

## A Graphical Overview

# 2023 Jinko Solar Climate Action White Paper

Optimize the energy portfolio and take responsibility for enabling a sustainable future

In 2019, Jinko Solar became the first PV company to join RE100 and EP100. Subsequently, we also made a commitment to the "Science Based Targets initiative" (SBTI). By the end of 2023, our near-term, long-term, and net-zero science-based carbon emission reduction targets and road-map were successfully approved by SBTi, making us the first PV company to achieve this milestone. Reflecting on past years, Jinko Solar has consistently tackled challenges at the forefront of international climate governance, representing not only ourselves but also the renewable energy sector.

The climate report we released recently is our first official featured climate action report, designed to showcase our philosophy, management approaches, practices, and accomplishments in responding climate-related issues to the public. This demonstrates our unwavering determination and ambition to combat climate change.

## Globally Recognized Service Provider of Photovoltaic and Energy Storage Systems

<p>Accumulated global shipments of modules over</p> <p><b>230 GW</b></p> <p>(By the end of Q1 2024)</p>	<p>2023 operating revenue reached</p> <p>RMB <b>118.682</b> billion</p>
<p>Serving over</p> <p><b>3,000</b></p> <p>global customers</p>	<p>The cumulative R&amp;D investment exceeded</p> <p>RMB <b>15</b> billion in the past three years</p>
<p>With a global workforce of over</p> <p><b>57,000</b></p>	<p>Number of accumulated patents granted over</p> <p><b>3,500</b></p>

### The first

PV company to have a "Wafer-Cell-Module" fully certified zero-carbon factory production chain

### The first

PV company to launch the modules named **Neo Green** manufactured from 100% renewable energy powered factory

Net-zero, near-term, and long-term targets have been approved by SBTi as the

### first

PV group enterprise in the world

GDP Climate Change Questionnaire scored

### B

EcoVadis Sustainability Rating earned

### silver medal

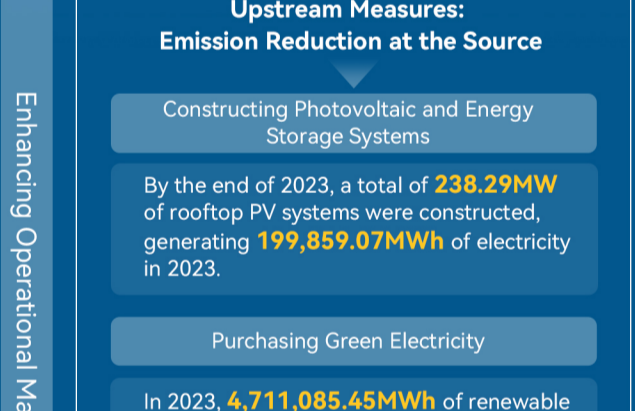
MSCI ESG Rating scored

### BBB

## Climate Strategy Matrix

We proactively identify the inherent value linkages between our business scenarios and our potential contributions to the global low-carbon energy transition. We also develop a climate strategy matrix that takes into account both our unique characteristics and those of the industry. This approach effectively communicates our innovative ideas regarding the global low-carbon energy transition to a wider range of stakeholders.

### Optimize the Energy Portfolio and Take Responsibility for Enabling a Sustainable Future



### Digital Empowerment for Climate Risk Management System Development

## Improving Climate Governance

We have implemented a climate governance framework with the board of directors at its core. We are committed to promoting the in-depth integration of climate governance and the company's business philosophy and practice through a top-down governance structure.

### Board of Directors & Strategy and Sustainable Development Committee

The top governing and decision-making bodies for climate change

### ESG Management Committee

The management body for climate change

### Collaborative Departments

The executing body for climate change

We have consistently invested in the development of a climate risk management system that actively involves both internal and external stakeholders, enabling collaborative efforts to contribute positively to the sustainable development of the industrial ecosystem.



Through the exploration of effective integration between GHG management and digital strategy, we have developed an online carbon management platform to manage GHG emissions through digital methods, thus injecting new catalyst into energy conservation and emission reduction.

## Enhancing Climate Resilience

We have included climate risks and opportunities as an established management indicator, incorporating them into our comprehensive risk and strategic management framework. Additionally, we have implemented a process for managing climate risks and opportunities, deeply integrating climate risk and opportunity management with our business strategy.

### Climate Risks and Opportunities Identification

Integrate internal and external analyses to identify types of risks and opportunities, forming a comprehensive list of risks and opportunities.

### Risks and Opportunities Materiality Analysis

Evaluate the impact period and the significance levels of the climate risks and opportunities, forming a matrix diagram.

### Financial Impact Assessment

Assess the potential effects of climate risks and opportunities on revenue, costs, assets, etc.

### Development of Response Strategies

Promote inter-departmental collaboration to formulate and upgrade targeted response strategies, enhancing climate resilience.

## Planning Carbon Reduction Pathways

At the end of 2021, Jinko Solar has committed to follow the 1.5°C temperature control target and to set science-based carbon emission reduction targets. After systematic research and preparation, our near-term, long-term, and net-zero science-based carbon reduction targets and roadmap have successfully been approved by SBTi at the end of 2023, making us the first PV company to achieve this milestone.



### Near-Term Targets

Commit to reduce absolute Scope 1 and 2 GHG emissions **50.4%** by 2032 from a 2022 base year, reduce Scope 3 GHG emissions from purchased goods and services **58.2%** per MW of solar related products produced within the same timeframe, and increase active annual source of renewable electricity to **100%** by 2030.

### Long-Term Targets

Commit to reduce absolute Scopes 1 and 2 GHG emissions **90%** by 2050 from a 2022 base year, and reduce Scope 3 GHG emissions from purchased goods and services, upstream and downstream transportation and distribution **97%** per MW of solar related products produced within the same timeframe.

### Overall Net-Zero Target

Commit to reach net-zero GHG emissions across the value chain by 2050.

Take the opportunity of being approved by SBTi as a new starting point, we accelerate the carbon reduction process, and regularly disclose carbon reduction progress to the public.

🎯 In 2023, the total emissions of Scope 1 and 2 were **5.1789 million** tons of CO<sub>2</sub>e, and the emission intensity per MW of production was **23.14** tons of CO<sub>2</sub>e, decreased by **15.08%** compared to 2022.

🎯 The total emissions of Scope 3 were **29.4579 million** tons of CO<sub>2</sub>e, and the emission intensity per MW of production was **131.63** tons of CO<sub>2</sub>e, decreased by **9.44%** compared to 2022.

Note: The unit of each photovoltaic-related product is MW of production.

## Implementing Climate Actions

### Energize Industry Decarbonization Operation

#### Operational Emission Reduction Management

We have established a diversified emission reduction management model focusing on "source emission reduction" and "process emission control" to facilitate the steady progress of our emission reduction targets.

#### Upstream Measures: Emission Reduction at the Source

Constructing Photovoltaic and Energy Storage Systems

By the end of 2023, a total of **238.29MW** of rooftop PV systems were constructed, generating **199,859.07MWh** of electricity in 2023.

Purchasing Green Electricity

In 2023, **4,711,085.45MWh** of renewable electricity was utilized, accounting for **51.92%** of total electricity consumption, ranked **first** among Chinese photovoltaic module enterprises.

#### Downstream Measures: Emission Control in the Process

Uncovering Energy-Saving Potential

Leveraging digital systems to monitor energy consumption data and analyze energy usage trends in real-time, uncovering potential for energy savings and reducing electricity costs.

Advancing Technical Improvement Projects

In 2023, a total of **136** technical improvement projects were carried out around key production and operational processes, resulting in a cumulative electricity saving of **135,639.58MWh**.

Note: According to the list of 2023 China Green Electricity (Green Certificate) Consumption TOP100 Enterprises released jointly by the China Electricity Council, Beijing Power Exchange Center, Guangzhou Power Exchange Center, and the National Renewable Energy Information Management Center.

### Supply Chain Collaborative Carbon Reduction

We have established a "CARE" supply chain ESG management system and implemented it across our supplier network to encourage GHG emission reduction initiatives.

We have set Scope 3 emission reduction targets and encouraged suppliers to set reduction targets that align with their specific circumstances.

In 2023, emission data was collected from **73** suppliers. By the end of 2023, core suppliers of **6** key categories had initiated product life cycle assessments.

In 2023, research on emission reduction was conducted among **12** core suppliers of key categories. By the end of 2023, core suppliers of **3** key categories had completed their emission reduction path planning.

We have collaborated with some core suppliers on photovoltaic system construction projects to enhance their emission reduction capabilities.

### Explore Diversified Decarbonization Solution

#### Modules to Help High-Efficient Green Power Generation

🎯 As of May 2024, Jinko Solar has broken the world records for photovoltaic product efficiency and power

**26** times. The mass production efficiency of N-type TOPCon cells exceeds **26%**. The laboratory conversion efficiency of the perovskite tandem solar cells has reached **33.24%**, with module power at the industry-leading level.

🎯 By the end of 2023, a total of **15** products have carried out product Life Cycle Assessment (LCA), **9** products have passed the Italian Environmental Product Declaration Certification, and **10** products have passed the French Product Carbon Footprint Certification. In 2023, a total of **6** products obtained the Chinese Green Building Materials Product Certification.

#### Energy Storage Systems to Help Smart Electricity Use

🎯 We have proactively developed a range of energy storage systems for Residential ESS, C&I ESS, and Utility ESS, introducing key product categories including the C&I ESS named SunGiga and the Residential ESS named SunTank. By the end of 2023, our energy storage systems had been deployed in over **100** projects.

🎯 Our 314Ah energy storage dedicated battery cell features high energy efficiency, long lifespan, and high safety, with a cycle life of over **10,000** times and a charging and discharging efficiency of **94.71%**.

#### BIPV Products to Empower Building Carbon Reduction

🎯 We have introduced a range of products, including Jincal rooftop BIPV and Jincal PV curtain wall systems, suitable for diverse applications such as commercial and industrial factory rooftops, carports, curtain walls, sunrooms, and other scenarios.

🎯 By the end of 2023, the Jincal BIPV products series had achieved revenue of more than **RMB 200 million**, and the total electricity generation of the project is expected to exceed **2.7 billion** kWh over 30 years.

### Empower Global Decarbonization Transition

#### Contribute to Global Sustainability

By the end of 2023, our products had served over **3,000** customers in more than **190** countries and regions worldwide, including more than **120** countries and regions under "the Belt and Road" initiative.

More than 220,000 modules have been delivered to the Verila Solar Power Plant in Bulgaria, establishing it as a benchmark for energy transformation.

Two sets of 6.88MWh large liquid cooling SunTera energy storage systems have been delivered to the Middle East, reducing reliance on emergency backup energy.

#### Promote Affordable Energy

We have provided renewable, sustainable, and affordable clean energy to more remote areas and developing countries, to promote a fairness, justice, inclusiveness global energy governance structure.

Our high-efficient modules have contributed to the Al Dhafra project, enabling the achievement of a competitive electricity price of 1.35 US cents/kWh.

We have delivered photovoltaic energy storage integrated solutions to the Kalobeyi settlement in the Kakuma refugee camp in Kenya, providing green electricity to over 2,700 users.

#### Application in Extreme Conditions

With integrated innovation across the entire industry chain, we have launched high-performance module products suitable for special scenarios such as marine as well as high altitude and cold condition, expanding the possibilities of clean energy development in extreme environments.

Supplied high-efficiency photovoltaic modules for the Yalong River Kela 1GW hydrophotovoltaic complementary project, located at an altitude of 4,600 meters. This installation is designed to meet the annual electricity demands of over 700,000 households.

Supplied high-efficient products for the Cirata floating photovoltaic project in Indonesia, with the water depth exceeding one hundred meters at the deepest, which can provide affordable green electricity for 50,000 households.

Technology is an ability, and driving sustainable change is a choice. To find solutions for human sustainable development, also to find innovative scenarios for our own development, which is a pleasant solar process for Jinko Solar. A planet powered by 100% solar energy is clearly visible in the way we expect.