ASTRONERGY

TO BE THE MOST COMPETITIVE PHOTOVOLTAIC MODULE SUPPLIER WORLDWIDE

www.astronergy.com

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*This brochure is valid until October 2025, the information may be changed and updated, please refer to the latest version.

Solar Together,

For A Greener World

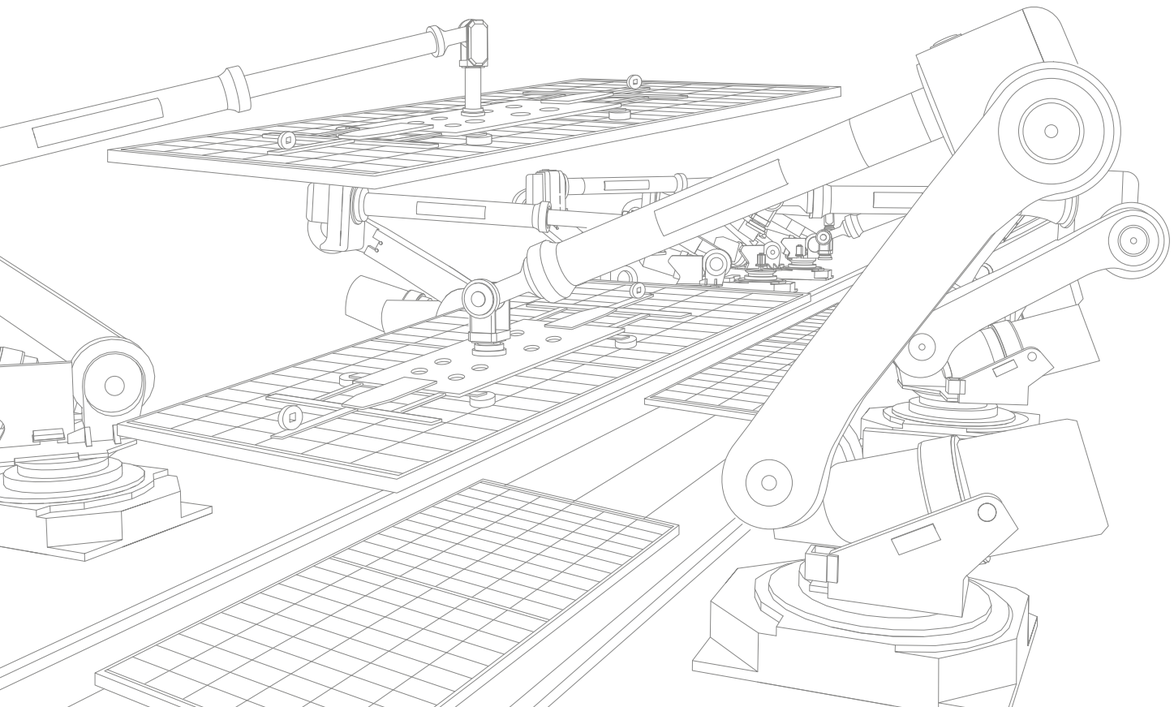
SSI Certified ESG Sites-Silver

Tier 1 PV Module Maker listed by BloombergNEF

TOP Performer honored by Kiwa PVEL for 9 times

Overall Highest Achiever by RETC

Group-level Gold Rating by EcoVadis



Contents

Company Profile _ About CHINT Group

25 Billion USD
2024 CHINT Group Revenue

50000+
Employees Worldwide

140 +
Countries and Regions Where Businesses Cover

4.14 Billion USD
PV Modules Revenue in 2024

8.3 Million Tons
CO2 Emissions Reduced per Year

8.3 Billion kWh
Green Electricity Provided for the Whole Society per Year

Founded in 1984, CHINT Group Co., Ltd. (hereinafter referred to as "CHINT") is a global leading smart energy solutions provider. Over the past 40 years since its establishment, CHINT has always focused on industry and brand building, deeply implemented the strategy of "Industrialization, Technologization, Internationalization, Digitalization and Platformization", and formed three major segments of "Green Energy, Intelligent Electric and Smart Low-carbon" and two major platforms of "CHINT International Platform and Sci-tech Innovation Incubation Platform", and endeavored to build up "211X" Management Capabilities, including Intelligent Electric and New Energy Industry Cluster Capabilities, Regional Localization Capability, Middle and Backstage Integration Capability, and Innovation Incubation Capability. Its business covers more than 140 countries and regions, with 4 global R&D centers，6 international marketing regions, over 25 domestic and international manufacturing bases, and a global workforce of over 50,000 employees. In 2024, CHINT's operating revenue reached USD 25 billion, and CHINT has been listed among the Top 500 Chinese Enterprises for more than 20 consecutive years. CHINT Electrics (stock code: 601877) is the first A-share listed company in China with LV electrical appliances as its main business.

CHINT continuously strengthens its "One Cloud & Two Nets" strategy, with "CHINT Cloud" as the carrier of intelligent technology and data applications and takes the lead in building the Energy Internet of Things (EIoT) and Industrial Internet of Things (IIoT) platforms, striving to be the explorer, advocator, and practitioner in the world of low-carbon development. With the "Green Energy, Smart Network, Load Reduction, and New Storage" service systems, CHINT sets up a platform-based enterprise, and builds a regional smart energy industry ecosystem. It provides a total energy solutions package for public institutions, industrial, commercial, and end users to achieve energy conservation, carbon reduction, and accelerate the energy transition.

About Astronergy

Under the CHINT Group, Astronergy is an intelligent manufacturing enterprise focusing on photovoltaic cells and modules. Founded in 2006, it is one of the earliest private enterprises in China to set foot in the photovoltaic field. It has the capacity to design and manufacture various cutting edge technology solar products for the markets.

Committed to being the most competitive photovoltaic module supplier worldwide, Astronergy sets its mission to create a sustainable and net-zero carbon world with solar power. Focusing on R&D, production and sales of high-efficiency crystalline silicon PV cells and PV modules, Astronergy has continuously launched the ASTRO series high-efficiency, high-quality, high-performance modules.

Both its bifacial and monofacial ASTRO series modules using large-size wafers could be perfectly applied in various scenarios of utility-scale power stations, commercial & industrial (C&I) PV systems and residential PV systems.

With business footprints in over 140 countries and regions, Astronergy has established intelligent manufacturing bases at Haining in Zhejiang, Yancheng in Jiangsu, Jiuquan in Gansu, Songyuan in Jilin, Fengyang in Anhui, Yiwu in Zhejiang, Yanchi in Ningxia, Yueqing in Zhejiang, Fuyang in Zhejiang, Yibin in Sichuan, in Thailand and in Turkey. It has also set up branch companies and sales centers in countries like Germany, Spain, the Netherlands, Poland, the United States, Canada, Brazil, Australia, Singapore, Japan, and Thailand, achieving great sales performance of Astronergy PV products in international mainstream markets of Europe, North America, Latin America, and Asia Pacific.

150 GW+

Total Global Shipments*

TOP 4

n-type TOPCon Product Shipment Worldwide

140 +

Business Covered Countries

*Data Updated June, 2025

ZERO BY 2050

Full Value Chain Carbon Neutrality

2035
100% Operation with Renewable Energy
90% Product Recycling Rate
...

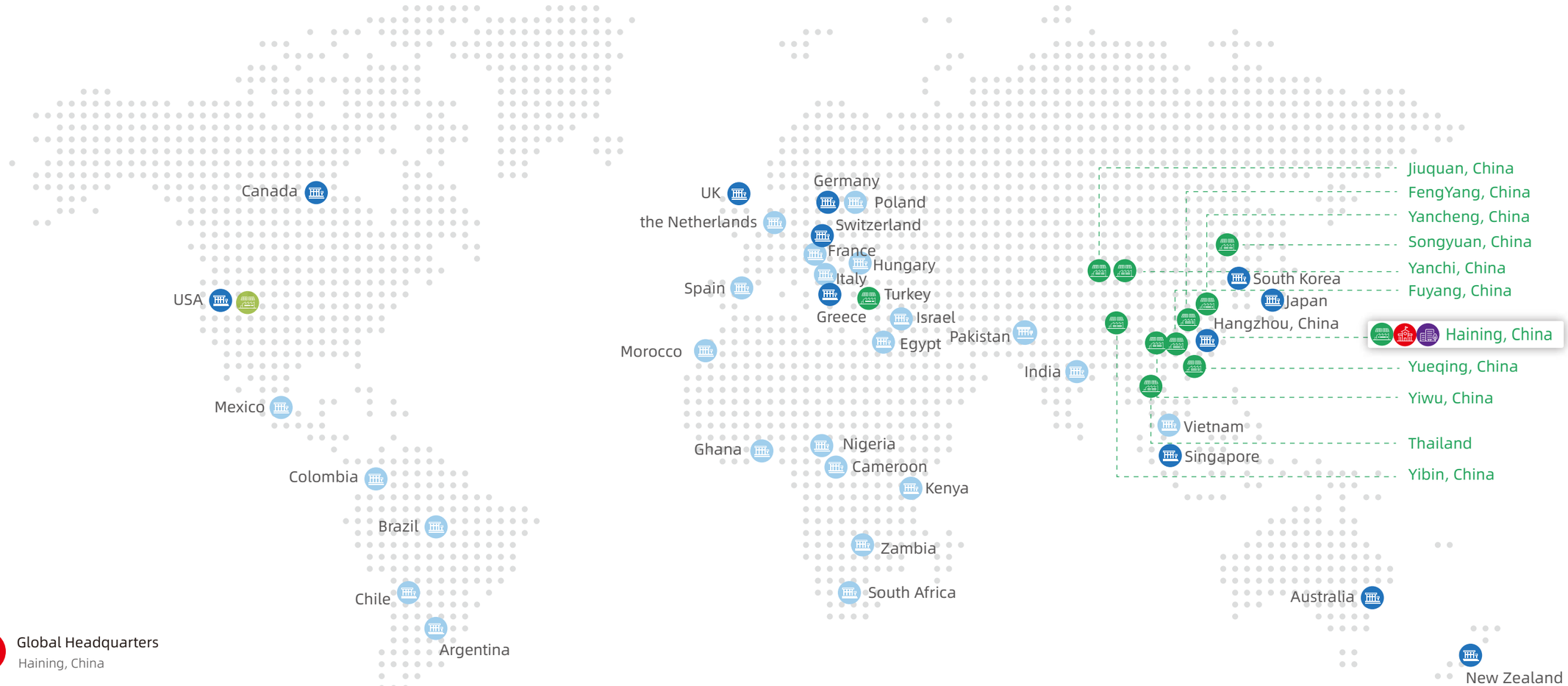
2028
0% Landfill Waste
8 Zero-carbon Factories
...

2023
ESG Report
1st Zero-carbon Factory
...

2022
Base Year

Globalization

Astronergy product sales footprint covers more than 140 countries around the world. And it has set up branches in the United States, Germany, Australia, Canada, Singapore, Thailand, Japan and other countries to help the process of globalization and win the full trust of customers and good reputation in the industry with credibility.



Global Headquarters
Haining, China

Global R&D Center
Haining, China

Global Sales Offices

Hangzhou, China
USA
Germany
Australia
South Korea
Canada
Singapore
Thailand
Japan
...

Global Manufacturing Bases (Mass Production)

Haining, China
Yancheng, China
Jiuquan, China
Songyuan, China
Fengyang, China
Yibin, China
Yiwu, China
Yanchi, China
Fuyang, China
Yueqing, China
Thailand
Turkey
...

Global Sales Channels

Spain
the Netherlands
Brazil
India
Poland
Egypt
Colombia
Morocco
Chile
Israel
Argentina
Vietnam
Mexico
Pakistan
...

Global Manufacturing Bases (under construction/ under preparation)

USA
...

Milestones

2006

Astronergy is founded

2007

Mass production of crystalline silicon (c-Si) cells started

2008

Production capacity of c-Si modules reached 100MW

2012

100MW module production line in Gansu Jiuquan Manufacturing Base was completed

2014

Astronergy acquired Conergy module factory and started to manufacture modules in Germany

2015

Zhejiang Haining Manufacturing Base was established

2016

Intelligent factory in Hangzhou was put into operation
Thailand Manufacturing Base started module production

2018

The renamed product brand (ASTRO) was officially launched

2019

Zhejiang Haining Manufacturing Base's 1.5GW c-Si cell and 1.5GW PV module production lines were put into operation

2020

Mass production efficiency of high-efficiency bifacial PERC cell reached a new peak (23.4%)

2021

Jiangsu Yancheng Manufacturing Base's first module rolled off the assembly line

2022

- Astronergy independently operates the business of PV modules & cells manufacturing and sales in CHINT Group
- ASTRO N n-type TOPCon modules were launched globally
- Jilin Songyuan Manufacturing Base started operation

2023

- Astronergy launched ASTRO N7 upgraded n-type TOPCon PV modules
- Anhui Fengyang Manufacturig Bases started operation
- Zhejiang Yiwu Manufacturig Base started operation
- Ningxia Yanchi Manufacturing Base started operation
- Zhejiang Yueqing Manufacturing Base started operation
- Yancheng Manufacturing Base got zero carbon factory certification from TÜV Rheinland
- Astronergy announced its Sustainability Strategy

2024

- The wafer-slicing lines of Thailand Base started operation
- Astronergy Fuyang Manufacturing Base started operation
- Turkey Manufacturing Base Started Operation
- Global shipment of Astronergy solar modules hits 130GW

Brand Value

For 9 years, Astronergy has been honored by Kiwa PVEL as "TOP Performer" among module manufacturers

Astronergy has won 9 awards of "All Quality Matters" from TÜV Rheinland

Tier 1
BloombergNEF

For a long time, Astronergy has been listed as the world's Tier 1 PV Module Maker by Bloomberg NEF

TOP 10
PV Modules
Suppliers released
by S&P Global

No. 1
in "China's Top 100 Private Enterprises with Social Responsibility" in 2022

No. 40
in "2025 China's Top 500 Private Enterprises"

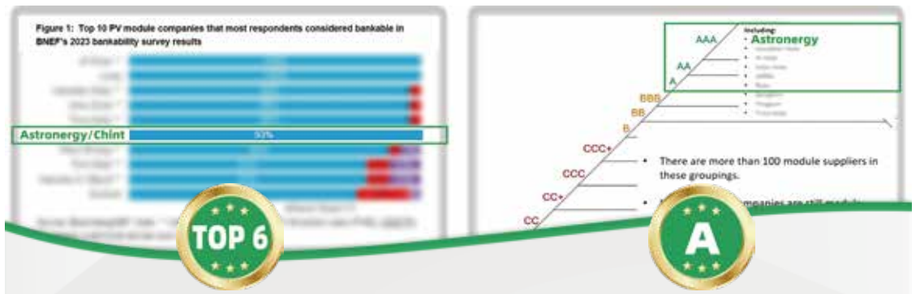
No. 235
in "2021 Top 500 Chinese Enterprises"

China Industry Award

China Charity Award

Bankability

In the annual "PV Module and Inverter Bankability" released by Bloomberg New Energy Finance (BNEF), Astronergy bankability rating has risen from seventh place on the 2022 list to sixth place on the 2023 list. And Astronergy has been rated "A" for multiple consecutive quarters in PV ModuleTech bankability ratings report.



ASTRONERGY RANKS TOP 6!
BNEF PV Module and Inverter Bankability 2023

ASTRONERGY AT THE A LEVEL!
PV ModuleTech Bankability Ratings 2024

Intelligent Manufacturing

Pioneer and Explorer of Smart Manufacturing in PV Industry
Astronergy builds the first PV "Intelligent Manufacturing" transparent factory

With the automatic production line and highly information-integrated production mode, Astronergy enables the monitoring and traceability in the production process from raw materials to finished products and maintains its leading position in smart manufacturing.

1st to Achieve AI Automatic Detection of EL Defects

* Supported by Big Data
* Localization of Production Equipment
* Fully Automated Production
* AI Quality Detection
* Automatic Monitoring of the Entire Process
* Automatic Batching by Unmanned Vehicles

Outstanding in Intelligent Manufacturing

* Sino-German Intelligent Manufacturing Demonstration Base
* Intelligent Photovoltaic Pilot Demonstration Enterprise

R&D Strength

Global R&D Cooperation

Explore the "industry university research" integration mode with Shanghai Jiao Tong University, Zhejiang University, Zhejiang University of Technology, Hangzhou University of Electronic Science and Technology, New South Wales, Chinese Academy of Sciences Ningbo Institute of Materials and other universities and research institutions, integrate global innovation resources, and promote enterprise R&D innovation and talent training. Deeply cooperate with domestic and foreign frontline equipment and material manufacturers, carry out collaborative innovation in the industrial chain, and promote industry material innovation and industrialization.

Zhejiang University
Key Technologies of Low-cost and High-efficiency Solar Cells

Shanghai Jiao Tong University
New Tunnel Passivated High-efficiency Solar Cell & Module Technology

Zhejiang University of Technology
N-type Passivated Contact High-efficiency Bifacial Crystalline Silicon Solar Cells

Hangzhou Dianzi University
High-efficiency Monocrystalline PERC Cell Technology

UNSW SYDNEY
Hydrogen Passivation Project

Accreditation Laboratory Qualifications

With strong testing capabilities, Astronergy has obtained the qualifications of CNAS Laboratory, CSA Witness Laboratory, TÜV Rheinland Witness Laboratory, Intertek "Satellite Program" Laboratory and other qualifications, and conducts more than 30 rigorous tests internally for PV modules.

Scientific Research Achievements

442 Utility Model Patents

120 Invention Patents

16 Appearance Design Patents

Scientific Projects

20%+ The number of R&D personnel with intermediate titles and above at the national level accounts for more than 20%

Launched 2 Provincial-Level Frontier Innovation Projects (From 2023 to 2024)

Talent Declaration

Zhejiang Core Energy's Key Cooperative R&D Projects

Jiaxing Leading Team on Innovation

Haining Demonstration Project on Collaborative Innovation

Our Products _ n-type TOPCon Ultra-High Power PV Modules

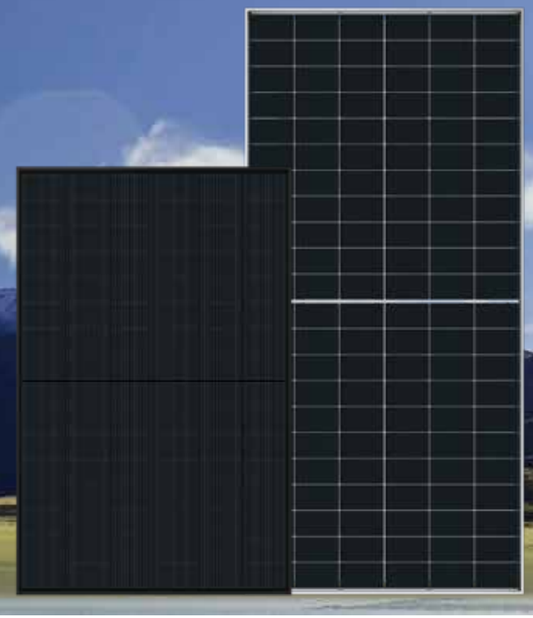
ASTRO N series products adopt n-type TOPCon solar cell technology, featured advanced technologies such as SMBB/ZBB, non-destructive cutting, high-density encapsulation, etc., to achieve advantages such as high power, high efficiency, high reliability, high power generation per watt, low BOS cost and LCOE. Products of the series are suitable for multiple application scenarios, such as utility-scale power plants, commercial and industrial distributed power plants, and residential rooftops and balconies.

15/25 Years
Product Warranty

30 Years
Linear Power Output Warranty

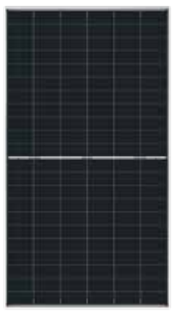
≤1.0%
First-year Power Degradation

≤0.4%
Annual Power Degradation



ASTRO N7 2.0 / ASTRO N7
650W/635W
TOPCon 5.0/TOPCon 4.0/Rectangular Wafer
ZBB/SMBB Tech/ Light Redirecting Film

Application Scenarios:
Utility-scale Power Stations and Distributed Power Stations



ASTRO N8
730W/ TOPCon 4.0 /210 Wafer
SMBB Tech

Application Scenarios:
Utility-scale Power Stations

ASTRO N7s 2.0
470W / TOPCon 5.0 / Rectangular Wafer
ZBB Tech

Application Scenarios:
Residential Rooftop Solar Power Systems

ASTRO N5
605W/ TOPCon 4.0 /183R Wafer
SMBB Tech

Application Scenarios:
Utility-scale Power Stations and Distributed Power Stations

Utility-Scale PV Power Stations

1050MW
Panjiang Utility-scale Solar Plant
Guanling county, Guizhou Province, China

50MW
Barreiras Project
Brazil

15MW
Utility-scale Solar Plant
Gelderland, Netherlands

70MW
Utility-scale Project in Zhangjiakou
Zhangjiakou, Hebei Province, China

89MW
Goonumbla Project
Australia

132MW
Claresholm Solar Farm
Southern Alberta, Canada

200MW
Forest-Solar Hybrid Power Station
Jiangshan, Quzhou, Zhejiang Province, China

165MW
Benban Solar Park Project
Egypt

310MW
China's First Sand-Solar Hybrid Power Station
Kubuqi, Inner Mongolia, China

550MW
The Largest Fishing-Solar Hybrid Project in Asia
Wenzhou, Zhejiang Province, China

48.5MW
Insua Power Station
Portugal

Applied Cases **Utility-Scale PV Power Stations**

154.4MW Germany Döllen Solar Farm
Brandenburg, Germany

3MW Depot Park-Sacramento, CA
USA

1000MW China Tacheng Multi-Energy Complementary Project
Tacheng, Xinjiang, China

70MW Italy Rovigo Solar Park
Italy

18MW Japan Nagano Solar Park
Japan

119MW Australia Hillston Solar Park
New South Wales, Australia

200MW China Jiangshan Agriculture-PV Complementary Project
Quzhou, Zhejiang, China

81MW Brazil SOL DO FUTURO Solar Park
Aquiraz, Ceará, Brazil

79MW Dominica Soco Solar Park
Dominican Republic

1000MW China Kela Hydro-Solar Complementary Power Plant
West Sichuan Plateau, China

310MW China Kubuqi Sand-Solar Hybrid Project
Kubuqi, Inner Mongolia, China

Distributed Rooftop PV Power Stations

10MW Roof Photovoltaic Power Station of Hangzhou East Railway Station
Hangzhou, Zhejiang Province, China

* **4.2MW**
Rooftop Project of Hangzhou South Railway Station
Hangzhou, Zhejiang Province, China

* **4MW**
Project "Million Rooftops for Zhixi"
Quzhou, Zhejiang Province, China

* **23MW**
C&U Group Rooftop Project
Wenzhou, Zhejiang Province, China

...

15MW D&Y Textile Distributed Rooftop Solar Generation Plant
Malaysia

1.2MW Hangzhou Civic Center Podium Roof Photovoltaic Power Station
Hangzhou, Zhejiang Province, China

10.3MW Geely Automobile PV Rooftop Project in Linhai
Linhai, Zhejiang Province, China

10MW Hikvision Rooftop Project
Hangzhou, Zhejiang Province, China

30MW Jintian Copper BIPV Power Station
Ningbo, Zhejiang Province, China