



# N-type Era for the Notch Above

Jinko Solar Co., Ltd.  
Q4 2024

[jinkosolar.eu](http://jinkosolar.eu)



# Table of Contents

01  
Industry Development

03  
Technology Innovation

05  
ESG

02  
Company Overview

04  
Globalization

06  
Corporate Strategy

# 01 Industry Development

# Climate Change & Global Action

## Climate Commitments and Net Zero Targets for Top 10 Global GDP Countries

To combat climate change, **198 countries** adopted the Paris Agreement in 2015, agreeing to limit temperature rise to **2°C** above pre-industrial levels within this century.

Currently, **120 countries** and regions have adopted "zero carbon" or "carbon neutral" targets.



United States | 2050



Brazil | 2050



United Kingdom | 2050



India | 2060



Japan | 2050



Canada | 2050



Italy | 2050



France | 2050



China | 2060

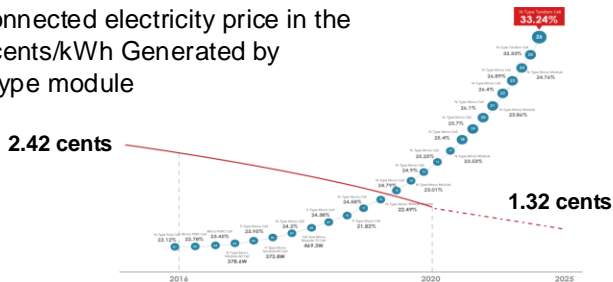


Germany | 2045

# Energy Transition, Photovoltaic Taking Charge

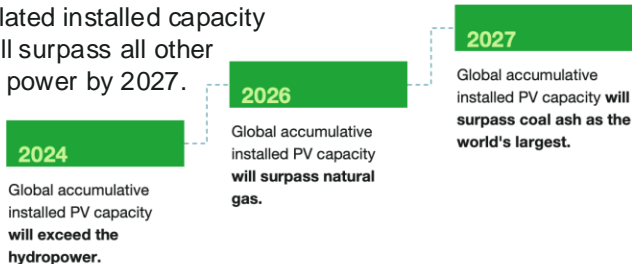
## 1. The Most Cost-effective Energy Source

Lowest grid-connected electricity price in the world at **1.32 cents/kWh** Generated by JinkoSolar N-type module



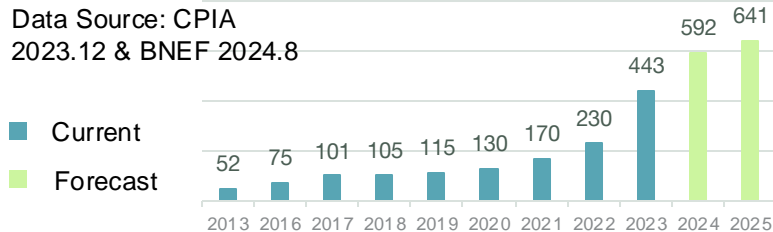
## 2. The Cleanest Energy Source

Accumulated installed capacity of PV will surpass all other forms of power by 2027.



## 3. Largest Growth Energy Source

Data Source: CPIA 2023.12 & BNEF 2024.8



## 4. Smartest Energy



# Future Energy Supply Model

Zero Carbon Energy



Smart Grid



Smart Energy Storage



Multi-energy Complementary



Energy Internet



Power Conditioning System



# Accelerating the Global Energy Transition



Building a new  
photovoltaic-based  
electric energy system:

- Zero Carbon Cities
- Energy Internet

# 02 Company Overview



Jinko Solar Co., Ltd.

# Company Profile

JinkoSolar (stock code: 688223) is a leading global manufacturer of photovoltaic modules and energy storage system.

It is on a mission to "Changing the Energy Portfolio and Taking Responsibility for the Future" to accelerate the global shift to sustainable energy and address the most pressing challenge of climate change. JinkoSolar is ranked among the Hurun Top 50, Fortune China Top 500 and MIT Technology Review's 50 Smartest Companies in the World.

**JinkoSolar is the 1st company shipped more than 300GW\*** of modules by Q3 2024, boasting a **global market share of 15%** and the top market share in 8 of the top 10 PV markets.



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



# Vertical Integration

- Stable supply chain with large orders;
- Cost control creates profitability advantage;
- Overseas integrated supply chain.



Jinko Solar Co., Ltd.

# Excellence Smart Manufacturing

## Intelligent Factory

JinkoSolar has fully implemented Smart Manufacturing, combining Industry 4.0, Smart Factory and Industrial Internet of Things (IIoT), enabling JinkoSolar to become a benchmark for efficient, agile and flexible PV product manufacturing.

[www.jinkosolar.eu](http://www.jinkosolar.eu)



# Distribution PV Era

PV's unique distributed nature predestines it to become the domination of renewable energy in the future. By the year 2023, JinkoSolar's distributed business accounts for **40%** of JinkoSolar's revenue, with a major presence in Europe, Australia, Japan, Brazil, etc.



Jinko Solar Co., Ltd.

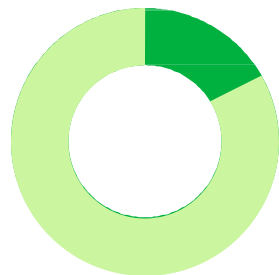
# Honors and Awards

- Listed on the Fortune Top 500 China for 10 consecutive years, ranking 188th in 2024
- Ranked "Most Bankable" PV brand by Bloomberg New Energy for 9 consecutive years and recognized as Tier 1 energy storage provider in BNEF's Q2 and Q3 2024 reports
- SSE - "Science and Innovation 50 Index" and "SSE Growth Index" sample companies
- Forbes Top 50 Innovative Companies in China
- Harvard Business Review - Enterprise Award for Digital Transformation
- China Listed Companies Association "Top 500 Excellent ESG Practice Cases of Listed Companies"
- China Listed Companies Association "Top 500 Private Enterprises in China's Manufacturing Industry"
- 2024 Fortune China Tech 50
- Recognized in the "2023 Forbes China Globalization Brands Top 30" under the "Leading Brands" category
- 2022 Hurun China Top 500, Top50

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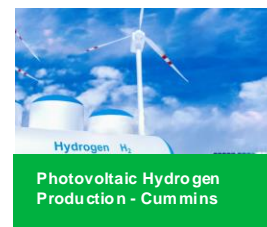
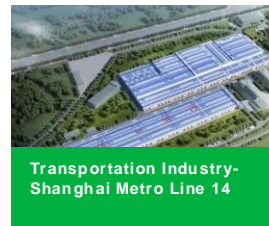
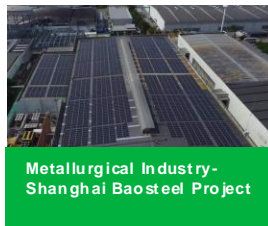
# Contribution to Emission Reduction



**2060GW**  
Global Installed Capacity

**300\*GW+**  
JinkoSolar Shipments

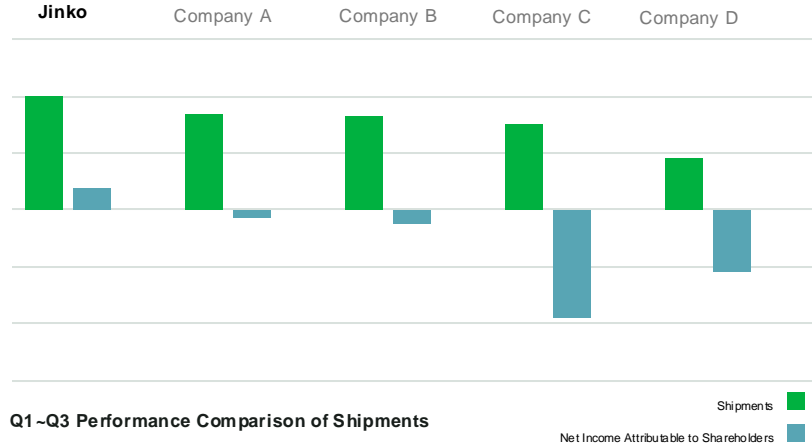
By 2024 Q3, JinkoSolar shipped **300\*GW+** out of **2060GW** of PV modules worldwide, which means that **1** out of every **8** modules comes from JinkoSolar. JinkoSolar contributes **1 kg** of every **8 kg** of carbon reduction.



# 2024 Q1 - Q3 Financial Results

<p><b>No. 1</b> Global Module Shipments Ranking</p>	<p><b>67.65 GW</b> Global Module Shipments</p>
<p><b>71%</b> Overseas revenue ratios</p>	<p><b>85% +</b> Overseas shipment ratios</p>
<p><b>1.215 billion RMB</b> Net Income Attributable to Shareholders</p>	<p><b>120.4 GW</b> Cumulative N-type module shipments</p>

\* Data as of 2024.10.31



**Q1~Q3 Performance Comparison of Shipments and Net income Attributable to Shareholders among Industry Peers**

\* Data Sources: Solarbe, Company Reports, Analyst Estimates

- **No.1** in global module shipments, with a growing share of overseas revenue
- Total N-type module shipments have surpassed **120.4GW**
- Overcame external challenges, demonstrated strong operational resilience, **balanced scale with profitability**, and ensured sustainable business operations

# Q1 – Q3 2024 Peer Performance Comparison

## Shipment Volume Comparison (GW)

Rank	Module Shipments	Q1 - Q3
1	<b>JinkoSolar</b>	<b>67.65</b>
2	A	57
3	B	54-55
4	C	51.23
5	D	32
6	E	29
7	F	22.9
8	G	14.5+
9	H	14.5+

## Total Operating Income Comparison (Unit: CNY Billion)

Rank	Gross Revenue	Q1 - Q3
1	<b>JinkoSolar</b>	<b>71.77</b>
2	A	68.27
3	B	63.15
4	C	58.59
5	D	54.35
6	E	34.18
7	F	22.58
8	G	20.37
9	H	16.46

## Comparison of Net Attributable Profit (Unit: CNY Billion)

Rank	Net Profit Attributable to Shareholders	Q1 - Q3
1	A	1.96
2	<b>B</b>	<b>1.45</b>
3	<b>JinkoSolar</b>	1.22
4	C	0.08
5	D	-0.48
6	E	-0.85
7	F	-1.10
8	G	-1.41
9	H	-2.83

\* All data is sorted by 2024 Q1-Q3 results



# 03 Technology Innovation

# Leading Edge Technology

## 26 times break the world record

The 182 N-type TOPCon cell reaches 26.89% maximum conversion efficiency, setting two new world records in N-type TOPCon tandem with 32.33% and 33.24%.



4200+  
Patent  
Application



2800+  
Granted  
Patents



2320  
R&D Team



6.9 Billion  
RMB+  
R&D  
Investment  
in 2023

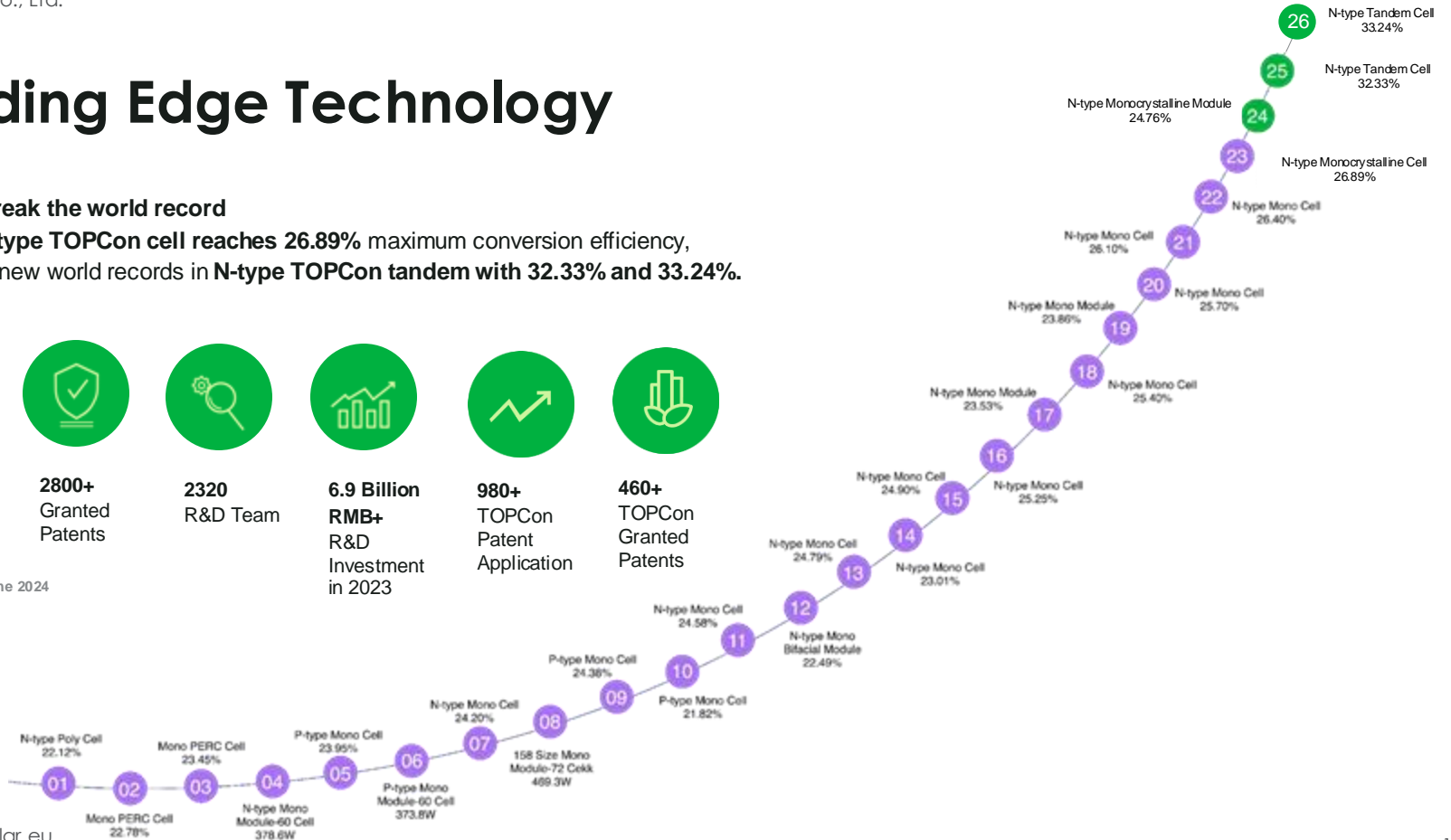


980+  
TOPCon  
Patent  
Application

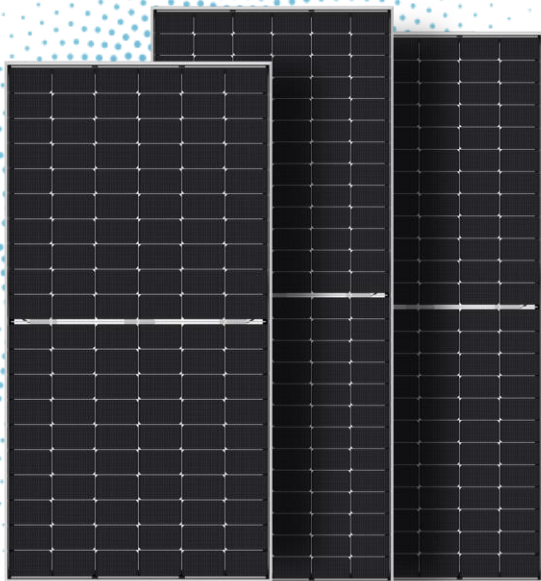


460+  
TOPCon  
Granted  
Patents

\*As of 30th June 2024



# N-type Leading the Way



## Leading in Technical Indicators

- Highest Efficiency in Cell R&D: **33.24%**
- Average Efficiency for Mass Production in 2024 Q3 **26.5%+**
- Module Power Higher than P-type: **Around 35W**



## Global Sales Leadership

- Cumulative Global PV Module Shipment Volume **300\*\*GW**
- 2024 Shipment Volume Forecast: **100-110GW**
- 2024 N-type Shipment Proportion: **90%**

\*Source: Management forecasts

\*\* status from December 3rd, 2024

# Authoritative Certification

- AAA Rating: Awarded the highest rating of 3A by PV ModuleTech for bankability
- Awarded the TÜV "Quality China" award for five consecutive years for monocrystalline modules with superior power generation simulation
- Ranked "Top Performance" by PVEL/DNV GL PV Module Reliability Scorecard for ten consecutive years
- Awarded "Top PV Performance" by EUPD Research in Europe, Australia, South Africa and Middle East and North Africa" by EUPD Research
- Awarded the AAA Customer Satisfaction Benchmark Grade and National Quality Benchmark by National Market Credit Quality



# AAA

JinkoSolar Ranks AAA-Rating in the Latest PV ModuleTech

Bankability Ratings Report

Q2,2024



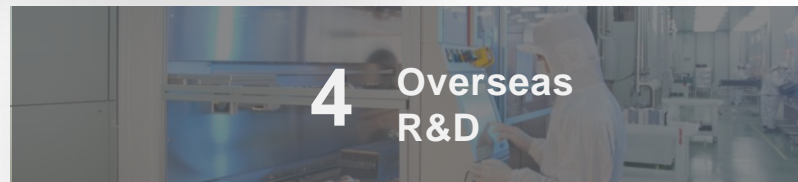
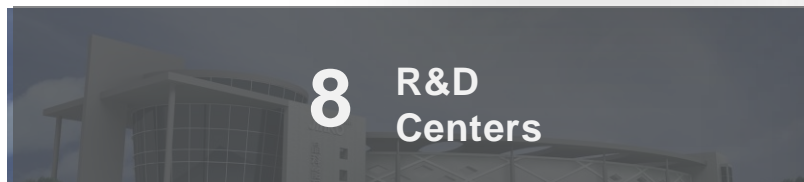
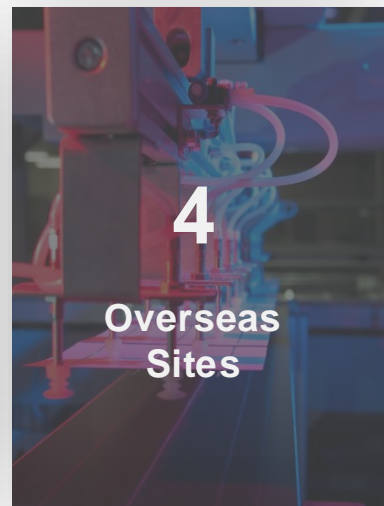


## Technology Awards

- Top 100 New Energy Industry Patents
- Top 500 Private Companies in R&D Investment and Invention Patents
- MIT-Global Top 50 Smart Companies
- Forbes China - Top 50 Innovative Companies
- Green and Efficient TOPCon Technology Award
- National Ministry of Industry and Information Technology "Green Design Products Public Announcement" list

# 04 Globalization

# Global Manufacturing and Global R&D



# Global Manufacturing and Global R&D

## Global Manufacturing



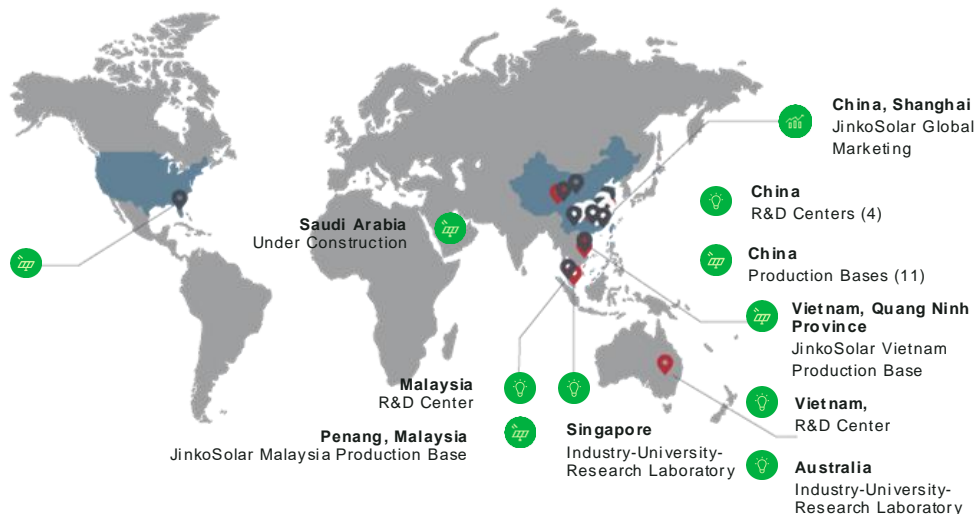
JinkoSolar is the first company in the industry to establish "vertically integrated" production capacity from wafer, cell and module production, with over 10 global manufacturing facilities across China, the US, Southeast Asia, and the Middle East.

**Florida, USA**  
JinkoSolar U.S. Manufacturing Facility

## Global R&D



JinkoSolar has global R&D capabilities, with R&D centers in Haining, Zhejiang Province, Shangrao, Jiangxi Province, Leshan, Sichuan Province, Xining, Malaysia and Vietnam, as well as joint R&D labs in Singapore and Australia.





# Global Diversified Supply Chain

## The Next Level of Overseas Expansion

Global Manufacturing 2.0: Joint Venture with PIF and VI to Build the Largest Overseas N-type Factory in Saudi Arabia



**Strong Alliance**

**Local Manufacturing**

**Green and Low Carbon**

- Global Top 5 Sovereign Funds (PIF) +Over 50% Market Share in the Middle East (Jinko)
- Chinese technology + Middle East capital; from Capacity Output to Management Output
- 10GW Full Value Chain Localization, Ensuring Local Supply and Reaching European and American Markets
- Increasing Localization Procurement Thresholds Annually, Policy Support for Local Production
- Project Launched in NEOM's OXAGON City, Achieving High Proportion of Green Electricity Supply
- Energy Cost Advantages, Aiding the Transition of Traditional Fossil Fuel Nations



### Florida, USA

2GW Modules Fully Operational in H1



### Shanxi, China

Phase I Crystal Pulling and Module Workshop Production and Operations;  
Phase II Steadily Advancing, Expected to Start Production in Q4

# Global Market Share

## JinkoSolar's market share on major markets

<b>60%</b> Saudi Arabia	<b>30%</b> Netherlands	<b>25%</b> Argentina	<b>18%</b> China
<b>42%</b> Poland	<b>30%</b> Columbia	<b>24%</b> Germany	<b>18%</b> Brazil
<b>40%</b> UAE	<b>30%</b> Egypt	<b>20%</b> Morocco	<b>18%</b> (distribution) Australia
<b>39%</b> Israel	<b>30%</b> Oman	<b>20%</b> Japan	<b>6%</b> USA
<b>35%</b> Thailand	<b>25%</b> Italy	<b>20%</b> Chile	<b>20%</b> India



# 05 ESG

# Responsible Manufacturer

## Carbon Footprint



We've set a goal to reach our science-based emissions reduction target :

- Low-carbon design
- EP100 Energy efficiency
- RE100 Renewable electricity
- Direct emissions abatement
- Advocating for strong climate policies

## Traceability

We enhanced the performance of traceability systems and improved information transparency to map the supply chain.

- Integrated production base
- Information-based traceability system
- Third-party independent audit system
- Professional traceability team

## UNGC



**United Nations**  
Global Compact

We are aligned with UN Guiding Principles on business and operation

- Uphold labor and human rights
- Responsible labor recruitment
- Responsible material sourcing
- Health, safety & wellness programs
- Supplier engagement & management

# Responding to Climate Change

- Joined RE100 and pledge to use 100% renewable energy by 2030.
- Joined EP100 and committed to implement an Energy Management system across all operations.
- Join the Science-based Carbon Targets Initiative and commit to "net zero emissions" by 2050
- Conducted ISO14064 greenhouse gas inventory
- Many products passed the carbon footprint certification in France, Italy and other countries
- Awarded the title of "Photovoltaic Recovery and Recycling" demonstration in China's green supply chain

THE CLIMATE GROUP

RE 100 EP 100



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

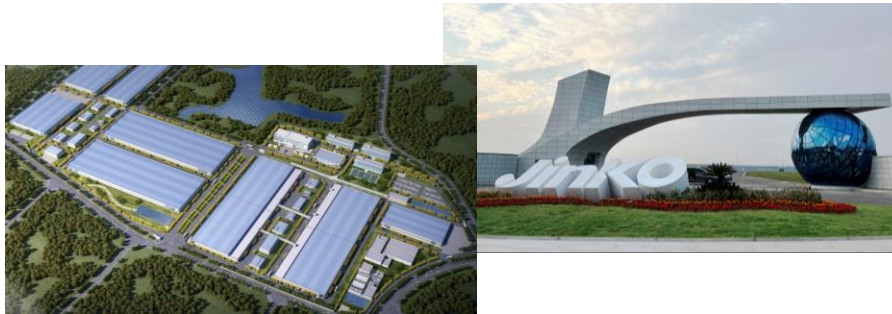
Partnership Organizations



# Zero Carbon Manufacturing Factory Carbon Management

**Eight** of JinkoSolar in-house manufacturing facilities (module – cell – wafer - ingot) acquired **Zero Carbon Factory Certificate** from **TUV Rheinland**, leading the PV industry.

- **Voluntary commitment** to energy saving and emission reduction
- Basis for **downstream manufacturers and end customer** to **make low-carbon choices**



**Crystal pulling**  
(Qinghai)



**Wafer Cut**  
(Shangrao WS2/4)



**Solar Cell**  
(Chuxiong)



**Solar Cell**  
(Anhui)



**Solar Cell**  
(Zhejiang)



**Module Assembly**  
(Zhejiang)



**Module Assembly**  
(Shangrao WS8 and Shangrao WS7)



# Sustainable Supply Chain

- Strict control over supplier selection, management and production processes
- Proactively control and trace the source of supply chain materials
- Urge partners to strictly implement low-carbon production
- Prevention of violations
- Drive sustainable development of the industry in multiple dimensions, including manufacturing and corporate cooperation

# Attracting Global Talent

- Provide a safe and healthy working environment
- Implement various talent incentives such as partners
- Diversified employee benefits and perks
- 38% local senior manager
- Corporate culture of fairness, responsibility and pragmatism



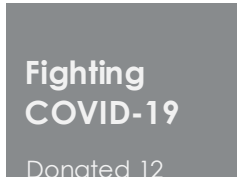
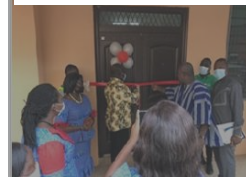
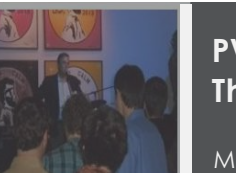


# Corporate Social Responsibility



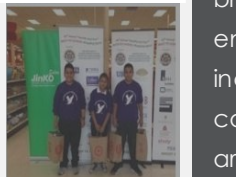
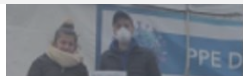
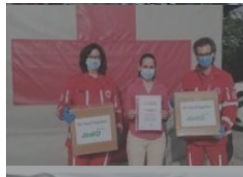
## Education

Contributed 20 million RMB to construct Qingmiao Primary School in Hengfeng Country and set up a 10 million RMB Qingmiao Scholarship at Yuhuan Middle School.



## Fighting COVID-19

Donated 12 million CNY to fight the



## PV Lights Up The World

Modules donated modules for the installation of PV power plants, bringing clean energy low-income communities around the world.



# ESG Awards

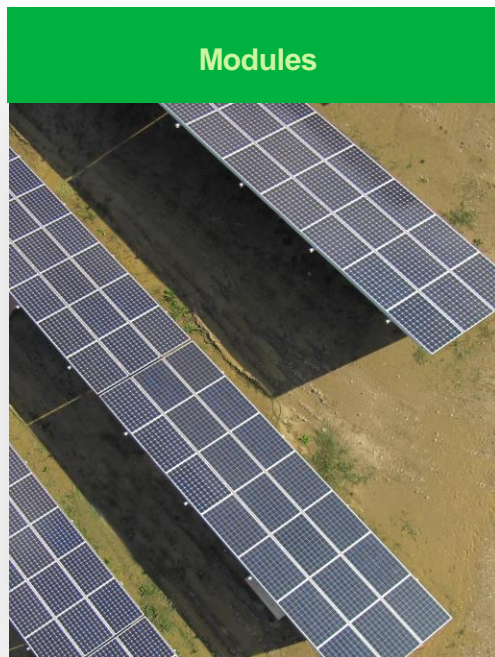
- First Chinese PV company to have all three targets validated by the SBTi
- JinkoSolar received the highest score of 65/100 in the EcoVadis 2023 Environmental and Social Performance Rating, ranking the highest among all Chinese companies in the same industry evaluated
- 2024 Forbes China ESG Top 50
- 2024 China ESG Impact List
- 2023 Forbes Top 50 Sustainable Companies in China
- 2022 China Listed Companies Association "Excellent ESG Practice Case of Listed Companies"
- 2022 Ernst & Young Sustainability Awards 2022 Outstanding Enterprise of the Year
- 2022 Finalist of ESG Innovation Experiment of the Year by Wall Street Insight



# 06 Corporate Strategy

# Product Strategy

Efficient, Reliable, Intelligent

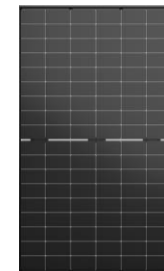
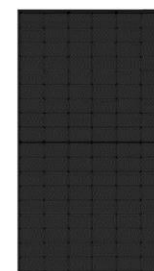
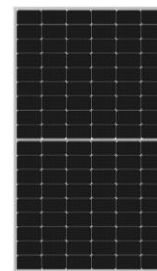
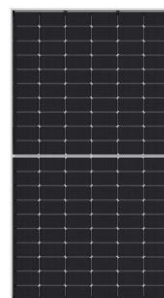
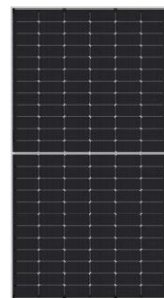
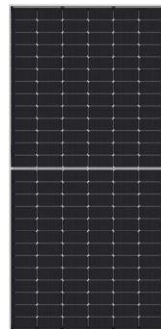
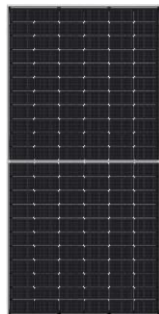


# Tiger Neo Series

182.3\*210 mm

182.3\*183.5mm

182\*188mm



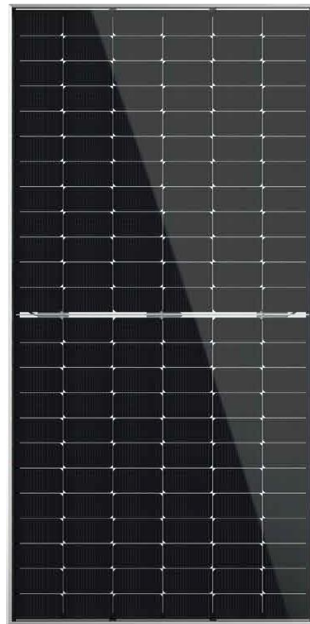
JKMxxxN-66HL4M-BDV	JKMxxxN-66HL4M-(V)	JKMxxxN-78HL4-BDV	JKMxxxN-72HL4-(V)	JKMxxxN-72HL4-BDV	JKMxxxN-60HL4-(V)	JKMxxxN-54HL4R-(V)	JKMxxxN-54HL4R-B	JKMxxxN-54HL4R-BDB
610-625W	615-630W	630-640W	590-600W	585-595W	485-495W	450-460W	445-455W	440-450W
2382*1134mm	2382*1134mm	2465*1134 mm	2278*1134 mm	2278*1134 mm	1906*1134mm	1762*1134mm	1762*1134mm	1762*1134mm
22.58-23.14%	22.77-23.32%	22.54~22.90%	22.84%~23.23%	22.65%~23.03%	22.44%~22.90%	22.52%~23.02%	22.27%~22.77%	22.02%~22.52%
66P	66P	78P	72P	72P	60P	54P	54P	54P
12 yrs	12 yrs	12 yrs	12 yrs	12 yrs	12 years	<b>15 yrs</b>	<b>25 yrs</b>	25 years
Bifacial	Monofacial	Bifacial	Monofacial	Bifacial	Monofacial	Monofacial	Mono All-Black	Bifacial Transparent-Black

# N-type TOPCon Modules

**650W** Higher Power

**23.51%** Higher Efficiency

**0.4%** Linear Degradation



**80±5%** Linear Degradation

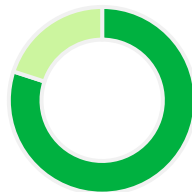
**30** Years Ultra-Long Power Warranty

**-0.29%/°C** Temperature Coefficient

# N-type Era



60% N-type  
Business 2023



90% N-type  
Business 2024

JinkoSolar has set an industry benchmark in N-type technology, process, cost, yield, production capacity and brand popularity, with **JinkoSolar's N-type module market share exceeding 25%**.

The market share of N-type cells is expected to accelerate, **with the market share of N-type cells expected to reach 25% / 70% in 2023/2024**, and the business share of N-type cells in JinkoSolar will reach **60% in 2023 and 90% in 2024**.



# Energy Storage Solutions

## Self-developed liquid-cooled energy storage system

JinkoSolar proposes "safe and smart energy storage", using its self-developed liquid-cooled thermal management system to break the traditional energy storage dilemma of low efficiency, high risk and difficult operation and maintenance, and has designed and manufactured the SunTera large-scale energy storage system and SunGiga commercial and industrial liquid-cooled energy storage system, which are "highly sensitive, high perception, self-management, self-judgment and self-decision".





# Energy Storage Systems

100+ successful projects



# Long-Term Growth Strategy

## Technical Innovation

Building long-term leadership of technology and product

- Continue to increase R&D investment
- Improve the layout of technical and ecological chain
- Strengthen the patent layout
- Accelerating the mass production of cutting-edge achievements

## High-efficiency Management

Building efficient systematic management capabilities

- Adhere to professional Management
- Maintaining an enterprising culture with focus on strong execution and hard work
- Continuously optimize the management mechanism with efficient coordination and clear responsibilities
- Accelerating the comprehensive application of automation, intelligentization and informatization

## Globalization

Building a strong global resource allocation capability

- Adhere to the globalization strategy
- Maintain a keen insight into the market
- Continuous and rational promotion of global marketing and production layout
- Comprehensive construction of supply chain partnerships



**Optimize the energy portfolio &  
take responsibility for enabling a  
sustainable future.**

Jinko Solar Co., Ltd.

Thank you

*JinKO*



***Jink*KO**