blankets, kitchenware, medical supplies, and solar-powered lighting equipment.

LONGi has donated and installed 700kW of high-efficiency solar modules, significantly reducing the Logistics Center's reliance on traditional power grids and substantially cutting operational costs. This enables more resources to be directly allocated to assisting those in urgent need1. The stable power supply ensures efficient execution of relief operations, including storage, sorting, and packaging of humanitarian supplies, thereby enhancing both response speed and overall operational efficiency of relief efforts. This project forms part of LONGi's climate action collaboration with UNHCR, marking a critical step in providing sustainable energy solutions for emergency logistics and warehousing. It not only establishes a model for green transformation in global humanitarian actions but also demonstrates a successful application of renewable energy in emergency storage systems.





989,933 kWh 495 metric tons

The 700-kW solar PV plant is projected to generate approximately 989,933 kWh of electricity annually.

Annual carbon emission reductions are estimated at 495 metric tons.

Our clean energy operations in Termez will help UNHCR achieve its goal of reducing GHG emissions from core relief items and emergency operations by at least 30% by 2030.

1. The information is sourced from the public data of UNHCR. For more details, please refer to: https://www.unhcr.org/centralasia/en/62509-solarization-of-uzbekistan-stockpile-completed.html





Pakistan's education system faces multifaceted crises. The declaration of an education emergency in May 2024 laid bare the stark reality of 26 million out-of-school children and youths, a figure rooted in intertwined challenges of poverty, social inequality, and cultural barriers. These factors perpetuate a vicious cycle of educational deprivation, disproportionately affecting local communities and refugee populations, particularly children and youths. While community and parental engagement are recognized as pivotal to fostering an improved educational culture, systemic underfunding, with education expenditures accounting for less than 2% of GDP, has left public schools in dire straits. Severe classroom shortages force multi-grade teaching in shared spaces, dilapidated sanitation facilities jeopardize student health, and the scarcity of textbooks and basic teaching aids directly undermines learning quality. Such inequitable resource allocation is most acute in impoverished regions and unstable host communities, further diminishing opportunities for vulnerable children to break the cycle of disadvantage through education.

In partnership with UNHCR, LONGi is working to enhance school infrastructure, with a dedicated focus on dismantling barriers to girls' education. We firmly believe every child deserves equal access to learning, regardless of gender, ethnicity, or socioeconomic background. While challenges remain formidable, tangible progress in refugee children's educational outcomes has been achieved. These efforts have yielded positive results, providing refugee children and youths with equitable learning opportunities and infusing renewed hope and momentum into Pakistan's education landscape.

LONGi is committed to leveraging BC technology to improve living conditions for refugees and accelerate energy equity.

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I've always longed for an education. When my father was alive, I begged him to let me continue beyond fifth grade, but he refused, bound by cultural taboos and the school's distant location. Yet learning remained the dream I carried in my heart.

—Basmina

Basmina once lived in Panian refugee camp, Haripur, Khyber Pakhtunkhwa. After losing both her father and elder brother two years ago, her family plunged into dire financial hardship. She persistently pleaded with her mother to return to school, but survival took precedence.

Thanks to educational assistance from LONGi and UNHCR, Basmina now attends Haripur Public Girls' High School as an eighth-grader. The light of hope has been rekindled in her life.



1. For details on LONGi's support for children's education in Pakistan, please refer to https://static.longi.com/LON\_Gi\_Final\_Report\_Supporting\_Access\_to\_Education\_for\_Children\_in\_Pakistan\_52516471d0.pdf



Under the support of LONGi and other partners, the UNHCR's educational assistance has achieved remarkable results:



#### **Expanded educational access**

We supported **142** refugee village schools in enrolling **56,512** refugee students, with female students accounting for **42%**. Specifically, **417** refugee students were provided higher education assistance, with the female participation rate increased to **47%**. Besides, we awarded Master's scholarships to **150** Afghan female refugees and **50** Pakistani female students, while offering vocational guidance to **93** young people.



#### Teacher training

We trained **919** teachers (one-third female) in professional development programs, including digital learning training for **375** teachers, to improve teaching quality and support national curriculum implementation.



#### Education infrastructure

We equipped all 142 schools with learning management systems and laptops/tablets, benefiting 56,512 students through blended learning and enhancing their learning motivation. We prioritized reconstruction of school classrooms, water and sanitation facilities, and perimeter walls to restore school security and functionality, making them safer and more comfortable.



#### Public education campaign

We conducted **20** community awareness activities reaching **3,674** community members, focusing on education rights for both boys and girls, child protection, prevention of gender-based violence, and prevention of sexual exploitation and abuse.

# Illuminating Hope through Solar Solutions

From Termez to Pakistan and beyond, LONGi is weaving a global network of green energy solutions through solar technology, bringing light to those struggling in darkness and powering sustainability for our shared planet. Where clean energy meets humanitarian action, technology transcends cold machinery to become a bridge between survival and dignity. With every solar panel installed, LONGi writes a new chapter in sustainability, one where each kilowatt-hour sparks hope, and every partnership redraws the map of global progress.

Looking ahead, LONGi remains committed to our mission. Through deepened collaboration with UNHCR in 2025-2026, we will expand green upgrades for emergency logistics hobs worldwide, extending proven solutions across Africa, the Middle East, and other critical regions. Together, we'll replicate these successes, letting solar energy's warmth and promise reach more communities, thereby co-authoring humanity's sustainable future.

# Sustainability Management

# Sustainability Philosophy

In 2023, we introduced our LIGHT sustainability philosophy, anchored in five core principles: Lead, Innovative, Green, Harmonious, and Trustworthy. This framework aligns our corporate strategies with the UN 2030 Sustainable Development Goals (SDGs). We are dedicated to advancing clean, renewable, and efficient energy solutions while working with stakeholders to create a future of clean energy that is "Affordable for all".



### **ESG Sustainable Development Vision**

Lead for the clean energy world



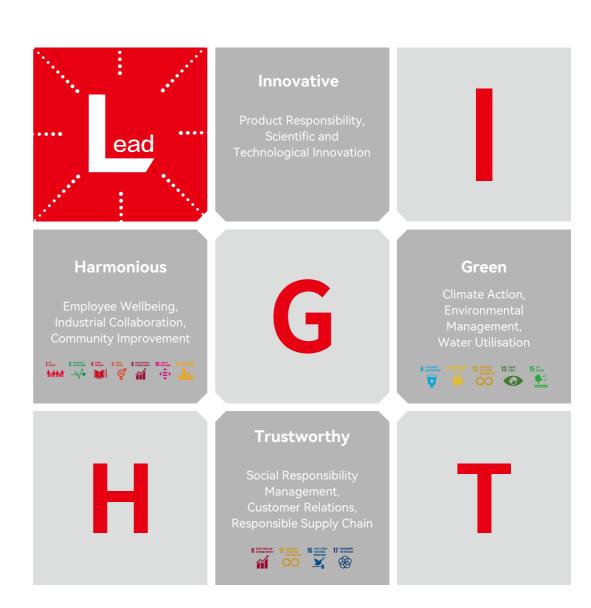
**ESG Sustainable Development Goal** 

Affordable for all

Drive better development for ourselves, the industry, and society with "leading" as the core.



# Affordable for All



Social

# Sustainability Governance System

We have established a comprehensive three-tier ESG governance framework that spans corporate governance, management, and execution levels. The Board of Directors and the Strategy and Sustainability Committee serve as the highest decision-making body, while the Strategy Management Committee implements an integrated management mechanism for ESG initiatives. This structure facilitates the formulation of sustainability plans, regular evaluation and audit processes, and ensures all ESG practices consistently align with our internal sustainability philosophy and objectives through effective implementation.





#### Strategy and Sustainability Committee under the Board of Directors

- Composed of the Board Chairman, Managing Director, CFO, two directors and one independent director
- Oversee integrated management, convene at least annually to comprehensively supervise and approve the Company's ESG strategy, medium/long-term plans, annual plans, ESG policy formulation and implementation; review and approve the annual ESG report, review ESG material topics and ESG objectives achievements, and determine ESG risks/opportunities relevant to corporate development

#### Strategy Management Committee

- Led by the Strategy
   Management Center and
   consisting of heads of relevant
   departments; coordinated by
   the Chief Sustainability Officer
   (CSO), who communicates
   with external stakeholders on
   behalf of senior management
- Review the Company's ESG development strategy, short/medium/long-term work plans, and ESG management systems, assess ESG objectives achievements, risks, and opportunities, identify ESG material topics, and review ESG reports, through group business analysis meetings

# Sustainability and ESG Office

- Established under the Strategy Management Center
- · Established a sustainable development and ESG governance system; conduct regular reviews and propose optimization suggestions; formulate strategic sustainability objectives and short/medium/long-term plans/policies/systems; identify ESG material topics and develop indicator frameworks with targets; build an ESG digital platform; monitor latest global sustainability concepts, policies, regulations and initiatives

#### Sustainability Expert Committee

- Composed of external ESG experts
- Analyze external ESG trends/policies/requirements and provide recommendations; evaluate current ESG management and propose improvements

# ESG Execution Task Force

- Composed of representatives from headquarters functional departments, subsidiaries and operational departments
- Identify and assess the impacts of climate change and ESG-related risks on business operations; implement measures toward achieving ESG performance in line with ESG objectives; collaborate with the Sustainability and ESG Office to complete information disclosures and project implementation; understand stakeholders' ESG needs and promote the company's sustainability brand;

# Stakeholder Materiality Analysis

By systematically identifying key factors that impact stakeholders and accurately assessing their effects, LONGi has optimized its communication strategies with stakeholders and prioritized critical issues. This ensures that resource allocation and operational decisions effectively balance the interests of all parties, aligning the company's sustainable development strategy closely with stakeholder expectations.

Stakeholder	Impact factor	Impact stage of the value chain	lmpact attribute	Impact description
Customers	Product quality	Products and services	•	Enhance operational efficiency and business growth for customers
	Service level	Products and services	•	Provide customers with product-related convenience services
	Business cooperation	Products and services	•	Create business opportunities through product utilization
Employees and labor unions	Occupational Health and Safety	Operations	•	Protect employees' life health and safety
	Career Development	Operations	•	Enhance employees' sense of professional achievement
	Human rights and benefits	Operations	•	Guarantee employees' reasonable living standards
Shareholders and investors	Financial performance	Operations	•	Generate financial returns for investors
Suppliers and partners	Business cooperation	Supply chain	•	Create mutual business opportunities
	Green supply chain	Supply chain	•	Promote environmental practices across the industry
Government and regulators	Tax payment	Operations	•	Strengthen government fiscal capacity
	Socioeconomic development	Operations	•	Support government's socio-economic objectives
	Compliance management	Operations	•	Build a good business atmosphere and ensure business credibility
Industry associations	Peer exchanges and cooperation	Operations	•	Elevate overall industry development standards
Communities and NGOs	Pollutants	Operations	•	Cause adverse impacts on the local environment by discharge of pollutants
	Wastes	Operations	•	Cause adverse impacts on the local environment by discharge of waste
	Greenhouse gases	Operations	•	Exacerbate climate change challenges
	Resource utilization	Operations	•	Reduce resource availability for locals
	Local economic development	Operations	•	Share economic development benefits with locals
Media	Disclosure and communication	Operations	•	Provide valuable news content and influence
Academics/ experts/ professional organizations	Technical exchanges and cooperation	Operations	•	Advanced academic research capabilities

# Stakeholders Engagement

LONG 2024 Sustainability Report

Stakeholder	Expectations	Engagement channels	2024 Highlights
Customers	<ul> <li>Reliable and efficient products</li> <li>Excellent services</li> <li>Compliance with agreements</li> <li>Ethical business environment</li> </ul>	<ul> <li>Customers' technical seminars and product launches</li> <li>Industry exhibitions</li> <li>Official website service platform (400cx.com) and satisfaction surveys</li> <li>ESG-related dialogs with customers</li> </ul>	<ul> <li>97.99% customer complaint resolution rate</li> <li>Completed 43 in-person ESG communications globally (Europe, Americas, Oceania, Asia-Pacific)</li> </ul>
Employees and labor unions	<ul> <li>Health and safety</li> <li>Career development</li> <li>Positive work environment</li> <li>Rights protection</li> </ul>	<ul> <li>Employee representative congress and labor union committees</li> <li>Training and education, employer brand</li> <li>Employee seminars, activities and clubs</li> <li>Chairman mailbox</li> <li>LONGi Happy+ and a complaint mini program</li> </ul>	<ul> <li>Established anonymous complaint channels with regular feedback mechanism; Received 1,334 complaints through the Chairman mailbox with 99.2% resolution rate; regularly published complaint resolution</li> <li>Promoted an employee assistance program (EAP) with global mental health helplines, tailored group counseling, and wellness activities such as mental health carnivals and workshops</li> </ul>
Shareholders and investors	<ul><li>Investment returns</li><li>Financial stability</li></ul>	<ul> <li>Earnings briefings, investor hotline, roadshows, and conference calls</li> <li>Shareholders' meetings, regular reports, ad-hoc announcements, and on-site research visits</li> </ul>	<ul> <li>Addressed 120 issues on the Shanghai Stock Exchange interactive platform, held 115 investor conference calls, 45 strategy meetings, 26 roadshows, received 37 on-site research visits, and hosted 4 earnings briefings, and replied to 100 inquiries in the investor mailbox</li> </ul>
Suppliers and partners	<ul> <li>Win-win cooperation</li> <li>Compliance with agreements</li> <li>Green supply chain</li> <li>Ethical business environment</li> </ul>	<ul> <li>Supplier Code of Conduct, transparent procurement practices</li> <li>Supplier website platform, collaborative innovation platform, and supplier conferences</li> <li>Supplier training</li> <li>Risk assessments and on-site audits for suppliers</li> </ul>	<ul> <li>CSR audit results: 73% environmental issue resolution rate; 76% social issue resolution rate</li> <li>Conducted due diligence for 123 new suppliers and 136 approved suppliers, and audited 48 on-site</li> <li>Conducted 65 supplier training sessions</li> </ul>

Governance



Stakeholder	Expectations	Engagement channels	2024 Highlights
Government and regulators	<ul><li>Tax payment</li><li>Employment</li><li>Compliance management</li></ul>	<ul> <li>Supervision and inspection, policy suggestion</li> <li>Participation in relevant government forums</li> </ul>	<ul> <li>Launched the first project under the cooperation framework with UNHCR</li> <li>Participated in the 29th United Nations Climate Change Conference (COP29) to explore ways to enhance climate resilience in climate-vulnerable regions</li> <li>Attended the APEC Sustainable Entrepreneurs Dialogue to discuss topics such as energy transition, technological innovation, and sustainable development</li> </ul>
Industry associations	<ul> <li>Fair competition</li> <li>Driving industry development</li> <li>Technology and experience sharing</li> </ul>	<ul> <li>Industry exchanges and seminars</li> <li>Project cooperation</li> </ul>	<ul> <li>Attended the China Photovoltaic Industry Association's annual conference, the 12th bifi PV Workshop, the 18th China New Energy International Forum &amp; Exhibition (NEX 2024), and the SNEC 17th (2024) International Photovoltaic Power Generation and Smart Energy Conference &amp; Exhibition</li> </ul>
Communities and NGOs	<ul> <li>Environmental protection</li> <li>Rights protection</li> <li>Safety</li> <li>Support community development</li> </ul>	<ul> <li>Community outreach and participation in project cooperation</li> <li>Charitable donations and charity activities</li> <li>Industry associations, societies, and open days</li> <li>Corporate and NGO dialogs</li> </ul>	<ul> <li>Organized or participated in 9 ESG-related international events</li> <li>Invited to attend several events, including the Low-Carbon Energy Transition at the 2024 Boao Asia Forum, the China-Europe Entrepreneurs Dialog, and the China-Australia Entrepreneurs Dialog, to discuss international cooperation, global energy transition, and low-carbon development</li> <li>Jointly issued a biodiversity conservation initiative with the International Union for Conservation of Nature (IUCN)</li> </ul>
Media	<ul><li>Information transparency</li><li>Smooth communication</li></ul>	<ul><li>News coverage</li><li>Executive interviews</li><li>ESG-related event media briefings</li></ul>	<ul> <li>Launched the 25th anniversary themed speech "Cycle of Light", looking back on LONGi's history and future plans for the next 25 years</li> <li>Participated in 18 media events, including the CCTV ESG Gala, media salons, international press briefings, and product launches</li> </ul>
Academics/ experts/ professional organizations	<ul><li>Policy trends</li><li>Industry trends</li></ul>	<ul><li>Seminars</li><li>Focus group</li><li>Expert lectures</li></ul>	Established partnerships with National University of Singapore, University of New South Wales, Northwestern University, Fudan University, Xi'an Jiaotong University, and Wuhan University

# **Sustainability Material Topics**

# Assessment Process of Material Topics

Accurately identifying and assessing material topics is one of the key steps in implementing sustainability management. In 2024, we refined our material topics by referencing the Sustainability Reporting Guidelines<sup>1</sup> and the Guidelines for Sustainability Report Preparation<sup>2</sup> issued by the Shanghai Stock Exchange, conducting a materiality assessment of ESG topics for the first time. A five - step process was designed to identify and evaluate them. Internal and external stakeholders were invited to participate. We aimed to comprehensively identify and analyze the risks and/or opportunities related to ESG topics, assessing their financial impact on LONGi. Also, we evaluated how LONGi's performance on these topics affects the economy, society, and the environment.



Sorting out business activities and business relationships



**02** Stakeholders Engagement

- Relying on a diversified communication mechanism and channels for stakeholders, the company maintains regular communication with key internal and external stakeholders such as investors, customers, and government agencies. We promptly solicit, absorb, and record the topics of concern to different stakeholders, as well as their specific focuses, expectations, and demands.
- 1. Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial) (Hereinafter referred to as the "Guidelines")
- 2. Guidelines No. 4 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report Preparation

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LONG 2024 Sustainability Report

◆ Based on the communication results with stakeholders, we have fully evaluated the 21 topics set by the *Guidelines* of the Shanghai Stock Exchange. At the same time, by integrating international and regional regulatory policies in the locations of our operations, feedback and demand analysis from overseas customers, ESG disclosure standards and requirements such as the GRI/ISSB criteria and the *European Sustainable Development Reporting Standard (ESRS)*, key points of concern in ESG ratings and industry practices, etc., we have reorganized and analyzed the existing issue list. After incorporating, splitting, merging topics and making judgments on their applicability, we have finally identified 17 topics that are highly relevant to the company's sustainable development. In light of our own operations and the current situation of sustainable development management, the explanations for the adjustment of the evaluated topics are as follows:

The Guidelines of SSE	Adjustment	Reason
Environmental compliance management	Issue Consolidation	Topics such as "Climate Change and Clean Technology R&D", "Pollution", and "Waste" have been covered, and no independent assessment has been carried out.
Employees	Issue Splitting	The three topics of "Human Rights", "Human Capital Development" and "Occupational Health and Safety" jointly constitute the content of the "Employees" issue, and no repeated assessment has been made.
Technology ethics	Not applicable	The existing business does not involve much of the content of the issue of "Technology Ethics".
Fair treatment of SMEs	Issue Consolidation	The issue of "Sustainable Supply Chain" has been covered, and no independent assessment has been made.
Due diligence	Issue Consolidation	"Due Diligence" is an important management method for LONGi's multiple topics such as "Sustainable Supply Chain", "Business Ethics" and " Labor and Human Rights ", and no independent assessment has been made.
Stakeholders Engagement	Issue Consolidation	"Stakeholder Engagement" is an important method for managing all topics rather than a standalone issue, and no independent assessment has been made.

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- ◆ Assessment of Impact Importance: Regarding the 17 ESG topics, we have conducted an in-depth analysis of the relevant activities in each link of the company's value chain. We have sorted out the impacts that LONGi's performance on each relevant issue has on the economy, society, and the environment, and formulated a research questionnaire for the assessment of impact importance. We have invited representatives of key internal and external stakeholders to participate in filling out the questionnaire. The assessment of impact importance is carried out from two aspects: "the severity of the impact (including the scale, scope of the impact, and the irreparability of the negative impact)" and "the probability of the impact occurring". In this year, a total of 250 valid questionnaire responses have been collected. These responses are from 11 types of internal and external stakeholders, including shareholders and investors, government and regulatory authorities, customers, suppliers and partners, the media, communities and non-governmental organizations, industry associations, academic experts/scholars/professional organizations, company directors and senior executives, and employees.
- ◆ Assessment of Financial Importance:

  Based on the external environment and trends of sustainable development, as well as the company's management and operation situation, we have identified 35 risks and 24 opportunities related to ESG topics. We have invited 17 management representatives from the company's management and business departments to assess the financial importance of short-term, medium-term and long-term risks and opportunities from two dimensions: "the importance of financial impact" and "the likelihood of financial impact".

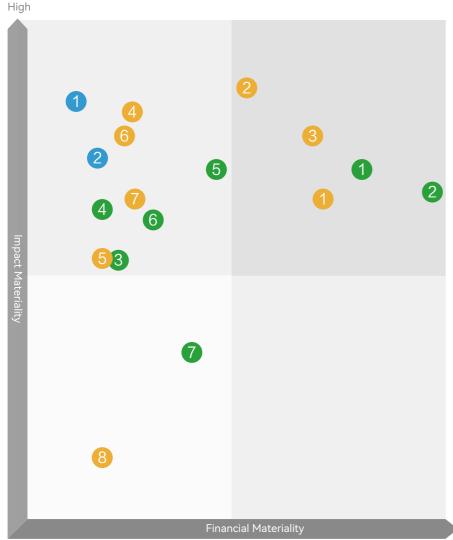
05 Issue review and validation

• Based on the results of the research on impact materiality and financial materiality, after internal management communication, external expert discussion and other results validation and adjustment, combined with LONGi's ESG management resources and capabilities, we set the thresholds of materiality of the topics to form the materiality matrix, and submit the results of the dual materiality assessment to the Board of Directors' Strategy and Sustainable Development Committee for review, and focus on the identified materiality of the topics disclosed in the report. We will focus on the disclosure of the identified material topics in the report.



### **Results of the Materiality Assessment**

The 2024 Materiality Matrix of LONGi is as follows:





Note: \* indicates topics of double materiality.

The assessment results show that 5 topics have both financial materiality and impact materiality, and 10 topics only have impact materiality. For topics with double materiality, including "Climate Change Mitigation and Clean Technology Development", "Energy Management", "Innovation-driven and Intelligent Manufacturing", "Sustainable Supply Chain", and " Product and Service Safety and Quality", in accordance with the requirements of the Guidelines of the Shanghai Stock Exchange, the company strives to respond in this report from four aspects: governance, strategy, impact, risk and opportunity management, as well as indicators and objectives.

Moderate High We have selected topics with double materiality and sorted out their impact types, impact scope, risks and opportunities, as well as their time dimensions. Please refer to the following table for details.

Topics	Impacts, risks and opportunities	Description	Scope of impact on the value chain	Time dimension <sup>1</sup>
	Positive impacts	<ul> <li>LONGi's core businesses cover mono-crystalline silicon wafers, mono-crystalline silicon cells/mono-crystalline silicon modules, distributed photovoltaic solutions, utility plant system solutions, and hydrogen energy equipment solutions, all contributing to global climate change mitigation.</li> <li>LONGi implements greenhouse gas reduction throughout the entire life cycle, increases the use of green electricity, and reduces greenhouse gas emissions.</li> </ul>	<ul><li> Upstream of the value chain</li><li> Internal operations</li><li> Downstream of the value chain</li></ul>	<ul><li>Short-term</li><li>Medium- term</li><li>Long-term</li></ul>
Climate Change	Negative impact	<ul> <li>The monocrystalline silicon production stage consumes significant electricity, and the low percentage of renewable electricity used in the production process generates large amounts of greenhouse gas emissions.</li> </ul>	<ul><li>Upstream of the value chain</li><li>Internal operations</li></ul>	Short-term     Medium- term
and Clean Technology R&D	Risks	<ul> <li>Physical risks: Floods, shifting precipitation patterns, and water scarcity may impact asset losses, changes in production capacity, and water costs.</li> <li>Transition risks: Carbon pricing, resource price volatility, decarbonization trends (e.g., product carbon footprint), and stakeholder expectations could increase manufacturing/compliance costs.</li> </ul>	• Internal operations	<ul><li>Short-term</li><li>Medium-term</li><li>Long-term</li></ul>
	Opportunities	<ul> <li>Technical transformation for energy conservation and consumption reduction can lower the cost of energy usage.</li> <li>Business segments such as BC products, "green power + green hydrogen", and new energy equipment offer promising growth opportunities, aiding in increased revenues and future cash flow.</li> </ul>	<ul><li>Internal operations</li><li>Downstream of the value chain</li></ul>	<ul><li>Short-term</li><li>Medium- term</li><li>Long-term</li></ul>

<sup>1.</sup> Definitions of short-term, medium-term and long-term: Short-term: 0-2 years; Medium-term: 3-5 years; Long-term: 6-10 years.

Governance



Impacts, risks Scope of impact **Topics** Description Time dimension and opportunities on the value chain • LONGi has joined the RE100 and EP100 initiatives. We increased the use of green electricity by trading it and dealing with renewable energy certificates, and using distributed renewable energy on-site. We also set Short-term Positive impacts Internal operations up a systematic energy management system. By carrying out a number of · Medium-term energy-saving and consumption-reducing projects, we gradually cut down on fossil fuel consumption. · LONGi's day-to-day production and upstream monocrystalline - silicon · Upstream of the value chain · Short-term Negative impact processes consume energy continuously. Internal operations Medium-term 000• • The demand for green PV products is growing, and the PV industry is moving towards low-carbon and green development. Longi will further Energy carry out the construction of an energy management system, implement Short-term Risks and evaluate energy conservation work, promote energy conservation Internal operations Medium-term and technological transformation projects, and construct an information system. All these efforts will increase the production and manufacturing costs. · By fully implementing the energy management system and continuously promoting energy conservation and technological · Short-term Opportunities Downstream of the value chain. transformation projects, we can reduce energy consumption and · Medium-term lower the cost of energy use. · Through technological innovation and intelligent manufacturing, reduce Short-term the usage cost of green products, enabling everyone to enjoy affordable Positive impacts Downstream of the value chain Medium- term clean energy and alleviating climate change. Long-term Innovation-driven Development · Through technological innovation and intelligent manufacturing, enhance Short-term and Smart Opportunities the product iteration ability and product delivery ability, and increase the Downstream of the value chain · Medium-term Manufacturing operating revenue. · Long-term

Governance



Topics	Impacts, risks and opportunities	Description	Scope of impact on the value chain	Time dimension
Sustainable Supply Chain	Positive impacts	<ul> <li>LONGi collaborates with suppliers to foster the development of sustainable industry chains, products, technologies, and employment, while also encouraging suppliers to mitigate adverse impacts on the environment and human rights.</li> </ul>	Downstream of the value chain	<ul><li>Short-term</li><li>Medium- term</li><li>Long-term</li></ul>
	Risks	<ul> <li>Regulatory frameworks such as the Corporate Sustainability Due Diligence Directive and the EU Regulation on Prohibiting Products Made with Forced Labour on the Union Market mandate initiatives to develop sustainable supply chains, and reduce adverse environmental and human rights impacts, and the relevant requirements are in the process of game and adjustment,leading to increased compliance costs and uncertainty.</li> </ul>	Upstream of the value chain	<ul><li>Medium- term</li><li>Long-term</li></ul>
	Opportunities	<ul> <li>Carrying out sustainable procurement and enhancing the sustainability of the supply chain can endow products with distinct advantages in international markets, enhancing customer retention and ultimately increasing market share and revenue abroad.</li> </ul>	Downstream of the value chain	<ul><li>Medium- term</li><li>Long-term</li></ul>
	Positive impacts	High-quality products ensure a reliable lifespan for customers.	Downstream of the value chain	<ul><li>Short-term</li><li>Medium- term</li><li>Long-term</li></ul>
Product and Service Safety and Quality	Risks	<ul> <li>Intense competition in the PV industry pressures companies to reduce costs, which may lead to declines in quality, resulting in increased customer complaints and maintenance costs, thereby negatively impacting the company's reputation and potentially leading to decreased revenue.</li> </ul>	Downstream of the value chain	• Short-term
	Opportunities	<ul> <li>LONGi is committed to pursuing technological and product innovations without compromising product quality, thereby enhancing customer satisfaction and loyalty, which in turn boosts market competitiveness and revenue growth.</li> </ul>	Downstream of the value chain	<ul><li>Medium- term</li><li>Long-term</li></ul>

# Sustainability Due Diligence

LONGi aligns with the OECD¹ Guidelines for Multinational Enterprises on Responsible Business Conduct, integrating responsible business practices into our policies and management systems. This comprehensive approach enables the identification and assessment of potential adverse impacts across operations and value chains, while maximizing positive social contributions, enhancing stakeholder relationships, and safeguarding corporate reputation.

# Identification and assessment of adverse impacts

# Prevention, mitigation, and termination of adverse impacts

# Complaint procedures and reporting channels

#### Communication and monitoring



- GHG emissions, waste, pollutant discharge
- Child labor, forced labor, discrimination and harassment
- · Working conditions and hours
- · Data and privacy breaches
- · Unfair competition
- Corruption

- · Public policy commitments
- Set climate goals and join initiatives (SBTi, EV100, RE100)
- Develop management systems (environment, data & privacy, business ethics, human rights, occupational health & safety)
- Conduct internal training programs
- Perform internal compliance reviews and external audits (clean production audits, business ethics audits, human rights audits)

#### Internal

- Complaint reporting mini-program: LONGi Happy+
- Chairman's mailbox

#### External

- Complaint mini-program: LONGi Qingfeng
- Official WeChat account: Yangguang LONGi
- Hotline and email

- Regularly publish sustainability reports
- Share communication outcomes via Official WeChat account
- Maintain ongoing dialogue with stakeholders



- Environmental pollution behaviors
- Corruption
- Conflict minerals
- · Child labor, forced labor

- · Public policy commitments
- Sign supplier code of conduct
- Establish supply chain ESG management and traceability system
- Conduct annual supplier ESG assessments (requiring improvements in overtime work, EHS non-compliance, and management system gaps)
- Promote supplier environmental & carbon target setting
- Deliver training & regular supplier engagement
- Engage third parties for audits & reviews

#### External

- Complaint mini-program: LONGi Qingfeng
- Official WeChat account: Yangguang LONGi
- · Hotline & Email

- Disclose annual supplier evaluation results & corrective actions in sustainability reports
- Dedicated webpage on LONGi's official website

- 1. Organization for Economic Co-operation and Development
- 2. Reference to the relevant framework of the *Guidelines for Listed Companies*, LONGi conducted its first due diligence on sustainable development related matters, and will continue to improve it in the future.

# 01

# Governance

LONGi persistently enhances its corporate governance framework, ensuring the standardized operation of Board of Directors, Board of Supervisors, and General Meeting of Shareholders, and upholds its decision-making processes' rationality, legality, and transparency. The Company intensifies its risk management practices, maintains high standards of business ethics, creates an ethical and compliant operational environment, and delivers robust safeguards for data and information security. All these measures establish a strong foundation for sustained, high-quality growth.

- 33 Corporate Governance
- 36 Risk Management
- 41 Business Ethics
- 48 Data Security and Privacy Protection

+ SDGs addressed in this chapter







### **Governance Structure**

In compliance with the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Corporate Governance for Listed Companies, the Rules Governing the Listing of Stocks on Shanghai Stock Exchange, and other applicable laws, regulations, and regulatory mandates, LONGi has crafted a comprehensive internal control system and established formal regulations, thereby building a clear and well-defined corporate governance structure within the organization.

The supreme governing body within LONGi is the Shareholders' Meeting, where institutional investors take an active role and engage with management on crucial issues, including corporate governance and business management. The Company's controlling shareholder complies meticulously with guidelines governing shareholder behavior, exercising their rights with utmost integrity. LONGi boasts independent and complete business types and autonomous operational capability, ensuring its independence from the controlling shareholder in the business, personnel, assets, organizational structure, and financial management matters. The Board of Supervisors is critical in monitoring company operations, related-party transactions, and the administration and utilization of funds raised, ensuring the Company's development complies with regulatory requirements. The governance architecture of LONGi centers on the Board of Directors, which orchestrates business activities and develops strategic initiatives. It is supported by four specialized committees that collectively supervise and manage various aspects of corporate governance.

2	8	13	
shareholders' meetings	supervisory board meetings	board meetings	1 * 1
1	7	1	1
strategy and sustainable development committee meeting	audit committee meetings	nomination committee meeting	compensation & apprais committee meeting

### **Governance Effectiveness**

### Independence of the Board of Directors

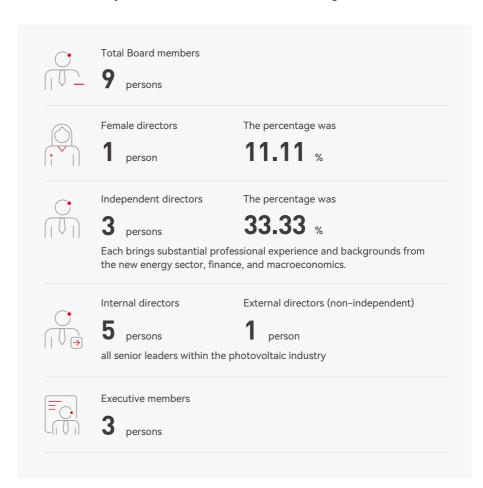
In accordance with the *Articles of Association*, the Board of Directors comprises three independent directors, representing one-third of the total number of directors. These independent directors comply with relevant regulations by participating in board meetings, shareholders' meetings, specialized committee meetings, and independent director meetings. They thoroughly review meeting proposals, familiarize themselves with the details of these proposals, and leverage their professional expertise to provide informed recommendations and insights and exercise their voting rights. Independent directors actively engage with minority shareholders through channels such as shareholder meetings and earnings briefings, listening to their views and concerns. Additionally, independent directors conduct site visits, such as to the Jiaxing Lighthouse Factory, to gain a deeper understanding of the Company's operational activities and advancements in digital transformation.

### **Executive Compensation**

The Company has implemented the *Compensation Management Measures for Directors, Supervisors, and Senior Management*, which explicitly outline executive compensation. The compensation structure for directors, supervisors, and senior executive members primarily includes a base salary and performance-based compensation. Performance-based compensation serves as an incentive for value creation during the operational period. CEO's/President's performance-based compensation is tied to the achievement return on equity, operating income, net profit, and other operational performance indicators, as well as individual contributions to sustainable development performance in areas such as risk management. This approach is reflective of the Company's performance-driven compensation philosophy. Additionally, the Company has set a clawback provision for performance-based compensation. In the event of discrepancies in financial information or other issues, the Company retains the right to reclaim the corresponding performance-based compensation.

### **Board Diversity**

LONGi recognizes Board diversity as a fundamental driver of its sustainable development. The Company implements a Board rotation process every three years, with nominations undergoing a strict selection process. Key factors such as industry experience, educational and cultural backgrounds, capabilities, gender, and other diversity elements are considered when electing Board members.



#### LONG 2024 Sustainability Report

#### **Investor Relations**

LONGi enhances its engagement with investors, bolstering their understanding and appreciation of the Company. In 2024, LONGi participated in numerous investor surveys, strategic meetings, conference calls, and regular earnings presentations to facilitate effective communication and convey shareholder value. These efforts were recognized when LONGi was honored with the "Best Practices Case Study for Earnings Presentations of 2023 Annual Reports" by the China Association for Public Companies, marking the second consecutive year of receiving these awards.



Hosting an Investor Relations Event to Showcase Future Plans

On July 4, 2024, LONGi hosted an investor relations event that included a tour of its production facilities. Over 100 securities analysts, fund managers, and researchers from domestic and international institutions attended the event, which provided transparent and detailed insights into the Company's plans for technological research, development, and product design, significantly enhancing investor relations.



Governance

LONGi was recognized as one of the "Best Listed Companies" by the New Fortune Magazine in 2024 and honored with the "Best Practices for Earnings Presentations of 2023 Annual Reports" by the China Association for Public Companies.



Responded to inquiries via the SSE's e-interactive platform



Responded to inquiries via the investor mailbox

100 times



Held investor conference calls



Organized strategy meetings



Conducted roadshows



Hosted on-site investor research meetings



Held earnings presentations

# Risk Management



bolstering its risk management capabilities to ensure operations are both compliant and sustainable.

#### Risk Management System

LONGi rigorously complies with applicable domestic and international laws and regulations and has implemented several internal protocols, including the *Internal Control Management Policy*, the *Compliance Management Policy*, and the *Code of Business Conduct*. The Company enhances its "Three Lines of Defense" model for risk management, which outlines the responsibilities across different levels and departments, ensuring stable and compliant operations. The Board of Directors, the highest authority on risk management, establishes the overall risk management goals and supervises the execution of risk governance and internal controls. Under the Board's governance framework, a robust "Three Lines of Defense" risk governance architecture is in place, specifying the duties of each department in risk management and forming a cohesive and effective risk management and control system.

#### Highest governance body: Board of Directors

Establishe risk management objectives and oversee implementation of risk governance and internal controls



#### First line of defense: Business Departments

Frontline in risk management

Primary responsible entities for risk control:

- Responsible for identifying key risks within their areas of jurisdiction during business operations, continuously monitoring dynamic changes in risks, and assessing, controlling, and responding to risks using professional methods.
- Integrate risk management into business processes to achieve proactive risk control at the source, ensuring that business activities are conducted within manageable risk limits.

#### Second line of defense: Risk Management Department

Standard-setting and centralized monitoring center

Play a dual role in "standard-setting and supervisory guidance" by leveraging its professional functions:

- Develop unified company-wide risk management standards, policies, and processes, providing operational guidance for business departments.
- Continuously monitor the first line of defense's compliance with risk management requirements, offer professional guidance on risk control vulnerabilities, coordinate cross-departmental risk governance, identify company-level significant risks, and promote the implementation of risk management strategies.



#### Third line of defense: Internal Audit Department

Provide independent supervision and effectiveness verification

Serve as the ultimate safeguard for risk control, conducting audits to assess the effectiveness of major risk management and internal control based on principles of independence and objectivity:

- Identify potential risk vulnerabilities and management deficiencies by independently evaluating the operation quality and effectiveness of the risk management system and the execution of internal controls.
- Supervise the entire process of the first and second lines of defense and report results directly to the Board of Directors, provide final verification of the integrity of the company's risk management system and the effectiveness of risk response measures.

#### **Risk Management Process**

The Company has developed a systematic risk management process and strategy and published the *Risk Identification and Assessment Procedures*, outlining the standards, specifications, and responsible parties for critical areas such as risk identification, assessment, and response, offering unified management guidance across all business units, and ensuring synergy, standardization, and effectiveness in risk management efforts. The process is structured as follows:

Risk Identification	Utilize standardized tools to comprehensively scan business scenarios and integrate internal management data with external environmental information to fully identify risks.	Risk Response	Develop differentiated control plans for key risks using risk avoidance, transfer, mitigation, and acceptance strategies, establish a mix of "long-term and short-term" measures.
Risk Assessment	Organize a cross-departmental team of experts who employ both quantitative analysis and qualitative assessment to rank risk levels reasonably, clarifying the priorities for control.	Risk Tracking Management and Ongoing Improvement	Conduct risk reviews and strategy optimization regularly, ensure the effectiveness of risk control measures through management review mechanisms, and continuously refine risk management strategies.

Emerging risk category	Risk description	Potential impact	Countermeasures
Cybersecurity	External attackers exploit system application vulnerabilities due to extensive asset exposure, with delays in threat identification or patching, leading to cyberattacks on the Company's network and systems.	Cyberattacks could cause system outages, data breaches, damage to market reputation, loss of customer trust, and financial losses.	<ul> <li>Launch a network asset attack surface management platform to review and reduce redundant system network assets, minimizing exposure risks to critical network assets.</li> <li>Establish a vulnerability management process that includes regular security scans, evaluations, and well defined responsibilities and priorities for addressing vulnerabilities, with timely progress updates.</li> </ul>
Extreme climate events	As global warming continues, abnormal global climate patterns lead to frequent natural disasters such as typhoons, floods, and droughts, posing risks of uncontrollable damage to business facilities and supply chains.	Extreme weather events (e.g., floods, heavy rainfall) could damage equipment, cause employee casualties, disrupt supply chains and logistics, and lead to asset losses, operational interruptions, or reduced production efficiency, resulting in financial and performance declines.	<ol> <li>Establish an emergency management organization and develop a climate change emergency response plan.</li> <li>Implement enhanced flood and wind resistance measures for factory and warehouse facilities.</li> <li>Increase the frequency of building, production equipment, and electrical wiring inspections.</li> <li>Strengthen operational resilience and improve flexibility in supply chain management.</li> <li>Strengthen employee capacity building by increasing knowledge of emergency response to extreme weather events.</li> </ol>

#### Risk Management Culture

The Company is dedicated to creating a robust risk management culture across all levels of the organization, implementing a blended learning platform combined with online and offline resources, and developing risk management related training materials and online courses to disseminate risk management knowledge. Through case sharing and specialized training sessions, employees' risk sensitivity and response capabilities are enhanced, embedding the principles of risk management into daily operations.

Develop the training courseware for "Risk Identification and Assessment Tool", release the LONGi E-learning course, and implement tool empowerment both offline and online.

■ A total of 29 training empowerment sessions were carried out, covering groups such as PC, business managers, and IC. The average training satisfaction was 93%.

#### **Adapted Tool Training Materials**

Each business unit localized and adapted the tool training materials.

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#### **Q&A List**

Answered questions on-site during training, summarized to form a Q&A list, and passed it on to the contact person/internal control BP/PC.

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í	rem	quest independing something select, exectioned	1 部内的になりできるのかが日本の大きな地域である。その他の人が日本の人が日本の人が日本の人が日本の日本、から日本の日本、教育の人は内の人が日本の日本の人が日本の人が日本の人が日本の人が日本の人が日本の人が日本の人
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	NEWSTONA	HIRETORI, MONICORNITARINENSIA, IL VIRGINE	<ol> <li>ことからりない出版す。からする場合からないないできます。 現在のはたため、 内のは、大きない、大きない、大きない、大きないないでは、大きないできます。 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、ないでは、 のは、 ないでは、 のは、 ないでは、 のは、 ないでは、 のは、 ないでは、 ないでは</li></ol>
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#### In-depth Training for Lower-level Organizations

Some business units conducted training for lower - level organizations, enabling a full understanding of the risk identification and assessment tool.



#### Provide Risk Framework

The risk control management department provided a risk framework for some businesses for reference by business units.

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Offline Training



Risk Identification and Assessment Tool Training Materials

Location: Professional line course/risk control management/internal control management, group - wide general course/management/middle - level management Release date: March 28, 2024 200+
people completed
the study

900+
people browsed the course



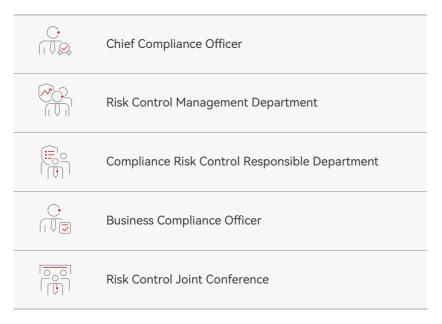


Popularize concepts, values, roles and responsibilities, and main processes of risk identification and assessment through the KK official account.

700+
people browsed
the popular
science content.

#### **Compliance Construction**

To establish and improve the company's compliance management system, effectively mitigate various compliance risks, and support sustainable development, the Company updated its Compliance Management System in 2024. This update further clarified the principles and logic of compliance management, identified key compliance areas and management methods, and simultaneously issued or revised related policies and documents in the areas of privacy protection, anti-monopoly, anti-commercial bribery, etc. The Company conducted compliance audits in areas such as anti-commercial bribery, labor compliance, and antitrust to ensure the effectiveness of compliance management. Additionally, the Company established corresponding scoring rules, incorporating the "compliance violation incidents" indicator into the organizational performance evaluation of each department, thereby achieving a closed-loop management process for compliance.



The Company develops its compliance management system and certification programs, identifying and assessing business risks in key areas such as employment practices, export controls, economic sanctions, intellectual property, antitrust, customs, and taxation. Compliance risk management is embedded in daily business operations and targeted improvement measures are implemented in high-risk areas. In 2024, the Company was re-certified with ISO 37301 for its compliance management systems, ensuring the ongoing validity of this certificate.

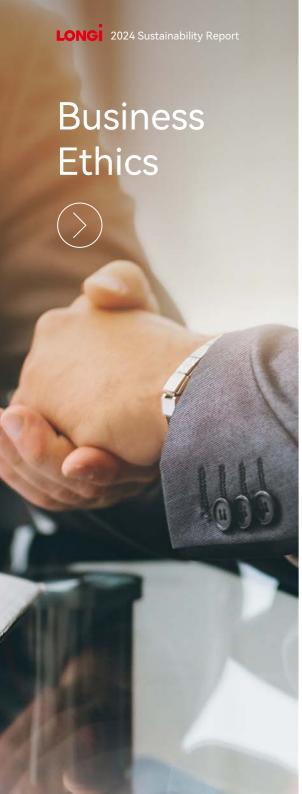
In 2024, the Company conducted dozens of compliance training sessions for employees on trade remedies, forced labor, export controls, economic sanctions, supply chain traceability, anti-monopoly, anti-commercial bribery, privacy and data protection. These efforts aimed to enhance employees' professional skills and compliance awareness.

The Company conducts regular internal and external audits, continuously driving its business units and internal control departments to enhance management practices. The audit department covers all business sectors and subsidiaries of the group at least once every three years, with annual audits conducted for high-risk business areas. In 2024, the audit department adopted a risk-based approach and, considering audit coverage requirements, completed 52 audit projects across the Group and its subsidiaries. These audits included routine audits, special audits, and economic responsibility audits. The scope of audits covered financial inflows and outflows, economic activities, internal controls, risk management, compliance management, anti-corruption practices, and business ethics management. The audit scope included the Group's key operational areas, such as production, supply chain, engineering, sales, logistics, warehousing, and functional departments. Furthermore, 100% of the identified risks were rectified.

#### Tax Transparency

The Company complies with national tax laws and regulations, ensuring the timely reporting and payment of taxes such as VAT and corporate income tax. Utilizing internal self-inspection mechanisms and external professional consultation, LONGi ensures accurate implementation of tax policies and effective tax risk mitigation. For example, when benefiting from policies such as R&D expense deductions and tax incentives for high-tech enterprises, we proactively engage with tax authorities to ensure full tax compliance. The Company is committed to fulfilling its tax information disclosure obligations and ensuring transparency and accuracy in its tax filings through a well-established tax management system. In expanding its international operations, the Company abides by the laws and regulations of the jurisdictions in which it operates, follows transfer pricing rules, and ensures that profit distribution matches value creation, adhering to principles of tax fairness. Additionally, through the export tax rebate green channel provided by the tax authority, the Company efficiently completes cross-border tax procedures, further strengthening the compliance of its international business operations.

The Company also continues to align its tax payment strategy with regional development goals. In constructing its Yunnan base, LONGi leverages the vertical integration advantages of the photovoltaic industry chain to create a trillion-yuan-scale industrial cluster for silicon photovoltaic manufacturing, forming a three-tiered driving model of "clean energy manufacturing – supporting industrial upgrading – local tax revenue cultivation".



#### Policies and Approaches

LONGi continuously enhances its business ethics management system<sup>1</sup>, ensuring full compliance with the laws and regulations that govern its business activities. Under applicable international conventions and best practices, the Company has developed and implemented the *Code of Business Conduct*. We also resolutely oppose commercial bribery, corruption, monopolistic practices, money laundering, and unfair competition by enhancing our supervision systems and strengthening preventive education, aiming to create an honest, fair, and transparent business environment to maintain market order and industry reputation, thereby achieving sustainable development.



Guided by the Audit Committee of the Board of Directors and with the Internal Audit Department at the helm, the Company has established an independent review and supervision mechanism within the organization, ensuring effective management and control of risks associated with business ethics topics, including anti-corruption and anti-competitive practices.

#### **Management Policies**

#### **Topics**

#### Policy content



Anti-corruption

- LONGi follows the principle of good faith and integrity
  in all business activities and complies with relevant
  laws and regulations to achieve sustainable
  development. In compliance with the United Nations
  Convention Against Corruption, we have developed
  and updated our internal policies, including the
  Administrative Measures for Anti-commercial Bribery,
  conducting regular violation investigations as per
  monitoring procedures to ensure compliance with
  regulations.
- LONGi adopts a zero-tolerance policy toward corruption within its workforce. The LONGi Anti-corruption Policy<sup>2</sup> mandates that all employees comply with laws, regulations, and company rules. This policy prohibits using authority for personal gain, soliciting or accepting illegal gifts, engaging in commercial bribery, disclosing trade secrets, falsifying documents, providing false information, and participating in unethical practices during procurement and tender processes.
- 1. Including anti-monopoly and fair competition, anti-bribery and anti-corruption, export governance and sanctions compliance, protection of the confidential information of stakeholders and/or personal information, respect for the intellectual property rights of others, respect for the personal rights of all internal and external employees, employees' health and safety and environmental protection, prevention of insider trading, avoidance of conflicts of interest, anti-money laundering and prohibition of terrorist financing, protection of the company's confidential information and intellectual property rights, privacy and data protection, responsible mineral procurement, environmental responsibility, social responsibility, etc. For details, please refer to the Longi Business Code of Conduct: https://static.longi.com/EN 0604 3367950217.pdf
- 2. LONGi Anti-Corruption Policy: https://static.longi.com/LON\_Gi\_Anti\_Corruption\_672ddcde36.pdf

#### Topics Policy content



Anti-money laundering

- The Company fully complies with the Anti-money Laundering Law of the People's Republic of China, committing to strengthening internal compliance management to ensure that all employees, distributors, suppliers, contractors, and other stakeholders conduct business in a legal and compliant manner, thus safeguarding the security of the financial system. We collaborate closely with law enforcement agencies, regulatory bodies, and the financial sector to prevent and combat money laundering. Through regular anti-money laundering training, employee awareness and execution of anti-money laundering practices are continuously enhanced.
- In our operations, we remain vigilant regarding risks related to money laundering
  and terrorist financing, working only with legally compliant businesses, particularly
  focusing on large cash transactions. We partner with reputable financial
  institutions and actively participate in identity verification processes. Furthermore,
  strict monitoring of cross-border transaction assets is conducted to ensure
  compliance with government regulations.



Conflict of interests

- The Company organizes an annual conflict of interest declaration process, issuing task reminders to all employees via the internal system, requiring declarations to be submitted within a specified timeframe.
- For sensitive positions and managers, the conflict of interest declaration process is triggered whenever promotions or job changes occur. The Group's internal monitoring department conducts regular or random checks, holding accountable employees who fail to provide truthful declarations, which are in line with company policies.



Anti-monopoly Anti-Unfair Competition

- In compliance with the Anti-monopoly Law of the People's Republic
  of China and the Anti-Unfair Competition Law of the People's
  Republic of China, the Company has developed and updated a
  series of anti-monopoly and anti-unfair competition management
  systems and behavioral guidelines internally. These policies and
  guidelines prohibit any conduct that distorts the market, misleads
  consumers, or restricts market competition. The Company does not
  use bribery or other unfair practices to gain business opportunities.
   We consistently assess anti-monopoly compliance risks to ensure
  fair market competition.
- The Company does not enter into or engage in any anti-competitive or monopolistic agreements with competitors, either formal or informal. Information exchange with competitors (including, but not limited to, sales territory or customer segmentation, pricing, or pricing structures) is strictly avoided. The Company refrains from discussions or negotiations with competitors on matters that could be considered monopolistic, does not participate in bid manipulation, and ensures fair treatment of trading counterparties.
- The Company respects and protects trade secrets, avoids false advertising, and ensures fairness and transparency in premium offers. In online operations, the Company refrains from disrupting the normal operation of internet products or services, striving to create a fair and competitive market environment.



Intellectual property respect

- The Company values technological R&D and innovation, strengthening its intellectual property portfolio to protect confidential information from misuse, theft, damage, or loss.
- A robust confidentiality policy has been established, requiring all employees to
  comply with the our intellectual property management regulations, which apply to
  current and former employees, ensuring proper management of our confidential
  information. If disclosure of confidential information to third parties is required for
  business cooperation, confidentiality agreements must be signed in advance to
  prevent unauthorized leaks.
- During R&D activities, employees are required to engage and collaborate with the Company's intellectual property department to ensure timely and appropriate protection of R&D innovations through intellectual property measures.
- In business activities, we ensure the correct use of registered trademarks, patent
  numbers, and other intellectual property markers, providing necessary reminders to
  consumers and relevant market participants to define the intellectual property rights,
  obligations, and confidentiality responsibilities between cooperating parties. We
  continuously improve our product sales market monitoring mechanisms, employing
  multiple channels to track the market situation of similar products. When
  infringements are detected, key information is collected, and notarization procedures
  are initiated if necessary.

#### **Complaints Management and Whistleblower Protection**

In accordance with domestic and international laws, regulations, regulatory requirements, and relevant industry developments, LONGi has formulated the *Administrative Measures for Complaints and Whistleblowing* and established complaint and whistleblower handling procedures to ensure the effective operation of internal and external monitoring mechanisms. These procedures apply to all employees, suppliers, customers, and other stakeholders. LONGi encourages its employees and stakeholders to proactively report any conduct detrimental to the Company's and its workforce's legitimate interests, thereby reinforcing discipline restraint, imposing penalties for violations, and safeguarding the Company's and its employees' lawful rights and interests.

LONGi advocates employee real-name whistleblowing and maintains confidentiality regarding whistleblowers' identities and information. The department responsible for receiving complaints will investigate all reports, and anyone involved in accepting, reviewing, approving, or investigating cases must be prohibited from disclosing whistleblowers' names, contact details, or other identifying information. Under no circumstances may materials revealing whistleblower information be shown to the department or individual under investigation. Any breach of these confidentiality obligations will incur serious consequences.

#### Reporting Channels

 WeChat mini program:
 LONGi Qingfeng



WeChat official account: Yangguang LONGi



- Tel: 0086-029-84193391; 18089282003
- Email: audit@longi.com
- Written correspondence or in-person reporting accepted at: Address: Audit and Supervision Center, LONGi Green Energy, No. 8369 Shangyuan Road, Economic and Technological Development Zone, Weiyang District, Xi'an, China

#### Whistleblowing receipt & registration

- Upon receiving a report, the Audit and Supervision Center will immediately record the information, covering key details such as whistleblower particulars (left blank if anonymous), subject(s) of investigation, and nature of alleged misconduct.
- All reports, whether anonymous or non-anonymous, shall be strictly kept confidential, properly recorded and followed up in a timely manner.

#### Preliminary assessment & classification

 Reports are categorized as major or routine based on severity, urgency, and scope.

#### Material whistleblowing reports

 Managed by the Supervision Department under the Audit and Supervision Center.

#### Routine whistleblowing reports

• Managed by the supervision liaison for each department.

 Investigators need to communicate with the whistleblower (if possible) to gather more details and develop an investigation plan.

#### Investigation initiation

• Investigation process initiation

· A special investigation team will

confidentiality procedures to

protective measures will be taken for the whistleblower,

process will follow strict

ensure fairness and

and investigators.

be set up, and the investigation

comprehensiveness. Appropriate

participants in the investigation,

Audit and Supervision Center will promptly inform the whistleblower of the results. Based on the investigation results, cases of misconduct will be submitted to the Human Resources Department for disciplinary consideration and those involving criminal activity will be referred to judicial authorities.

Result handling & feedback

· After the investigation, the

 Any identified internal control deficiencies or management loopholes will be transferred to the Risk Control Management Department for rectification to ensure issues are resolved.

#### **Actions Taken**

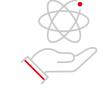


The Company maintains a "zero-tolerance" stance on commercial bribery and continuously performs anti-bribery compliance risk assessments across public donations, gift-giving, discounts and rebates, and commercial sponsorships.

During the Reporting Period, LONGi ISO 37001 underwent an annual audit.



#### **Business Ethics Audits**



The audit department combines comprehensive coverage with targeted supervision, completing at least one audit cycle of the Group's all business sectors and subsidiaries every three years. Annual audits concentrate on high-risk business types and personnel to detect potential corruption. Employees found engaging in improper behavior are subject to appropriate penalties, and audit findings are disclosed regularly. In 2024, the audit department adopted a risk-based approach in line with coverage requirements, using routine, special, and economic responsibility audits to supervise the Group and its subsidiaries. These audits throughout the year encompassed financial inflows and outflows, economic activities, internal controls, risk management, compliance management, anti-corruption practices, and business ethics management. The audit scope included the Group's key operational areas, such as manufacturing, supply chain, engineering, sales, logistics, and functional departments.

Each year, the Company engages certified external public accountants to audit the effectiveness of internal controls over financial reporting, including assessments of fraud, misrepresentation, and other unethical business practices and evaluations of related internal controls' effectiveness.



#### **Business Ethics Training**

**LONG** 2024 Sustainability Report

LONGi has consistently upheld a "zero-tolerance" and "focus on prevention, rectify past misconduct to prevent recurrence" policy in its anti-fraud efforts. We strive to nurture a culture where both internal and external stakeholders "do not have the audacity, opportunity, or desire to become corrupt", supporting the attainment of business objectives while ensuring sustainable, healthy, and rapid growth.

LONGi requires all employees (including part-time staff, interns and contractors) to undergo annual anti-corruption training and sign the *Integrity Commitment*, confirming their understanding of and compliance with the Company's anti-corruption guidelines and procedures. Likewise, all suppliers, distributors, contractors, and partners engaged in business with the LONGi must attend the Company's anti-corruption training and sign the Declaration on *Supplier Code of Conduct* to ensure that they understand and comply with the Company's anti-corruption policies, thereby collectively creating an environment founded on honesty and transparency.

The Audit and Supervision Center introduced diverse cultural empowerment programs during the Reporting Period, such as offline integrity training sessions, online micro-courses, and prosecutors-led promotion sessions. Other activities included the "Integrity Star" awards, along with campaigns like "Integrity Cartoons", "Prosecutor Talks", textbook cover check-ins, "DISS Fraud", and "May 4th Youth Integrity Discussions". Employing posters, extended infographics, and creative video, themed events like "Integrity in Overseas Slang" were also introduced to engage international employees, ensuring that the culture of integrity is genuinely internalized and translated into action.

# Internal integrity promotion

Front Matter

Over the year, the Company held 4,447 integrity training sessions, encompassing functional, manufacturing, marketing, procurement and engineering units. These sessions covered corporate integrity requirements, complaint and whistleblowing mechanisms and examined frequently encountered cases. After each session, participants were required to take an exam and sign an integrity commitment.

## External integrity collaboration

Through "online follow-ups, on-site visits, investigative interviews, and roundtable discussions". the Company conducted reviews with 355 suppliers throughout the year, conveying the Company's integrity requirements and management norms, ensuring that 100% of the suppliers were informed about LONGi's complaint and whistleblowing channels and were willing to report any cases of fraud or violations. This process helps cultivate a fair and transparent supply chain environment.

#### Violation reporting

To reinforce employees' sense of integrity and accountability, and in line with the "focus on prevention, rectify past misconduct to prevent recurrence" principle, the Company has established dedicated feedback and communication channels, including an integrity account. Employees who voluntarily surrender illicitly obtained proceeds are exempt from liability.

#### **External Cooperation and Communication**

LONGi continuously advances collaboration and exchanges with external parties in business ethics, upholding industry self-discipline and driving healthy sector-wide growth.



Contribution to the official release of the group standard Compliance Management System Standards for Enterprises in the New Energy Industry

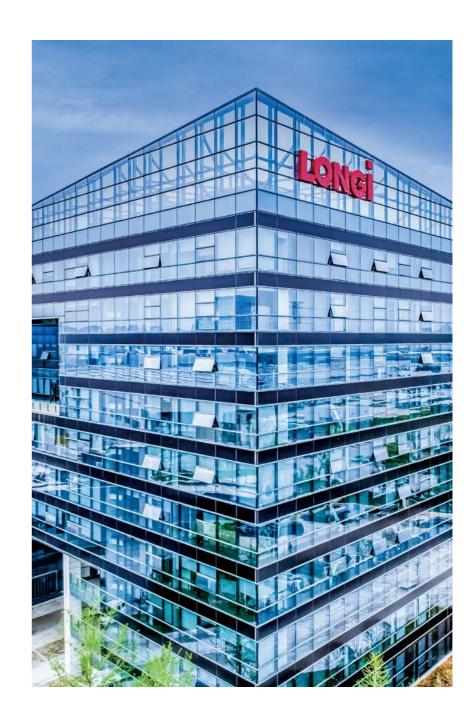
In February 2024, LONGi took part in drafting the group standard Compliance Management System Standards for Enterprises in the New Energy Industry under the guidance of the China New Energy Chamber of Commerce. During the drafting and review process, LONGi offered substantive feedback that aided the standard's successful evaluation and official publication. This standard provides comprehensive guidance and recommendations for implementing an integrity-focused compliance management system for enterprises engaged in new energy technology R&D, manufacturing, engineering, energy storage, and related services.



Group Standard Compliance

Management System Standards for

Enterprises in the New Energy Industry



#### Targets and Performance

#### Key Performance in 2024

▼ Public opinion events that pose significant risks to business operations

In 2024, the Company made no direct or indirect political donations. All charitable contributions followed the approved public donation process and complied with the applicable laws and regulations of the donation entity's location. There were no illegal incidents arising from fraud or corruption. The Company did not face any anti-competition or anti-monopoly-related lawsuits.

▼ Business Ethics Reporting

Anonymous complaints related to business ethics

anonymous complaint

The resolution rate for both types was

154 items 100 %

**▼** Business Ethics Culture

Integrity-related events

Total employees involved

35,000

Group participation rate

100 %

New employees' Integrity Commitment signing rate

Employees rating their perception of integrity practices as above average

Employee willingness to report violations proactively

98 %

Press releases distributed by LONGi's Sunshine Media Matrix

**110** issues

The total reading volume has exceeded

180,000

person-times

▼ Business Ethics Audits

Percentage of operational sites that underwent business ethics risk assessment

100 %

Number of business ethics audit projects

▼ Supplier Engagement

The Audit and Supervision Center revisited suppliers

Provided business ethics and integrity advocacy sessions and training programs

With a total training duration of

Supplier business ethics training

100 %

▼ Business Ethics Training

Anti-corruption training

Offline specialized training sessions

Online micro-courses

Prosecutor-led promotion sessions

Board of Directors' participation in ethics training

Integrity training sessions for

executive managers and above

Board of Directors' training coverage

Employee training coverage

Integrity training and promotion (Sessions)



**Employees participating** in ethics training

40.681

persons

Total training hours

40.681 hours

43

# Data Security and Privacy Protection

2024 Sustainability Report

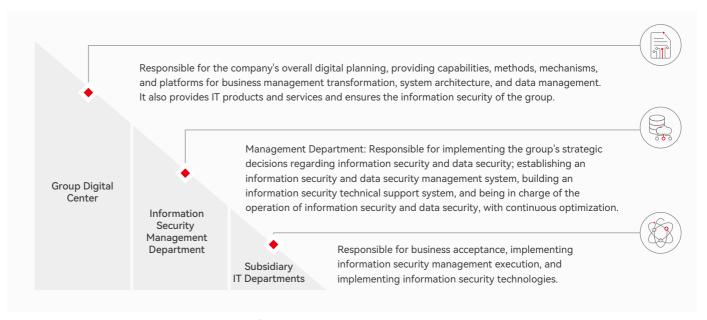
LONGi places significant emphasis on the security and privacy protection of user information. The Company continuously improves its information security management policies, including developing and publishing the Group's Administrative Measures for Data Security. In addition, LONGi regularly conducts information security risk assessments and stress tests and enhances the growth of an information security culture, ensuring robust protection for customer information and privacy.

#### Policies and Approaches

In compliance with the Data Security Law of the People's Republic of China, the Cybersecurity Law of the People's Republic of China, the Personal Information Protection Law of the People's Republic of China, and the European Union's General Data Protection Regulation (GDPR), as well as other applicable laws and regulations, LONGi has developed a series of policies related to privacy compliance management and privacy protection assessment in the area of privacy protection. These documents govern privacy protection practices during business operations. To ensure a timely response to cybersecurity incidents, the Company has established the Emergency Response Plan for Information Security Crises, which details the reporting procedures for information security issues. Additionally, through its privacy policy, the Company informs data subjects about the collection, usage, transmission, storage, and deletion of their personal information and provides mechanisms for data subjects to exercise their rights.



The Company has integrated information security management standards into its *Supplier Management Policy* to reinforce supplier information security. When necessary, the Company examines and evaluates suppliers' information security capabilities and safeguards mutual information security through confidentiality agreements, service monitoring, and performance reviews.



#### **Actions Taken**

LONG 2024 Sustainability Report

The Company has established a clear data security management policy, implementing technical measures such as data transmission encryption, local file encryption, and deploying data loss prevention solutions to ensure company data security. Additionally, we have set up a privacy protection compliance management system to support the compliant operation of our business. We conduct personal information protection impact assessments for various business scenarios, safeguarding the privacy rights of customers, employees, visitors, and supply chain partners.

In 2024, all of the Company's IT infrastructure and information systems earned ISO/IEC 27001 and ISO/IEC 27701 certificates. To ensure the systems' effectiveness, the Company conducts regular internal audits, regulatory reviews, and external audits annually. The Company's official website, internal office systems, and MES system have all been registered under the National Information System Security Level Protection (Class II). Third-party agencies have also conducted security evaluations on these systems, addressing and fully rectifying six high-risk items identified in the assessment, ensuring the security and reliability of these systems.

#### LONGi's Data Security Management Requirements

- Prohibit interference with or limitation of data owners' rights requests and responses.
- Prohibit unauthorized access, copying, deletion, transfer, sharing, assignment, or public disclosure of personal data.
- Prohibit neglecting, delaying, or concealing incidents of personal data breaches; report immediately to the compliance team and initiate emergency response procedures; notify regulatory authorities and data owners if necessary.
- Conduct a data protection impact assessment (DPIA) before processing activities that may have a significant impact on personal rights and freedoms.
- Legitimately collect personal data; prohibit collecting personal data beyond operational scope, using personal data for purposes beyond operational intent, and retaining personal data beyond operational requirements.



#### **Technical Protection**

The Company continuously updates and improves its information security management technologies annually, strengthening technical defenses and enhancing overall information security management. Some of the Company's key protective measures include:



Leveraging Al-driven intelligent recognition technology, the Company has developed a multi-dimensional, multi-engine email protection system. The system successfully identified and intercepted over 50,000 spam and phishing emails during the Reporting Period. The system's heterogeneous technology architecture effectively mitigates risks such as phishing and data breaches, ensuring information security for employees and business partners, and maintaining the health of the Company's digital ecosystem.



Asset attack surface management

The Company gains valuable insights into the current threat landscape by integrating threat intelligence information. Through monitoring and evaluating asset exposure, potential security risks are detected, enabling the Company to implement the necessary security measures and establish a proactive security defense strategy. Over 150 risks were proactively identified and rectified during the Reporting Period.



System risk management

During the launch and changes to information systems, the Company simulates hacker attacks to conduct comprehensive security evaluations in real environments, allowing the precise identification and resolution of potential security vulnerabilities. In the Reporting Period, security evaluations were completed for 38 business systems, significantly enhancing the overall information security level and ensuring information systems' secure and stable deployment.



Deep defense capability construction

The Company has built a multi-layered security protection system covering networks, applications, hosts, terminals, and container environments. Through continuous monitoring and intelligent response mechanisms, over 100 network attacks were successfully intercepted. This system ensures the Company's core systems' stable operation and safeguards the sensitive information of customers and partners through improved data security mechanisms, reflecting the Company's social responsibility and governance effectiveness in data security management.

#### **Data Compliance Management**

In its daily operations, the Company collects and processes personal information of employees, customers, visitors, and supply chain partners. These activities involve collecting, using, and cross-border transferring personal information and third-party processing. The Company conducts business activities in accordance with the Data Security Law of the People's Republic of China, the Cybersecurity Law of the People's Republic of China, the Personal Information Protection Law of the People's Republic of China, and the European Union's General Data Protection Regulation (GDPR), as well as other applicable laws and regulations in the countries or regions where it operates.

The Company conducts data compliance assessments under applicable laws and regulations. These assessments cover but are not limited to, the external provision of personal information and systems/frameworks and primarily assess the impact on the rights of personal information subjects and the adequacy of the adopted security measures. During the Reporting Period, the Company carried out personal information protection impact assessments for all business scenarios involving the processing of personal information of employees, customers, visitors, and supply chain partners, and provided personal information protection training for all employees and specific personnel.

#### Risk Assessment and Stress Testing

The Company implements rigorous preemptive protection, active responses during incidents, and swift post-incident handling for information security, along with future preventive measures. At least once per year, the Company conducts a penetration test of the Group's information systems, simulating hacker attacks to assess the effectiveness of existing defense mechanisms. This process identifies potential security vulnerabilities and ensures the analysis and rectification of security issues. The Company proactively identified and resolved over 180 high-risk vulnerabilities in 2024. All identified system vulnerabilities were either rectified or had corrective plans in place, with no impact on customers or internal employees.

#### Information Security Awareness and Training

To enhance employee awareness of information security, the Company provides all employees with relevant information security training and guidance on handling security issues with caution. In cases where information leaks occur due to personal reasons, the Company enforces disciplinary measures based on the severity of the incident. During the Reporting Period, LONGi took the following measures:

#### Regular security awareness campaigns

Information security materials were disseminated to all employees through email and the Company's internal WeChat account. A total of 21 security tips were shared, covering office security, password protection, email security, phishing, and employee confidentiality. During China Cybersecurity Week, special awareness activities were conducted through email and the WeChat account, reaching over 210,000 readers.

#### Internal phishing drills

Phishing simulations were conducted for core departments (e.g., the Central Research Institute, Procurement Department), mimicking real-world scenarios to strengthen employees' ability to recognize and prevent security threats.

#### IT staff skill training

Information security skill training was organized for IT professionals to enhance their capabilities in secure development and operations, reinforcing the Company's information security infrastructure.







Xey Performance in 2024





Information security awareness materials disseminated

with a cumulative readership of over

 $\textbf{210,000} \; \mathsf{person-times}$ 



System vulnerabilities identified

**180** items

rectification or corrective plans in place

100 %



Information security training coverage for IT professionals

100 %



No negative incidents of information security and privacy breaches of employees, customers, visitors, supply chain partners, etc.



02

# Value Chain

LONGi is dedicated to deepening value chain management across all processes. With a robust operational system as its foundation and leveraging its technological leadership, LONGi consistently drives innovation and breakthroughs. By continuously optimizing products and services, LONGi has vigorously advanced the PV sector toward greater efficiency and higher quality. The Company also collaborates with its partners to build a sustainable supply chain system, creating greater value for customers and contributing to global energy transition and sustainable development.

"

+ SDGs addressed in this chapter























- 62 Product Quality Management
- 66 Customer Relationship Management
- 69 Sustainable Supply Chain

# Innovationdriven Development and Smart Manufacturing

Policies and Approaches

#### **R&D & Innovation System**

LONGi upholds the technology innovation concept of "producing one generation, developing one generation, and reserving one generation", establishing a comprehensive scientific and technological innovation system. Through digital and intelligent transformation, we've built a R&D project management system. It standardizes the entire process of technology planning, resource allocation, project implementation, and outcome delivery and conversion in R&D – related businesses. This system enhances the efficient collaboration across the entire chain of the market, products, R&D, and manufacturing. To keep leading in clean energy tech, LONGi keeps increasing R&D resource input, focuses on attracting and developing tech talent, and aims to set new benchmarks in clean energy technology.







#### Management system documents

- · Administrative Measures for Technology Planning
- Administrative Measures for Technology R&D Projects
- · Administrative Measures for Collaborative Innovation Business
- · Administrative Measures for External Standards Management
- Administrative Measures for Technology Innovation
- Administrative Measures for Rewarding Key Scientific and Technological Breakthroughs

#### Technical R&D process system documents

We've established a comprehensive R&D process system. It has 81 core documents and covers multiple R&D-related areas, including technology planning, lifecycle management of R&D projects, innovation collaboration in the industrial chain, university-industry cooperation, incubation of technological ideas, and innovation management.

LONGi's Innovation and R&D Management Policy Framework



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Digitalization Strategy

LONGi is at the forefront of digital transformation, leveraging digital and intelligent solutions to drive technological service transformation, ensure efficient process systems, and establish standardized data governance protocols. The Company has developed a clear digitalization strategy, with plans to achieve full digitization of key areas through digitization in three to five years, ultimately becoming a benchmark for digitalization in the solar energy technology sector.

To ensure the smooth advancement of digital transformation, LONGi has established a Digitalization Center responsible for the company's overall digital strategy. The primary responsibilities of the Digitalization Center include building digital processes and governance systems, providing capabilities, methodologies, mechanisms, and platforms for business management transformation, architecture, processes, and data, continuously measuring operations, and driving department heads to fulfill their responsibilities. Additionally, the center offers IT products and services to ensure information security. The company's digitalization system team has grown to over 500 members, with cumulative investments in digital projects exceeding several billion yuan, providing solid organizational and resource support for the digital transformation.

Under the principles of business-side responsibility and authority equivalence, business transformation befitting operations, maximizing professional synergy, and optimizing system-wide human efficiency, the Company has formulated differentiated strategies based on 3 core business areas: business transformation, IT technology, and information security. Using MBT (Management Business Transformation) and IT primary processes, LONGi has implemented comprehensive management policies that span transformation, processes, data, and IT technology.

#### **Digital Construction Module**

LONGi's digital application system has covered the core business areas of product research and development, marketing, supply chain and manufacturing, significantly improving the operational efficiency and management level of each link.



R&D Field

The full implementation of the IPD<sup>1</sup> process has been achieved, promoting the digital transformation of product development and laboratory management. It has effectively opened up the management and data channels for R&D to support marketing and for R&D to guide manufacturing. By establishing a product data standardization system, the accuracy of product data is strictly controlled at the source, significantly improving R&D efficiency and greatly shortening the R&D cycle.



Marketing Field

Digital closed-loop management of the entire process from leads to contracts, from orders to collections, and after-sales service has been realized, fully implementing MTC<sup>2</sup>. Focusing on channel business management, it aggregates salespeople, channel partners, installers, and end-users, promoting in-depth interaction between the brand and users, and realizing the transformation from brand-user reach to business process-user reach, thus enhancing customer experience and brand loyalty.



The full-domain implementation of the ISC<sup>3</sup> process has been achieved, promoting the comprehensive visualization of the supply chain. It covers the entire process management from demand, production scheduling, shipment, logistics execution, in-transit tracking to order receipt, significantly improving the overall order delivery efficiency and establishing a reliable and agile supply support system.

<sup>1.</sup> IPD: Integrated product development

<sup>2.</sup> MTC: Market to cash

<sup>3.</sup> ISC: Integrated supply chain

#### **R&D** and Innovation Achievements

In 2024, LONGi achieved breakthroughs in core technological areas, including silicon wafers, cells, and modules.

# 77



#### Silicon Wafer Innovation

In March 2024, LONGi introduced its TaiRay silicon wafer product line, offering three key advantages: high platform compatibility, more evenly distributed resistance, and effective removal of impurities. These wafers support a variety of cell technology routes and size specifications, providing the industry with efficient, flexible, and reliable silicon wafer solutions, thus marking the beginning of the Terawatt Era at PV CellTech.

#### Cell Innovation

LONGi has set multiple world records for cell efficiency across different technology routes, becoming the "Dual-Champion" of world record efficiencies in both mono-crystalline silicon photovoltaic cells and silicon-perovskite tandem solar cells. These achievements highlight the Company's robust technological R&D capabilities.

- Mono-crystalline silicon photovoltaic cells breakthrough: In April 2025, LONGi's self-developed monocrystalline silicon solar cell achieved a photoelectric conversion efficiency of 27.81%, which was certified by the Institute for Solar Energy Research Hamelin (ISFH). This accomplishment has pushed the exploration of the limits of monocrystalline silicon photovoltaic cells to new heights.
  - Silicon-perovskite tandem solar cell breakthrough:
    In April 2025, the crystalline silicon-perovskite tandem solar cell was certified by the National Renewable Energy Laboratory (NREL) in the United States, achieving a photoelectric conversion efficiency as high as 34.85%. This once again set a new world record for the efficiency of crystalline silicon-perovskite tandem cells.

    Meanwhile, the company has also increased the efficiency of the commercial M6-sized crystalline silicon-perovskite tandem cell to 32%.



LONGi leads the publication of perovskite-based cell industry standards, filling a domestic gap

LONGi led the development of two energy industry standards:

Measurement of Quantum Efficiency of Tandem Solar Cells and

Measurement of Current-Voltage Characteristics of Perovskite-based

Tandem Solar Cells, which have been officially approved and

published. The implementation of these standards will unify testing

methods, resolve inconsistencies in industry test results, and provide

accurate data support for companies across the industrial chain,

driving cost reduction and efficiency improvements in the PV sector.

The Measurement of Current-Voltage Characteristics of

Perovskite-based Tandem Solar Cells is China's first industry standard

for perovskite-based cells, filling a gap in the domestic market.



Industry Standards for Perovskite-based Cells

#### Module Innovation

In October 2024, a certification report from the Fraunhofer Institute for Solar Energy Systems (Fraunhofer-ISE) confirmed that LONGi's HPBC 2.0 module achieved an efficiency of 25.4%, breaking a 36-year monopoly held by overseas PV brands on crystalline silicon module efficiency records. This milestone set a new world record for PV module efficiency. With HPBC 2.0 technology, LONGi introduced the Hi-MO 9 and Hi-MO X10 products, catering to centralized and distributed scenarios, offering advantages in reliability, low degradation, low-light power generation, and shade resistance.

Hi-MO 9 module:

Built on the efficient HPBC 2.0 cell technology, this module offers enhanced power generation capacity, lower BOS (Balance of System) costs, and improved reliability. With a maximum power output of 670W and conversion efficiency of up to 24.8%, and a bifaciality rate surpassing 80%, it is another ultra-high-value module created by LONGi through disruptive innovation, driven by deep insights into global customer needs.

Hi-MO X10 module:

LONGi introduced the Hi-MO X10, a new generation of distributed modules. This module achieves a maximum mass production power of 670 W and surpasses the industry's mainstream TOPCon modules by more than 30 W, with a mass production efficiency of 24.8%, breaking the global record for the highest efficiency in mass production modules. The HPBC 2.0 cells used in the Hi-MO X10 modules achieve a mass production efficiency of over 27%, making them the highest efficiency mass-produced cells globally. LONGi has brought a 1.5% increase in absolute value in just two years, creating a significant generational gap with conventional cells in the mainstream market.



#### Three publications in *Nature* within one year, driving PV technology breakthroughs

LONGi has achieved significant scientific research milestones in the PV field, with three crucial research papers published in Nature journal within one year.

#### February 2024

In collaboration with Jiangsu University of Science and Technology and Curtin University of Australia, LONGi developed the world's first crystalline silicon heterojunction solar cell with high flexibility and high power-to-weight ratio, with thicknesses ranging from 57 to 125 microns and a maximum conversion efficiency of 26.81%.

#### September 2024

LONGi experimentally demonstrated that crystalline silicon-perovskite double-junction tandem solar cells can exceed the single-junction Shockley-Queisser (S-Q) theoretical efficiency limit for the first time.

#### October 2024

By utilizing an all-laser patterning process, LONGi achieved a photovoltaic conversion efficiency of 27.30% for HBC cells, setting another new world record.

#### Article | Published S1 Complex 25

#### Silicon heterojunction back contact solar cells by laser patterning

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Nature (2024) | Claritic action

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#### Abstract

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LONGi's Paper in the Nature



#### Intelligent Manufacturing

LONGi's Jiaxing base, the world's first "Lighthouse Factory" in the PV sector, has implemented advanced technologies such as industrial Internet, big data, artificial intelligence, and digital twins on a large scale. The base has developed and implemented over 30 digital use cases, including machine vision-enabled flexible automation, AI-powered full-process inspection and traceability, intelligent management of order production and delivery cycles, AI algorithms for cell resource matching and dynamic correction, and intelligent human resource management. These innovations provide robust technical support for the intelligent production of LONGi products.

Workforce allocation	33% reduction in single-line workforce allocation
Manufacturing costs	28% reduction in manufacturing costs
Yield rate	43% reduction in yield loss
Delivery time	84% reduction in production delivery time
Energy efficiency	20% reduction in unit energy consumption

"Lighthouse Factory" Efficiency Enhancements



The world's first "Lighthouse Factory" in the global photovoltaic industry

In 2024, following the launch of LONGi's HPBC 2.0-based Hi-MO X10 module, demand for second-generation BC products surged. To better meet customer demand, LONGi initiated a comprehensive upgrade of existing production lines in the second half of 2024. Leveraging its global leadership in smart manufacturing and digitalization, the Jiaxing base was among the first to transition. By the end of February 2025, the production lines at the Jiaxing base had been fully upgraded. Production capacity is gradually increasing, with rapid growth anticipated by June 2025.



#### **Intellectual Property Rights**

In compliance with applicable domestic and international laws and regulations, including the *Patent Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China*, the *World Intellectual Property Organization Convention*<sup>1</sup>, and the *Agreement on Trade-Related Aspects of Intellectual Property Rights*<sup>2</sup>, LONGi has established the Intellectual Property Management Policy as the guiding framework and supports it with specialized management procedures for patent protection, intellectual property incentives and evaluation, intellectual property risk prevention, and intellectual property management in external technical exchanges. These measures cover R&D early warnings, risk prevention, quality management, and strategic planning, ensuring the standardized and efficient implementation of intellectual property work at the policy level.

LONGi has established an Intellectual Property Management Committee as the highest decision–making body for intellectual property management, responsible for formulating and executing intellectual property strategies. The committee is supported by the Group Intellectual Property Department, which coordinates and manages intellectual property–related affairs to ensure the effective management and protection of the Company's intellectual property rights.

The Company has developed a complete intellectual property risk management process to ensure effective control over intellectual property risks and fully protect technological innovations.

Systematic risk prevention and control mechanism:

LONGi has established an intellectual property risk control mechanism that spans all business units and core business processes, embedding intellectual property protection throughout R&D, production, sales, and the supply chain. This approach ensures comprehensive and in-depth management of intellectual property risks across all business areas.

Comprehensive risk management:

The Company has systematically strengthened intellectual property risk prevention through early identification and risk warning, strategic planning, coordinated risk management, and enhancing the foundations for risk prevention.

Risk monitoring and early warning:

LONGi has built an intellectual property risk monitoring system, using information discovery, communication, and investigation mechanisms to monitor intellectual property risks. The Company issues early warnings and develops protection and risk management plans for domestic and international intellectual property under local laws, regulations, and policy environments.

<sup>1.</sup> World Intellectual Property Organization Convention

Agreement on Trade-Related Aspects of Intellectual Property Rights

#### **Collaborative Innovation**

LONGi is committed to building an open and collaborative innovation ecosystem. The Company has established external framework documents such as the Administrative Measures for External Technical Cooperation Projects and the Administrative Measures for Collaborative Innovation Business, advancing university-industry partnerships, collaborative innovation across the industry chain, and industry exchanges. By collaborating with global universities, research institutions, and industrial chain partners, we jointly drive technological advancements in photovoltaic materials, equipment, and manufacturing processes, contributing to the sustainable development of the global clean energy sector.



LONGi continues to stimulate deep collaboration with industrial chain partners under the guiding principle of "Collaborative Innovation for Shared Success". The Company has officially launched the "Partner + LONGi" collaborative innovation ecosystem, which is built on integrity, driven by value, and supported by a robust set of rules. To date, LONGi has engaged in technical cooperation with over 100 partners and reached more than 20 technical collaboration agreements. These projects cover core technological areas such as silicon wafers, cells, modules, hydrogen energy, and renewable methanol<sup>1</sup>.



Universityenterprise cooperation In 2024, LONGi established partnerships with with several well-known universities both at home and abroad, such as the National University of Singapore, the University of New South Wales, Zgejiang University, Fudan University. Together, they are conducting joint research on core technologies in PV energy, hydrogen energy, biomass energy, and other related fields.



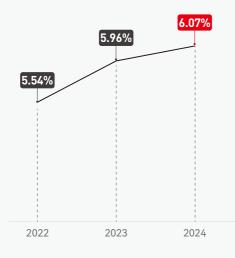
In 2024, LONGi actively participated in numerous domestic and international industry exchange events, including the European Photovoltaic Solar Energy Conference, the International Conference on Photovoltaic Science and Engineering, and the World Conference on Photovoltaic Energy Conversion. During these events, LONGi engaged in in-depth discussions with global authoritative institutions and industry partners regarding the future development trajectory of BC technology and the direction of new energy integration.

<sup>1.</sup> Renewable methanol: According to the International Renewable Energy Agency (IRENA) report Innovation Outlook: Renewable Methanol, renewable methanol encompasses both biomethanol and green methanol. Biomethanol refers to methanol produced from biomass, while green methanol refers to methanol produced from CO<sub>2</sub> captured from renewable resources (bioenergy with carbon capture and storage, and direct air capture) combined with green hydrogen (hydrogen produced using electricity generated from renewable energy sources).

#### Targets and Performance

#### Research and Development Investment

- Revenue Share (%)



In 2024, the company's R&D investment amounted to RMB

representing

of its total revenue

The target for 2025 is to maintain the R&D revenue share at above 5%.

#### Patents Overview



In 2024, the number of patent applications for invention was

505 pieces



the number of granted patents was

**204** pieces



the number of valid invention patents was

**524** pieces

#### ∑ Standard-Setting Overview



Number of external technical standards which LONGi has been part of their development and revision as of the end of the Reporting Period



Number of external technical standards which LONGi has been part of their development and revision in 2024

National standards

5 Items Industry standards

standards 3 Items

Local

Group standards

# Product Quality Management



LONGi maintains an unwavering commitment to "Reliability", consistently following the "Quality First" principle.

The Company has established a complete lifecycle quality management system that spans customer demand management, product R&D, procurement, manufacturing, engineering design and installation, and after-sales service.

Through this system, LONGi continuously strengthens product quality, ensuring the delivery of high-quality, reliable products to customers.



The more challenging the circumstances, the more we must uphold quality principles and bottom lines.

— Li Zhenguo

#### Governance

LONGi has established a product quality management structure covering the Group's quality, centers/business units, and all production bases. The responsibilities and authorities of the Quality Management Committee and departments are defined to enforce quality management responsibilities at all levels.

#### Strategy

LONGi has established its quality management system by referring to international and national standards, benchmarking against outstanding companies, and integrating its own actual situation in quality construction. As of the end of the reporting period, all of the Company's stable production facilities have received ISO 9001 quality management system certificates. The Company's module products have secured the IEC 62941 photovoltaic module manufacturing quality system certificate, and LONGi Solar has obtained the GB/T 27922 after-sales service system certificate. Furthermore, LONGi is the global first PV enterprise to obtain full-process power measurement control assessment certification for PV module manufacturers.

#### June 2024

LONGi products were recognized as "Highest Achiever" in RETC's 2024 PV Module Index Report and "Top Performer" in PVEL's 2024 PV Module Reliability Scorecard, received high recognitions from authoritative testing institutions for consecutive years.

#### September 2024

LONGi's second-generation BC flagship Hi-MO 9 won several awards at the 10th "All Quality Matters" Solar & ESS Congress hosted by TÜV Rheinland, including the PV Module Energy Yield Simulation AQM Award and PV Module Reliability AQM Award. The distributed product Hi-MO X6 won the PV Module Outdoor Energy Yield AQM Award.



Since LONGi first participated and won an award in 2017, it has consecutively received the "Quality Win China" award in the photovoltaic module category for eight years. To date, LONGi has won the Power Generation Simulation Award five times and the Outdoor Verification Award four times.



#### Policies and Approaches

In compliance with laws and regulations such as the *Product Quality Law* and the *Standardization Law of the People's Republic of China*, as well as authoritative domestic and international standards, LONGi continually optimizes quality management processes, strengthens employees' ability to identify and resolve quality issues, and establishes and refines its quality management and policy systems. These efforts systematically enhance LONGi's quality management capabilities, providing solid support for achieving the Company's operational objectives.



#### **Actions Taken**

#### **Quality Culture Development**

To unify the understanding of quality across all levels and areas of the Company, standardize and guide quality culture efforts at all organizational levels, and advance the normalization and standardization of quality culture activities, LONGi has developed and published the *LONGi Quality Culture Manual*, creating a culture of full employee engagement and collective practice in upholding quality standards.



#### **Quality Digitalization**

In 2024, the company advanced its IT-enabled quality management system by optimizing its comprehensive "1+7+1" digital quality framework, achieving end-to-end integration of quality data processes spanning collection, governance, and analytics, which established a data-driven foundation for quality decision-making. Leveraging its Quality Big Data Platform, LONGi has implemented an intelligent three-tier indicator system across corporate, divisional, and operational levels using business intelligence tools, which enables cross-process quality traceability throughout photovoltaic manufacturing chains (silicon wafers, cells, and modules), thereby evolving from basic descriptive analytics into a closed-loop management system that incorporates diagnostic insights, predictive modeling, and prescriptive optimization capabilities.



Origin of Digital Quality Management - Large Quality Management System



Seven Major Quality Management Business Modules - Quality System Management, R&D Quality Management, Reliability Management, Supply Chain Quality Management, Process Quality Management, Customer Satisfaction Management, Continuous Improvement Management



Quality Big Data Center with the aim to achieve end-to-end digital quality management of the whole process

#### Impact, Risk and Opportunity Management

LONGi continuously refines its product quality risk governance framework through digital transformation initiatives, enabling predictive identification and proactive mitigation of latent quality risks, achieving a significant reduction in quality incident probability. The Company regularly conducts comprehensive assessments of its quality management system to ensure its efficient and stable operation, with continuous improvements to elevate its quality management capabilities. Additionally, LONGi has implemented a quality incident management system to respond quickly to product quality disputes, resolve issues promptly, and minimize impacts on customers.

#### Quality Risk Prediction and Identification

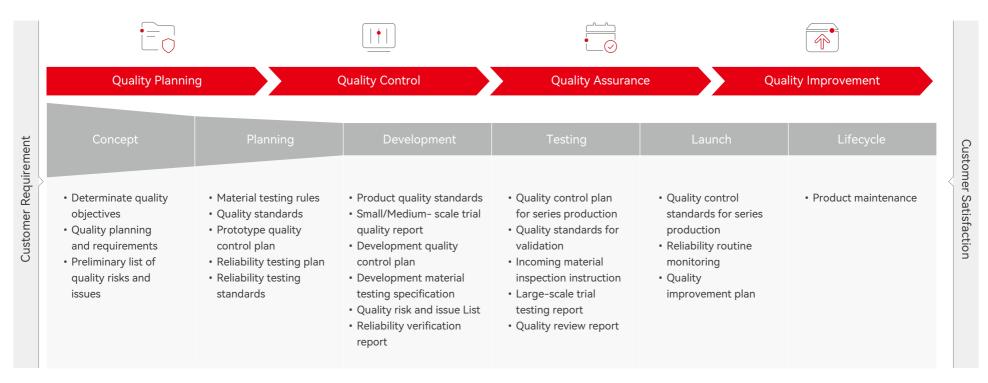
LONGi has built an advanced product quality risk management mechanism through using digital tools, enabling precise prediction and identification of potential quality risks. The Company employs an intelligent AI detection platform, which combines manufacturing processes and analyzes and evaluates nearly 200 quality inspection data points, spanning 7 AI inspection procedures. The system automatically collects quality information by using machine vision AOI¹ for process inspection, applying machine learning and deep learning algorithms for automatic determination and early warning. This process has boosted manufacturing efficiency by over 25%, significantly reduced missed detection rates, and resolved hard-to-detect issues such as scratches and dents on PV module surfaces. It also reduced the costs of manual visual inspections and increased first inspection or patrol inspection efficiency by 42%.

Moreover, LONGi applies intelligent AI algorithms, such as knowledge graphs, to automatically identify defect types and machine-specific issues, automatically push early warnings of similar problems to on-site personnel, and provide problem causes and improvement measures. This attribution AI analysis system improves staff efficiency in identifying and resolving quality issues, overcoming challenges in timely alarm prediction.

#### Lifecycle Quality Management

LONGi leads with high standards to reach superior quality, embedding the "Lifecycle Quality" concept into the product's DNA. This approach covers every stage of the product's journey – from design and production to application – ensuring exceptional quality standards throughout the entire lifecycle. The Company has implemented standardized, hierarchical quality data warehouses, enabling full lifecycle quality traceability from suppliers to customers. This system creates four main data lines for suppliers, components, products, and customers, allowing one file per supplier, one file per component, one file per product, and one pile per customer, supporting code-based traceability and forward/reverse tracing to ensure quality traceability and transparency.





Lifecycle Quality Management for New Product Development

#### Quality Management System Audit

LONG 2024 Sustainability Report

LONGi focuses on the effective operation of its quality management system by adopting T/CAQ 10102 *Guidelines for Evaluating the Maturity of an Organization's Quality Management System* and GB/T 19580 *Criteria for Performance Excellence* to establish a quantitative evaluation system for assessing the maturity and performance of its quality management system. To ensure the smooth advancement of the evaluation process, the company has further strengthened its internal audit team by organizing comprehensive empowerment training with a participation rate of 100%. Additionally, 70 professional internal evaluators have been selected to enhance the team's capabilities. Additionally, LONGi has enhanced its internal audit system by launching the IAS integrated audit system, enabling information-based online audit process management and improving audit efficiency.

#### **Quality Incident Management**

During the Reporting Period, LONGi optimized its Administrative Measures for Group Quality Risks and Incidents, further enhancing its management system for quality risks and incidents. By defining the processes and requirements for tiered reporting, analysis and resolution, as well as review and accountability of quality risks and incidents, LONGi ensures that these issues are handled efficiently and under established procedures.

#### **Metrics and Targets**

During the reporting period, LONGi did not experience any major product safety incidents or administrative penalties.



# Customer Relationship Management

LONGi upholds the core values of "Reliability, Value-added, Fulfillment" and follows the customer service principle of "Professional Services Drive Customer Value Creation". By maintaining a responsible attitude as its foundation and using high-quality products as a link, LONGi provides exceptional, efficient, and high-level services to create long-term value for its customers.

#### Policies and Approaches

LONGi ensures the standardization of customer relationship management through a series of policy frameworks. By coordinating these policies, the Company has established a customer-centric relationship management structure safeguarded by policy guarantees.

Governance

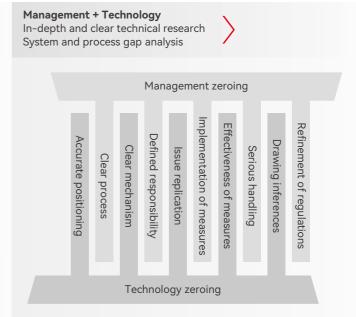
Front Matter



The Company has developed the LONGi Customer Service Manual and the Product After-sales Service Evaluation System, which define service standards and evaluation mechanisms, providing customers with high-quality and standardized service experience. To address technical challenges customers face, the Company has formulated the Technical Issue Handling Procedure to ensure a rapid and effective response to technical issues.

Furthermore, LONGi has established the *Group Quality-related Customer Complaints Management Policy*, ensuring timely and precise handling of customer complaints through standardized processes and clear escalation channels. The Company has also developed a "Dual Closed Loop, Dual Zeroing" feedback mechanism, which regulates complaint handling timeliness, tiered handling, escalation handling, and closed loop standards, ensuring customer feedback is efficiently transformed into service improvement motivation.





#### **Actions Taken**

#### **Customer Service System**

LONGi has established a three-tier global customer service system that connects regional departments, customer service departments, and quality management departments in marketing centers. This system enables the efficient allocation of service resources, guaranteeing prompt and professional responses to customer needs. We have developed a "Business-Technical-Service" integrated "Iron Triangle" service model to meet customers' full lifecycle service needs across business solutions, product technical solutions, and delivery services.



Senior experts at headquarters offer comprehensive technical support to customers across all dimensions.



Capable of handling customer-end issues, ensuring resources are available for resolution.



Six regional offices has been established around the world as customer service interfaces, providing fast responses, thorough on-site research and analysis, and crafting professional product solutions.

First level: local technical service

Second level: central empowerment support Third level: headquarters expert support

#### **Customer Health and Safety**

LONGi is committed to safeguarding customer health and safety, ensuring that all products provided are safe and reliable.



#### Product design phase:

 LONGi has obtained IEC61730 and UL61730 photovoltaic module safety verifications on safety risks such as electric shock and fire hazards, identifying and addressing potential safety issues in product design

#### Raw material selection:

LONGi follows strict standards and specifications, avoiding using substances harmful
to human health whenever possible, thus reducing health risks at the source.

#### ♦ After product sale:

- The Company provides comprehensive environmental, health, and safety information to customers, ensuring safe product usage.
- LONGi regularly collects customer feedback and addresses their environmental, health, and safety concerns
- The Company continuously monitors product safety risks and takes prompt actions, including recalls and disposal, when defects or safety hazards are detected

We have established product recall management procedures, defining proactive and reactive recall processes. In a product recall, the Company swiftly prepares a recall report detailing the reasons, scope, and resolution results and formulates targeted corrective and preventive measures to prevent future occurrences.



By the end of the Reporting Period, all LONGi module products had received the IEC 61730 photovoltaic module safety certificate, and no product recall events occurred during the Reporting Period.

#### **Customer Satisfaction**

LONGi values customer feedback and has established diversified communication channels to facilitate it. The Company regularly surveys customer satisfaction, evaluating overall service, timeliness, professionalism, and attitude. Based on these results, LONGi develops and implements targeted improvement measures to enhance customer satisfaction.



CC3 organizations:

Sales managers, delivery managers, and solution managers provide direct service support.



Service hotline: 4008-601012



Official website: https://www.longi.com/en/



LONGi e-mail: customercare@longi.com

Customer communication channels

#### Responsible Marketing

LONGi implements responsible marketing concepts, complies with the Advertising Law of the People's Republic of China and other applicable laws and regulations in its operating locations, and has established a review and supervision mechanism for responsible marketing materials. All marketing materials must be approved by authorized management personnel before publication to ensure all promotional content fully complies with applicable legal and regulatory requirements.

Additionally, the Company regularly organizes responsible marketing campaigns, including the "Iron Triangle" enhancement program for frontline sales teams and comprehensive marketing courses for new employees. These efforts strengthen sales personnel's understanding of corporate culture, product knowledge, and sustainability, enhance their awareness of preventing responsible marketing risks, and ensure compliance in product promotion and sales activities while promoting sustainable consumption within society.



#### **Targets and Performance**



customer complaint resolution rate of

the customer satisfaction rate is

During the Reporting Period, LONGi's customer relationship management actions yielded positive results, with a customer complaint resolution rate of 97.99% and the customer satisfaction rate<sup>1</sup> is 74.9%, achieving excellence.



During the Reporting Period,

- · no marketing compliance violations
- no product recall events occurred



1. LONGi's customer satisfaction is divided into five levels: Adequate (<20%), Satisfactory (20%-30%), Good (30%-50%), Excellent (50%-60%), and Outstanding (≥60%).

Front Matter



#### Governance

LONGi has established a three-tier supplier management structure consisting of "Decision-making Level-Leadership Level-Execution Level". The Board of Directors' Strategy and Sustainability Committee is responsible for strategic decision-making, the Group's Strategy Management Committee provides leadership and supervision, and the Supply Chain Management Center handles the day-to-day implementation, with supporting departments collaborating for the efficient development of supply chain management activities.

#### Decision-making Level

Strategy and Sustainability Committee under the **Board of Directors** 

Responsible for setting the strategic direction of sustainable procurement, establishing annual management objectives, making decisions on major issues, and ensuring consistency with the Company's overall ESG strategy

#### Leadership Level

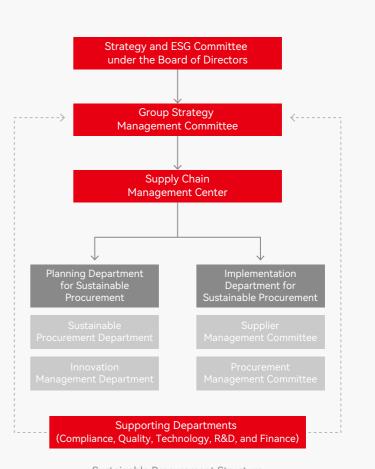
**Group Strategy Management Committee** 

Listen to the work report of the Supply Chain Management Center, monitor procurement progress, provide professional guidance and advice, and report regularly to the Board of Directors' Strategy and ESG Committee

#### **Execution Level**

Supply Chain Management Center

Divided into sustainable procurement planning and execution departments, responsible for building supplier management systems, developing procurement policies and standards, establishing supplier evaluation methods, conducting market survey and industry analysis, reviewing supplier qualifications, maintaining supplier relationships, and tracking supplier performance



Sustainable Procurement Structure

Social

#### Strategy

As a leading company in the PV sector, LONGi has developed ESG sustainability capabilities and became the first in the industry to receive ISO 20400 certificate<sup>1</sup> for its sustainable procurement system in June 2024, covering sustainable procurement management across the Group's supply chain. The Company integrates sustainable procurement throughout the procurement lifecycle, promoting the adoption of green development principles by upstream and downstream enterprises in the supply chain.

#### Policies and Approaches

LONGi continuously refines its supplier management system, establishing a comprehensive management process from supplier development to exit. The Company has developed several management policies related to sustainable supplier development, including the Supplier Management Policy<sup>2</sup>, Administrative Measures for Supplier CSR<sup>3</sup>, Supplier Sustainable Procurement Guidelines<sup>4</sup>, LONGi Supplier Code of Conduct<sup>5</sup>, and the Administrative Measures for Supplier ESG Risks. ESG requirements are integrated into procurement contracts covering suppliers, contractors, their affiliates, and tier-two suppliers. This approach helps standardize supplier management, with the system incorporating risk-based tiered control processes, ensuring closed-loop management from new suppliers to qualified suppliers and eventually to exit management. LONGi has established the Supplier Sustainable Procurement Policy<sup>6</sup> and the Supplier Social Responsibility Operational Guidelines<sup>7</sup> to guide suppliers in implementing practices related to business ethics, human rights, occupational health and safety, environmental protection, and corporate governance. Together, these efforts aim to drive the sustainable development of the supply chain.



### Sustainable Supply Chain Content of Policy



Green Procurement

• The company is committed to driving the green transformation of the industrial chain. In the "LONGi Supplier Code of Conduct", signed by suppliers, LONGi calls on industrial chain partners to prioritize environmental protection. Key suppliers are required to obtain ISO 14001 Environmental Management System certification, and the "Sustainable Procurement Policy" and "Sustainable Procurement Guidelines" advocate for green procurement. The company pledges to minimize the negative impact of raw materials used, actively collaborates with upstream suppliers and other stakeholders to promote the use of circular, renewable, and third-party verified raw materials, and avoids sourcing materials from regions critical to biodiversity through origin tracing.

- 1. Link to LONGi Performance Evaluation Statement of the ISO 20400 Sustainable Procurement Guidelines: https://www.longi.com/en/news/longi-iso-20400-sustainable-sourcing/
- 2. Link to LONGi Supplier Management Policy: https://static.longi.com/LON\_Gi\_Supplier\_Management\_Policy\_7ecf240e09.pdf
- 3. Link to Administrative Measures for LONGi Supplier CSR: https://static.longi.com/LON\_Gi\_Supplier\_CSR\_Management\_Measures\_b5705c78be.pdf
- 4. Link to Supplier Sustainable Procurement Guidelines: https://static.longi.com/LON\_Gi\_Sustainable\_Purchasing\_Guidelines\_for\_Suppliers\_9787ab032f.pdf
- 5. Link to LONGi Supplier Code of Conduct: https://static.longi.com/LON Gi Supplier Code of Conduct 21e607ed51.pdf
- 6. Link to LONGi Sustainable Procurement Policy for Suppliers: https://www.longi.com/en/sustainability/esq-society-sustainable-procurement/
- 7. Linkto LONGi Supplier Social Responsibility Operational Guidelines: https://static.longi.com/En\_LON\_Gi\_Supplier\_Social\_Responsibility\_Instruction\_1\_963e0027b9.pdf

Governance

# **LONGI** 2024 Sustainability Report

Sustainable Supply Chain	Content of Policy
Supplier Human Rights Protection	<ul> <li>LONGi requires assembly suppliers (Tier 1), component suppliers (Tier 2), and key raw material suppliers (Tier 3) to comply with the International Labour Organization (ILO) core conventions and fair terms. Additionally, LONGi urges suppliers to create fair, safe, and healthy working environments for their employees.</li> </ul>
Transparent Procurement	<ul> <li>"Fairness and Justice" is one of the core principles of the company's sustainable procurement policy. LONGi conducts comprehensive evaluations from multiple dimensions, including supplier qualifications, product quality, technical safety, delivery timelines, costs, and sustainable supply capabilities, to ensure a fair and transparent selection process. From a global supply chain perspective, LONGi selects the most suitable partners.</li> <li>The company has established a Supplier Relationship Management (SRM) platform, enabling the entire process of supplier bidding, procurement contract signing, fulfillment, delivery, and payment settlement to be conducted online and transparently.</li> </ul>
Responsible Mineral Sourcing	<ul> <li>LONGi has formulated the LONGi Conflict Minerals Procurement Policy<sup>1</sup>, committing to neither using nor selling any conflict minerals<sup>2</sup>. Additionally, all direct and indirect suppliers are required to pledge that their products do not contain conflict minerals from high-risk regions.</li> </ul>
Diverse Supplier	<ul> <li>LONGi launched the "Diverse Supplier" initiative to promote employee diversity within supply chain enterprises and foster social fairness and inclusion. By incorporating features such as quick registration and star marking in the supply chain system, we implement specialized management for eligible suppliers, including minority-owned businesses, women-owned businesses, veteran-owned businesses, and social enterprises. Under equal conditions, priority is given to these diverse-certified enterprises as suppliers. During the reporting period, the number of suppliers independently registered under LONGi's diverse supplier program increased by 74%, the number of suppliers engaged in partnerships grew by 150% compared to 2023, and the collaboration value tripled.</li> </ul>

<sup>1.</sup> LONGi Conflict Minerals Procurement Policy Link: https://static.longi.com/CONFLICT\_MINERALS\_PROCUREMENT\_POLICY\_d6b642bcd1.pdf

<sup>2.</sup> Conflict Minerals: Refer to tantalum, tin, tungsten, or gold (specifically columbite-tantalite (coltan), cassiterite, wolframite, and their derivatives) as well as cobalt, mined from the Democratic Republic of Congo (DRC) or any internationally recognized adjoining countries.

# Supplier Due Diligence

LONG 2024 Sustainability Report

Based on international standards and legal requirements for social responsibility, such as the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the OECD Due Diligence Guidance, the company employs due diligence methods such as questionnaire submissions and on-site audits to accurately identify weaknesses in suppliers' ESG management. Targeted guidance and support are provided, and the assessment results of suppliers' ESG performance, along with related improvement progress, are regularly disclosed to ensure transparency in sustainable supply chain information.

	Identify the assessment scope	Identify and assess risk	Develop mitigation plan	Communicate and feedback
General supplier approach	<ul> <li>Key Tier-1 suppliers</li> <li>High-risk suppliers</li> </ul>	For non-critical Tier-1 and high-risk suppliers  • Questionnaire assessment  For key Tier-1 and high-risk suppliers  • Conduct on-site audits  • LONGi conducts second-party audits  • Invite independent third-party audits	<ul> <li>Conduct training, such as basic knowledge training, LONGi procurement policy promotion, and industry best practices, etc.</li> <li>Promote and provide guidance for system certification (Social responsibility system certifications such as SA8000 and ISO 26000.)</li> <li>Implement closed-loop management of corrective action projects and eliminate suppliers who are not willing to make corrections or who violate LONGi's red lines</li> </ul>	<ul> <li>Establish an appeal channel</li> <li>Maintain regular communication and engagement</li> <li>Publicly disclose reports, announcements, and communication results</li> </ul>
Conflict mineral- related suppliers	Suppliers using materials containing 3TG	Promote the CMRT (Conflict Minerals Reporting Template) survey and the RMAP (Responsible Mineral Assurance Process) audit process		

# ◆ General Due Diligence

In 2024, we conducted questionnaire-based and on-site audit<sup>1</sup> due diligence for 123 new suppliers and 136 qualified suppliers. We performed 71 on-site audits for 48 key suppliers, accounting for 73% of BOM<sup>2</sup> material procurement value. During these audits, we identified a total of 1,768 issues, including 133 environmental issues and 870 social issues. Furthermore, we engaged third-party auditors and LONGi's ESG team (all auditors are SA8000 internal auditor certified) to conduct specialized ESG audits for silicon material and module component suppliers. The audits were based on SA8000 and legal standards, covering five areas—human rights, business ethics, health and safety, environmental protection, and management systems—across 12 modules and 84 audit criteria. During the on-site audit, a total of 480 issues were identified, including 48 environmental issues and 432 social issues. The 2024 on-site audit results were: 31% rated A (excellent), 46% rated B (good), 23% rated C (average), and no D (fail). All silicon material suppliers passed the audit, with no risks of child labor or forced labor identified. Other non-conformities identified during the audits were tracked and required suppliers to complete corrective actions within specified timelines.

Through a comprehensive assessment of the supply chain's ESG performance, we identified a total of 3 issues related to non-standard EHS (Environment, Health, and Safety) on-site management and incomplete management systems³ during our on-site audit this year. In response to these issues, we required the suppliers to develop improvement plans and complete the rectifications within the specified timeframes. As of the end of the reporting period, the closure rate for environmental issues reached 73%, and the closure rate for social issues reached 76%. No serious high-risk environmental or social issues were identified in the supply chain. The remaining un-closed non-conformities are being addressed according to plan, with no delays anticipated.

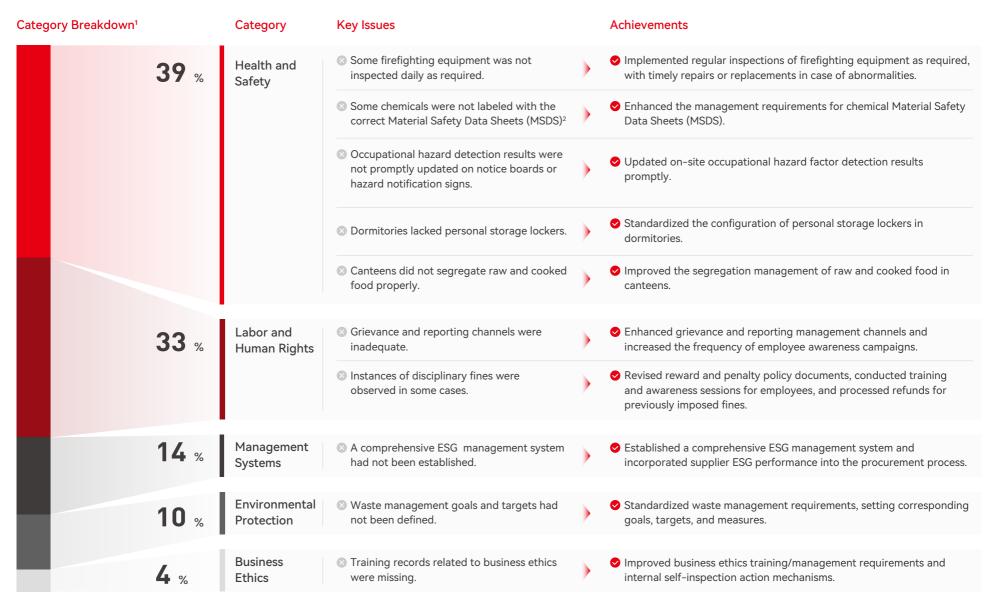
Key Findings from Supplier On-site Audits in 2024	Action initiatives
Non-standard EHS on-site management issues	<ul> <li>Planned and implemented a special EHS (Environment, Health, and Safety) capability enhancement program, conducted in-depth on-site inspections at supplier facilities to ensure compliance with relevant laws, regulations, and industry standards. Based on this, LONGi established clear improvement indicators for suppliers, tracked progress through regular monitoring mechanisms, and provided best practices to guide suppliers in enhancing their management capabilities.</li> </ul>
Issues with incomplete management systems	<ul> <li>LONGi offered suppliers a series of training programs on labor-related social issues, covering key topics such as anti-discrimination, prohibition of child labor and forced labor, and occupational health and safety. These programs helped suppliers better understand and comply with relevant standards, guided them in obtaining ESG certifications or participating in ratings, assisted in building ESG management frameworks, and encouraged suppliers to regularly disclose ESG information. In 2024, LONGi facilitated 23 suppliers in obtaining relevant certifications or completing information disclosure.</li> </ul>

2024 Supplier ESG Management Issues and LONGi's Actions

<sup>1.</sup> Including child labor/underage workers, forced labor, anti-discrimination, freedom of association, working hours & wages, anti-corruption, anti-bribery, conflict minerals, safety compliance & fire protection, chemical safety, occupational health & safety, environmental protection, and management systems.

<sup>2.</sup> Bill of Materials: BOM

<sup>3.</sup> The complete 2024 Supplier Due Diligence Report is available at: https://static.longi.com/LON\_Gi\_2024\_Supplier\_Due\_Diligence\_Report\_857c2f9cc6.pdf



Sustainability Due Diligence Results and Improvements on Issues

<sup>1.</sup> The percentages represent the proportion of each category's issues relative to the total number of issues, with a cumulative sum of 100%.

<sup>2.</sup> Chemical MSDS: Refers to the Material Safety Data Sheet (chemical safety technical specification document).

# Conflict Minerals Due Diligence

The company actively fulfills its management responsibilities for conflict minerals, committed to ensuring the sustainability and compliance of the supply chain. To ensure suppliers continuously adhere to responsible mineral procurement requirements, the company has established a responsible conflict mineral procurement management system based on the five-step framework of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. This system follows a management process of "signing commitments – periodic surveys – confirming smelter or refiner eligibility – providing reports – reviewing performance and empowerment."

Additionally, LONGi has formulated the Conflict Minerals Supply Chain Compliance Management Measures, which standardize and regulate the annual identification of 3TG¹ materials, supply chain surveys, risk assessments, and tiered supply chain management

# Signing Commitments

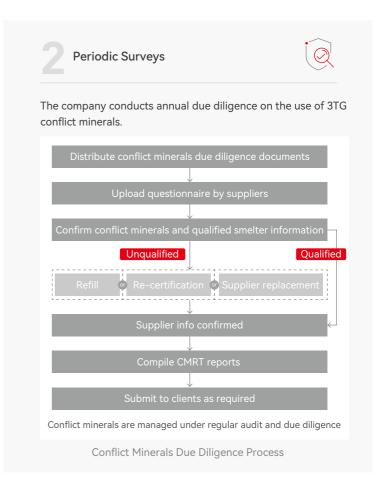
LONGi has formulated and publicly disclosed the *LONGi Conflict Minerals Management Policy*. New suppliers are required to sign the *LONGi Supplier Code of Conduct* during the qualification process, committing to sourcing 100% of our minerals from non-conflict regions, ensuring that 100% of the raw materials we use are responsibly sourced and conflict-free.

# Risk Prioritization



Identify the RMAP<sup>2</sup> certification results of upstream smelters or refiners and implement tiered management based on the results, incorporating them into performance management.

Low Risk	3TG material upstream smelters or refiners are RMAP-certified.	Supervision and review are conducted regularly in February and August each year.
Medium Risk	3TG material upstream smelters or refiners are not RMAP-certified, but the origin does not involve risk areas.	Continue cooperation and encourage the upstream smelters or refiners to obtain RMAP certification within 6 months.
High Risk	3TG upstream smelters or refiners are not RMAP-certified, and the origin involves risk areas or cannot be identified.	Terminate cooperation, conduct responsible mineral audits, and require RMAP certification or equivalent standards to be achieved within 6 months. If not achieved, initiate supplier replacement or exit procedures.



- 1. Conflict Minerals: Tin (Sn), Tungsten (W), Tantalum (Ta), and Gold (Au).
- 2. RMAP: Responsible Minerals Assurance Proces

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# Communication and Reporting



We educate upstream suppliers about relevant risks, helping them understand the potential impacts of conflict minerals. We require Tier 1 suppliers to complete the Conflict Minerals Reporting Template (CMRT) from the Responsible Minerals Initiative (RMI) and extend this requirement to all levels of supply chain partners. Suppliers must provide compliant CMRTs to maintain their qualification for continued supply.

# Monitoring and Empowerment



LONGi encourages suppliers to establish responsible mineral work objectives and routinely tracks their measures and performance in reducing conflict mineral risks. Additionally, to ensure supply chain compliance, we actively educate suppliers about risk awareness, helping them understand the potential impacts of conflict minerals.

LONGi encourages stakeholders to report issues or violations related to conflict minerals and has established accessible complaint channels. External stakeholders can provide feedback through various means, including phone calls, the "LONGi Integrity" WeChat mini-program, the group audit email, and the SRM portal.

During the reporting period, LONGi conducted two questionnaire surveys targeting all direct suppliers involved in 3TG1 (tantalum, tin, tungsten, and gold) conflict minerals through the Supplier Relationship Management (SRM) platform, achieving a coverage rate of 100%. No supplier's delivered products were found to contain 3TG1 minerals from conflict or high-risk areas that were not certified by third-party RMAP (Responsible Minerals Assurance Process). In the future, the company will gradually expand its coverage to include minerals such as cobalt and mica, further improving its responsible mineral procurement management system.

Smelter	Company name	Address
CID002180	Smelting Branch of Yunnan Tin Company Limited	No. 1 Smelting Road, Gejiu City, Honghe Hani and Yi Autonomous Prefecture, Yunnan Province, China
CID001070	China Tin Group Co., Ltd	Laibin City, Guangxi Zhuang Autonomous Region, China
CID000228	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.	Shegutian Group, Xiadu Village, Qiaokou Town, Suchuan District, Chenzhou City, Hunan Province, China
CID001231	Jiangxi New Nanshan Technology Ltd.	Longhua Industrial Park, Economic Development Zone, Nankang District, Ganzhou City, Jiangxi Province, China

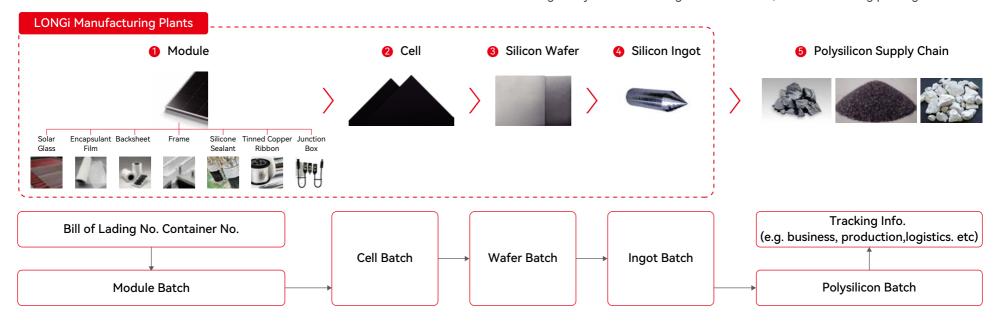
Summary of the Smelter List for 2024

# Supply Chain Traceability

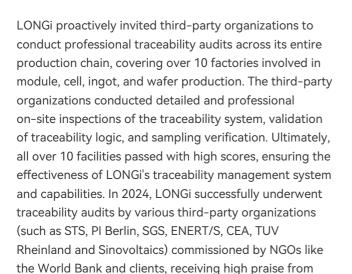
LONGi enforces rigorous traceability management standards and has established a three-tier control mechanism of "commitment - verification - admission." Suppliers in the silicon supply chain are required to first sign a commitment to compliance pathways. They are then subject to a three-dimensional audit and verification process that includes "on-site inspection + document traceability + capability assessment." This process cross-verifies the suppliers' compliance management capabilities, production traceability systems, and traceability management capabilities. Only high-quality suppliers who pass these stringent screenings are admitted into the traceability resource pool for management. After admission, dynamic tiered and graded management is implemented. Regular monitoring and evaluation of suppliers' traceability performance are conducted and incorporated into performance assessments to ensure survival of the fittest. This ensures that the entire supply chain always meets leading sustainability standards. Looking ahead, we will expand our traceability capability building to the non-silicon main material supply chain of modules.

LONGi, adhering to ISO 9001:2015 and SEIA (Solar Energy Industries Association) standards, and referencing traceability inspection criteria from clients and third-party organizations, has built its own supply chain traceability system from the ground up. The system establishes LONGi's traceability standards, comprising three major modules—Governance (Management), Implementation (Operation), and Support—with 23 business processes, and has published the Supply Chain Traceability System Manual.

Relying on the quality system, LONGi has optimized and enhanced the management standards and traceability implementation capabilities across its wafer, module, and cell production bases. This covers the entire business process, from material procurement, production planning, warehousing and logistics, product manufacturing, process monitoring. The company has also improved its business systems, Traceability Integration System (TSS), and traceability logic. Additionally, over 1,000 employees involved in traceability-related roles across the group have undergone systematic training and assessment, with all achieving passing scores.



these third parties.



Internally, we upgraded our Digital Traceability
Integration System. In 2024, we piloted the TSS online
traceability service, which provides clients with fully
transparent and visible end-to-end traceability, This
service covers all of our company's bases, extends
vertically to the silicon supply chain, and delves
horizontally into non-silicon main materials. It has
significantly enhanced the timeliness of traceability
services, offering clients a prompt and rapid traceability
experience.We will continue to optimize and enhance the
effectiveness of our traceability system and processes,
aiming to achieve customer satisfaction through efficient
and high-quality traceability services.

# Supplier Empowerment and Training

LONGi has formulated a 2024–2028 Supplier ESG Capacity Building Plan, aiming to gradually increase the proportion of procurement spending from key Tier 1 suppliers participating in the capacity building program to 95% between 2025 and 2028. As of the end of the reporting period, this proportion stood at 73%, representing an 18 percentage point increase compared to 2023. LONGi has launched the 'LONGi e-Learning Supplier Platform,' which provides systematic training and professional technical support to continuously promote the concept of sustainable development and assist suppliers in enhancing their ESG management capabilities. During the reporting period, 228 suppliers were encouraged to register and use the platform.

# Training Activities Conducted by LONGi in 2024:

- A total of 65 training sessions were held, combining both on-site and online formats. These sessions covered key topics such as environmental management, human rights, occupational health, production safety, and social responsibility management. The training adopted a "guidance + audit" closed-loop model, encompassing three aspects: management system planning, document preparation, and process record execution.
- ♦ Efforts were made to advance the construction of a green supply chain, with 45 environmental management training sessions conducted to empower suppliers to enhance their environmental management capabilities. Through this year's environmental management improvement initiative, 63 suppliers have completed rectification of environmental violations.
- Training was organized to improve suppliers' management capabilities in critical employee-related issues such as human rights and occupational health. This included interpreting labor laws and regulations and promoting occupational health knowledge, ensuring suppliers fully understand anti-discrimination, the prohibition of child labor and forced labor, working hours, compensation and benefits, health and safety, and more.
- Through the promotion of topics such as business ethics and corporate governance, suppliers were ensured to comprehensively grasp the fundamentals of compliant operations and improve their management standards.

Governance



LONGI 2024 Sustainability Report

# Qualification Compliance

- Completion and acceptance of building main structures and ancillary facilities (e.g., factories, canteens, dormitories)
- Safety (including fire safety) -"Three Simultaneities" principle
- Environmental and occupational health systems

# System Capacity Building

- Management system: Management manual, risk management, legal and regulatory identification, supplier/subcontractor management
- Labor and human rights policies:
   Child labor and young workers,
   forced labor, anti-discrimination,
   prohibition of harassment and
   abuse, freedom of association,
   rewards and punishments,
   protection of female employees, etc.
- Environmental and safety policies:
   Occupational health, hazard
   identification, labor protection,
   hazardous operations, special
   equipment, work-related injuries, etc.
- Business Ethics

# On-site EHS Management

- Personal safety: Labor protection, safety exits, firefighting facilities, emergency drills, and occupational health.
- Material safety: Management of machinery, chemicals, solid waste, and hazardous waste.
- Environmental safety: Wastewater discharges and exhaust gas emissions as well as toxic and hazardous positions
- On-site management: Rational scheduling, safety training, and routine supervision

# ◆ Collaborative Innovation with Suppliers

The Company has launched the "Four New Value Creation" platform, leveraging new technologies, materials, processes, and models to establish diverse collaboration mechanisms with suppliers, successfully driving the implementation of a series of innovative achievements. During the reporting period, 165 potential value innovation projects were identified, with 57 projects successfully implemented. Some projects focused on increasing the proportion of green product procurement, including: enhancing the procurement of green and low-carbon granular silicon products; replacing precious metals; reducing the weight of plastic-containing products; extending the lifespan of printing screens; and promoting the use of automated warehouses, multimodal transportation, and reusable packaging.

### **New Technologies**

Proactively explore cutting-edge technologies and secure exclusive usage rights to establish competitive advantages

- · Technological breakthroughs
- Joint R&D
- · Advanced technologies



# New Materials

Develop new materials to reduce procurement costs and achieve system-level savings

- Material R&D
- · Alternative materials
- New products



### **New Processes**

Optimize specifications and parameters to minimize downtime and enhance production efficiency

- · Specification optimization
- · Parameter optimization
- Process improvements



### New Models

Implement superior operational models to drive efficiency gains, cost reductions, and improved customer satisfaction

- Original Management Model
- Borrowed Management Model



# ◆ Promoting Supplier Environmental Management



Promotion of Resource Management

LONGi has incorporated water resource usage across the entire value chain into its management scope. The company encourages suppliers to enhance their water resource management through various measures, including obtaining ISO 14001 environmental management system certification, setting water-saving targets, implementing water conservation projects, and reducing wastewater discharge. During the supplier qualification process, we investigate and evaluate their water resource management practices in production. In the annual performance evaluation of existing suppliers, we include their water resource management performance as a key assessment criterion, continuously monitoring the progress of related water-saving initiatives.

In collaboration with upstream raw material and auxiliary material production suppliers, we reduce the water footprint throughout the organization and the product life cycle through source control, strengthened management, and joint cooperation.



Promotion of Carbon Emissions Management

The Company actively collaborated with the Institute of Public and Environmental Affairs (IPE) and Towngas Energy to provide professional guidance on carbon verification and disclosure for suppliers. In 2024, the following achievements were made:

- Facilitated 50 supply chain enterprises to successfully conduct carbon verification, with 4 suppliers voluntarily choosing to disclose carbon data through the IPE platform.
- Successfully partnered with 4 suppliers to implement green energy solutions, deploying 1,098 MW of photovoltaic rooftop installations, working together with suppliers to reduce carbon emissions.
- · Actively carry out the Science Based Targets initiative (SBTi) training to promote suppliers in setting carbon reduction targets.



Promotion of Waste Management

The Company launched a Supplier Waste Reduction Initiative, supporting over 70 suppliers in enhancing energy efficiency and emission reduction while ensuring regulatory compliance. Key optimization measures for pollutants and waste reduction include:

- Source Control: Using low-pollution raw materials to reduce VOC emissions.
- Process Optimization: Improving material efficiency, production yield, and workflow to minimize waste.
- End-of-Pipe Treatment: Enhancing waste processing efficiency, enabling water reuse, and promoting resource recycling.carbon reduction targets.

During the reporting period, 37 suppliers were encouraged to set short-term annual waste reduction targets, and efforts will continue to guide suppliers in establishing medium- and long-term waste reduction goals. Over 70 suppliers collectively reduced emissions by 3.86 million tons of exhaust gases, 760,000 tons of wastewater, 7,835 tons of hazardous waste, and 66,000 tons of general solid waste.

# ◆ Supplier Engagement

LONGi has established mutually trusting and collaborative partnerships with suppliers and developed diverse communication channels to strengthen engagement.



# Day-to-day business coordination

### **SRM**

Comprehensive business coordination through system modules



# Collaboration and coordination survey

Aimed at continual improvement

SRM supplier survey

# Regular exchanges

Quarterly exchanges Strategic resources

Semi-annual exchanges Significant & bottleneck

Annual exchanges

Special communication

Annual audit coaching

Supplier visits

# **Business communication**

# SRM Appeal Center

Business & non-business appeals

Public e-mail for supplier management Supply\_Chain@longi.com

"Four New" collaborative innovation program e-mail scmc-innovation@longi.com

# **Open Complaint Channels**

Group audit e-mail audit@longi.com

Due diligence e-mail compliance@longi.com

Complaint hotline 86 029-84193391 86 18089282003

### LONGi Honest

# LONGi in Sunshine





# ESG Capacity Building Exchange

A total of 43 ESG audit exchanges were conducted within the supply chain. Suppliers were required to build systems according to ESG standards and undergo ESG audits.

# **Audit Sunshine Cooperation Exchange**

A total of 304 exchanges were conducted both online and through offline visits. This helped to foster a good relationship between supply and demand parties, allowing them to better understand cooperation concepts and integrity culture, thereby strengthening the foundation for collaboration and achieving long-term, in-depth cooperation.

# Quality Exchange

The manufacturing business unit's SQE, technical, and process departments conducted 119 on-site audit exchanges. These focused on in-depth communication regarding quality anomalies to improve yield rates.

# Regular Exchanges

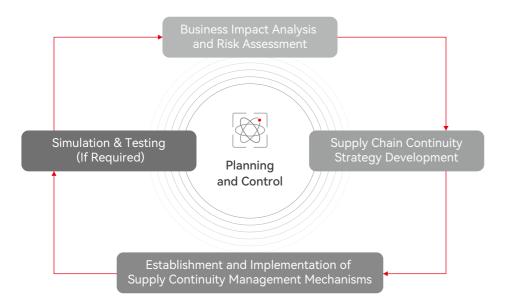
A total of 177 regular exchanges were conducted in the supply chain (including 155 with top management participation). Through in-depth communication, market information and technology trends are shared, and problems are jointly researched and solved.

Front Matter

# LONG 2024 Sustainability Report

# **Enhancing Supply Chain Stability**

The Company is continuously improving the stability of its supply chain to provide a fundamental guarantee for long-term development. We have established systems such as the "Procurement Management System," "Supplier Development Management Measures," "Supplier Resource Pool Management Measures," and "Strategic Supplier Management Measures." A dedicated insights department has been set up to conduct industry chain insights into segmented markets, implement the supply chain diversification development strategy, and provide precise guidance for procurement operations to ensure supply chain stability and security. In 2025, we will release the "Supply Chain Continuity Management Measures" to establish a risk management mechanism that dynamically monitors potential risks, allowing timely detection and response. Through internal supply chain operations BCP (Business Continuity Planning), we will form a comprehensive mechanism of pre-planning, control during the process, and post-improvement. This manages the processes of planning, procurement, supplier management, and transportation delivery, aiming to reduce or mitigate sustainable supply risks, ensure supply continuity, and strengthen the resilience and stability of the supply chain.



# ◆ Supply Chain Diversification

The Company has established a resource pool plan to ensure that there are at least two or more suppliers in the mainstream resource pools, with suppliers covering a global range (including countries and regions in Asia such as China and Southeast Asia; in the Americas such as the United States, Canada, etc.; and in Europe such as Belgium, the Netherlands, etc.). This reduces supply chain risks caused by issues with a single supplier or regional problems.

# ◆ Regional Collaboration:

The Company fully leverages its influence in the industry, advocates for the development of industrial clusters and localized layouts, and encourages suppliers to establish facilities nearby to reduce the impact of geographic location differences, which can make logistics and transportation more susceptible to severe weather conditions. Currently, the Northwest region, Jiangsu-Zhejiang region, and Shaanxi region have developed supportive resources for key auxiliary materials, further enhancing the efficiency and resilience of the supply chain.

### Value Collaboration:

LONGi signs long-term framework agreements with key first-tier suppliers, clarifying the cooperation objectives, responsibilities, and rights of both parties to ensure the stability and sustainability of the partnership. Additionally, by investing in suppliers or providing financial support, we establish closer collaborative relationships with them to jointly explore value engineering, conduct joint development, and achieve deep collaboration within the supply chain.

### Procurement Collaboration:

The Company actively promotes a "Collaborative Procurement" model, utilizing a digital system to establish a connection with suppliers, creating a resources pool. The company plans and monitors the objectives of this resources pool to ensure that the resources within it are of high quality and active. Additionally, it synchronizes demand forecasting, inventory management, and material requirement planning, referencing Just-In-Time (JIT) and Vendor Managed Inventory (VMI) models to implement proactive management of materials, thereby improving the efficiency and responsiveness of the supply chain.

# **Digital-Driven Business**

The Company has always valued long-term partnerships with global suppliers, establishing relationships with 3,822 suppliers, including many small and medium-sized enterprises. This vast supplier network reflects our commitment to building fair and transparent collaborative relationships. Ensuring timely payment of invoices is a critical measure to maintain the stability and trust of our supply chain.

Since 2021, the Company has built and improved a digital system and management platform for online automatic settlement payments. Through collaborative procurement projects with suppliers, we have achieved timely API interface communication, facilitating information sharing, quick responsiveness, and close interaction, further optimizing the collaborative management model of capacity and inventory. With ongoing development of the platform and system functionalities, the company has achieved online electronic management of supplier onboarding, receipt, and settlement processes. The supplier management system can automatically match payment cycles and trigger payment operations, ensuring that the payment progress is fully visible. Additionally, the company has established an independent accounting team to monitor the payment process in real time, guaranteeing the timeliness and accuracy of payments.

As of the end of this reporting period, the supplier automatic settlement payment achievement rate has reached 90%. During the reporting period, there were no instances of overdue payments to suppliers.

# Impact, Risk, and Opportunity Management

Governance

The Company is dedicated to establishing a comprehensive supply chain ESG risk management system and has developed the Supplier ESG Risk Management Measures. Additionally, it has referenced international social responsibility standards such as RBA, SA 8000, the United Nations Charter, and the Business and Human Rights Standards to formulate LONGi's supply chain ESG audit standards. By systematically identifying and managing ESG risks in the supply chain, we aim to create a responsible supply chain ecosystem. For suppliers who perform excellently in ESG risk assessment, the company will provide annual recognition and awards, as well as correspondingly increase their share of collaboration; for suppliers with poor performance, we will consider reducing cooperation or initiating an elimination process.

# Risk Assessment Tools

▼ Third-party database screening

To balance the coverage and effectiveness of supplier ESG risk assessments, the Company employs a diversified approach to identification and evaluation, including third-party database screening, due diligence questionnaires, on-site audits, third-party audits, and third-party certifications.

### The Company's Supplier Business Info Legal Info Relationship Management (SRM) · Business licenses Litigation platform has integrated third-party credit status labor disputes customers/ suppliers IP disputes tools such as 'Qixinbao' and 'IPE,' certifications · enforcement cases enabling efficient verification of Financial Info key information regarding new Financial reports suppliers, including business · debt analysis information, ownership structure, public sentiment, labor disputes, Relationships Dynamic Risks Equity structure · Operational and environmental compliance. · foreign investments · financial This helps us quickly screen · bid-rigging legal environmental blacklists potential suppliers for compliance · ESG risks risks and provides strong support for subsequent access evaluations.

Risk Management System

1. RBA: Responsible Business Alliance



# ▼ Due diligence questionnaire

Based on international standards and legal requirements such as the UNGP (United Nations Guiding Principles on Business and Human Rights) and the OECD Guidelines for Responsible Management, the questionnaire covers core ESG themes including human rights (child labor, forced labor, wages, discrimination, working hours, freedom of association, etc.), health and safety, environmental protection, business ethics (anti-corruption, anti-bribery, antitrust, data privacy, conflict minerals, etc.), and management systems. If a supplier's risk level does not meet the access threshold, we will suspend the development process.

### ▼ Third-party audit

To audit whether suppliers comply with the *Supplier Code of Conduct*, the company conducts comprehensive internal audits and external third-party audits across the supply chain. For internal audits, the company performs document reviews and on-site audits. In 2024, document reviews were conducted for 93 suppliers, and on-site audits were performed for 48 key new suppliers, achieving 100% coverage of high-risk suppliers, with re-evaluations conducted for one-third of high-risk suppliers. For external audits, the company engages third-party auditing firms that communicate with workers in a confidential manner and audit the suppliers' work and accommodation facilities. During the audit period, suppliers maintain an open attitude and allow auditors to access facilities, review records, and interview workers

# ▼ Supplier ESG Management Survey

Governance

The Supplier ESG Management Survey references the OECD *Guidelines for Responsible Management* and includes key assessment points for environmental risk, social risk, and governance risk in its evaluation. It comprehensively assesses the ESG risk level of suppliers based on dimensions such as key ESG events, rating certifications, industry risks, regional risks, factory size, EHS compliance documentation, and on-site compliance performance. This serves as a due diligence method during the supplier access phase and provides a preliminary basis for identifying ESG risks in suppliers. If a supplier's risk level does not meet the access threshold, we will suspend the development process.

### ▼ On-site audit

On-site audits are a core component of the supplier ESG risk assessment. We gain direct insight into and collect information on suppliers' ESG management through interviews, document reviews, and on-site observations, and we provide improvement recommendations based on the assessment results.

# ▼ Third-party certification

Encouraging and requiring suppliers to obtain third-party verification is a powerful measure for the company to assess and enhance supplier ESG performance. To achieve ESG-related third-party certifications, suppliers must actively evaluate their own ESG management deficiencies and take targeted improvement measures.

# **Risk Management Process**

The Company integrates supplier ESG risk assessments throughout the entire lifecycle of cooperation, starting with two key phases: new supplier access assessments and annual evaluations of qualified suppliers. This ensures strict selection during the supplier introduction phase and dynamic control during the cooperation process, enabling timely identification and resolution of potential ESG risks.

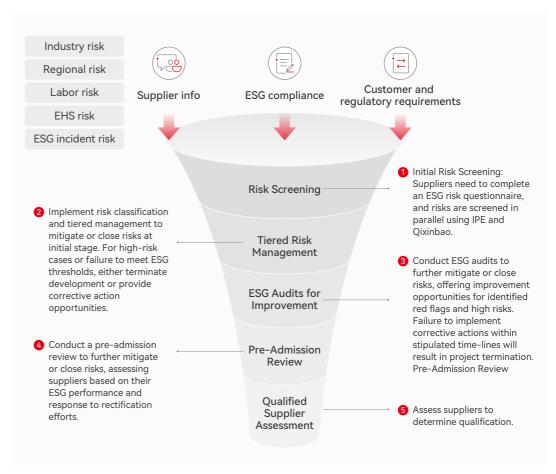
Macroeconomic Factors			
Countries and Regions	Industry	Products	
ESG Risk Situation of the Manufacturing Location (e.g., geopolitical conflict risks)	Resource Intensity of the Industry (e.g., labor intensity, energy consumption)	Product Nature (e.g., presence of hazardous substances, plastic products)	

Supplier Operational Behavior			
Environment	Society	Corporate Governance	
Carbon Emissions, Toxic Emissions, Waste, Water Resources, etc.	Employee Rights Protection, Health and Safety, Conflict Minerals, Labor Disputes, Sustainable Supply Chain, etc.	Management Systems, Compliance, Corrupt Practices, etc.	

# Supplier ESG Risk Assessment (Selected Mission)

# ◆ Supplier ESG Access Assessment

New suppliers must successfully register on the LONGi Supplier Platform and sign the Supplier Declaration<sup>1</sup> and the LONGi Supplier Code of Conduct<sup>2</sup>. The signed Supplier Code of Conduct will serve as an annex to the contract and will govern the behavior of suppliers throughout the entire contract execution process. After becoming a potential supplier for LONGi, procurement personnel will conduct a comprehensive qualification review of the suppliers based on category thresholds.



<sup>1.</sup> The Supplier Declaration link: https://static.longi.com/20220610\_CSR\_1\_0c4d1490d3.pdf

We require suppliers to complete a due diligence questionnaire, incorporating ESG performance such as labor management into the suppliers' "scorecard" for supplier review and selection. For suppliers that do not pass the qualification review, LONGi will take measures such as prohibition of access management, high-risk management, or red line management based on their specific circumstances to control ESG risks from the source, ensuring the high-quality access of new suppliers. In 2024, 100% of suppliers were selected based on environmental and social standards1.

# Management of High Risk

If a supplier is determined to be high risk, the company must conduct an on-site inspection to assess whether to incorporate the supplier based on the results of the inspection.

# Management of Red Line Issues

The following items are prohibited, and improvements must be completed otherwise, access would be prohibited

- · The use of any form of child labor is prohibited
- Forced labor is prohibited, and restrictions on employees' personal freedom are prohibited.
- The use of violence, abuse, corporal punishment, or sexual harassment is prohibited, as is illegal body searches or searches by the opposite sex
- Paying employees below the local wage standards is prohibited.
- There have been incidents of fire or serious injuries within the past 12 months; the factory currently has significant occupational health and safety and fire risks.
- There have been significant environmental violations or major environmental pollution incidents in the past year; the factory currently engages in illegal emissions of pollutants.
- Within the past 3 years, the company or its high-level executives (including current legal representatives, directors, supervisors, high-ranking officials, or direct persons responsible for supply projects) have faced criminal or administrative penalties for commercial bribery

# Management of Access Prohibition

Such behaviors occurring within 2 years will result in a 2-year or permanent prohibition of access

- Major illegal activities that violate national laws and administrative regulations
- Engaging in false, deceitful, fraudulent, or fabricated actions
- · Violating the occupational health, safety, and environmental protection rights of internal and external employees
- · Violating requirements for ethical cooperation
- · Violating the basic human rights of internal and external employees

<sup>1.</sup> Social standards include signing the LONGi Supplier CSR Code of Conduct, passing social risk screenings such as labor disputes, and submitting supplier due diligence questionnaires. Environmental standards involve screening for certifications such as ISO 14001 Environmental Management System, ISO 45001 Occupational Health and Safety Management System, and ISO 50001 Energy Management System or Green Factory status. Additionally, the IPE (Institute of Public and Environmental Affairs) third-party tool is utilized to monitor records of major environmental violations.

# ◆ Annual ESG Assessment for Suppliers

After becoming a qualified supplier for LONGi, the company conducts an annual ESG risk assessment. The assessment content includes topics such as environmental management, pollutants and waste, energy and resources, human rights, occupational health, business ethics, and corporate governance. LONGi employs graded ESG management for suppliers and classifies them into risk categories (high risk, medium risk, and low risk). Corresponding control measures are established for suppliers of different risk levels, along with a corrective action plan. If a supplier fails to meet ESG standards, including the RBA Code of Conduct¹, for an extended period, we will terminate our cooperation with suppliers that pose significant compliance risks.

Risk Level	Audit and Supervision Requirements	Daily Supervision Requirements	Training Requirements	
High Risk	In principle, on-site audits are conducted annually, and due diligence document reviews are conducted each year until the risk is reduced to low risk	Incorporate into supplier performance evaluations to drive continuous improvement.	Regular supplier training sessions are organized.	
Medium Risk	In principle, on-site audits are conducted every three years, and due diligence document reviews are conducted each year until the risk is reduced to low risk.			
Low Risk	On-site audits are conducted as needed, and due diligence document reviews are conducted each year	Award and commend suppliers to encourage them to continue improving		

# ◆ Supplier Exit Management

For suppliers with inappropriate behaviors, we classify them into two categories based on the nature of their actions and the severity of their impacts: elimination and blacklisting. Suppliers placed on the blacklist will, in principle, never be reused within the group.



### Elimination

For suppliers with consistently poor performance that cannot be improved, alongside behaviors such as a lack of service awareness and low cooperation, or those with significant risks, LONGi will initiate an elimination review. Eliminated suppliers will be restricted from participating in new procurement activities in the categories and organizations from which they were eliminated, and they will generally not be allowed to be reused for a year.



### Blacklist

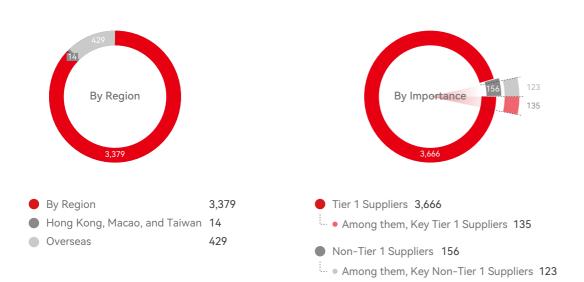
If a supplier breaches one or more red line issues, a blacklist review may be initiated against the supplier. Suppliers that are placed on the blacklist will, in principle, never be reused within the group.

88

# **Metrics and Targets**

Number of Suppliers

LONGi 2024 Supplier Count (Unit: Counts)



# **Supplier Distribution**

# Silicon Materials

Sichuan	Qinghai	Jiangsu	Gansı
Inner Mongolia	Yunnan	Shaanxi	

# Module Materials

Jiangsu	Taiwan	Shanghai	Guangxi	Liaoning
Zhejiang	Shaanxi	Hebei	Shandong	Ningxia
Anhui	Henan	Jiangxi	Hubei	Tianjin
Sichuan	Guangdong	Fujian	Hunan	

# Supporting Materials Overseas

Vietnam	Malaysia	Indonesia	the US
Singapore	Germany	Thailand	

# Certification Performance of Suppliers

By the end of the reporting period, 100% of BOM key material suppliers had obtained ISO 45001, ISO 14001, and ISO 9001 certifications. At the same time, LONGi is gradually requiring auxiliary material suppliers to cover system certifications. The current status of all suppliers' system certifications within the company is as follows:

Number of suppliers certified with ISO 45001

1,575

Number of suppliers certified with ISO 14001

1,663

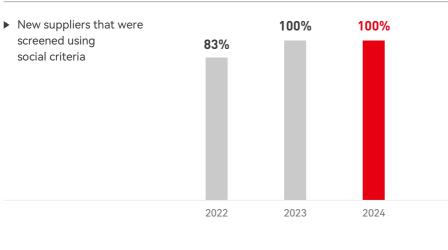
Number of suppliers certified with ISO 9001

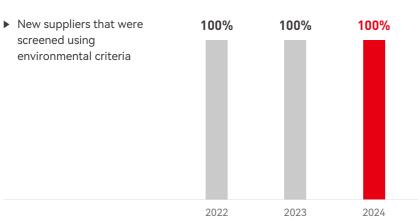
2,208

Certifications Obtained by Suppliers	2024
Conducted EcoVadis rating and received a medal	4
Promoted SA 8000 certification	8
Passed RBA audits	3
Promoted suppliers to rectify IPE environmental violations and remove them	63

# ■ Sustainable Supply Chain Management Performance

LONGi New Suppliers Screened by Using Social and Environmental Standards in 2022–2024<sup>1</sup> (Unit: Counts)





<sup>1.</sup> Social standards include signing the LONGi Supplier CSR Code of Conduct, passing social risk screenings such as labor disputes, and submitting supplier due diligence questionnaires. Environmental standards involve screening for certifications such as ISO 14001 Environmental Management System, ISO 45001 Occupational Health and Safety Management System, and ISO 50001 Energy Management System or Green Factory status. Additionally, the IPE (Institute of Public and Environmental Affairs) third-party tool is utilized to monitor records of major environmental violations.



In 2024, the signing rate of LONGi's Supplier Code of Conduct and Integrity Agreements reached

100 %



The proportion of new suppliers selected based on environmental and social standards is

100 %



The company conducted due diligence on

123 (100%) new suppliers



The Company performed third-party ESG audits on

11 suppliers



Due diligence was carried out on 136 qualified suppliers, accounting for

**91** 9

of the total BOM material procurement amount for the group



The Company conducted

71 on-site audits

of 48 key new suppliers

Accounting for

**73** 9

of the BOM material procurement amount

Providing

100 %

coverage of high-risk suppliers

Due diligence was conducted on 12 direct suppliers involved with conflict minerals, achieving  $\,$ 



100 %

No products delivered by suppliers were found to contain 3TG minerals sourced from conflict areas or high-risk regions that had not been certified by third-party RMAP



33

suppliers were eliminated for violating LONGi's red lines

# Supplier Training Performance

	2022	2023	2024
Number of training sessions	108	258	65
Total training hours	230	608	145
Number of participating suppliers	397	5,993	1,295

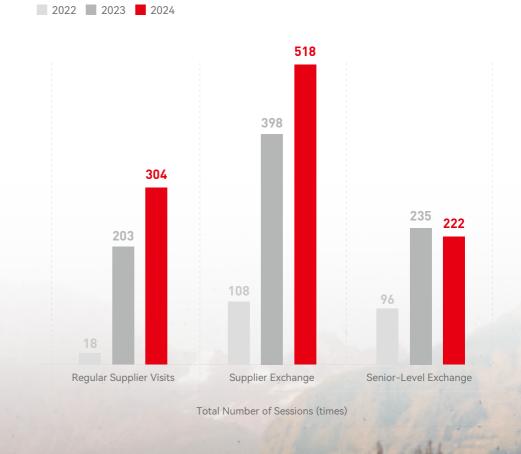
ESG

The completion rate of ESG training for procurement staff and suppliers has reached

100 %



# LONGi 2022-2024 Supplier Exchange Performance



# 03

# Environmental

LONGi is committed to proactive stakeholder engagement on key environmental topics, ensuring that diverse perspectives are fully integrated into our decision-making processes. Through comprehensive internal training programs and awareness campaigns, we continually strengthen employee environmental consciousness and advance sustainable development principles throughout the organization.



- Climate Change and Clean Technology R&D
- 112 Water and Effluents
- 121 Pollution
- 125 Waste
- 128 Resource Use and Circular Economy
- 131 Biodiversity and Ecosystems

+ SDGs addressed in this chapter

















LONGi has implemented a robust environmental management system founded on the *Environmental* 

Management Control Procedures, reinforced by

and technical guidance protocols. In 2024, LONGi

governance, maintain ongoing monitoring of

assessments of critical indicators including energy consumption and waste emissions to facilitate continuous improvement and environmental risk

specialized environmental element management policies

developed the E20 Environmental Management Model, a systematic, holistic lifecycle approach to environmental governance, to enhance base-level environmental

environmental performance metrics, and conduct regular

mitigation. LONGi additionally engaged experts from the Ministry of Ecology and Environment to establish a simulated ecological environment inspection team,

headed by LONGi's EHS director and comprising expert

team members. This team evaluates environmental

challenges facing the Company through the lens of

central environmental protection supervision, driving

environmental management excellence and supporting



As of the end of the Reporting Period, all operating sites have achieved 100% certification in the ISO 14001 Environmental Management System

100 %

green supply chain

management

enterprise



national and provincial green factory designations

national-level green design demonstration enterprise for industrial products

1

production facilities certified for clean production

5



In 2024, LONGi's environmental protection investments totaled RMB 369.876 million, and the proportion of operational sites that have undergone specific environmental risk assessments is 100%., with zero incidents of environmental non-compliance, regulatory violations, or administrative penalties.

RMB 369.876 million

100 %



# Response to Climate Change and Clean Technology R&D

# Governance

LONGi has established a climate change governance structure led by the Board of Directors to effectively drive climate governance and implementation. Leveraging extensive experience in the PV and energy sectors, LONGi's Board members possess strong capabilities in identifying and managing climate-related risks while capitalizing on opportunities emerging from the low-carbon transition.

# **Decision-making Level**



# Strategy and Sustainability Committee under the Board of Directors

The supreme decision-making and governance body for corporate climate action: hold at least one annual meeting to review climate change strategies and objectives, including medium-to-long-term plans, annual plans, and the formulation/implementation of relevant policies, and oversee the management of identified climate risks and opportunities.

# Management Level



# Strategy Management

The climate action decision–making body led by the Chief Sustainability Officer (CSO): conduct periodic assessments of climate change risks/ opportunities and develop corresponding climate action strategies.

# **Execution Level**



# Sustainability and ESG Office

The coordinating body for advancing corporate climate action led by the Brand Management Department: responsible for organizing and executing the company's climate action commitments.

# Energy Management Leadership Group

The implementation body for energy conservation and emission reduction initiatives led by the Plant Management Department: responsible for executing corporate carbon accounting and reduction programs.

# Supply Chain Management Center

The environmental and emission reduction management department for value chain suppliers, managed by Supplier and Operations Management Department: responsible for carbon accounting, promoting and evaluating supplier emission reduction actions.

To strengthen the Board of Directors 'management of climate-related matters, LONGi has established the Strategy and Sustainability Committee under the Board, comprising the Board Chairman, Managing Director, Chief Financial Officer, and two additional directors. The Strategy and Sustainability Committee meeting convenes at a minimum once per year.

At the management level, LONGi has instituted a Strategic Management Committee coordinated by the Chief Sustainability Officer. Serving as the principal decision-making body for climate action, this committee receives annual assessments on material climate topics, including environmental management, climate risk, energy and water consumption, and carbon footprint calculation, from the brand management team leader, EHS manager, energy manager, and key factory directors to develop and guide climate action strategies for the upcoming year.

At the operational implementation level, the Sustainability and Climate Action Office collaborates with the Energy Management Committee to coordinate departments and subsidiaries in advancing climate change response measures and implementing carbon reduction targets, with regular progress reporting to the Board of Directors.

Furthermore, LONGi has established special reward funds for energy improvement projects at the Group level, conducting annual reviews of energy improvement projects submitted by business units and selecting priority projects for Group-level implementation. In the future, LONGi will continue exploring incentive mechanisms tied to climate-related performance indicators cascaded throughout business units.

# **Strategy**

# Identified Impacts, Risks, and Opportunities

In 2023, LONGi conducted comprehensive assessments to identify and analyze climate risk-vulnerable segments and potential opportunities throughout the value chain, utilizing value chain mapping, climate database risk screening, and industry research methodologies. Following TCFD framework recommendations, we identified 16 transition risks, 65 physical risks¹, and 15 climate-related opportunities, with detailed findings published in the 2023 Climate Action White Paper of LONGi². LONGi has reassessed changes in the external environment in the year, and determined that there are no material changes to core climate-related risks and opportunities.

<sup>1.</sup> Physical risks are closely associated with the geographical locations of actual operational sites; therefore, when multiple operational sites identify the same physical risk, these are treated as separate risk instances.

<sup>2.</sup> Climate Action White Paper: https://static.longi.com/2023\_LON\_Gi\_Climate\_Action\_White\_Paper\_efb952f280.pdf

# Policies and Approaches

LONGi has developed the *Environmental Management Policy*<sup>1</sup> in accordance with environmental protection laws and regulations to drive reductions in energy consumption and greenhouse gas emissions.





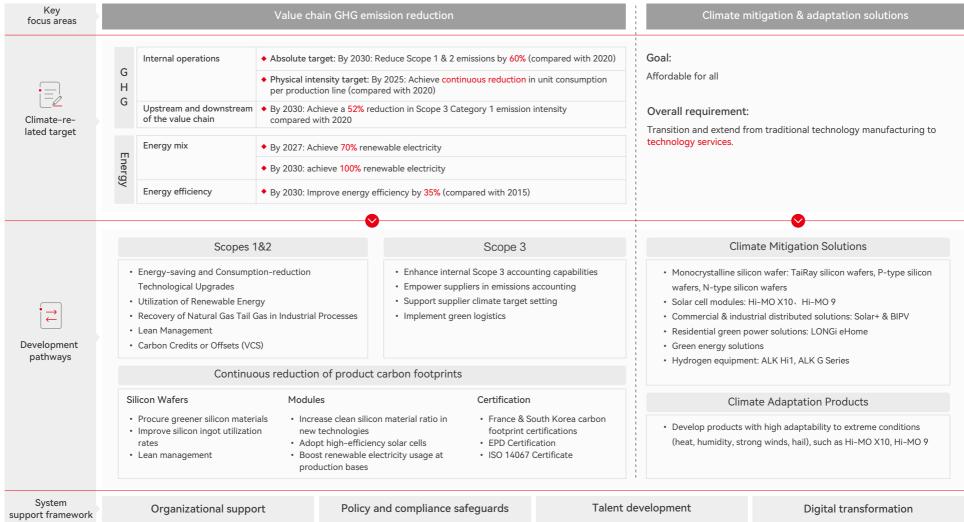
Applicable topics	Coverage	Policy commitment	Systems and procedures
Energy and resource management	Applicable to LONGi and all branches, subsidiaries, and affiliated organizations	LONGi is committed to conserving energy and resources, progressively reducing dependence on fossil fuels. We implement advanced energy-efficient technologies, develop intelligent energy management systems, and maintain production equipment at optimal operational efficiency to minimize energy consumption and maximize energy performance. We follow circular economy principles, exploring and implementing green production processes to minimize environmental impacts and resource depletion. We monitor energy and resource utilization efficiency, ensure the effectiveness of environmental management measures, and pursue continuous improvement based on performance assessments	We have established governance frameworks including the Energy Management Manual, the Energy Management Policy, and the Administrative Measures for Energy Data, formed a Group Energy Management Leadership Team chaired by the Chairman, supported by an Energy Management Leadership Team Office and Energy Management Expert Team, ensuring standardization throughout the entire energy management process.
Greenhouse gas emissions management		LONGi has established a greenhouse gas emissions accounting system spanning the value chain. We identify and manage climate risks in accordance with international standards, and have developed and received approval for SBTi in line with the PV sector trajectories and our operational context. We advance energy conservation, emissions reduction, and renewable electricity usage in production processes, accelerating product carbon footprint management systems and certification, and positioning ourselves as a leader in climate action and sustainable development within the PV sector.  • We commit to ultimately achieving 100% renewable energy usage and net-zero emissions by 2050  • We commit not to finance any external activities or organizations opposing climate change action  • We commit to enabling key suppliers to proactively implement environmental management and emissions reduction actions	LONGi conducts a group-wide carbon verification and certification annually, updates its greenhouse gas emission inventory once a year, and has received third-party certification for five consecutive years.  Prioritizing internal operations and supply chain carbon emissions management, with carbon accounting, energy management, and clean energy infrastructure development as core strategic measures, we have developed the Carbon Emissions Management System Manual, the Renewable Energy Power Management Measures and the Zero-carbon Factory Construction Guidelines. In compliance with ISO 14064 standard requirements, we have achieved comprehensive coverage across the EMS operational framework and implemented an online platform for carbon emissions data management to continuously enhance internal carbon emissions data verification protocols.

# **LONG** 2024 Sustainability Report

Actions Taken

LONGi is committed to addressing climate change through a three-pronged approach focusing on green manufacturing, innovative solutions, and enhanced product resilience. Through technological innovation, the Company aims to drive low-carbon transformation while accelerating global energy transition and carbon neutrality objectives.





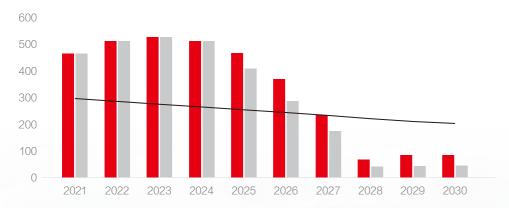
Front Matter

# Green Manufacturing

Based on its SBTi commitments, which mandate a 60% reduction in operational greenhouse gas emissions by 2030, and accounting for projected business growth with the anticipated achievement of 100% renewable electricity usage by 2028 under the RE100 framework, LONGi has developed the following carbon reduction pathway.

LONGi's GHG Emission Scenario Predictions for Operations-CO<sub>2</sub> equivalent (10,000 tons)





# ◆ Internal Operations-Greenhouse Gas Emissions Reduction

Analysis of LONGi's historical greenhouse gas emissions profile reveals that Scope 2 emissions constitute over 95% of total operational greenhouse gas emissions, with electricity consumption being the predominant driver. Consequently, enhancing energy efficiency and transitioning toward renewable electricity sources have become strategic priorities in LONGi's emissions reduction efforts.

Regarding energy efficiency, LONGi implements targeted emission reduction initiatives across all production segments, including monocrystalline silicon, wafers, cells, and modules, to continuously optimize operational energy efficiency. In 2024, the Company implemented 477 technical energy efficiency upgrades, projected to conserve approximately 426 GWh of electricity annually, reducing greenhouse gas emissions. Additionally, the Company conducted skills promotion and training sessions, delivering energy conservation awareness campaigns to all employees and providing specialized energy conservation training for the Group's executives to enhance energy-saving awareness.

98

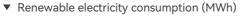
	Energy efficiency initiatives	Production mode optimization	Energy conservation achievements
Monocrystalline silicon	Process improvement  Crystal pulling and seeding power benchmarking management initiative:  • We developed a seeding power benchmarking dashboard utilizing the silicon wafer BI system and integrated control center data to optimize seeding power consumption.	scheduling and manufacturing modes, implementing specialized actions for energy consumption management during production line stops	The Silicon Wafer Business Unit (Monocrystalline + Wafer) executed  73 electricity conservation projects in 2024, projecting annual electricity savings of
Wafers	Process refrigeration system efficiency enhancement:  • We improved slicing process chilled water system efficiency by analyzing improvement opportunities in process chilled water demand.		<b>235</b> GWh.
Cells	Process equipment nitrogen usage optimization project:  • We optimized nitrogen supply in production processes by evaluating equipment and process energy-saving potential, reducing air separation equipment operating load.		The Cell Manufacturing Center conducted  173 electricity efficiency projects in 2024, with expected annual electricity savings of  137 GWh.
Modules	Process improvement  Compression cycle improvement project:  • We established standard lamination cycles through internal benchmarking and cross-departmental collaboration, effectively improving laminator energy utilization.		The Module Manufacturing Center deployed  231 electricity conservation projects in 2024, with projected annual electricity conservation of  54 GWh.

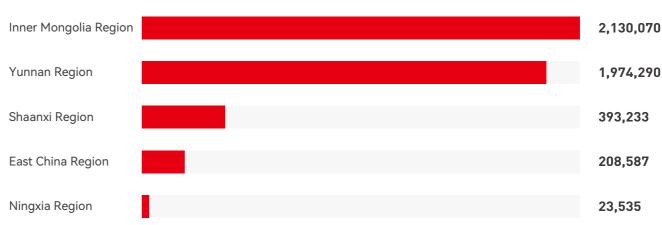
Front Matter

Regarding energy portfolio management, LONGi continuously optimizes its energy structure, progressively increasing renewable electricity utilization rates. In 2024, LONGi utilized 4.746 TWh of renewable electricity through on-site PV generation, green power procurement, and renewable energy certificate transactions, representing 47.5% of total electricity consumption, which translated to avoided indirect emissions of 2,546,741.37 tons of carbon dioxide<sup>1</sup>.

From a renewable electricity usage perspective, Inner Mongolia and Yunnan regions demonstrated the highest consumption volumes, each approaching 2 TWh. In terms of proportional renewable usage, Inner Mongolia and Yunnan regions maintained leading positions, primarily attributable to regional resource advantages such as abundant hydroelectric capacity in Yunnan and substantial wind and solar generation capacity in Inner Mongolia. From a sourcing perspective, on-site PV generation alone cannot meet production electricity demands, necessitating further reliance on external renewable electricity and renewable energy certificate transactions for higher proportions in the future.

# LONGi Renewable Electricity Consumption 2024 by Region





# Main Sources of Renewable Electricity & Renewable Electricity Share (%)





 Green electricity trading

# Yunnan Region



- Green electricity trading
- · on-site PV

# Shaanxi Region



- Green certificate trading
- on-site PV

# East China Region



- Green certificate trading
- on-site PV



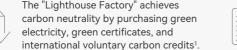


· On-site PV

In 2024, the Jiaxing base successfully became LONGi's first zero-carbon factory, adhering to ISO 14068 standards, and is currently the first "Lighthouse + Zero Carbon" factory in the photovoltaic industry.

- Lighthouse Factory Enhances Energy Efficiency:
  - A smart energy management system has been deployed, along with the introduction of globally leading intelligent production equipment, including fully automated string welding machines, automated production lines, Al string traceability, and other advanced smart devices and processes. In 2024, the unit product energy consumption at Jiaxing LONGi Solar decreased by 24.6% compared to the previous year.
- Promotion of Energy-Saving Renovation Projects:
  - Jiaxing LONGi has conducted transformer energy efficiency upgrades, electrochemical energy storage projects, intelligent control systems for efficient cooling rooms, and EMS system iterations, saving significant amounts of energy consumption for the company. A total of 26 energy-saving projects were implemented in 2024, resulting in an annual energy savings of approximately 13 GWh, equivalent to a reduction of 7,600 tons of carbon emissions.
- Accelerating Energy Structure Upgrade:

A 17.03 MW photovoltaic power station was built on the roof of the Jiaxing LONGi factory, consuming approximately 16 GWh of electricity in 2024, which accounts for 10.2% of the total electricity consumption and corresponds to a reduction of 9,558 tons of carbon emissions. Additionally, LONGi's first electrochemical energy storage project—the 13.4 MWh electrochemical energy storage demonstration project at Jiaxing LONGi—was successfully connected to the grid in July 2024. Since connecting to the grid, the project has repeatedly responded to the orderly electricity usage requirements of the local energy bureau and grid, receiving high praise from the local government.





Self-generated photovoltaic green electricity usage: Approximately

16,000 MWh



Procurement of China Green Certificates (GEC):

143,603 MWh



Offset of International Voluntary Carbon Units (VCU):







# ◆ Value Chain-Continuous Advancement of Scope 3 Emissions Reduction

Guided by the SBTi, LONGi encourages suppliers to establish medium and long-term greenhouse gas reduction targets, fostering collective advancement toward a sustainable value chain. In 2024, LONGi took the following measures:

- The Company facilitated 50 supply chain enterprises in implementing carbon verification processes, with 4 voluntarily disclosing carbon data through the IPE platform
- The Company has set short-term annual carbon reduction targets for 37 suppliers and will continue to guide them in formulating medium- and long-term carbon reduction targets.
- The Company enhanced multimodal transportation adoption through "land-to-water", "sea-rail intermodal", and "river-sea intermodal" logistics strategies. Internationally, the Company prioritized rail and barge transport systems, while domestically emphasizing rail and inland waterway transportation to reduce dependency on carbon-intensive road freight. Through this integrated approach to low-carbon logistics, transportation-related environmental pollution was substantially minimized.

International port operations

In 2024, through expanded implementation of "land-to-water", "sea-rail intermodal", and "river-sea intermodal" logistics models, multimodal transport utilization at port operations increased to 73%, representing a 30 percentage point improvement compared to 2023, reducing carbon emissions of approximately 19,000 tons and demonstrating significant transport efficiency optimization

Through rail and barge transportation methods, 502 containers were transported in 2024, generating cost savings of approximately RMB 2.7 million and reducing

carbon emissions of approximately 1,500 tons



By prioritizing rail and inland waterway transportation to minimize road transport dependency, domestic multimodal transport utilization reached approximately 20% in 2024, reducing carbon emissions of approximately 2,300 tons

Scientific logistics network development. Through data-driven warehouse location analysis, economic feasibility assessment, and logistics solution optimization, LONGi advances sustainable development across its distribution network. Specific measures include:



Employing data modeling methodologies for strategic warehouse placement to minimize delivery distances and transportation duration



Leveraging big data and intelligent algorithms to optimize transportation routing and reduce logistics costs

The Company implemented an end-to-end transportation visibility platform enabling logistics route planning and risk alert functionality. Through digital technologies, transportation efficiency was enhanced and resource allocation optimized.









# ◆ Product Carbon Footprint

LONGi conducts product carbon footprint assessments to accurately quantify carbon emissions throughout the full product lifecycle. The Company has implemented several strategic projects to progressively reduce the carbon footprint of its PV products.

Value chain processes	Key measures
Silicon Wafers	Introducing suppliers with lower-carbon silicon materials, adopting lean management practices to continuously decrease electricity and water consumption, enhancing silicon rod utilization rates through optimized product formulations, and reducing per-unit carbon allocation
Modules	<ul> <li>Expanding the proportion of clean silicon materials produced with advanced technologies</li> <li>Integrating innovative high-efficiency cell technologies to enhance electricity generation per unit of raw material, thereby reducing the carbon footprint per watt</li> <li>Installing PV power plants at our own bases to increase the use of green PV electricity, further reducing the carbon footprint</li> </ul>

In 2024, LONGi's silicon wafers, modules, and hydrogen energy products have obtained 53 carbon footprint certification certificates globally. Among them, the silicon wafer products have received 13 carbon footprint certification certificates from France; the module products have obtained 24 French carbon footprint certifications, 5 South Korean carbon footprint certifications, 4 international environmental product declarations (EPD) certifications, 1 ISO 14067 product carbon footprint certificate, and 3 PCCC product carbon footprint certificates; the hydrogen energy products have received 3 carbon footprint-related certification certificates from domestic and international hydrogen product certification bodies. Details are as follows:

Silicon Wafer Products	Obtained 13 French carbon footprint certification certificates
Module Products	24 French carbon footprint certifications obtained
	5 South Korean carbon footprint certificates
	International Environmental Product Declarations (EPD) certifications, including Italian EPD, Norwegian EPD, and Swedish International EPD
	1 ISO 14067 product carbon footprint certificate
	3 PCCC product carbon footprint certificates
Hydrogen Energy Products	3 carbon footprint-related certification certificates from domestic and international hydrogen product certification bodies







# **Climate Mitigation Solutions**

Li Zhenguo: Make PV energy and clean energy more accessible to everyone, integrating green energy into every subtle corner of life, making it truly within reach and easy to use.



◆ PV Products¹ and "Photovoltaic+" Application Scenarios

LONGi is deeply exploring the integration of "PV+" scenarios, providing innovative solutions for global centralized and distributed customers.



### Power

- Adapt plans to local conditions and flexibly layout ground-mounted and distributed photovoltaic power stations to reduce dependence on fossil energy.
- Implement an integrated multi-energy complementary solution, with photovoltaics as the dominant source, combined with various resources such as wind, water, and thermal energy, to build a clean and low-carbon energy supply system.



# Industry

 Tailor green power substitution solutions for energy-intensive industries such as petrochemicals and metallurgy.



### Construction

 Leverage the advantages of smart and digital construction to customize Building Integrated Photovoltaics (BIPV) solutions and residential photovoltaic building solutions, enhancing building sustainability.



# Transportation

- Explore a new ecosystem integrating transportation and photovoltaics, promoting efficient synergy between new energy vehicles and renewable energy.
- Launch comprehensive green transportation solutions that fully utilize various transportation facility resources.



# Agriculture, Forestry, Animal Husbandry, and Fishing

· Launch schemes for agricultural-photovoltaic complementarity, forestry-photovoltaic complementarity, livestock-photovoltaic complementarity, and aquaculture-photovoltaic complementarity. Develop new photovoltaic business models that integrate on-panel power generation with off-panel cultivation, animal husbandry, and fish farming, improving the efficiency of land and resource utilization.



### Power

LONGi is deeply involved in Brazil's low-carbon energy transition. In partnership with Carvalho Energy, LONGi has constructed a 53 MW photovoltaic power plant project in Brazil, equipped with over 100,000 LONGi modules, supporting the development of local renewable energy. Currently, among the 15 ground-mounted stations in the project, 5 are already grid-connected, 4 are under construction, and 6 are in the procurement stage, with full operation expected by 2025. Among them, the 3.5 MW power plant achieves an annual power generation of 630,000 kWh, setting a record for power generation in Brazil and ranking among the country's most efficient power plants. According to April 2024 data from ePowerBay, 6 out of the top 8 solar power plants with the best performance in Brazil are powered by LONGi modules, providing strong support for Brazil's clean energy transition.



Map of Photovoltaic Power Plants in Brazil

# Industry

In February 2025, LONGi signed a strategic cooperation agreement on green hydrogen with the Federal Government of Nigeria and APPL Hydrogen Limited (AHL). The plan is to construct a project in the Atabrikang Free Trade Zone (LFTZ) of Ibeno Local Government Area, Nigeria, with an annual production capacity of 1.2 million tons of green hydrogen derivatives, focusing on the production of renewable methanol for export.

The project will utilize LONGi's globally leading Hi-MO 9 photovoltaic module products and new alkaline electrolysis technology (energy consumption of 4.2-4.5 kWh/Nm3 H2) to build a full industry chain of "photovoltaic hydrogen production + chemical transformation." At the same time, relying on the policy dividends of the Free Trade Zone, a 200MW photovoltaic power station and water electrolysis hydrogen production system will be constructed to achieve local consumption of renewable energy.

### Construction

LONGi seizes the opportunity presented by the "Belt and Road" initiative to provide BIPV solutions for the Tashkent Olympic City project in Uzbekistan. The project utilizes LONGi's CENT product, with a total installed capacity of 2 MW and an expected power generation of 61.1789 million kilowatt-hours in 2025. The CENT product offers four main values: safety and reliability, efficient power generation, stable returns, and worry-free operation, along with features such as leak prevention, corrosion resistance, fire resistance, typhoon resistance, and anti-degradation, setting a new benchmark for green development in Central Asia.



BIPV Solutions for Uzbekistan Olympic City

# Transportation

In January 2024, LONGi signed a strategic cooperation agreement with NIO to jointly promote the use of photovoltaic power as a green and clean energy source for charging and swapping stations. They aim to create an industry-leading photovoltaic energy storage and charging swap station and collaborate on advancing distributed photovoltaic systems in conjunction with V2G vehicle-grid interaction, as well as establishing industry standards related to "carbon-neutral mobility".



Photovoltaic Energy Storage and Charging Swap Station

# Agriculture, Forestry, Animal Husbandry, and Fishing

LONGi provides agricultural and animal husbandry solutions for the Eastern provinces of Egypt. Through photovoltaic modules, LONGi supplies a large and stable amount of clean electricity for water pump irrigation systems. The 500 kW installed capacity can save over RMB 50,000 in electricity costs each month, effectively reducing the operating costs of agricultural production and greenhouse gas emissions.



Solution Idea of LONGi Agricultural and Animal Husbandry

# ◆ Green Hydrogen

LONGi remains committed to its hydrogen product layout strategy and core development direction, focusing on the development of alkaline electrolyzer technology. The Company is dedicated to providing large-scale green hydrogen equipment for the global market, creating safe, reliable, high-efficiency, and low LCOH¹ products and solutions. LONGi's "green electricity + green hydrogen" system solution now has the full capability to undertake both off-grid and grid-connected hydrogen production projects. This solution integrates renewable energy, electricity, energy storage, chemicals, and automatic control, offering system integration across these domains. The solution covers the entire project lifecycle, including LCOH calculation, green electricity and green hydrogen project design, full lifecycle economic analysis, system steady-state/transient simulation verification, and the supply of full-chain products. By the end of the Reporting Period, LONGi Hydrogen's energy production capacity had reached 2.5 GW.

In the field of green hydrogen products, LONGi Hydrogen mainly focuses on green hydrogen equipment and green solutions, working in close collaboration in both areas.

# Regarding green equipment:

The G-series 3,000 Nm³/h product has been designed, manufactured, and delivered, and as of April 2025, has been in operation for 7 months. The deployment of large-scale equipment has led to a 10%-20% reduction in CAPEX costs for green hydrogen. Additionally, the application of the Hi1 upgraded technology has enabled the commercialization of green hydrogen equipment to achieve an energy consumption of 4.25 kWh/Nm³ at 4,500 A/m² and as low as 4.0 kWh/Nm³ at 3,000 A/m², considerably reducing operational expenditure for green hydrogen production.

### ♦ In terms of green hydrogen solutions:

In 2024, LONGi Hydrogen launched a green energy planning management system on the event in Denmark, enabling second-level configuration calculations for green hydrogen projects. This system optimizes the LCOH of green hydrogen through more reasonable configurations. Furthermore, the intelligent management platform for green hydrogen equipment has been connected with laboratory systems and our internal green hydrogen project platform. This platform provides more convenient technical support for the operation and maintenance of green hydrogen equipment and coordinates the overall energy dispatching of green hydrogen plants, enhancing the reliability of green hydrogen project operations and aiding efficient and cost-effective project performance.

LONGi's Hydrogen is advancing the application of green hydrogen across multiple industries with safe, reliable, and highly efficient electrolysis hydrogen production equipment and solutions. In 2024, several achievements were made, as detailed below:

Application area	Specific achievements
Ammonia synthesis	<ul> <li>Delivered 15 sets of 1,000 Nm³/h alkaline hydrogen production equipment, installing the world's largest ammonia synthesis project – the Da'an Wind and Solar Green Hydrogen Synthesis Ammonia Integration Demonstration Project.</li> <li>Delivered 4 sets of 1,000 Nm³/h alkaline hydrogen production equipment to aid the green hydrogen-to-green ammonia project in Uzbekistan, advancing the green energy transition in Central Asia.</li> </ul>
Steel smelting	Delivered two sets of ALK G series 3,000Nm³/h alkaline hydrogen peoduction equipment, marking the deployment of the world's largest commercially available single electrolyzer in actual operation in China and globally. The system has been successfully commissioned for a blast furance hydrogen injection project, supporting the industrial-scale application of a new low-carbon steelmaking process that replaces carbon with hydrogen.
Hydrogen blending in natural gas	Provided a complete green hydrogen solution and 2 sets of 1,000 Nm³/h hydrogen production core equipment for Australia's Murray Valley Hydrogen Park. The hydrogen produced will be used in a project blending hydrogen in natural gas pipelines, helping more Australian households and industries use cleaner, green energy.



Strategic partnership with HydrogenPro to advance growth in the European green hydrogen market

In December 2024, LONGi Hydrogen signed an investment agreement with HydrogenPro ASA<sup>1</sup>, establishing a strategic partnership to drive the growth of the European green hydrogen market. This collaboration focuses on scaling up electrolyzer manufacturing, engineering design, and after-sales services in the green hydrogen sector.





LONGi partners with Maersk bio-methanol to drive emissions reduction in the shipping industry

In October 2024, LONGi signed a long-term biomass methanol offtake agreement with the shipping giant Maersk, aimed at providing green fuel for Maersk's dual-fuel methanol fleet. LONGi will produce bio-methanol at its facility in Xuchang, Henan, using agricultural waste as raw material, with deliveries expected to begin in 2026. The agreement extends for the next decade. This collaboration meets Maersk's fuel needs, helps them comply with EU carbon emission regulations, and drives the use of renewable methanol in the shipping industry, showcasing LONGi's capacity to expand into diverse green fuel sectors and providing a successful example for the low-carbon transformation of global shipping.

<sup>1.</sup> HydrogenPro is a leading enterprise in green hydrogen technology and systems, operating as an Original Equipment Manufacturer (OEM) of alkaline electrolyzer systems for large-scale green hydrogen production facilities

## **Climate Adaptation Products**

As global temperatures continue to rise and extreme weather events become more frequent, an increasing number of customers are demanding higher climate adaptation capabilities from products. LONGi has developed a "all-scenario reliability system" to continually enhance the reliability testing of products, ranging from stricter single tests to comprehensive aging tests, all aimed at improving products' climate adaptability and safety.



Facing extreme climate challenges, LONGi Hi-MO 9 redefines PV safety standards with robust disaster resilience

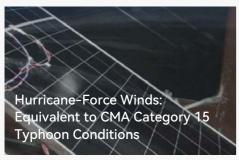
In the face of frequent global extreme weather events, the LONGi Hi-MO 9, with its industry-leading disaster resilience, provides solid assurance for the long-term reliable operation of PV power plants. Its outstanding performance has been validated by authoritative third-party institutions through dual tests:

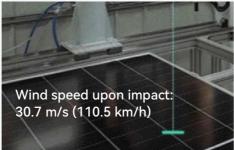
#### Extreme wind resistance:

TÜV SÜD conducted two extreme wind load tests on Hi-MO 9 modules at the Shanghai Jiao Tong University Wind Tunnel Laboratory. The modules faced wind speeds up to 64.4 m/s (exceeding the highest national wind speed rating) without structural damage, setting a new record for PV sector wind tunnel test speeds

#### Superior hail impact resistance:

TÜV Rheinland's Yangtze River Delta operations center conducted strict hail impact tests on the modules, increasing hail diameters from the standard 25mm to 35mm and 45mm (double the IEC standard), and at a high velocity of 30.7 m/s. Despite these conditions, the modules maintained their integrity in EL tests, showed no significant power degradation, and passed insulation and wet leakage tests





Hi-MO 9 Extreme Climate Testing



LONGi BIPV Roof 4.0 modules effectively resist category 17 typhoons

In September 2024, Typhoon Yagi severely hit Hainan, with the maximum wind force near its center exceeding level 17. The photovoltaic project of the Boao Forum for Asia in Hainan, jointly built by LONGi and Sunt, was not significantly affected by this typhoon, demonstrating excellent wind-resistance capabilities.





Photovoltaic modules after the passage of a typhoon at level 17

# Risk and Opportunity Management

risks in accordance with the methods and processes specified by our corporate risk management system, utilizing three scenarios: accelerated transformation scenarios (<2°C/1.5°C), current policy scenario (baseline), and high warming scenario (>4°C) for scenario analysis. Identification and assessment of climate change risks are fully integrated into strategic decision–making and daily operational management.







# Climate Risk

LONGi conducts specialized work on climate risk, identifying and assessing vulnerable links and potential opportunities within the value chain. In the future, this work will be integrated into LONGi's regular risk identification mechanism.

# Climate Risk Assessment and Prioritization

LONGi evaluates and ranks key risks and opportunities based on their likelihood, frequency of occurrence, and financial impact. We perform financial quantification of climate risks by considering parameters and financial data under different climate scenarios, enabling LONGi to prioritize addressing climate risks with significant financial implications.

#### Climate Risk Response

After the board approves the list of climate risk, the Sustainability and ESG Office will organize relevant functional and business units to formulate climate risk responses, including establishing comprehensive environmental and climate risk prevention measures and emergency management systems.

# **Metrics and Targets**

LONGi sets climate-related metrics and objectives based on international climate action target-setting methods and climate-related initiatives, tailored to the Group's circumstances. LONGi is the first PV enterprise in China to be approved by the SBTi.

# **Energy Consumption Targets**

Overall energy consumption target

In 2024, the Group's overall electricity intensity was to

decrease

**9.14** <sub>9</sub>

compared to that in 2023

with an actual achievement of (achieved the target)

10.7 %

▼ Targets for each production unit¹

The 2024 electricity intensity reduction targets set for each production unit compared to 2023, and the actual achievements, are as follows, with all targets met

Production unit	Targeted reduction rate (YoY)	Actual reduction rate
Monocrystalline silicon	3.00%	4.27%
Wafers	3.50%	13.6%
Cells	20.0%	26.0%
Modules	4.00%	19.1%

<sup>1.</sup> Only count the performance of each production unit of domestic production bases.

**35** %

# **Climate Targets**



RE100
°CLIMATE GROUP → CDP

°CLIMATE GROUP EP100 °CLIMATE GROUP EV100

#### SBTi

- Reduce Scope 1 and 2 emissions by 2030 compared to 2020
- Decrease the emission intensity per ton of purchased goods and services for Scope 3 by 2030 compared to 2020

RE100

- Achieve
  - renewable electricity usage by 2027
- Achieve
- renewable electricity usage by 2028

#### **EP100**

 Complete the deployment of the energy management system by 2025, based on the 2015 baseline year, energy efficiency improve

#### EV100

 Coverage of charging facilities installed at production and operation sites by 2030 achieve

100 %

## **Key Performance**

LONGi Comprehensive Energy Consumption in 2022-2024

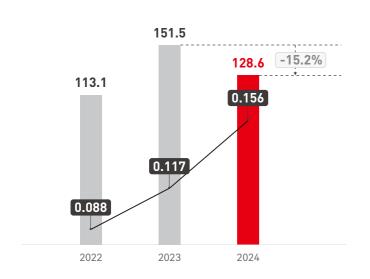
Total Comprehensive Energy Consumption (10,000 tce)

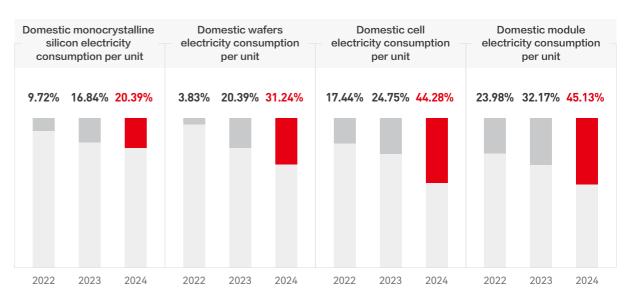
 Comprehensive energy consumption intensity (10,000 tce/RMB 100 million)



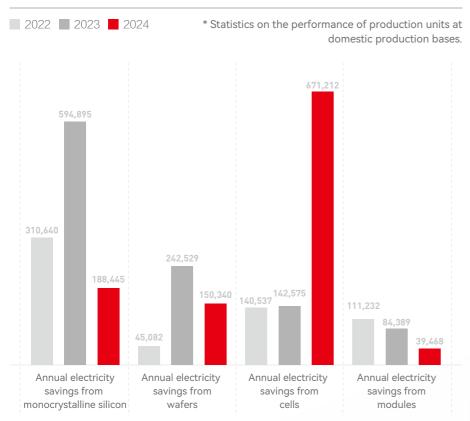
Actual decline rate (%)

\*The baseline year is 2020



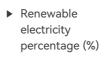


#### LONGi Product Electricity Savings Statistics in 2022-2024 (MWh)



In 2024, LONGi achieved remarkable reductions in overall energy use and intensity across different production units, reflecting substantial progress in its energy conservation and emissions reduction efforts. The largest decreases were seen in the cell and module segments, with an intensity reduction of over 44% compared to 2020. In terms of electricity savings, the cell segment recorded the greatest reduction in 2024, with annual electricity savings exceeding 671 GWh. The main reason is that there were numerous energy-saving projects carried out in the cell segment this year, totaling 173 projects.

#### LONGi Renewable Electricity Usage in 2022-2024

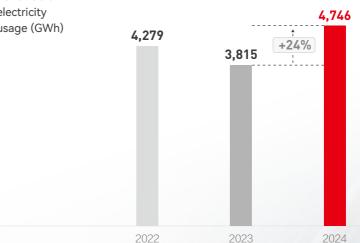


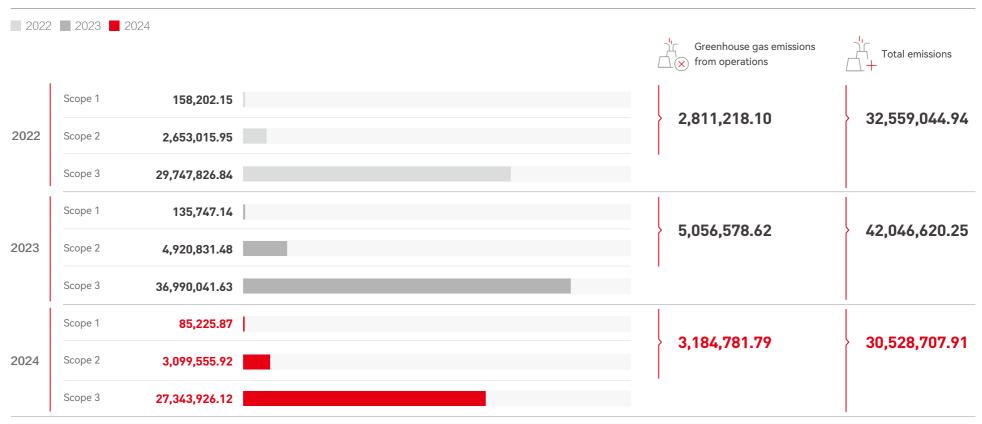












In 2024, in terms of the structure of greenhouse gas emissions, Scope 2 continued to dominate LONGi's total greenhouse gas emissions, representing approximately 97% of the overall emissions. Regarding the total amount of greenhouse gases, LONGi achieved reductions across Scopes 1, 2, and 3 to varying degrees. Compared to 2023, Scope 1 emissions decreased by 37.2%, Scope 2 by 37.0%, and Scope 3 by 26.1%, primarily driven by an increase in renewable electricity usage (up 24% compared to 2023), the implementation of energy-saving technological upgrades, and a decline in product shipments due to the downturn in the PV sector.

\*Note: In 2024, LONGi's Scope 1, 2, and 3 carbon emission data was certified through steps including preliminary preparations, carbon emission inventory, internal review, certification application, and on-site audit, and received the ISO 14064-1:2018 Greenhouse Gas Verification Statement issued by an international certification body (for details, refer to "Appendix Five").



LONGi continues to optimize its water use structure and advances water stress assessments for the rational development and efficient utilization of regional water resources. The Company also carries out water-saving technological upgrades, wastewater treatment and reuse projects, and other related projects to improve water resource efficiency at production sites while reducing wastewater discharge. LONGi has joined the LWFI1, collaborating with value chain partners to alleviate local water resource pressures.

#### Policies and Approaches

In compliance with relevant domestic and international laws and regulations, including the Water Pollution Prevention and Control Law of the People's Republic of China and the Water Law of the People's Republic of China, LONGi has established water resource management policies and water-saving requirements, such as the Water Saving Management Policy, and formed a Water Resource Management Leading Group headed by the Chairman. The team implements the water-saving management policy of "environmental compliance, water-saving priority, cost-efficient discharge, and scientific management", formulates water resource strategies, and assesses water resource management performance. Regarding production water control, we have established a three-tier management mechanism, from the manufacturing business group to the respective centers/business units and production bases. A performance evaluation mechanism, primarily focusing on water-saving target assessments, is in place and linked to the compensation of responsible personnel. This standardized evaluation process drives the optimization of the entire "water extraction - water use - wastewater discharge" process, continuously improving water resource efficiency and environmental risk prevention capabilities.

Governance

Front Matter



Applicable topics	Coverage	Policy commitments
Water Resource Utilization and Wastewater Discharge	Applicable to LONGi and all branches, subsidiaries, and affiliated organizations	LONGi strengthens the sustainable management of water resource utilization and improves water efficiency. The Company has established water resource management policies and water-saving requirements, including gray water use, concentrated water reuse, and rainwater recycling projects, to reduce wastewater generation and discharge. We also strictly control the use of hazardous chemicals to reduce pollutant concentrations in wastewater and enhance the efficiency of wastewater treatment processes to ensure that discharges meet regulatory standards. Moreover, LONGi plunges into the establishment of "zero wastewater discharge" factories.

<sup>1.</sup> Low Water Footprint Initiative, LWFI

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# Water Risk Assessment

Over-extraction of water in areas with high water risk may lead to local water shortages, over-extraction of groundwater causing land subsidence, and changes in natural runoff patterns, which may adversely affect the habitats of wetland and river ecosystems. To address this, LONGi conducts an annual water resource review of all its plants using the Aqueduct Water Risk Atlas (WRI), and regards water resource risk levels as an important reference for setting water-saving targets. In 2024, we conducted water resource risk assessments at all operational locations. The results show that 21 bases are located in high-risk areas (61.8%), including 15 bases in extremely high-risk regions and 6 bases in high-risk regions. The regions most affected by water scarcity are primarily in Ningxia, Inner Mongolia, and Shaanxi.



#### Inner Mongolia

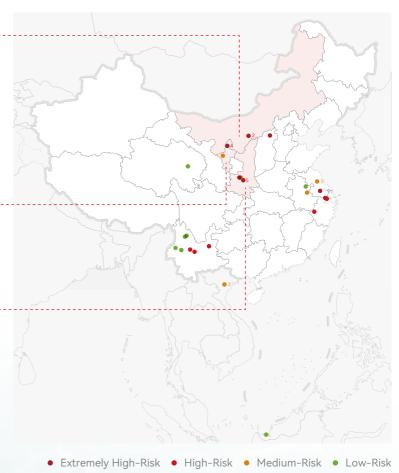
- Build a non-conventional water source utilization system, prioritizing the use of coal mine drainage and municipal gray water to replace natural water sources
- Implement industrial wastewater closed-loop management systems for 100% water resource reuse through advanced treatment techniques
- Establish a "zero-discharge" production wastewater treatment system, using chemical and biological treatment for 100% recycling
- Advance water-saving modifications in production systems, including equipment upgrades and process optimization to reduce water usage

#### Ningxia

- Construct municipal gray water and concentrated water reuse equipment, enabling the tiered use of municipal gray water and production of concentrated water
- Conduct targeted water-saving technological upgrades, optimize system operational parameters, and enhance water-saving capacity

#### Shaanxi

- Implement "zero-discharge factory" design standards in new plants in Xixian,
   Tongchuan, and Weibei areas, constructing wastewater resource treatment centers
- · Collect and use rainwater and expand additional water source channels
- Promote tiered water resource utilization and water-saving processes, optimizing system operational parameters to further reduce water usage



Governance

Social



Water pressure level	Extremely High	High	Medium	Low	Water conservation measures
Number of bases	15	6	6	7	water conservation measures
Set water conservation goals	•	•	•	•	Goal setting: LONGi establishes rolling water conservation targets each year.
Use gray water	•	•	•	•	<ul> <li>Water source collection: establish a systematic collection mechanism to effectively gather wastewater from production, cooling water from equipments, etc., covering key processes.</li> <li>Purification treatment: utilize specialized processing techniques to purify the collected water, removing pollutants and improving water quality to reusable standards.</li> <li>Scene application: distribute the purified gray water for applications such as irrigation, site cleaning, and industrial production, achieving the practical implementation of water resource recycling.</li> </ul>
Reuse concentrated water	•	•	•	•	<ul> <li>Preliminary removal of impurities: pre-treat the production concentrate, focusing on removing solid particles, metal ions, and other particulate matter to reduce impurity content.</li> <li>Deep purification: utilize technologies such as ion exchange for secondary treatment of the concentrate to further purify the water quality and meet reuse standards.</li> <li>Distribution of reused water: reintroduce the treated concentrate, which meets the standards, into washing, industrial production, and other processes to reduce the use of fresh water.</li> </ul>
Recycle rainwater	•				<ul> <li>Facility construction: scientifically design the rooftop drainage system and install collection devices to establish the basic hardware facilities for collecting rainwater.</li> <li>Impurity filtration: use filters and other equipment to remove impurities from rainwater, ensuring the cleanliness of the stored rainwater.</li> <li>Storage Utilization: Store the filtered rainwater for use as a supplement for non-production-related water needs such as irrigation and cleaning.</li> </ul>
Plan zero discharge	•				<ul> <li>Emissions analysis: conduct a comprehensive statistical analysis of the sources, types, and volumes of wastewater, deeply assess the current status of the company's wastewater discharges, and identify optimization directions.</li> <li>Resource recycling: explore recoverable resources such as energy, water, and materials within the wastewater, and achieve recycling through technical means to reduce waste.</li> <li>Goal advancement: Combine technical upgrades, management optimizations, and dynamic monitoring measures to gradually implement the goal of zero wastewater discharge and reduce environmental impacts.</li> </ul>

Front Matter

Social

Water pressure level	Extremely High	High	Medium	Low	Water concernation massures	
Number of bases	15	6	6	7	Water conservation measures	
Other water-saving technology renovations	•	•	•	•	<ul> <li>Water source development: expand diversified alternative water sources and increase the development of non-traditional water resources to reduce reliance on conventional water sources.</li> <li>Upgrade of recycling water: Promote the transformation of process cooling water and power facility circulating water to enhance the efficiency of water circulation in production processes.</li> <li>Purification optimization: improve the water purification process to enhance the purification rate and reduce ineffective water resource consumption during the preparation process.</li> <li>Equipment innovation: implement water-saving modifications to water-using equipment and lower water consumption levels during equipment operation through technological upgrades.</li> <li>Application planning: based on production needs, rationally plan the application scenarios and usage ratios of alternative water sources to optimize the overall water usage structure.</li> <li>Practical implementation: gradually apply alternative water sources to suitable production or non-production processes to promote the sustainable utilization of water resources.</li> </ul>	

Water Risk Mitigation Measures by Risk Level

## Water Resource Utilization

LONGi strengthens the sustainable management and utilization of water resources by implementing water-saving projects such as gray water reuse, concentrated water reuse, and rainwater recycling to improve water efficiency and reduce wastewater generation and discharge. As of the end of the reporting period,



production bases were recognized as water-saving enterprises



production base earned a provincial-level water-saving benchmark enterprise title



production base was awarded the provincial-level water efficiency leader title

	Water-saving measures	Key project	Water-saving results
Monocrystalline silicon	<ul> <li>Process water-saving technological breakthroughs:</li> <li>Use of a closed-loop cooling water system, development of ultra-long-cycle silicon crystal growth technology under high-temperature vacuum conditions to improve the recycling rate of cooling water.</li> <li>Large-scale alternative water source application:</li> <li>Establishment of rooftop rainwater collection systems and the use of unconventional water sources such as coal mine drainage.</li> </ul>	Monocrystalline Furnace washing and maintenance water recycling project:  Systematic collection and treatment of monocrystalline furnace maintenance water to achieve water resource recycling and reduce one-time water consumption.	Wafer Division (monocrystalline + wafers) to carry out  45 water-saving projects, with an estimated annual water saving of  3.386 million tons.
Wafers	<ul> <li>Wastewater recycling:</li> <li>Upgrading of wastewater treatment systems to improve the wastewater reuse rate.</li> <li>Process water-saving innovations:</li> <li>Upgrade and optimization of cutting parameters (e.g., line speed, tension) to reduce water consumption during production.</li> </ul>	Separate cutting fluid treatment project:  • Independent treatment of silicon wafer cutting fluid and other wastewater, optimizing the wastewater management process, reducing the overall treatment load, and improving the reuse rate of regenerated water.	
Cells	<ul> <li>Deep treatment of production wastewater:</li> <li>Construction of gray water recycling systems to reduce the use of ultrapure water in the process.</li> <li>Water-saving refinement management:</li> <li>Optimization of reverse osmosis membrane configurations to improve pure water production efficiency and enhance condensate water recovery.</li> </ul>	Cleaning machine water optimization project:  • Optimization of the overflow and replenishment volumes of cleaning water tanks to reduce pure water consumption in cleaning, with an estimated annual water savings of 16,500 tons.	35 water-saving projects were implemented, with an estimated annual water savings of 5.892 million tons.



Xi'an LONGi Solar selected as a typical case of water-saving industrial enterprises for high-quality development in the Yellow River Basin

Xi'an LONGi Solar established a comprehensive water recycling system, reducing total tap water usage from 10,000 cubic meters to 3.500 cubic meters. It also built a reverse osmosis concentrated system and a gray water use system capable of recycling 3,500 cubic meters per day, saving 320,000 cubic meters of water from municipal sources and 1.25 million cubic meters of gray water annually. Additionally, through technological improvements and process optimizations, the usage of process water (ultrapure water) decreased by 30%. An energy management online platform was established to monitor water usage in real time, automatically generating water consumption data analysis reports and water usage budgets, enabling scientifically managed water usage across the system.

# Wastewater Discharge

The wastewater generated by the Company primarily originates from wafer, cell production, concentrated water from pure water preparation, and surface cleaning processes. To reduce water stress and environmental impact, we rigorously control the use of hazardous chemicals, lower pollutant concentrations in production wastewater, enhance the efficiency of wastewater treatment processes to ensure compliant discharge, and recycle waste cutting fluid wastewater to reduce discharge volumes, thereby advancing the construction of "zero wastewater discharge" factories. In 2024, we advanced the optimization of fluoride ion treatment processes to reduce fluoride emissions and increased Fenton processes to lower COD emissions, thus reducing the pollutant discharge from production wastewater.



Ordos Factory Achieves "Zero Wastewater Discharge"

LONGi has achieved "zero wastewater discharge" at its Ordos factory through innovative technology, setting a benchmark for green manufacturing. Relying on the industrial wastewater treatment plant and water regeneration project at the Mengsu Zero Carbon Industrial Park, a supply chain model has been established that connects drainage water—enterprise—wastewater—industrial wastewater processing and regeneration plant—high-quality regenerated water—enterprise. Utilizing globally leading processes such as ultrafiltration and reverse osmosis, the plant efficiently removes pollutants such as salts, hardness, silicon, and fluorine from photovoltaic wastewater. Additionally, through concentrated brine membrane concentration technology and evaporation crystallization for salt separation, the facility achieves the cyclical regeneration of water resources for reuse by the enterprise.



#### Efficient wastewater recycling

In the production of PV silicon wafers, debonding wafer wastewater, a typical industrial wastewater, contains a large amount of organic matter, surfactants, and silicon powder. The Company recycles this wastewater after treatment through MBR, ultrafiltration, and dual-stage reverse osmosis, significantly improving water quality. The purified water is used directly in production processes and the concentrated water is for machine cutting washing, achieving 100% reuse of the gray water, which not only reduces reliance on natural water resources but also lowers wastewater treatment costs, achieving resource utilization of wastewater. It is estimated to save 3.5 million tons of tap water annually, with financial benefits reaching RMB 17 million.

#### **Targets and Performance**

The Company has established a water resource management system to monitor, assess, and improve water use, formulate water-saving policies and plans, clarify water-saving targets, responsible departments, and implementation steps to ensure the implementation and execution of water-saving measures.



#### Water Resource Utilization

Water Resource Utilization Targets

In 2024, the Group's overall water use intensity target¹ was to

decrease

compared to 2023

The actual decrease was (meeting the target)

**24.8** %

#### The 2024 Targets for each production unit<sup>2</sup>

water use intensity reduction targets set for each production unit compared to 2023, and the actual achievements, are as follows, with all targets met

Production unit	Targeted reduction rate (YoY)	Actual reduction rate
Monocrystalline silicon	2.50%	17.6%
Wafers	4.00%	21.3%
Cells	25.0%	44.5%

- 1. Due to product type adjustments, targets from 2024 onward will use 2023 as the base year.
- 2. Only count the performance of each production unit of domestic production bases.

2022

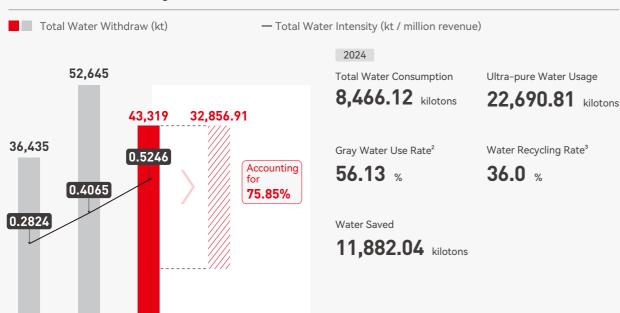
2023

Appendix

#### Water Resource Utilization Performance

We monitor the water footprint of products, establish water footprint management plans by product type, monitor the water use intensity of products, and explore the construction of "zero wastewater discharge" factories. In 2024, by analyzing the water-saving potential of all production stages and employing alternative water measures such as gray water recycling, concentrated water recycling, and rainwater recycling, the reduction rate of water use intensity was considerably reduced in monocrystalline silicon, wafers, and cells compared to 2023, especially in the cell sector, with an actual reduction of 44.5%.

#### LONGi Water Resource Usage in 2022-2024



# Decline in water use intensity in each production section in 2024

\* Only count the performance of each production unit of domestic production bases.



Monocrystalline silicon water use intensity decrease<sup>4</sup>

**117.6** %



Wafers water use intensity decrease

**↓ 21.3** %



Cell water use intensity decrease

**1 44.5** %

- 1. The main reason for the rapid decline in water consumption per unit in the cell section is the fierce competition in the PV industry in 2024. Due to product innovation in the cell section, it is necessary to quickly reduce costs and improve efficiency to enhance the competitiveness of new products.
- 2. Calculation of gray water use rate: Gray Water Use Rate = (Gray Water Reused ÷ Total Water Withdraw) × 100%
- 3. Water Recycling Rate = Reused Water Volume / Total Water Consumption; where Total Water Consumption = Total Water Withdraw + Reused Water Volume
- 4. Starting in 2024, the comparison for reduction in water use intensityused 2023 as the base year

2024 Water Withdraw from Regions with High or Extremely High Baseline Water Stress

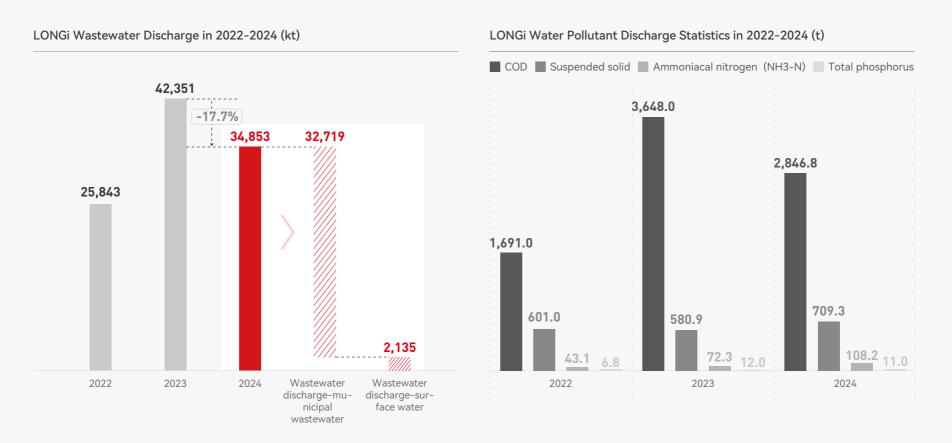
Social

## Wastewater Discharge

Wastewater Discharge Reduction Target

By 2025, COD discharge concentration will be  $30\,$  % stricter than the discharge standards

> Wastewater Discharge Performance



<sup>1.</sup> Note: All domestic production bases use municipal drainage systems, while only some overseas bases involve surface water drainage.

Value Chain

# Pollution

LONG 2024 Sustainability Report



LONGi rigorously fulfills its responsibility for ecological and environmental protection, establishing a comprehensive and detailed control system framework. Driving innovation at the source, we reduce the "increment" of pollution, optimize processes to strictly control the "variables" of pollution, and upgrade end-of-pipe treatment to resolve the "stock" of pollution. This approach maximizes environmental harmony and drives green transformation in the industry.

#### Policies and Approaches

In compliance with the relevant provisions of the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Regulations on the Administration of Construction Project Environmental Protection, and the Law of the People's Republic of China on Environmental Impact Assessment, as well as the national policies on clean production audits, LONGi has established an environmental management system led by the Company's EHS Management Committee, covering the entire process and multiple dimensions. We have also developed internal procedures such as the Environmental Protection Control Procedures, the Exhaust Gas Management Policy, the Technical Guidelines for Operating and Monitoring Exhaust Gas Treatment Facilities, the Rainwater and Sewage Management Policy, the Environmental Noise Management Policy, the Soil and Groundwater Management Policy, the Solid Waste Management Policy, and the Technical Guidelines for Hazardous Waste Management, covering all operation locations. With administrative support from environmental element management policies and technical support from technical guidelines for management elements, LONGi comprehensively implements environmental management tasks, ranging from source prevention and process reduction to end-of-pipe treatment. This approach enhances comprehensive pollution control and ensures compliant discharge of pollutants.



#### **Environmental Risk Prevention**

LONGi has established the Measures for the Environmental Emergency Response Management to strictly implement environmental risk prevention measures, raise awareness of environmental risks, update and refine emergency plans, and conduct regular drills. We enforce all necessary emergency measures to prevent environmental accidents. Regular inspections are conducted on storage areas, pipelines, and sites where hazardous materials are used. In the event of toxic or harmful substance leaks or accidents, effective measures are immediately taken to manage environmental pollution and mitigate the impact of pollutants on the environment.

# **Environmental Impact Assessment**

LONGi focuses on the environmental friendliness of project construction in all phases, including site selection, design, construction, and operation. We conduct environmental impact assessments before initiating all projects, , systematically analyze, assess, and manage the environmental impacts during project operations, and adopt effective measures to control pollutant emissions.

Social

Front Matter

Governance

#### Actions Taken

The primary air pollutants from LONGi's production processes include nitrogen oxides, sulfur oxides, particulate matter, and other pollutants. We classify, collect, and treat industrial exhaust gases to ensure compliant emissions. By optimizing our exhaust gas collection systems, we ensure comprehensive collection and quality-specific separation, improving capture rates and facilitating the transition from fugitive emissions to controlled emissions. For different types and concentrations of exhaust gases, we implement separate collection processes and employ targeted treatment technologies, ensuring that pollutant emissions comply with atmospheric pollutant emission limits and relevant standards, safeguarding ambient air quality. Simultaneously, we address issues at the production source by continuously promoting process improvements and technological innovation to reduce industrial exhaust gas generation. We have established exhaust gas reduction management plans for production processes and have conducted inspections and provided reduction guidance at 34 operational bases during the Reporting Period to ensure the implementation of relevant standards.



In 2024, LONGi's production bases reduced NOx emissions at the source through technological upgrades and optimized production processes. Among them,

Xi'an Module

spraying" system to replace "SDG adsorbents" for NOx treatment, improving

Qujing LONGi adopted

a "four-stage the treatment efficiency by approximately 30%

Xianyang LONGi employed "electrostatic oil removal + activated carbon" processes to remove VOCs, increasing the filtration box capacity to improve treatment efficiency and reduce **VOC** emissions

Base/Subsidiary replaced activated carbon with RCO technology to treat VOCs, increasing treatment efficiency by approximately 30%

**19.8** %

Solar reduced nitric acid usage at the process source, decreasing NOx emissions by about 19.8%

Xi'an LONGi

Emission source	Exhaust gas type	Emission Reduction measures
Texturing	HCl, fluorides, Cl <sub>2</sub>	Two-stage alkaline spray scrubbing treatment
Laser SE	Particulate matter	Pulse bag dust collectors for collection and disposal
Wet etching	NOx, fluorides	Four-stage alkaline spray scrubbing treatment; additional wet scrubbing towers to enhance nitrogen-containing exhaust gas treatment capacity
Coating	Ammonia, particulate matter	Treatment through silane combustion, dust collectors, and single-stage spray scrubbing
Laser grooving	Particulate matter	Pulse/bag dust collection systems for disposal
Screen printing	Non-methane hydrocarbon (NMHC)	Activated carbon adsorption units for treatment

Social

#### Targets and Performance

Exhaust gas pollutant reduction targets

1. Indicator data have been verified by a third party

By 2025, VOCs emissions concentration will be 30% stricter than emission standards  $30\,$  %

> Waste emissions performance



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Value Chain

# Waste

2024 Sustainability Report





#### Policies and Approaches

In accordance with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes and related technical guidelines and standards, LONGi has issued the Environmental Management Policy and established internal management procedures, including the Solid Waste Management Policy, the Technical Guidelines for Hazardous Waste Management, and the Administrative Measures for Environmental Resource Utilization and Benefits. We conduct technical guidance, regular diagnostics, and evaluations, continuously optimizing our waste management system.



Applicable topics	Coverage	Policy commitments
Waste Management	Applicable to LONGi and all branches, subsidiaries, and affiliated organizations	LONGi minimizes waste generation through detailed management measures. We promise to comply with laws and regulations governing waste management, implement waste classification, continuously optimize waste collection, storage, and treatment processes, establish an effective recycling and reuse system to rationally utilize and treat waste and reduce its adverse environmental impact, and develop waste resource utilization projects to maximize waste resource use

LONGi strengthens the hazardous substance control in the design and production of PV modules, minimizing negative environmental impacts. We comply with the standards in European Union's Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) and the Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Lead, mercury, cadmium, DEHP1, BBP, DBP, DIBP, and other hazardous substances are handled or eliminated from all module components, including glass, frames, backsheets, laminates, and labels. Additionally, we are accelerating the detection of perfluorinated and polyfluorinated alkyl substances (PFAS) in our products and plan to gradually recycle fluorinated components to meet future international market requirements for PFAS.

<sup>1.</sup> DEHP (Di(2-ethylhexyl) phthalate), BBP (Butyl benzyl phthalate), DBP (Dibutyl phthalate), and DIBP (Diisobutyl phthalate) are toxic and commonly used as plasticizers in industrial applications

Appendix

#### Actions Taken

LONG 2024 Sustainability Report

We engage third parties with a hazardous waste operating license to manage and dispose of hazardous waste and track the whole process to ensure a closed-loop management system. For non-hazardous waste, we prioritize comprehensive utilization through external sales, supplemented by secondary disposal, to increase the recycling rate of non-hazardous waste.

**16,913.22** person-hours

In 2024, the Company's environmental personnel at various levels (full-time and part-time) accepted 16,913.22 person-hours of environmental protection training covering solid waste management, environmental factor identification, wastewater and exhaust gas management.



Category	Pollutants generated in operations	Treatment measures
General industrial waste	251,226.37t	Mainly sold for comprehensive utilization, along with secondary disposal by qualified entities (e.g., biochemical sludge)
Plastic waste	5,341.37t	Sold for comprehensive utilization
Kitchen waste	3,989.75t	Disposed by qualified entities
Office waste	11,537.71t	Disposed by qualified institutions
Hazardous waste	21,709.71t	Disposed/treated by entities with hazardous waste treatment and utilization qualifications

In 2024, we continued to drive the reduction and reuse of calcium fluoride sludge, with applications including soil conditioning, cement kiln co-disposal, and as a raw material for hydrofluoric acid (HF) production, while exploring new technologies for using it as a raw material for downstream suppliers.



## LONGi Implements Environmental Resource Utilization

In 2024, the company established a Group-wide environmental resource utilization management system, developed unified workflows and management policies. The resource utilization efforts across various bases focus on six dimensions: "source emission reduction, hazardous waste detoxification, waste recovery, resource recycling and reuse, management optimization, and technological enhancement." Throughout the year, initiatives such as reducing hazardous waste of spent activated carbon and achieving zero-cost recycling, as well as resource utilization of calcium fluoride sludge, were promoted. These efforts resulted in the harmless treatment of 42,111 tons of waste, waste reduction of 357 tons, and a total economic benefit of RMB33.45 million from resource utilization in 2024.

Social

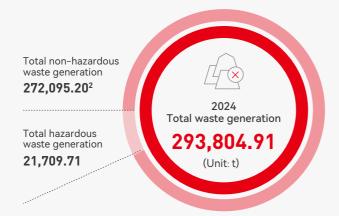
#### Targets and Performance

> Waste reduction target

The recycling rate for non-hazardous waste should not be lower than  $80\,\%$ 



➤ Waste discharge performance¹



Data of previous years (Unit: t)	2023	2022
Total waste generation	483,573.81	294,519
Total non-hazardous waste generation	441,654.12	277,134
Total hazardous waste generation	41,919.69	17,385

Non-Hazardous Waste recycling volume  224,877.13  Hazardous waste recycling volume  359.56  2024  Waste recycling volume  225,236.69  (Unit: t)
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Data of previous years (Unit: t)	2023	2022
Waste recycling volume	324,498.35	21,910
Non-Hazardous Waste recycling volume	323,803.54	21,890
Hazardous waste recycling volume	694.81	20

<sup>1.</sup> Indicator performance has been verified by a third party

<sup>2.</sup> The main reason for the reduction in waste generation is the decrease in production capacity.

# Resource Use and Circular Economy

2024 Sustainability Report



#### Policies and Approaches

In 2024, with the publication of the Opinions on Accelerating the Construction of a Waste Recycling System by the General Office of the State Council and the implementation of the EU Ecodesian for Sustainable Products Regulation, LONGi deepened the circular economy concept in its corporate operations and product lifecycle management. LONGi follows the "14th Five-Year" Plan on Green Development of the Industrial Sector, the "14th Five-Year" Plan for Developing Circular Economy, and the EU Circular Economy Action Plan, upholds the product design philosophy that minimizes environmental impact and emphasizes energy conservation and environmental protection throughout the product lifecycle. LONGi aims to minimize the environmental impact of products at the end of their lifecycle by considering end-of-life treatment during the design stage. In material selection, we prioritize recyclable and biodegradable materials, encourage waste-free design, and adopt recyclable packaging, while also reducing the use of chemicals in manufacturing. In the implementation stage, we ensure compliance with environmental standards and maximize the recycling and regeneration of discarded products, contributing to the sustainable development of the PV industry chain.



#### Actions Taken

#### Stage Action Results



Product design

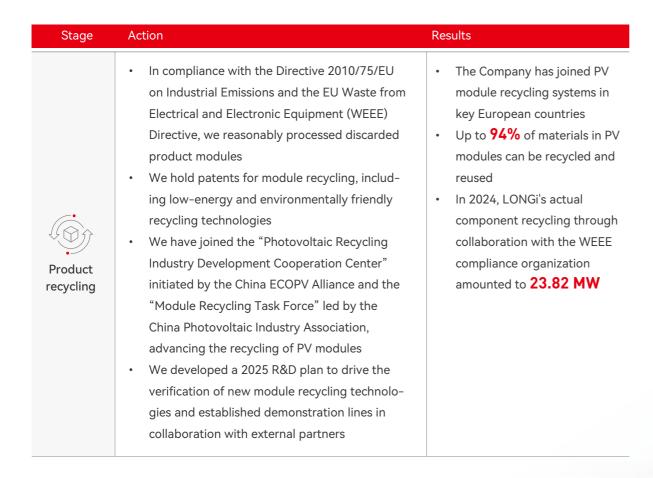
- We implemented the "Four New" initiative, using new materials, processes, technologies, and models to drive process upgrades and technological improvements
- We practiced waste-free design principles
- We designed products that are easier to recycle, enhancing recyclability and material efficiency
- We extended the warranty period of modules, thereby increasing their lifespan
- We increased the proportion of recyclable components in modules
- We reduced the use of harmful chemicals, such as by pioneering large-scale use of fluorine-free backsheets in the industry through module BOM technological innovation

Product warranty has been extended from 25 years to 30 years



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Stage	Action	Results
Product manufacturing	<ul> <li>The "Lighthouse Factory", through machine vision-enabled flexible automation, Al-powered full-process inspection and traceability, intelligent management of order production and delivery cycles, Al algorithms for cell resource matching and dynamic correction, intelligent human resource management, and other digital cases, enabled resource and energy savings in the manufacturing process</li> </ul>	<ul> <li>After the implementation of the "Lighthouse Factory" project, the overall energy consumption per unit at production bases decreased by 20%</li> <li>In-house bases have established PV power plants to increase the use of green solar energy</li> </ul>
Green packaging	<ul> <li>We prioritized the use of recyclable and renewable packaging materials</li> <li>We adopted a "container-in-place-of-warehouse" strategy to enhance resource utilization efficiency In 2024, this model rapidly expanded in the domestic market by utilizing containers instead of traditional warehouses for storage and transportation, improving operational flexibility and reducing resource occupation</li> <li>We promoted circular packaging to support green packaging efforts. In 2024, LONGi implemented an optimized solution for packaging wooden edge protectors by eliminating metal screws and switching to a one-piece design, achieving a reduction in packaging materials</li> <li>We designed and applied circular packaging for the transportation of upstream and downstream PV raw materials, replacing disposable cardboard packaging to reduce carbon emissions</li> </ul>	<ul> <li>By the end of 2024, 100% of silicon wafer products sent to LONGi Solar base used recyclable packaging, and the adoption rate of recyclable packaging for crucible products reached 100%</li> <li>In 2024, the cumulative shipment volume of products using containerization instead of warehousing reached 263 MW, a significant increase compared to 2023.</li> <li>In 2024, the cumulative volume of products using recyclable packaging reached 2.583 billion pieces, resulting in cost savings of approximately 10 million, and achieving a carbon emission reduction of about 1,300 tons</li> </ul>
Logistics and transportation	<ul> <li>We encouraged the use of circular packaging in logistics and optimized the logistics system by building an intelligent and information-driven logistics network, reducing energy consumption and pollution emissions during transportation</li> </ul>	<ul> <li>In 2024, the proportion of multimodal transportation before export ports surged from 10% to 73%, with the first trial of multimodal transportation in customer delivery segments in Europe</li> </ul>



#### Targets and Performance

During the reporting period





Total shipment volume using containers instead of traditional warehouses

263 MW

Significantly increased compared to 2023



Total products shipped using reusable packaging

**2.583** billion pieces

# Biodiversity and Ecosystems

LONGi believes that, as members of the global family, humans have the responsibility and capability to protect biodiversity. We look forward to collaborating with all stakeholders and leading by example through our actions.

The Company continues to invest resources in desertification control and rational land use, and combine green energy applications with desertification management efforts, consistently contributing to biodiversity protection and ecological balance maintenance, and driving continuous improvement of the global environment.

#### Policies and Approaches

In compliance with ecological and environmental laws and regulations, including the Law of the People's Republic of China on Environmental Impact Assessment and the Regulations on the Administration of Construction Project Environmental Protection, LONGi integrates ecological protection concepts throughout the project lifecycle, including design, construction, and operations and maintenance. Through a series of measures, LONGi implements ecological and environmental protection in the locations where its projects are situated.



Applicable topics	Coverage	Policy commitments
Biodiversity and Ecosystems	Applicable to LONGi and all branches, subsidiaries, and affiliated organizations	LONGi emphasizes biodiversity protection during production, operations, and project development. We require that all construction projects undergo ecological and biodiversity impact identification and assessments during the design phase, and apply the avoidance principle during the construction phase to minimize impact on ecologically sensitive and vulnerable areas. We advocate for biodiversity conservation among upstream and downstream partners, and provide funding and support for biodiversity conservation actions.

Social

Planning and design phase



Construction phase



Operation and maintenance phase • We strictly follow the "Ecological Protection Red Line" to protect natural elements such as mountains and vegetation, ensuring that project design is in harmony with the surrounding ecological environment;

Governance

Front Matter

- · Prior to project site selection, we conduct comprehensive ecological baseline surveys to identify local key species and their habitat characteristics, evaluate the potential impacts of the project on biodiversity and natural resources, and develop targeted strategies to ensure the integrity of local species and their habitats.
- · We comply with all laws and regulations governing biodiversity conservation, assessing environmental impacts under the "Three Simultaneities" principle;
- We optimize construction plans to reduce construction time and material consumption, prioritize materials and equipment that are friendly to biodiversity, and rigorously control pollutant emissions during construction;
- · We implement ecological restoration in areas impacted by construction, and establish a long-term maintenance mechanism to enhance ecosystem recovery.
- We regularly check environmental risks, promptly identifying and addressing potential issues;
- · We also organize ecological and environmental protection education activities to build a positive atmosphere for employee participation in ecological conservation efforts.

**Actions Taken** 

Since 2021, LONGi has released a Climate Action White Paper at the United Nations Climate Change Conferences for three consecutive years. In 2024, at the 29th Conference of the Parties (COP29) to the UN Framework Convention on Climate Change (UNFCCC), LONGi, in collaboration with the International Union for Conservation of Nature (IUCN), launched an initiative combining climate action and biodiversity conservation, advancing corporate actions to a higher level. Through this joint initiative with IUCN, LONGi aims to raise awareness about biodiversity conservation and draw on the experience of outstanding biodiversity conservation projects such as the "Ant Forest" to collectively address global ecological challenges.





#### Joint biodiversity conservation initiative with IUCN

At COP29, LONGi and IUCN jointly released the Initiative of Advancing Climate Action and Biodiversity Conservation with Photovoltaic. The initiative includes calls for companies to develop and implement climate and biodiversity protection measures in accordance with international multilateral environmental agreements (MEAs) and global standards, including the Convention on Biological Diversity, the United Nations Convention to Combat Desertification, the United Nations Framework Convention on Climate Change, and the Kunming-Montreal Global Biodiversity Framework. It also encourages following global best practices to ensure that all activities meet global climate and biodiversity protection requirements, adopting environmentally friendly methods in the design, construction, and operation of renewable energy projects, improving energy efficiency, and increasing the proportion of clean energy use. The initiative advocates for companies to establish a corporate culture for biodiversity conservation and to promote international cooperation, sharing, and dissemination of global best practices through partnerships.



COP29 Launch Event



#### Attendance at the United Nations Convention to Combat Desertification

At the 16th Conference of the Parties (COP16) to the United Nations Convention to Combat Desertification, LONGi showcased its innovative practices and remarkable achievements in desertification control, committed to integrating the application of green energy with efforts to combat desertification.

In desert areas, photovoltaic panels absorb sunlight, providing shade during the day which effectively reduces water evaporation; at night, they help condense air moisture, increasing soil humidity. Additionally, water used to clean the solar panels also effectively supports the survival and growth of vegetation. By integrating PV systems with vegetation restoration, LONGi enhances the stability and efficiency of solar power systems and significantly improves the regional microclimate, effectively mitigating the impacts of natural disasters such as hot winds, dry winds, and sandstorms.

LONGi actively promotes "Photovoltaic +" ecological governance. In 2024, LONGi is carrying out numerous "Photovoltaic +" desert management and ecological governance projects in ecologically fragile areas such as coal mining subsidence areas and deserts, exploring feasible paths for photovoltaic solutions to address challenges of drought and water scarcity.

Type of Ecological Restoration	Governance Area	Project Details
Photovoltaic Desertification Control	Ordos Kubuqi Desert	LONGi has successively built 336 kW and 338 kW photovoltaic power stations, achieving coordinated development of green energy, desertification control, and ecological restoration through the model of 'power generation on panels, planting beneath panels, and farming between panels.
Photovoltaic Desertification Control	NEOM City in Saudi Arabia	LONGi will provide 2 GW of photovoltaic modules to support the world's first city powered entirely by renewable energy, providing affordable clean energy for local residents.
Photovoltaic Desertification Control	The northern edge of Ordos Kubuqi Desert, south of the Yellow River; southern edge of the Mu Us Desert	LONGi is assisting in the construction of the 'Photovoltaic Great Wall' project (100 million kW) on the Northern edge of the Kubuqi Desert, South of the Yellow River, as well as the 'One Corridor, Multiple Points' wind and photovoltaic project (50 million kW) on the Southern edge of the Mu Us Desert.)
Photovoltaic Desertification Control	Dengkou County, Bayannur City	As the world's largest guaranteed photovoltaic project, LONGi is providing a capacity of 1.6 GW for the Mengneng Dengkou integrated energy storage + ecological governance project, using its high-efficiency N-type Hi-MO 7 photovoltaic modules.
Photovoltaic Desertification Control	Interior of the Ulan Buh Desert in Alxa; Dalate Banner; Hangjin Banner, etc.	LONGi has won the bid for the 2 million kW 'A-Dian into Wulanchabu' regional mutual assistance new energy project (1.7 million kW photovoltaic), the 500,000 kW integrated photovoltaic project for desertification prevention and control in Dalate Banner, and the 1.1 million kW integrated wind and photovoltaic project for desertification control in Hangjin Banner, promoting the application of BC Generation II technology in photovoltaic desertification scenarios.
Ecological Restoration	Ordos coal mining subsidence area and areas to be mined	In the 4 GW new energy mega-base project in the Ordos coal mining subsidence area, a 1 GW photovoltaic power station was first connected to the grid in June 2024, all using LONGi Hi-MO 5 and Hi-MO 7 high-efficiency photovoltaic modules, and operating in parallel with 8 GW of thermal power units for peak shaving, achieving "the transmission of electricity from Inner Mongolia to the eastern regions".

#### During the Reporting Period

None of LONGi's production bases or operational sites was located in ecological red zones or near protected areas, with two biodiversity conservation projects undertaken.

**2** projects

#### Next Steps

In 2025, LONGi plans to deeply integrate biodiversity management into the core of its corporate development strategy and into its routine ecological and environmental management. The Company will guide its efforts with ecosystem science theories, conducting comprehensive and multi-scale ecological baseline surveys and assessments across all operational areas, seeking green operation opportunities, and building a sustainable ecological future. Additionally, LONGi will assess nature-related dependencies, risks, and opportunities to identify its connectivity with nature, establishing an internal biodiversity management mechanism and system. In 2025, LONGi plans to join the TNFD¹ and will publish an independent biodiversity practice report.

1.TNFD: The Taskforce on Nature-related Financial Disclosures



# o4 Social

LONGi strictly adheres to international labor standards and laws and regulations of the operation site and establishes a human rights governance system covering the whole value chain. We have formulated human rights policies and workforce management guidelines, and established mechanisms combining both risk identification and compliance audits. Based on the workers' congress system and diversified communication channels, we safeguard employees' democratic rights and enhance labor-management consultation by building the Complaint and Mediation Committee. Moreover, we work with suppliers to mitigate human rights risks, through which we ensure human rights protection across the industrial chain and continue to foster a sustainable environment that is fair and safe.

137 Human Rights

143 Occupational Health and Safety

+ SDGs addressed in this chapter











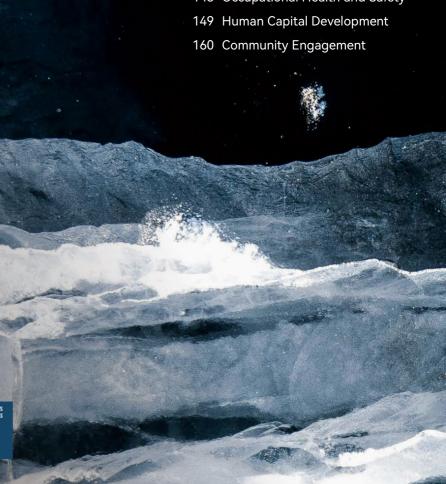












Value Chain

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The Company strictly adheres to the labor laws and regulations of the operation site, such as the Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China, as well as the United Nations Guiding Principles on Business and Human Rights (UNGPs), and Fundamental Conventions of the International Labor Organization (ILO). We are committed to safeguarding the fundamental rights of all employees, suppliers, and other business partners. We ensure that our recruitment procedures are compliant, and provide employees with competitive remuneration, incentives, and benefits. On this basis, we contribute to a fair, safe, and inclusive working environment where each employee's lawful rights and interests are respected and protected. In 2025, LONGi signed the Women's Empowerment Principles (WEPs). We advocate equal career opportunities for both male and female employees and support women in tapping into their potential and improving themselves.

#### Policies and Approaches

The Company has formulated the LONGi Human Right Policy<sup>1</sup>, the Management Measures for Prevention of Child Labor and Protection of Young Workers, the Management Measures for Prohibition of Forced Labor, the Anti-Discrimination and Harassment Management Measures, the Management Measures for Labor Dispute Resolution, and other policies to protect employees' rights and interests and human rights. It also has strict regulations concerning employee hiring, onboarding, management, and separation, and standardizes the identification of compliance risks, remediation measures, and procedures for incidents, including the implementation of the hiring system and ensuring transparent and compliant hiring process. The Company has conducted training and dissemination of the above policies and regulations for managers and other employees.



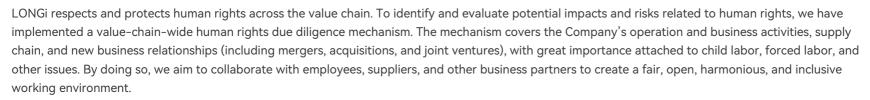
In terms of supplier management, the Company has made the LONGi CSR Code of Conduct of Suppliers and conducted CSR due diligence on suppliers. The code stipulates measures for protection of suppliers' human rights, including anti-discrimination, prohibition of child and forced labor, fair remuneration, freedom of association and collective bargaining, and the source of raw materials, providing guidance on human rights due diligence and fulfillment of corporate social responsibility of suppliers. For more details on management of suppliers' human rights and human rights, please refer to the Sustainable Supply Chain section.

Front Matter	Governance	Value Chai
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Topics	Policy content
Prohibition of child labor	Take measures to prohibit child labor and establish mechanisms and procedures for relief of child labor.
Prohibition forced labor	<ul> <li>Do not accept or use bonded labor, indentured labor, slaves, or human trafficking victims.</li> <li>Prohibit the use of prison labor and do not require job applicants to pay recruitment fees for employment; prohibit recruitment or employment through violence, threats, deception, seizure of personal documents, or the charge of deposits.</li> <li>Do not impose unreasonable restrictions on employees' freedom of movement within the workplace or their rights to leave the Company, establishing mechanisms and remedial measures to address incidents of forced labor.</li> </ul>
DEI	<ul> <li>Explicitly prohibit any form of discrimination, including but not limited to race, nationality, language, skin color, gender, age, religion, pregnancy, physical traits, or any other characteristics protected by applicable law.</li> <li>Adhere to zero tolerance for all forms of harassment, including but not limited to verbal abuse, physical contact, visual harassment, sexual harassment, bullying, and workplace violence. All employees are obligated to report and prevent any harassment incidents. For verified violations, we will take severe disciplinary actions against offenders.</li> <li>Prevent and address harassment through regular training, transparent reporting mechanisms, and rigorous investigation procedures.</li> <li>Uphold fair hiring principles and ensure equal pay for equal work.</li> </ul>

Actions Taken

# **Human Rights Due Diligence**



The Company actively conducts human rights due diligence to ensure the avoidance of adverse impacts related to human rights:



<sup>1.</sup> For example, coercion of employees by force/violence, threats, etc., or the occurrence of insults, corporal punishment, beatings, unlawful searches and detention of employees, etc.

**Appendix** 

#### **Policies and Commitments**

- · LONGi is committed to respecting and safeguarding human rights based on the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the ten principles of the United Nations Global Compact. LONGi respects the UNGPs and pledges to uphold human rights within its operations and throughout its value chain.
- LONGi's responsibility to respect human rights encompasses internationally recognized rights as outlined in the International Bill of Human Rights and the core human rights defined in the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. Accordingly, LONGi has formulated a human rights policy.

#### Supervision and improvement of risk management

- · The Company respects the rights of all employees and implements measures of risk prevention, identification, evaluation, and remediation. We also identify human rights risks regularly and conduct compliance audits to evaluate potential risks and improve management, so as to ensure closed-loop management of identified issues and safeguard employees' lawful rights and interests.
- · We use appropriate qualitative and quantitative indicators as well as internal and external sources to evaluate LONGi's human rights measures, thus reviewing the effectiveness of these measures in mitigating negative impacts on human rights.
- Functional departments of the Group report on the implemented measures and their effectiveness.

#### Risk Assessment

Governance

- The starting point of human rights due diligence is risk analysis, aimed at identifying and assessing actual or potential negative impacts on human rights caused by business activities.
- A comprehensive and ongoing risk analysis covers all of LONGi's production facilities, supply chain, and the entire lifecycle of products.
- The most severe potential human rights infringements remain a top priority for
- The Company conducts specific risk analyses based on incidents. Additionally, internal and external investigation results may trigger re-evaluation of human rights risks.

#### Response Measures

- · We follow a risk-based approach recommended by the United Nations and other international standards and normative systems to assess the sustainability of existing measures in priority areas that could lead to, contribute to, or are directly related to potential negative human rights impacts associated with LONGi.
- · LONGi has long implemented initiatives in areas such as health and safety, product management, compliance, human resources, and sustainable supplier management to mitigate or reduce negative impacts on human rights.
- We continuously supplement existing measures as needed to address gaps and drive ongoing improvement.



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**Appendix** 

#### Awareness and Training

 Provide human rights training on issues such as child labor and forced labor to the board of directors, senior management, and employees to enhance awareness of human rights due diligence.



#### LONGi conducts human rights training for senior executives and directors

In December 2024, LONGi organized a human rights responsibility empowerment training for the board, aiming to improve the governance team's understanding and awareness of human rights issues to address challenges in the process of globalization. The training invited human rights experts to share insights and experiences to help the Company establish a more comprehensive human rights responsibility framework.



Human Rights Training Site

# **a**

#### LONGi conducts supply chain human rights due diligence training

The LONGi Supply Chain Management Center hosted a "Human Rights Responsibility Awareness Enhancement Training" for global suppliers. The training is based on the UN Guiding Principles on Business and Human Rights (UNGPs), focusing on the three pillars: "Protection, Respect, and Remedy." It guides suppliers to conduct business in accordance with the core steps of corporate human rights due diligence (HRDD), sharing measures to identify forced labor and safeguard workers' rights. The training emphasizes the importance of responsible management for supply chain resilience and risk mitigation, encouraging upstream and downstream companies in the industry to strengthen their supplier responsibility awareness and capabilities, promoting sustainable industry development.



Supplier Human Rights Due Diligence Training

#### Complaints and reporting

- The Company has established clear and systematic procedures to investigate and address complaints related to human rights violations. Investigations are conducted by specialized teams composed of representatives from relevant functional departments. When necessary, external experts are invited to ensure independence and impartiality of the investigations. The process includes receiving, evaluating, investigating complaints, and publishing the results, and implementing proper corrective actions and disciplinary measures without bias related to employees' position or any other factor.
- The Company has open channels of communication, complaints and reporting to protect human rights. We encourage anonymous or real-name reporting of human rights issues from employees, suppliers, business partners, customers, and other stakeholders to the Compliance Department or the Supervision Department through telephone, email, and reporting mailboxes. The Company promises to conduct objective investigations in accordance with laws and regulations, address all cases fairly, provide timely feedback, and strictly keep strictly confidential the whistleblowers' identities and information.



Reporting and communication channels

Compliance consultation:

Compliance@LONGi.com

 Reporting email: audit@LONGi.com

• Reporting hotline:

+86 29 84193391; +86 18089282003

## **Culture of Fairness**

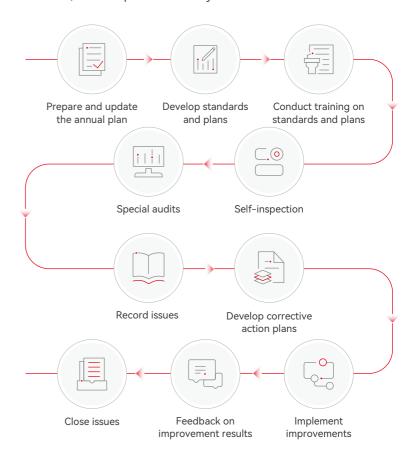
LONGi provides robust support for its DEI policies and assigns the Strategy and Sustainable Development Committee to supervise the implementation of the policies. Management and the HR Department make joint efforts to integrate DEI into strategic decision-making, daily operations, and recruitment process, formulate compliant DEI policies, and advance relevant projects. The Chief Strategy and Sustainability Officer (CSO) oversees the diversity performance evaluations of employees and regularly report progress to the committee. All employees are responsible for implementing DEI principles, participating in training sessions, and are encouraged to engage in related activities, so as to foster a corporate culture that is more diverse, equitable, and inclusive. The Company has set specific DEI goals and KPIs, and incorporated "employee diversity" into the performance evaluations of the HR Department and CSO. The effectiveness of policies is regularly evaluated based on results of annual employee satisfaction surveys and training participation rate.

- Formulate leadership guidelines and the code of conduct for management to foster constructive exchange among employees, and enhance capabilities of the leadership through business workshops, case studies, and mentorship programs.
- Advocate international standards while respecting regional differences, employ a two-way education mechanism to advance cross-cultural understanding, and establish the multi-tiered capability development model to ensure DEI principles are integrated in both policy frameworks and practices.
  - Establish the system combining online and offline training to incorporate core DEI principles such as anti-discrimination and anti-harassment into daily training programs, thus enhancing employees' understanding of DEI policies and encouraging them to implement these policies. We carry out cross-cultural exchange activities and annual onboarding training programs to help employees learn about global DEI standards while receiving local support. We also provide training sessions for employees in the HR Department, as well as diverse cultural exchange activities and benefits programs, so as to continuously improve the DEI policies and achieve our targets.

As a participant in the United Nations Global Compact Accelerator Program, LONGi promises to address gender balance and abridge the gender wage gap within the time limit, and disclose DEI metrics and progress in its sustainable development reports, so as to ensure transparency and accountability.

# **Compliance Audit**

Every year, the Company conducts internal HR audits on all entities under its management including manufacturing bases based on corporate social responsibility framework. The audits include prohibition of child labor and forced labor, anti-discrimination, compliance of social insurance contribution, proper working and rest hour, and compliance of salary determination.



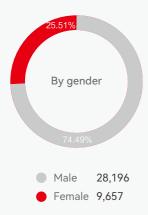
#### **Targets and Performance**

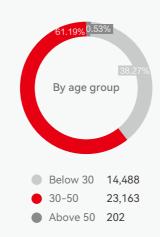
In 2024, there were no incidents or complaints concerning child labor, forced labor, and security-related issues that violated human rights and modern slavery laws in countries and regions where we operated. We conducted on schedule HR compliance audits across all domestic business units, including but not limited to the prohibition of child labor and forced labor, and identified no negative incidents in these areas.

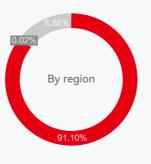
Diversity, equity, and inclusion requirements and behavior standards for employee training reached the coverage rate of



#### LONGi Employee Structure in 2024 (unit: persons)

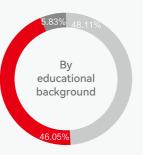








- Taiwan regions
- Other countries/regions 3,364



- Below junior college 18,211 degree
- Junior college and 17.437 bachelor's degree
- Master degree and 2,205 above

▼ Number of local

#### LONGi 2024 Employee Diversity Performance

▼ Number of high-end talents attracted by LONGi



▼ Cumulative number of overseas employees (non-Chinese) attracted



▼ Cumulative number of local employees attracted in overseas bases



▼ Number of local employees attracted in Malaysia



- employees attracted in Vietnam 2024

# Occupational Health and Safety

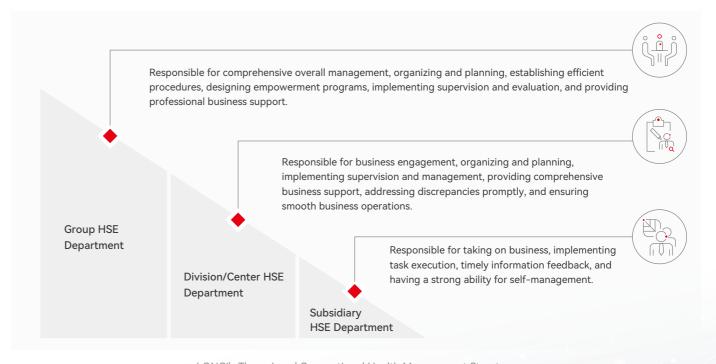


LONGi attaches great importance to occupational health and safety management, strictly adheres to the Occupational Safety and Health Convention of the ILO. We are committed to protecting the occupational health of our workforce, suppliers, and contractors. We have established comprehensive systems and made efforts to advance risk and incident prevention, emergency response, build the culture of safety, and sharpen employees' skills, so as to prevent workplace incidents and lay a solid foundation for employees' health and stable development of the Company.

#### Policies and Approaches

The company has always regarded the occupational health and safety management of its employees as the cornerstone of its sustainable development. It continuously improves its management system, deepens hidden danger investigation, enhances emergency response capabilities, and fully consolidates the safety production defense line. In 2024, the company introduced 17 new institutional documents, including the "EHS Performance Evaluation Method for Management Personnel" and the "Behavioral Safety Management Method", to ensure that the company meets legal and regulatory requirements while improving its occupational health and safety management level and safeguarding the safety and health of its employees.





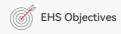
LONGi's Three-Level Occupational Health Management Structure

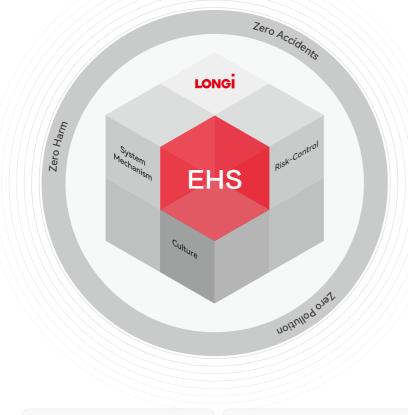


#### ▼ Overall Framework¹













### **▼** Business Operation Rules

# System Mechanism

Front Matter

**EHS Basic** Management Compliance Management Stakeholder Management Risk and Change Management **Emergency Management** Inspection, Assessment, and Improvement

# Risk-Control

Production Operation Risk	Operation Standards and Execution	Work Environment Management
Control Assessment	On-site Chemical Management	
Production	General Equipment	Electric Heating Equipment
Equipment and Facility Risk Control	Handheld Electric Tools & Mobile Electrical	Equipment Inspection and Maintenance
Assessment	Lifting and Hoisting Equipment	Automated Guided Vehicle
	Electrical Equipment	Exhaust System
Plant Risk Control Assessment	Special Gas and Chemical System	Rainwater and Sewage System
	Water Supply and Heating System	
Storage and Transportation Risk	Raw Material and Finished Product Warehouse	Transportation and Transfer Vehicles
Control Assessment	Chemical Warehouse	Solid Waste Management
Restaurant and	Restaurant Management	Security Management
Dormitory Security Risk Assessment	Dormitory Management	
Fire Protection System Risk	Fire Protection Facility Management	Firefighting Equipment and Facilities
Assessment	Fire Protection System Operation	

#### Culture

**EHS Culture** 

**EHS** Leadership EHS Incentives and Accountability EHS Knowledge and Competence **EHS Atmosphere and Communication** EHS Behavior and Awareness

Governance

LONGi uses its EHS vision, mission, goals, policies, and values as an overall framework, while leveraging system mechanisms, risk control, and safety culture to continuously promote the construction of the occupational health and safety management system.

During the Reporting Period,



the coverage rate of system for employees

100 %





all sites that were put into operation of subsidiaries attained ISO 45001 Occupational Health and Safety Management System certification

100 %

# **Risk Prevention and Control**

The Company has established a comprehensive occupational health and safety management mechanism covering risk identification, evaluation, control, and monitoring. Through refining the process, enhancing hidden danger investigation and training sessions, we have improved our risk management capabilities in a systematic way, thus providing robust support for safeguarding workplace safety.

Risk Prevention and Control	Major initiatives
Risk Prevention and Control	<ul> <li>Throughout the year, 856 high-risk positions for fire hazards were identified. Videos of key fire prevention areas were displayed on screens to enable early detection, early response, and proactive prevention.</li> <li>We provided pre-job, on-the-job and post-job occupational health examinations for all employees exposed to occupational hazards, as well as emergency medical examinations for those exposed to sudden hazards. The Company offered pre-job and on-the-job occupational health training for all employees exposed to occupational hazards to enhance their awareness and skills in occupational health protection in a comprehensive and effective way.</li> </ul>
Prevention of incidents	<ul> <li>The Company has developed a Serious and Fatal Accident Prevention Review Model (SIFS-PA) based on the SIFS incident management model, covering various types of accidents, including mechanical injuries, falls from heights, fires, electrocution, poisoning, asphyxiation, burns, strikes from objects, and vehicle injuries. Through annual on-site audits, targeted improvement tracking, and assistance with challenging issues, we comprehensively enhance our accident prevention capabilities.</li> </ul>
Monitoring of high-risk areas	<ul> <li>Established process safety standards for high-risk equipment such as the monocrystalline furnace buffer tank and liquid ammonia station, and implemented design source control and technological upgrades to systematically eliminate risks in key areas such as the silane station.</li> </ul>
Innovation of safety technology	<ul> <li>Throughout the year, 249 innovations of safety technology were accomplished to prevent accidents, including: warning system for the risk of silicon wafer dust explosion, low-risk substitution of hazardous chemicals, centralized monitoring of safety interlock systems, upgrade of LP silica fume handling process, over-temperature safety protection for organic exhaust gas treatment in screen printing, dual-reset safety protection system for personnel entering the equipment.</li> </ul>

Environmental

# Risk Prevention and Control

#### Major initiatives



• The Company implements a series of behavioral safety SOT¹ initiatives to strengthen behavioral safety management. This includes personnel control and organizational management in behavioral safety. Personnel control involves safety inspections by the main responsible persons/deputy general managers at the bases, safety observations by management personnel, and risk awareness among grassroots employees. Organizational management of behavioral safety includes monthly assessments for all bases, random verifications, and continuous feedback for improvement.



• In 2024, the Company formulated and issued the LONGi Group Potential Hidden Danger Investigation Guidelines, providing guidance on 5 systems (mechanical safety, hazardous chemicals, public auxiliary equipment, electrical safety, and hazardous operations) involving 15 modules. We also developed corresponding training courses and delivered them to relevant business departments. By doing so, we enhanced our capabilities of identifying hidden dangers.



#### Taizhou LONGi Solar pays safety liability insurance for employees

Taizhou LONGi Solar takes active steps to fulfill its corporate social responsibility by establishing a multi-layered occupational safety protection system for employees in non-mandatory insurance areas. Though the PV manufacturing industry is not classified as the high-risk industry in the *Implementation Measures on Work Safety Liability Insurance*, the Company pays work safety liability insurance together with employer's liability insurance and medical expense insurance for employees to protect them from risks. The coverage rate has reached 53%, with priority given to employees in production, manufacturing, and other frontline positions.



Taizhou LONGi Solar Base

<sup>1.</sup> The SOT special project model, based on behavioral safety for personnel control and organizational management, enhances safety management levels through three major cyclical mechanisms: One-dimensional cycle (personnel control) operates through propaganda and training, focused execution, and internalized improvement.

Two-dimensional cycle (organizational management) operates through regular scoring, random verification, and feedback-driven improvement.

Three-dimensional cycle achieves a two-way improvement loop between personnel control and organizational management, ultimately aiming to prevent occupational health and safety accidents.

Social

# Training for Improvement

**LONG** 2024 Sustainability Report

LONGi strengthens its safety management capabilities through a dual-track policy: carrying out specialized training programs for executives to enhance their leadership and for employees in EHS positions to sharpen their skills. Based on management capability modeling and scenario-based workshops at pilot bases, we have formulated the Personal Safety Action Plans covering 10 core capabilities to ensure that the accountability checklists are aligned with governance tools. Moreover, we have developed matrices of capabilities required for 112 key positions and a tiered training system based on the analysis of 221 employees from three production bases, and established a platform with 54 hands-on training sessions and 39 standardized video courses. On this basis, we ensure that our experience in safety management will be offered to new employees, establishing a dual defense system of es "talent + systemes ".

# **Emergency Management**

The Company has established an integrated fire prevention system composed of "1 • 3 • 5 emergency management model and three-level comprehensive inspections". It also designates 768 zones as emergency response grids, builds professional ERT teams, maintaining zero major accidents in both engineering construction and power plant O&M.

- The Company developed the fire emergency response procedure of "keeping in mind four steps, mastering eight skills, and taking actions within 60 seconds", with fire drills for all employees, to ensure that they can call for rescue and extinguish the fire properly while prioritizing self-protection during emergencies.
- LONGi has built the group-wide emergency medical response system and medical teams of over 1,600 trained personnel, with more than 220 drills carried out and 253 emergency medical kits distributed. During the year, emergency awareness training sessions covering 100% of the employees were delivered, with approximately 37,686 participants. By doing so, the Company ensures rapid and effective response to sudden health incidents.

# **Culture Development**

The Company continues to strengthen the responsibility system and risk prevention in the field of safety production.

- Conducted various EHS activities, including Occupational Health Awareness Month, Fire Safety Month, Safety Production Month, and the es "Safe LONGies" journal.
- Developed a total of 562 grassroots position lists and 2,018 TOP risk and control measure lists, promoting 100% implementation across all bases.



### Xey Performance in 2024





Proportion of operational sites that conducted employee health and safety risk assessments

100 %



Throughout the year, there were no level 1 or level 2 work-related injuries or fire incidents

the number of fatalities due to work-related causes

**O** people

the number of contractor fatalities

people



Potential safety hazards identified

**57,490** items

rectification rate

99.51 %



SIFS-PA special accident prevention audits conducted

64 times

▼ Breakdown by gender (hours)

Audit issues identified

Self-inspection improvements implemented

**1,090** items

Rectification completion rate

100 %



External and third-party workplace safety audits conducted

**715** times





Coverage of business units for the behavioral safety SOT special random verification

**57** %

a pass rate of

100 %



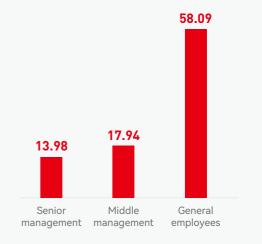
Number of workplace safety activities carried out

Emergency response drills organized

2,131



▼ Breakdown by level (hours)



Value Chain

Front Matter



2024 Sustainability Report



ONGi always prioritizes talent development as the key driver for corporate growth. We have established the system including value creation, performance evaluation, and equitable distribution that covers the full lifecycle of employees, remuneration policies in accordance with international standards, and transparent promotion mechanisms. We also develop targeted employee care initiatives and learning maps based on multiple scenarios to continuously enhance the adaptability and sense of belonging of our workforce worldwide.

#### Policies and Approaches

LONGi has formulated policies such as the Remuneration Management System, the Management Measures for Employee Care, the Management Measures for Employee Cultural and Sports Activities, the Management Measures for Employee Clubs, the Complaints and reporting Management System, the Accountability Management Measures, the Management Measures for Labor Dispute Resolution, and the Professional Talent Development Plan. The Company also developed the employee representative congress and transparent remuneration and promotion mechanisms, so as to facilitate health examinations, provide mental health assistance, and support the employees in need. At the same time, we reinforce the cohesion through regular cultural events and skill training sessions, ensure open communication through the workers' congress and guarantee employees' rights to know, participate, and supervise the Company's decision-making process, promote transparency in remuneration, and provide mental health support for all employees. All these measures align individual growth with corporate strategic objectives, thus promoting the positive interplay between the two.



#### Actions Taken

## Remuneration and Performance

LONGi adheres to the remuneration management principle of "equitable, competitive, and sustainable", rigorously implementing equal pay for equal work between genders while ensuring competitiveness and equity of remuneration. The Company has developed a multidimensional framework of remuneration and incentives composed of "base salary, allowances and subsidies, performance bonuses, corporate profit sharing, and medium- and long-term incentives", combined with pay rise plans, awards for major projects, and awards for those who made outstanding contributions. These measures collectively improve work efficiency across the Group and realize employees' full potential. To further optimize the performance management system, the Company has implemented a scientific and dynamic performance evaluation process:





Setting goals

LONG 2024 Sustainability Report

Managers and employees jointly set measurable and time-limited objectives



Providing support

Track the progress on a regular basis, provide targeted resource support, and help employees to improve their capabilities



Scientific evaluation

Evaluate performance based on objective data and the goals that have been set



Feedback and improvement

The management holds one-on-one sessions to review the outcomes and jointly develop improvement plans, promoting mutual growth for employees and the organization



Result application

Appendix

Performance evaluation results are closely linked to promotion, performance bonuses allocation, pay rise, as well as other management process such as awards for employees who made outstanding contributions

Performance Evaluation Procedures

# **Employee Care**

Taking a people-centered approach, the Company has developed a multidimensional employee care system covering benefits, health management, career development, and living support based on local conditions, cultural traditions, and staff preferences at all operation sites, aiming to enhance employees' sense of belonging and happiness.

Category	Benefits	Details
Basic benefits	Company benefits	In addition to mandatory social insurance, housing fund, and statutory holidays, we provide full-time employees with dormitories, meals, transportation subsidies/buses, benefits for employees working away from home (allowances and family leave), funds for bonding activities, fitness facilities.

Category	Benefits	Details
Flexible working options	Flexible working	Offers flexible working schedules, remote work, and part-time jobs to improve employees' satisfaction and help them to achieve work-life balance.



Category	Benefits	Details
Leave policy	Diverse leave system	Establish a compliant and flexible leave system. Apart from statutory annual leave, sick leave, marriage leave, bereavement leave, paternity leave, the Company also provides child-bearing leave such as prenatal check-up leave, breastfeeding leave, maternity leave, and additional leave options like marriage-accompaniment leave, long-distance family visit leave, compensatory leave, point-based leave, and incentive leave.
Female support	Maternity support	Establish rest rooms for pregnant women and baby-care rooms in plant areas with more than 100 female employees, and provide them with child-bearing leave, prenatal check-up leave, and breastfeeding leave.
Employee clubs	Employee Art and Sports Clubs	The Group had 165 clubs where cultural and unique local activities were launched, such as Murder Mystery Game and fishing.

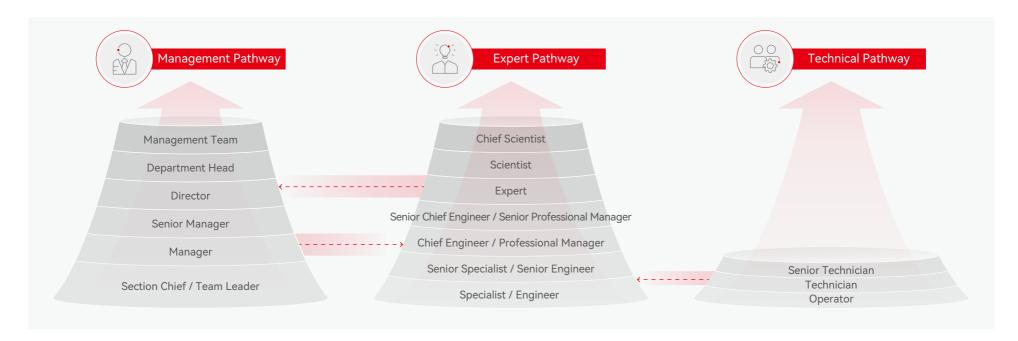
Category	Benefits	Details
	EAP mental health services	Establish global mental health hotlines, provide group health counseling, and carry out mental health carnivals and workshops.
	Health management	Provide physical examinations for employees not exposed to occupational hazards, as well as report analysis and knowledge of prevention of chronic diseases.
Employee care	Financial assistance	Provide financial assistance for employees when they or their spouses and immediate family facing financial difficulties due to hospitalization, serious illnesses, or accidents.
	Group insurance	Provide all staff with supplementary commercial health insurance that includes critical illness insurance and inclusive insurance that combine lump-sum payment and reimbursement.
Transition policy	Internal retirement/ consultant policy	Offer employees opportunities to be internal consultants or retire, pay social insurance and housing fund for them, and provide corresponding benefits.



### **Promotion Channels**

The Company has established a comprehensive career development system, providing equal growth and promotion opportunities for all employees. The Company has established a multi-channel career development system. Promotion decisions are made based on employees' performance, and multidimensional evaluation methods are adopted to eliminate all forms of bias. Employees worldwide have the opportunities for career development. All units adhere to the three major principles: "integration of promotion and business development", "fairness and equity", and "pursuing development in an orderly manner". Every year we conduct promotion nominations and reviews for candidates who are committed to corporate value and meet the requirements for performance and working years. We also regularly review our decisions to ensure that employees at all levels have equal opportunities for career development, and provide tailored support for employees with different backgrounds. Moreover, employees will receive structural feedback on their performance and expectations for them. By doing so, each employee can take active steps to achieve their goals and make positive contributions to the Company.

The Company has developed a scientific, systematic, and standardized talent development system to provide mechanisms for the growth and development of every employee. It has established three main career paths: management, expert, and technical specialists. The Company has also developed standards for managerial roles, qualification standards for professional positions, and skill assessment standards for operational roles. Through diversified empowerment programs for senior, middle, and frontline employees as well as technical staff, the system effectively supports and guides each employee to grow through lateral rotations or vertical development, helping them become versatile talents with comprehensive practical experience across multiple fields and providing more opportunities and space for upward growth and career advancement.



Social

# **Talent Cultivation**

LONGi firmly believes that talent is the core driving force behind the sustainable development of the enterprise. In terms of talent development, we have established a comprehensive and multi-tiered cultivation system, creating an empowerment professional system tailored to different levels and categories of employees.

LONGi regularly conducts business needs assessments and training budget kickoff meetings each year to accurately target training directions. We meticulously create diverse training programs focused on leadership, new employee onboarding, and professional skill enhancement, empowering the growth of every employee, helping them achieve their career aspirations at LONGi, and working together to drive the company to greater heights.

The General Project	The Human Resources Committee reviews and identifies individuals who have the six key qualities for leaders.
The Sergeant Project	The Human Resources Committee at manufacturing bases reviews and identifies qualified individuals.
The Lieutenant Project	Fully examine qualities of foremen to ensure they are up to par.
LONGi Cultivation	A program for excellent previous graduates in campus hires. Those who passed the evaluation are offered job positions.
LONGi Futures	A program for Graduate traineeship in campus hires. Those who passed the evaluation are offered job positions.
International Talent	Carefully match talent with business needs, identify international talent with background in manufacturing and marketing, and train them until they are up to par.
Focus on New Leadership	Help new leaders to have a deep understanding of LONGi's leadership management and corporate culture, knowledge about the Company and the industry, and relevant policies, thus enhancing their sense of belonging.
Focus on New Employees	Help new employees from social recruitment to learn about the Company and the industry, relevant policies, and corporate culture, thus contributing to their development and enhancing their sense of belonging.



Leadership empowerment project

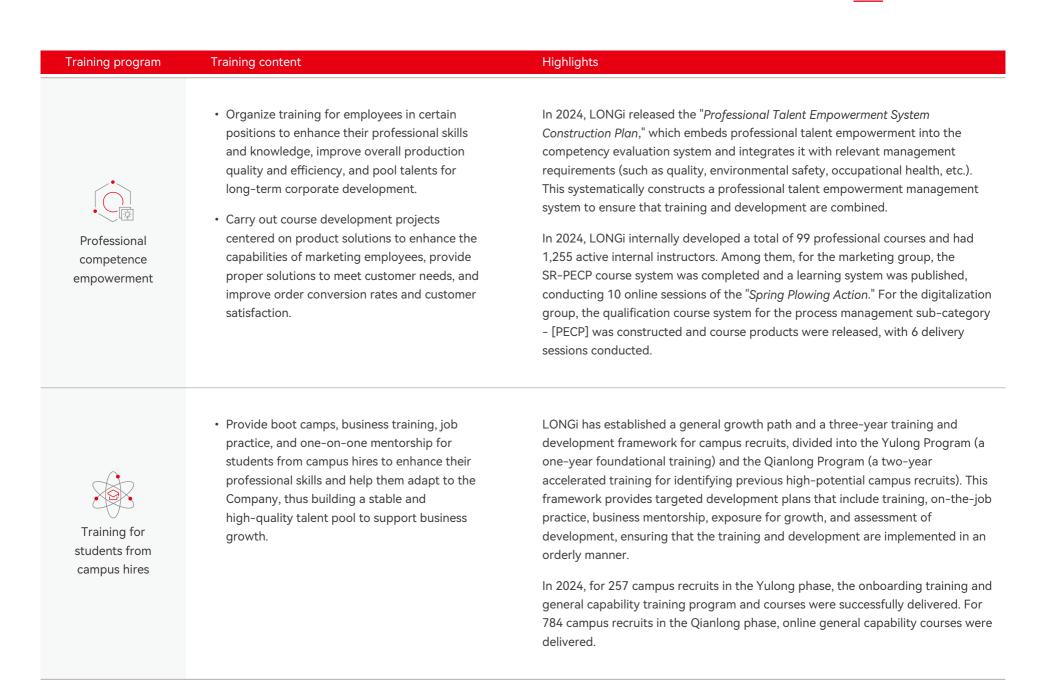
#### Training program Training content Highlights The Company provides personalized training for LONGi uses the "Six Powers of Leadership" tiered standards as a basis to develop leaders at diverse levels: and design the Leadership Development Program (LDP), suitable for M4+ leadership empowerment projects, and the Leadership Management Program (LMP), suitable • Senior managers: capacity enhancement for M3 leadership empowerment projects. To address the differentiated capability projects for general managers in marketing development needs of various positions, LONGi identifies the capability areas/regional leaders, capacity enhancement development requirements for key management positions and develops and projects for general managers at production designs "differentiated" empowerment project/course solutions that integrate job bases, senior executive workshops, etc. These characteristics, combining leadership and professional competencies. Examples projects strengthen employees' capabilities of include projects such as GMDP-S/M, CFO, and SLP-P. To ensure that the market insight and resource integration, so as "foundation" talents of the company's management ladder have a solid foundation to help the Company speed up expanding new in management theory and competencies, courses or projects have been designed markets and ensure business objectives are and developed for universal competencies, basic management skills, and achieved in a more effective way. management tools suitable for M1-M2 tiers, achieving a 100% completion rate for · Frontline managers: cultivate qualified talent training indicators. for frontline management through Leadership differentiated projects for business units, so as Level **General Program Key Position** empowerment to enhance teamwork across the Company. GMDP **GMDP-S** Senior LDP empowerment project GMDP-M **GMDP** Management **GMDP-CFO** CFO Middle LMP empowerment project Management Frontline LFP empowerment project Supervisors LMP-HRM Team SLP-P empowerment project Leaders LMP-4D LMP-HR

Front Matter

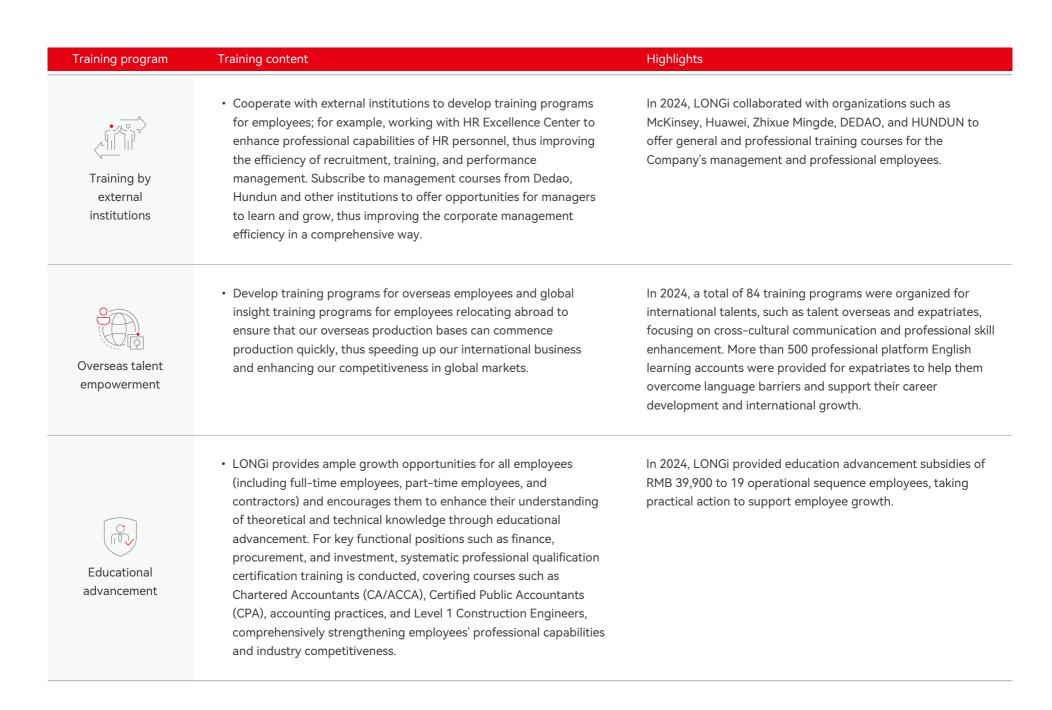
**LONG** 2024 Sustainability Report

**LONG** 2024 Sustainability Report

Value Chain



**Appendix** 



Front Matter

LONGI 2024 Sustainability Report

Social

### Actions to deepen college-enterprise collaboration: first batch of students from LONGi Class begin their internship

To alleviate the global talent gap in PV industry, LONGi, together with Carbon Neutrality College of Northwest University, explores the new model of college-enterprise collaboration by establishing the "LONGi Class" to jointly cultivate leading PV talents. In November 2024, 12 students graduated from the class and commenced their internship at LONGi Central R&D Institute. The program features the dual-mentorship system, joint development of courses, and hands-on training, providing students with comprehensive training opportunities covering professional theory and practice.



Members of the LONGi Class

# **Employee Communication and Satisfaction**

LONGi strictly complies with the *Trade Union Law of the People's Republic of China*. It has formulated the *Group Labor Union Management System*, established labor unions and held workers' congresses in compliance with relevant laws and regulations. We respect employees' rights to freedom of association and collective bargaining, and make it clear that workers may voluntarily join labor unions. We have diversified communication channels for labor unions, including general manager mailboxes, employee forums, reception days, and dormitory visits to ensure timely responses and solutions are provided to address employees' concerns. The Company and labor unions have jointly established the Labor Dispute Mediation Committee, which consists of the union chairman, employee representatives, legal representatives, and HR representatives. Labor disputes are mediated based on negotiation, safeguarding employees' legitimate rights and interests.

The Company implements a two-level workers' congress system: group-level congresses are held in the first half of the year and unit-level congresses in the second half of the year. On this basis, we safeguard employees' rights to information, participation, and supervision. In 2024, the Second Workers' Congress was convened, with 180 employee representatives from all operational bases participating online and offline.

To motivate employees and safeguard the sound development of the Company, every year we conduct surveys on satisfaction with the corporate atmosphere, through which we evaluate the our management measures and know employees' concerns. In 2024, based on the four key dimensions (job satisfaction, happiness, stress, and sense of purpose) of workplace well-being set by University of Oxford's Wellbeing Research Centre, we conducted the survey and achieved a score of 91.03, with 45.45% of all employees participating. On this basis, we formulated targeted strategies to improve employees' sense of happiness.

We have also established complaint procedures for employees. If they have questions about probation, performance evaluations, termination procedures, or unfair treatment in the workplace, or other related matters. they may make anonymous complaints on designated platforms. The complaint will be addressed in accordance with the corresponding procedures and through indirect supervisors, the HR Department, and then the dedicated investigation team. Employees may report any suspected violations through the following channels:



#### **Engagement and Complaint Channels**

- Compliance consultation: Compliance@LONGi.com
- Reporting email: audit@LONGi.com
- Reporting hotline: +86 29 84193391; +86 18089282003
- Providing suggestions: chairman@LONGi.com (Chairman email)

### ➤ Key Performance in 2024



▼ Remuneration and Performance



Employee regular formal performance assessment coverage rate

▼ Employee Care



Social insurance coverage rate was

100 %



The total amount of distributed union benefits was

RMB 48.12

▼ Employee Communication and Satisfaction



Collective agreement signing rate

▼ Talent Cultivation



The company's investment in employee training

RMB 25.4 million

Average training expenditure per employee

RMB 671.02



The Worker's Congress communicated with

Proposal closure rate was

90 %

Total training hours achieved



Average training hours per employee

**57.73** hours



The Chairman received

Closure rate of the opinions received by the Chairman's mailbox was



Percentage of employees participate in regular % performance and career development reviews



**1,334** opinions

Employee satisfaction score of corporate atmosphere was

Percentage of employees participating was

45.45 %



Environmental

# Community Engagement

2024 Sustainability Report



#### Policies and Approaches

The Company supports the United Nations Guiding Principles for Business and Human Rights and Human Rights and the Ten Principles of the UN Global Compact, and adheres to the United Nations Declaration on the Rights of Indigenous Peoples. We encourage localized employment and procurement, support livelihoods of local residents (particularly vulnerable groups including children, the disabled, indigenous populations, and minorities), respect cultural diversity, and help them to benefit from economic, social, and cultural development. Moreover, we make it clear in the Code of Business Conduct that LONGi always takes solid steps to promote and protect fundamental human rights and freedom of local communities.



#### **Actions Taken**

With "Affordable for All" as its vision, LONGi promotes a fair and just global energy transition through green technology innovation. In areas such as health and well-being, biodiversity conservation, and quality education, we empower community sustainable development with the power of green technology, practicing corporate social responsibility and sustainability.



Education support







- · Climate action
- Biodiversity



















· Rural revitalization











Governance

### Climate Action

LONG 2024 Sustainability Report

At COP 27, we advocated global energy equity for the first time. At COP 29, we were committed to promoting energy equity through green innovation. All these efforts demonstrate our determination to make affordable clean energy accessible to more people.

Donating Hi-MO X6 to a primary school for disabled children in Poland

With the infinite energy of the sun, LONGi donated Hi-MO X6 high-efficiency modules to a primary school for disabled children in Poland. Through solar power, it brought clean electricity to the campus, helping the school reduce electricity expenses and also minimizing the environmental impact of teaching activities. Installing photovoltaic modules on campus not only provides an opportunity to showcase the practical application of solar energy but also has a positive impact on the development of the community ecosystem and promotes sustainable development.



Donation of Hi-MO X6 high-efficiency modules to a primary school for disabled children in Poland

In Mozambique, LONGi transforms the abundant solar energy in Southern Africa into green electricity to power water pumps, offering a vital source of clean water to local maternity clinics.



LONGi supports maternity clinics in utilizing clean energy and freshwater

"Clean water sources are crucial for improving sanitation, raising living standards, and reducing maternal and child mortality rates. In 2024, LONGi, together with its Swedish strategic partner and Senergia of Sweden, and in collaboration with the local Mozambican non-governmental organization Project Vita, has constructed a photovoltaic-powered water tower and a 0.86kW rooftop photovoltaic project for the maternity clinic in Linga Linga Village, Mozambique, aiming to assist the local maternity clinic in obtaining clean water sources. The project was completed by the African construction team under the guidance of LONGi. It not only effectively reduces the risk of infection and complications during childbirth for pregnant women, but also ensures that newborn children can be bathed with clean water. Since the system was put into operation, the clinic has delivered 58 babies (17 per month on average), safeguarding maternal and infant health through clean energy and providing a sustainable solution for improving public health conditions.



Donation of Hi-MO X6 all-black modules to Linga Linga Maternity Clinic in Mozambique

Front Matter

# **Biodiversity**

LONG 2024 Sustainability Report

LONGi takes active steps to promote ecological restoration and sustainable development, providing innovative solutions through public welfare programs for the protection of rare species, ecological restoration of desert, and the protection of regional biodiversity, so as to achieve harmony between man and nature.



LONGi launches the "Zero-Carbon Life Plan for Pandas"

At COP28, LONGi announced the "Zero-Carbon Life Plan for Pandas", including donating the distributed PV power plant to the Foping Rescue, Breeding and Research Base of Qinling Giant Panda, adopting a panda, and providing PV products and technological support for the Shaanxi Foping National Nature Reserve.

It is understood that there are more than 2,000 giant pandas in the wild across the country, and around 67 of them are found in the Foping National Nature Reserve. Other rare animals such as the takin, golden snub-nosed monkey, and crested ibis are also present in the area. Without in-depth understanding, it is impossible to protect them more effectively, and human patrols alone cannot achieve round-the-clock monitoring. In 2024, LONGi installed a 137.46 kW off-grid photovoltaic system in the Foping National Nature Reserve. The BC modules provide continuous and stable power support for the reserve's monitoring system, enabling it to operate around the clock. This system can also accurately track the growth and activity patterns of wild flora and fauna. While reducing carbon emissions, it provides a more scientific basis for biodiversity conservation and ecological research.



PV power plant at the Shaanxi Foping National Nature Reserve



The Distributed Photovoltaic Power Station at the Qinling Giant Panda Foping Rescue and Breeding Base (completed in 2023)

# **Support for Education**

LONGi continues to ensure the right to education for diverse groups and promote educational fairness. During the reporting period, LONGi invested approximately RMB 1.35 million in educational public welfare projects.



Support for talent cultivation at the School of Physics, Lanzhou University

In 2019, LONGi signed a ten-year donation agreement with the School of Physics at Lanzhou University, committing to donate RMB 1 million annually to the college. In 2024, LONGi continued to fulfill this commitment and support its talent cultivation projects. The donated funds will be specifically used to support projects such as equipment upgrades, academic exchanges, and student research, creating better learning and research conditions for students through stable funding, aiding the college in enhancing its teaching and research levels, and cultivating more high-quality talents in the field of physics.

# **Community Investment**

LONGi, supported by photovoltaic technology, is lighting up hope in underdeveloped regions around the world, promoting energy equity, and contributing to green development.



Build "Sun Corridor" in favelas of Brazil

LONGi carried out the "Sun Corridor" PV project in favelas to support human rights protection in Rio de Janeiro through clean energy technology. The Company worked with Revolusolar, a non-governmental organization, to donate 60 high-efficiency PV modules to communities lacking stable power supply, and construct distributed solar systems on rooftops. The project has benefited 50 households. Over the past three years, over 70,000 kWh of electricity was generated, 7 tons of CO2 emissions were reduced, and more than RMB 100,000 in energy costs was saved annually. It provides solutions for lighting, medical equipment operation, and power supply for daily life during power outages, and relieves the burden of local people by reducing energy costs. Through such a sustainable way, we safeguard residents' rights to energy access, healthcare, and adequate standard of living, and inject green momentum into human rights protection in favelas.



"Sun Corridor" PV Project

## **Rural Revitalization**

In 2024, LONGi responded to the call for rural revitalization by actively carrying out rural revitalization projects with a public welfare investment of RMB 28.89 million. They collaborated with charitable organizations such as the Lijiang Charity Association in Yunnan Province and the Red Cross Society in Jingtai County, Baiyin City, Gansu Province, to support rural education, local infrastructure development, and green rural construction, benefiting approximately 25,000 people.

#### **Targets and Performance**

In 2024, LONGi's total donation amount was



RMR **78.47** million



Funded public welfare projects on climate actions

over RMR 6.33 million



Funded projects on biodiversity conservation

about RMB **450,000** 



Funded public welfare projects on education

RMR 1.35 million



Funded public welfare projects on community development

PMR 41.45 million



Funded public welfare projects on rural revitalization

RMR 28-89 million

Governance

Social

Appendix 1

# **ESG Performance Summary**

Indicator	Unit	2024	2023	2022
Corporate governance performance				
Operating revenue	RMB 100 million	825.82	1,294.98	1,289.98
Net profit attributable to shareholders of the listed company	RMB 100 million	-86.18	107.51	148.12
Basic earnings per share	RMB/share	-1.14	1.42	1.95
Total assets	RMB 100 million	1,528.45	1,639.69	1,395.56
Weighted average return on equity	%	-13.10	16.20	26.95
Number of independent directors on the board	Head counts	3	3	3
Number of female board members	Head counts	1	2	2
Integrity training and promotion	Sessions	4,447	1,205	578
Coverage rate of anti-corruption training for employees	%	100	100	100
Coverage rate of business ethics risk assessment	%	100	/	1
Coverage rate of business ethics training (board, employees, suppliers)	%	100	100	100
Business ethics training hours per employee	Hours	1	/	/
Illegal cases resulting from fraud and corruption	Cases	0	0	0
Number of anonymous complaints and reports regarding business ethics	Cases	257	362	212
Handling rate of anonymous complaints and reports regarding business ethics	%	100	100	100
Number of non-anonymous complaints and reports regarding business ethics	Cases	154	121	33
Handling rate of non-anonymous complaints and reports regarding business ethics	%	100	100	100
Incidents of Information security and privacy breach	Incidents	0	0	0

Indicator	Unit	2024	2023	2022
Product and service performance				
Investment in R&D	RMB 100 million	50.14	77.21	71.41
Ratio of investment in R&D to revenue	%	6.07	5.96	5.54
Number of patents granted throughout the year	Pieces	598	767	762
Total number of patents granted	Pieces	3,342	2,879	2,132
Marketing service centers in Asia-Pacific region, Europe, Americas, Middle East, and Africa	Counts	16	36	16
Response rate for customers' requests for technical support	%	100	100	100
Acceptance rate for customers' requests for technical support	%	100	100	100
Product recalls	Incidents	0	0	0
Customer satisfaction	%	74.9	/	/
Environmental performance				
Proportion of operational sites that have undergone specific environmental risk assessments	%	100	100	100
Coverage rate of employees who have received training on specific environmental issues	%	100	100	100
Total GHG emissions	tCO <sub>2</sub> e	30,528,707.91	42,046,620.25	32,559,044.94
Scope 1 GHG emissions	tCO <sub>2</sub> e	85,225.87	135,747.14	158,202.15
Scope 2 GHG emissions <sup>1</sup>	tCO <sub>2</sub> e	3,099,555.92	4,920,831.48	2,653,015.95
Scope 3 GHG emissions	tCO <sub>2</sub> e	27,343,926.12	36,990,041.63	29,747,826.84
Total upstream Scope 3 GHG emissions	tCO <sub>2</sub> e	25,078,254.37	36,458,752.43	28,824,165.58
Total downstream Scope 3 GHG emissions	tCO <sub>2</sub> e	2,265,671.75	531,289.20	923,660.28
GHG emissions within the scope of operation	tCO <sub>2</sub> e	3,184,781.79	5,056,578.62	2,811,218.10
Total water withdrawal	kt	43,319.39	52,644.61	36,435.43
Alternative water sources-gray water use rate	kt	24,315.86	28,333.33	23,199.05
Alternative water sources-rainwater withdrawal	kt	35.95	/	17+

<sup>1.</sup> Scope 2 is based on the market-based greenhouse gas performance, and the verification report is based on the location-based greenhouse gas performance. In addition, LONGi used the emission factor in the Announcement on the Release of the Carbon Dioxide Emission Factor of Electricity in 2022 to calculate the greenhouse gas emissions in 2024, and made retroactive adjustments to the Scope 2 data of 2023 and 2022

Environmental



Indicator	Unit	2024	2023	2022
Total water consumption	kt	8,466.12	10,922.80	/
Total water withdrawal density	kt/RMB million revenue	0.5246	0.4065	0.2824
Ultrapure water withdrawal	kt	22,690.81	28,728.10	16,142.00
Gray water use rate	%	56.13	53.82	63.67
Water savings <sup>1</sup>	kt	11,882	5,529	9,593
Reduction rate of overall electricity consumption per unit in the group compared to the baseline year (2020)	%	27.14	18.32	9.75
Comprehensive energy consumption	10,000 tce	128.59	151.49	113.14
Direct energy consumption	10,000 tce	0.51	0.72	/
Indirect energy consumption	10,000 tce	128.08	153.88	/
Comprehensive energy consumption intensity	10,000 tce/RMB 100 million	0.156	0.117	0.0877
Renewable energy usage <sup>2</sup>	GWh	4,746	3,815	4,279
The proportion of renewable electricity usage	%	47.5	31.1	47.18
The amount of electricity saving <sup>3</sup>	GWh	1,049	1,064	607
Annual electricity savings from monocrystalline silicon	GWh	188	595	311
Annual electricity savings from wafers	GWh	150	243	45
Annual electricity savings from cells	GWh	671	143	141
Annual electricity savings from modules	GWh	39	84	111
Total emissions of exhaust gas	t	594.08	693.04	1,246.33
Emissions of nitrogen oxides (NOx)	t	45.46	149.92	557.04
Emissions of sulfur oxides (SOx)	t	0.93	59.44	360.67
Emissions of particulate matter (PM)	t	305.00	278.43	175.19

<sup>1.</sup> Data covers domestic production bases only

<sup>2.</sup> The renewable electricity usage data has been verified by an independent third party

<sup>3.</sup> Data covers domestic production bases only

Social



Indicator Unit 2024 2023 2022 Fluorides t 49.85 33.81 21.42 Chlorine t 12.53 19.71 2.03 77.75 Ammonia t 43.41 15.73 52.23 VOCs t 136.9 136 kt 25,843 Wastewater discharge 34,853 42,351 Wastewater discharge-municipal wastewater kt 32,719 39,329 kt Wastewater discharge-surface water 2,135 3,022 2,847 COD discharge t 3,648 1,691 43,089 Ammoniacal nitrogen discharge kg 108,235 72,252 Total phosphorus discharge 10,973 12,018 6,750 kg Suspended solid discharge kg 709,323 580,921 601,040 294,519.00 Total waste generation t 293,804.91 483,573.81 272,095.20 277,134 · Total amount of non-hazardous waste generated t 441,654.12 Total amount of hazardous waste generated t 21,709.71 41,919.69 17,385 Amount of waste recycled and reused t 225,236.69 324,498.35 21,910 Amount of non-hazardous waste recycled and reused t 224,877.13 323,803.54 21,890 Amount of hazardous waste recycled and reused t 359.56 694.81 20 % Waste recycling rate 76.67 67.1 7.44 Rate of recycled non-hazardous waste % 82.7 73.3 7.9 % Rate of recycled hazardous waste 1.66 1.66 0.12 Amount of disposal of hazardous waste t 21,350.15 41,224.88 17,365 Transfer disposal (landfill) t 2,479.73 28,576.54 Transfer disposal (incineration and energy recycling) 18,870.43 12,648.34

Social



Indicator Unit 2024 2023 2022 Amount of disposal of non-hazardous waste t 47,218.07 117,850.58 255,244 Transfer disposal (landfill) t 41,686.24 93,260.47 • Transfer disposal (incineration and energy recycling) 5,531.83 t 24,590.11 Supply chain performance Counts 3,822 4,767 3,861 Total number of suppliers Number of suppliers (Chinese mainland) 3,379 3,999 3,473 Counts 21 14 Number of suppliers (Hong Kong, Macao, and Taiwan regions) 14 Counts Number of suppliers (Overseas) 429 747 374 Counts 4,575 / Tier-1 suppliers Counts 3,666 • Non tier-1 suppliers Counts 156 192 258 286 / Key suppliers Counts Key tier-1 suppliers 135 155 Counts Key non tier-1 suppliers Counts 123 131 Signing rate of supplier code of conduct % 100 100 100 Amount covered by supplier ESG due diligence audits % 91 83 Number of suppliers certified with ISO 45001 Counts 1,575 2,014 3.030 Number of suppliers certified with ISO 14001 1,663 2,271 2,767 Counts Number of suppliers certified with ISO 9001 2,208 3,519 3,711 Counts New suppliers screened by ESG criteria (social criteria) % 100 100 83 New suppliers screened by ESG criteria (environmental criteria) % 100 100 100 145 608 230 Total hours of supplier training Hours Total suppliers participating in training Person-times 1,295 5,993 397 Total number of supplier training sessions Sessions 65 258 108 % / Coverage rate of buyers who received sustainable procurement training 100 100

Social

Indicator		Unit	2024	2023	2022
Employee and community performance					
Total number of full-time employees		Head counts	37,853	75,066	60,601
Number of employees by gender	Male	Head counts	28,196	55,033	48,774
	Female	Head counts	9,657	20,033	11,827
Number of ethnic minority employees		Head counts	4,290	8,790	/
Number of employees by region	Chinese mainland	Head counts	34,483	64,971	48,236
	Hong Kong, Macao, and Taiwan regions	Head counts	6	7	4
	Overseas	Head counts	3,364	10,088	12,361
Number of employees by age	Below 30	Head counts	14,488	39,861	35,087
	30-50	Head counts	23,163	34,834	25,162
	Above 50	Head counts	202	371	352
Number of employees by education	Below junior college degree	Head counts	18,211	39,821	35,083
	Junior college and bachelor's degree	Head counts	17,437	32,115	23,772
	Master degree and above	Head counts	2,205	3,130	1,746
Proportion of female employees in executive managemen	t	%	21.68	20.27	20
Proportion of female employees in junior management		%	22.62	20.86	/
Proportion of female employees in revenue-generating fu	nctions (e.g., sales) management	%	7.45	25.21	/
Total overseas employees attracted (non-Chinese national	ls)	Head counts	3,364	10,088	1,706
Total local employees attracted to overseas bases		Head counts	2,727	9,872	1,623
Number of local employees attracted in Malaysia		Head counts	2,032	5,452	471
Number of local employees attracted in Vietnam		Head counts	695	4,420	1,152
Number of new employees		Head counts	28,294	35,779	/
Number of new employees by gender	Male	Head counts	22,506	26,717	/
	Female	Head counts	5,788	9,062	/
Social insurance coverage rate		%	100	100	98

Governance

Social

ndicator		Unit	2024	2023	2022
Number of new employees by age	Below 30	Head counts	15,657	23,704	/
	30-50	Head counts	12,612	12,013	/
	Above 50	Head counts	25	62	/
Total number of employees trained		Head counts	37,853	75,056	60,601
Total training hours throughout the year		Thousand hours	2,185.3	2,269.9	1,747.4
Average training hours per employee throughout	the year	Hours	57.73	30.24	28.83
Coverage rate for leadership training across all ma	nagement levels	%	100	100	100
Human rights incidents such as child labor, forced	labor, and discrimination	Cases	0	0	0
Coverage rate for regular employee performance	evaluations	%	100	100	100
Labor union membership rate		%	100	100	100
Satisfaction with corporate atmosphere		Score	91.03	91.97	91.12
Amount of labor union welfare disbursed		RMB 10,000	4,812.00	6,046.90	3,716.00
Gender pay ratio		%	106	/	/
Total hours of occupational health and safety train	ning	Thousand hours	2,097.0	2,898.9	2,217.2
Average EHS training hours per employee		Hours	53.08	37.38	36.59
Number of occupational health and safety training	sessions	Sessions	5,375	4,831	3,145
Number of emergency drills		Times	2,131	2,005	1,175
Annual safety hazard rectification rate		%	99.51	82.57	99.09
Number of recordable work injuries		Head counts	59	17	52
Lost days due to work-related injuries <sup>1</sup>		Days	480	353	420
Number of work-related fatalities		Head counts	0	/	/
Number of contractor fatalities		Head counts	0	/	/
Value of charitable donations		RMB 10,000	7,847.14	1,275.92	1,076.01
Amount of public welfare investment in rural revit	alization	RMB 10,000	2,888.68	/	/
Number of beneficiaries from rural revitalization		Head counts	25,000	/	/

# **ESG-Related Certifications**

Certification framework	Details
ISO 14001	Our manufacturing bases achieve 100% coverage of ISO 14001 Environmental Management Systems certification.
ISO 9001	Our manufacturing bases achieve 100% coverage of ISO 9001 Quality Management Systems certification.
ISO 50001	Our manufacturing bases achieve 100% coverage of ISO 50001 Energy Management Systems certification.
ISO 45001	Our manufacturing bases achieve 100% coverage of ISO 45001 Occupational Health and Safety Management Systems certification.
ISO 37301	LONGi has obtained ISO 37301 Compliance Management Systems certification.
ISO 37001	LONGi has obtained ISO 37001 Anti-Bribery Management Systems certification.
ISO 27001	All IT infrastructure and information systems have obtained the certification.
ISO 27701	All IT infrastructure and information systems have obtained the certification.
ISO 20400	This certification has covered sustainable procurement management across the Group's supply chain.
IEC 61730 Photovoltaic Module Safety Qualification	All of LONGi's module products have obtained IEC 61730 photovoltaic module safety qualification.
IEC 62941 Terrestrial Photovoltaic Modules-Quality System for PV Module Manufacturing	LONGi's module products have obtained IEC 62941 terrestrial photovoltaic modules-quality system for PV module manufacturing.
Green Factory	LONGi has been awarded 11 National and Provincial Green Factory certifications.

Appendix 3

# Index of Indicators

Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies-Sustainability Report (Trial)

Disclosure requirements	Clause	Corresponding section of the Report
Chapter III Environmental Disclosure		
Section 1 Climate Response	Article 20	Climate Change and Clean Technology R&D
	Article 21	Climate Change and Clean Technology R&D
	Article 22	Climate Change and Clean Technology R&D
	Article 23	Climate Change and Clean Technology R&D
	Article 24	Climate Change and Clean Technology R&D
	Article 25	Climate Change and Clean Technology R&D
	Article 26	Climate Change and Clean Technology R&D
	Article 27	Climate Change and Clean Technology R&D
	Article 28	Climate Change and Clean Technology R&D
Section 2 Pollution Control and Ecosystem Protection	Article 29	Water and Effluents   Pollution   Waste   Biodiversity and Ecosystems
Ecosystem Protection	Article 30	Water and Effluents   Pollution
	Article 31	Waste
	Article 32	Biodiversity and Ecosystems
	Article 33	Climate Change and Clean Technology R&D   Water and Effluents   Pollution   Waste   Biodiversity and Ecosystems
Section 3 Resource Use and Circular Economy	Article 34	Climate Change and Clean Technology R&D   Water and Effluents   Resource Use and Circular Economy
Circular Economy	Article 35	Climate Change and Clean Technology R&D
	Article 36	Water and Effluents
	Article 37	Resource Use and Circular Economy

Disclosure requirements	Clause	Corresponding section of the Report
Chapter IV Social Disclosure		
Section 1 Community	Article 38	Community Engagement
Engagement	Article 39	Community Engagement
	Article 40	Community Engagement
Section 2 Innovation-Driven	Article 41	Innovation-driven Development and Smart Manufacturing
Development and Ethics of Science and Technology	Article 42	Innovation-driven Development and Smart Manufacturing
	Article 43	Not applicable
Section 3 Suppliers and Customers	Article 44	Sustainable Supply Chain   Product Quality Management   Customer Relationship Management
	Article 45	Sustainable Supply Chain
	Article 46	Sustainable Supply Chain
	Article 47	Product Quality Management
	Article 48	Customer Relationship Management   Data Security and Privacy Protection
Section 4 Employees	Article 49	Human Rights   Occupational Health and Safety   Human Capital Development
	Article 50	Human Rights   Occupational Health and Safety   Human Capital Development
Chapter V Corporate Governance Info	rmation Related	to Sustainable Development Disclosure
Section 1 Sustainability-Related	Article 51	Sustainability Management
Governance Mechanisms	Article 52	Sustainability Due Diligence
	Article 53	Stakeholders Engagement
Section 2 Business Conduct	Article 54	Business Ethics
	Article 55	Business Ethics
	Article 56	Business Ethics

# **GRI Standards Index**

- Statement of use: LONGi has reported in accordance with the GRI Standards for the period from January 1, 2024, to December 31, 2024.
- ♦ GRI 1 used: GRI 1: Foundation 2021

Disclosure topic/number	Disclosure	Corresponding Section of the Report		
GRI 2: General Disclosures 2021				
Organization and its reporting	ng practices			
2-1	Organizational details	About This Report		
2-2	Entities included in the organization's sustainability reporting	About This Report		
2-3	Reporting period, frequency and contact point	About This Report		
2-4	Restatements of information	Not applicable		
2-5	External assurance	Third Party Assurance Report		
GRI 2: General Disclosures 20	021			
Activities and Workers				
2-6	Activities, value chain and other business relationships	About Us   Business Category		
2-7	Employees	Human Capital Development   ESG Performance Summary		
2-8	Workers who are not employees	Human Capital Development   ESG Performance Summary		
Governance				
2-9	Governance structure and composition	Corporate Governance		
2-10	Nomination and selection of the highest governance body	Corporate Governance		
2-11	Chair of the highest governance body	Corporate Governance		
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Governance System		
2-13	Delegation of responsibility for managing impacts	Sustainability Governance System		
2-14	Role of the highest governance body in sustainability reporting	Sustainability Governance System		

Governance



Disclosure topic/number	Disclosure	Corresponding Section of the Report	
2-15	Conflict of Interests	Business Ethics	
2-16	Communication of critical concerns	Stakeholders Engagement	
2-17	Collective knowledge of the highest governance body	Sustainability Governance System	
2-18	Evaluation of the performance of the highest governance body	Sustainability Governance System	
2-19	Remuneration policies	Corporate Governance	
2-20	Process to determine remuneration	Corporate Governance	
2-21	Annual total compensation ratio	Omitted here due to information confidentiality requirements	
Strategy, policies and prac	ctices		
2-22	Statement on sustainable development strategy	Sustainability Philosophy	
2-23	Policy commitments	Business Ethics   Climate Change and Clean Technology R&D   Pollution   Waste   Biodiversity and Ecosystems   Sustainable Supply Chain   Human Rights   Human Capital Development	
2-24	Embedding policy commitments	Business Ethics   Climate Change and Clean Technology R&D   Pollution   Waste   Biodiversity and Ecosystems   Sustainable Supply Chain   Human Rights   Human Capital Development	
2-25	Processes to remediate negative impacts	Sustainability Due Diligence	
2-26	Mechanism for seeking advice and raising concerns	Stakeholders Engagement   Sustainability Due Diligence	
2-27	Compliance with laws and regulations	See corresponding sections in the Report	
2-28	Membership associations	Honors and Ratings	
2-29	Approach to stakeholder engagement	Stakeholders Engagement	
2-30	Collective bargaining agreements	Human Capital Development	
GRI 3: Material Topics 202	1		
3-1	Process to determine material topics	Sustainability Material Topics	
3-2	List of material topics	Sustainability Material Topics	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities	



Disclosure topic/number	Disclosure	Corresponding Section of the Report
Economic		
GRI 201: Economic Perform	ance	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities
201-1	Direct economic value generated and distributed	ESG Performance Summary
201-2	Financial implications and other risks and opportunities due to climate change	Climate Change and Clean Technology R&D
201-3	Obligatory Defined Benefit Plans and Other Retirement Plans	Human Capital Development
GRI 202: Market Presence		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Omitted here due to information confidentiality requirements
202-2	The proportion of senior managers hired from the local community	Omitted here due to information confidentiality requirements
GRI 203: Indirect Economic	Impacts	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities
203-1	Infrastructure investments and services supported	LONGi's Partnership with UNHCR: A Dedicated Topic
203-2	Significant indirect economic impacts	LONGi's Partnership with UNHCR: A Dedicated Topic
GRI 204: Procurement Prac	tices	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Sustainable Supply Chain
204-1	Proportion of spending on local suppliers	Community Engagement
GRI 205: Anti-Corruption		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Business Ethics
205-1	Operations assessed for risks related to corruption	Business Ethics
205-2	Communication and training about anti-corruption policies and procedures	Business Ethics
205-3	Confirmed incidents of corruption and actions taken	Business Ethics
GRI 206: Anti-competitive I	Behavior	

Social



Disclosure topic/number	Disclosure	Corresponding Section of the Report	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Business Ethics	
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Business Ethics	
Environmental			
GRI 301: Materials			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Resource Use and Circular Economy	
301-1	Materials used by weight or volume	Omitted here as it is incalculable	
301-2	Recycled input materials used	ESG Performance Summary	
301-3	Reclaimed products and their packaging materials	Omitted here as it is incalculable	
GRI 302: Energy			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Climate Change and Clean Technology R&D	
302-1	Energy consumption within the organization	ESG Performance Summary	
302-2	Energy consumption outside the organization	Hard to collect information and omit it here	
302-3	Energy intensity	ESG Performance Summary	
302-4	Reduction of energy consumption	Climate Change and Clean Technology R&D	
302-5	Reductions in energy requirements of products and services	Climate Change and Clean Technology R&D	
GRI 303: Water Resources			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Water and Effluents	
303-1	Interactions with water as a shared resource	Water and Effluents	
303-2	Management of water discharge-related impacts	Water and Effluents	
303-3	Water withdrawal	ESG Performance Summary	
303-4	Water discharge	ESG Performance Summary	
303-5	Water consumption	ESG Performance Summary	
GRI 304: Biodiversity			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Biodiversity and Ecosystems	



Disclosure topic/number	Disclosure	Corresponding Section of the Report
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity and Ecosystems
304-2	Significant impacts of activities, products and services on biodiversity	Biodiversity and Ecosystems
304-3	Habitats protected or restored	Biodiversity and Ecosystems
GRI 305: Emissions		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Climate Change and Clean Technology R&D   Pollution
305-1	Direct (Scope 1) GHG emissions	ESG Performance Summary
305-2	Energy indirect (Scope 2) GHG emissions	ESG Performance Summary
305-3	Other Indirect (Scope 3) GHG Emissions	ESG Performance Summary
305-4	GHG emissions intensity	ESG Performance Summary
305-5	Reduction of GHG emissions	Climate Change and Clean Technology R&D
305-6	Emissions of ozone-depleting substances (ODS)	Not included and omitted here
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	ESG Performance Summary
GRI 306: Wastes		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Waste   Resource Use and Circular Economy
306-1	Waste generation and significant waste-related impacts	Waste   Resource Use and Circular Economy
306-2	Management of significant waste-related impacts	Waste   Resource Use and Circular Economy
306-3	Waste generated	ESG Performance Summary
306-4	Waste diverted from disposal	ESG Performance Summary
306-5	Waste directed to disposal	ESG Performance Summary
GRI 308: Supplier Environn	nental Assessment	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Sustainable Supply Chain
308-1	New suppliers that were screened using environmental criteria	Sustainable Supply Chain
308-2	Negative environmental impacts in the supply chain and actions taken	Sustainable Supply Chain



Disclosure topic/number	Disclosure	Corresponding Section of the Report
social		
GRI 401: Employment		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Rights   Human Capital Development   Sustainable Supply Chain
401-1	New employee hires and employee turnover	ESG Performance Summary
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Human Capital Development
401-3	Parental leave	Human Capital Development
GRI 402: Labor/Manageme	nt Relations	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Capital Development
402-1	Minimum notice periods regarding operational changes	Omitted here due to information confidentiality requirements
GRI 403: Occupational Hea	lth and Safety	
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Occupational Health and Safety
403-1	Occupational health and safety management system	Occupational Health and Safety
403-2	Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety
403-3	Occupational health services	Occupational Health and Safety
403-4	Occupational Health and Safety Matters: Worker Participation, Consultation, and Communication	Occupational Health and Safety
403-5	Worker training on occupational health and safety	Occupational Health and Safety
403-6	Promotion of worker health	Occupational Health and Safety
403-7	Prevention and mitigation of occupational health and safety impacts	Occupational Health and Safety
403-8	The ratio of employees covered by an occupational health and safety management	Occupational Health and Safety
403-9	Work-related injuries	ESG Performance Summary
403-10	Work-related ill health	Occupational Health and Safety

Social

Disclosure topic/number	Disclosure	Corresponding Section of the Report	
GRI 404: Training and Education			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Capital Development	
404-1	Average hours of training per year per employee	ESG Performance Summary	
404-2	Programs for upgrading employee skills and transition assistance	Human Capital Development	
404-3	Percentage of employees receiving regular performance and career development reviews	Human Capital Development	
GRI 405: Diversity and Equ	al Opportunity		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Capital Development	
405-1	Diversity of governance bodies and employees	Sustainability Governance System   Human Capital Development	
405-2	Ratio of basic salary and remuneration of women to men	ESG Performance Summary	
GRI 406: Non-discrimination	n		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Capital Development	
406-1	Incidents of discrimination and corrective actions taken	Human Capital Development	
GRI 407: Freedom of Assoc	iation and Collective Bargaining		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Capital Development	
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Human Capital Development	
GRI 408: Child Labor			
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Rights	
408-1	Operations and suppliers at significant risk for incidents of child labor	Human Rights	
GRI 409: Forced or Compulsory Labour			
3-3	Management of material topics Management of material topics	Topic-Related Impacts, Risks and Opportunities   Human Rights	
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Human Rights	



Disclosure topic/number	Disclosure	Corresponding Section of the Report	
GRI 413: Local communitie	es		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Pollution   Waste	
413-1	Operations with local community engagement, impact assessments, and development programs	Pollution   Waste	
413-2	Operations with significant actual and potential negative impacts on local communities	Pollution   Waste	
GRI 414: Supplier Social A	ssessment		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Sustainable Supply Chain	
414-1	New suppliers that were screened using social criteria	Sustainable Supply Chain	
414-2	The Negative Social Impacts of Supply Chains and Actions Taken	Sustainable Supply Chain	
GRI 416: Customer Health	and Safety		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Product Quality Management   Customer Relationship Management	
416-1	Assessment of health and safety impacts of product and service categories	Customer Relationship Management   Customer Relationship Management	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Customer Relationship Management	
GRI 418: Customer Privacy	у		
3-3	Management of material topics	Topic-Related Impacts, Risks and Opportunities   Information security and privacy protection	
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Information security and privacy protection	

Environmental

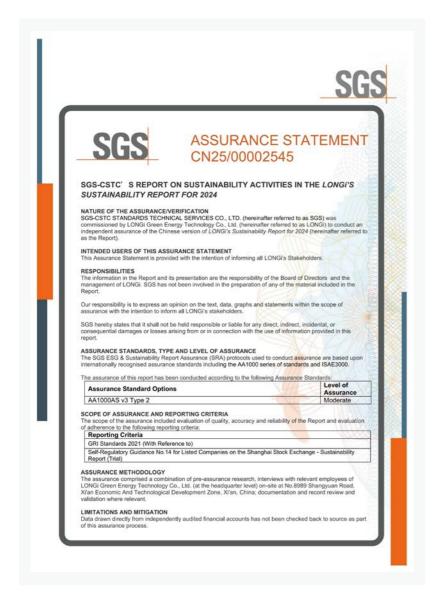
# Designation References in the Report

Short Name	Full Name	Relation
LONGi Green Energy	LONGi Green Energy Technology Co., Ltd	The Group/Headquarters
LONGi Solar	LONGi Solar Technology Co., Ltd.	A wholly-owned subsidiary of the Company
Lijiang LONGi	Lijiang LONGi Silicon Materials Co., Ltd.	A wholly-owned subsidiary of the Company
Huaping LONGi	Huaping LONGi Silicon Materials Co., Ltd.	A wholly-owned subsidiary of the Company
LONGi Malaysia	LONGI MALAYSIA SDN.BHD.	A wholly-owned subsidiary of the Company
Ordos LONGi	Ordos LONGi Silicon Materials Co., Ltd.	A wholly-owned subsidiary of the Company
Baoshan LONGi	Baoshan LONGi Silicon Materials Co., Ltd.	A wholly-owned subsidiary of the Company
Taizhou LONGi Solar	Taizhou LONGi Solar Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Jiaxing LONGi Solar	Jiaxing LONGi Solar Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Xi'an LONGi Solar	Xi'an LONGi Solar Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Xi'an LONGi Solar	Jiaxing LONGi PV Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Xi'an LONGi Solar	Shaanxi LONGi Solar Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Ordos LONGi PV	Ordos LONGi PV Technology Co., Ltd.	A wholly-owned subsidiary of LONGi Solar
Zhejiang LONGi Solar	Zhejiang LONGi Solar Technology Co., Ltd.	A subsidiary of LONGi Solar
Jiangsu LONGi Solar	Jiangsu LONGi Solar Technology Co., Ltd.	A subsidiary of LONGi Solar
LONGI CENTER	LONGi CENTER New Energy Co., Ltd.	A joint venture of LONGi Green Energy
Xi'an LONGi Hydrogen Energy	Xi'an LONGi Hydrogen Energy Technology Co., Ltd.	A holding subsidiary of LONGi Green Energy Investment
Nwestern Vietnam	NWestern Solar VIETNAM COMPANY LIMITED	A wholly-owned subsidiary of Hainan LONGi

Governance

Appendix 5

# Third Party Assurance Report







Statement of Conformity CN25/00002038

#### **Greenhouse Gas Verification Statement**

The inventory of Greenhouse Gas emissions in 01 Jan. 2024 to 31 Dec. 2024 of

#### LONGi Green Energy Technology Co., Ltd.

Business address: No. 388, Aerospace Middle Road, Chang'an District, Xi'an City Organization boundary: Detail organization boundary information has been listed in Annex, for multi-site statement

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

#### ISO 14064-1:2018

Direct Emissions 85,225.87 tonnes of CO2e Indirect Emissions 32,642,946.88 tonnes of CO2e **Total Emissions Quantified** 32,728,172.75 tonnes of CO2e

The specific categories of indirect greenhouse gas emissions are detailed in the appendix of this statement, which is an integral part of this statement

Authorised by David Xin Sr. Director - Business Assurance

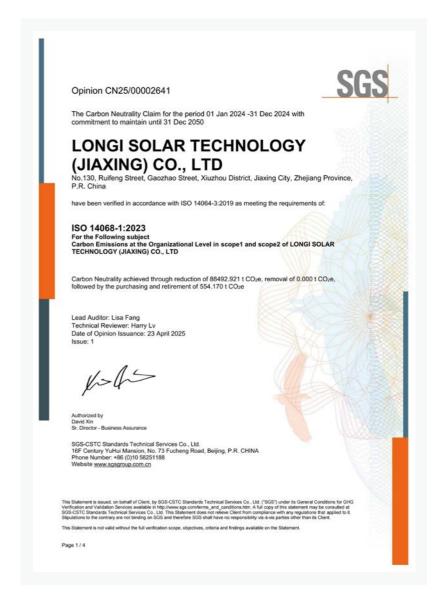
SGS-CSTC Standards Technical Services Co., Ltd.
16F Century Yufful Mansion, No. 73 Fucheng Road, Beijing, P.R. CHINA 100142 t +86 (0)10 58251188 www.sgsgroup.com.cn



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Several statements have been issued for this scope, this is main statement



# Suggestions and Feedback

Dear readers,

Thank you for reading the LONGi 2024 Sustainability Report. In order to make continuous efforts to elevate LONGi's sustainability practices and the quality of our report preparation, we invite you to scan the QR code to fill out the feedback form. If you have any questions or suggestions about the Report, please don't hesitate to reach out and contact us.



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LONGi Solar





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