SUNWODA ENERGY

COMPREHENSIVE ENERGY STORAGE SOLUTION PROVIDER

SUNWODA ENERGY

Sunwoda Energy Technology Co., Ltd.

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SUNWODA ENERGY

Sunwoda Electronic Co., Ltd.

Founded in 1997, Sunwoda went public on the Shenzhen Stock Exchange in 2011 and listed Global Depositary Receipts on the Swiss Stock Exchange in 2022, becoming a leader in the lithium-ion battery sector.
The company operates in five segments: 3C batteries, EV batteries, energy storage systems, smart hardware, and industrial ecological innovation. Headquartered in Shenzhen, Sunwoda has production bases in China, India, Vietnam, Hungary, Morocco, and Thailand, along with branches in the U.S., France, Germany, Israel, South Korea, and Japan.

Sunwoda Energy Technology Co., Ltd.

As a subsidiary of Sunwoda Group, Sunwoda Energy focuses on lithium battery energy storage integration and application technologies. The company specializes in five major business areas: utility energy storage, C&I energy storage, residential energy storage, network energy, and smart energy. Sunwoda Energy aims to meet the specific needs of customers in segmented markets by providing innovative and competitive green energy products and solutions. The company is committed to becoming a leading industry player with expertise in energy storage products and solutions, investment and operation capabilities, and strong channel and brand influence.

2011
Listed on the Shenzhen Stock Exchange

50000+
Employees

18.52GWh
Accumulated ESS Installed Capacity

NO.1
Global 3C Battery Shipments

NO.8
Global Power Battery Installed Capacity

95%
Compound Annual Revenue Growth Rate

TOP5
Industry Ranking of Energy Storage Industry Planning

100+
Countries/regions of project distribution

*Data as of November 2024

FIVE MAJOR BUSINESS AREAS

Creating Comprehensive Solutions

Utility Energy Storage

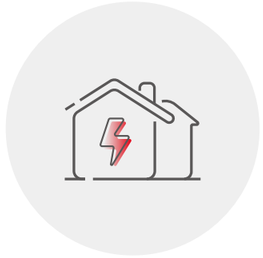
- Generation-Side Storage
- Grid-Side Storage
- User-Side Storage

C& I Energy Storage

- Smart Buildings
- Smart Industrial Parks
- Construction Sites and Mines
- Rail Transit
- Community Power Distribution

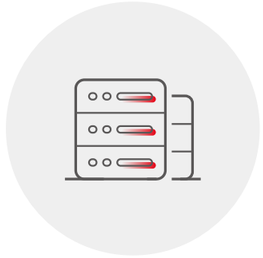
Residential Energy Storage

- Residential Solar-Storage-Charging Ecosystem
- Portable ESS
- Small C&I Energy Storage



Network Energy

- Telecommunication Base Stations
- Data Centers



Smart Energy

- Zero-Carbon Parks
- Zero-Carbon Travel
- Energy Digitalization
- Virtual Power Plants

UTILITY ENERGY STORAGE SOLUTIONS

Ultimate Safety

Long Lifespan

Stable Operation

High Utilization

Modular Design

Application Scenarios / Grid-Side Generation-Side User-Side

UTILITY ENERGY STORAGE PRODUCTS

Liquid-Cooling Energy Storage System

Standard 20-Foot Container
Capacity of 5.015MWh

Liquid-Cooling PACK

1P48S、1P52S、1P104S

Air-Cooling Energy Storage System

Standard 20-Foot Container
Capacity of 2.58MWh

Air-Cooling PACK

2P14S、1P20S

C&I ENERGY STORAGE SOLUTIONS

High Efficiency

Enhanced Safety

Modular Design

Flexible Installation

Advanced Technology

215/232/261kWh

All-in-one
Liquid-Cooling ESS

344/372kWh

Liquid-Cooling
Battery Cabinet

RESIDENTIAL ENERGY STORAGE SOLUTIONS

Clean Energy

Scalability on Demand

Cost Savings

Intelligent Monitoring

Safety and Reliability

Flexible expansion from 5kWh to 120kWh, Sunwoda residential ESS is primarily used for self-consumption, peak shaving, emergency backup power in households, and optimizing electricity use in residential and commercial buildings.

Application Scenarios /

Household Green Energy

Uninterrupted Power Supply

UPS

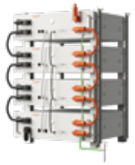
Independent Power Supply

RESIDENTIAL ENERGY STORAGE PRODUCTS

Residential/ Portable ESS

Portable Energy Storage Power Supply
Continuous Power Output: 1400W Peak Power: 2800W

Rack Type Low-Voltage Battery (Basic Version)
IP20 Protection, Capacity: 5~20kWh, Expandable to 120kWh

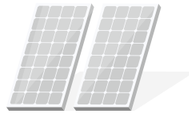


Rack Type Low-Voltage Battery
IP20 Protection, Capacity: 5~20kWh, Expandable to 120kWh

Wall-Mounted Battery
IP65 Protection, Capacity: 5kwh,Expandable to 40kwh

Low-Voltage Stackable Battery
IP65 Protection, Capacity: 5~20kWh, Expandable to 60kWh

High-Voltage Stackable Battery
IP65 Protection, Capacity: 5~20kWh, Expandable to 60kWh



Hybrid Inverter/ All-in-one ESS

Off-Grid/Grid-Tied Photovoltaic Energy Storage Inverter (US Standard)
Supports US Standard Split-Phase Grid 120/240 Vac IP65 Protection, Inverter Power: 5-8KW

High-Voltage Stackable All-in-one ESS
IP65 Protection Inverter Power: 5-15KW Supports Battery Capacity: 5-40kWh

Small C&I ESS

Small Commercial and Industrial Rack High-Voltage Battery (Simple Bracket Type)
IP20 Protection, Capacity: 25~70kWh, Expandable to 210kWh

Small Commercial and Industrial Rack High-Voltage Battery (All-in-One Rack Type)
IP20 Protection, Capacity: 25~70kWh, Expandable to 210kWh

Small Commercial and Industrial Outdoor Cabinet
IP55 Protection, Capacity: 60kWh, Expandable to 180kWh

NETWORK ENERGY

Communication Base Stations

Smarter

Safer

High Density

Longer Lifespan

48V battery products cover capacities ranging from 50Ah to 200Ah, suitable for a wide range of macro and micro base station energy storage scenarios.

Application Scenarios

Public Micro Base Stations

Public Macro Base Stations

Private Network Macro/Micro Base Stations

NETWORK ENERGY PRODUCTS

(COMMUNICATION BASE STATION)

4850
Indoor Lithium Battery
SMI-4850A1F1
Rated Capacity 50Ah

4850
Outdoor Lithium Battery
SMO-4850A1F3
Rated Capacity 50Ah

48100
Smart Lithium Battery
ST-48100A1
Rated Capacity 100Ah

48100
Standard Lithium Battery
SMI-48100A1F6
Rated Capacity 100Ah

48150
Standard Lithium Battery
SMI-48150A1F1
Rated Capacity 150Ah

48150
Smart Lithium Battery
ST-48150A1
Rated Capacity 150Ah

48200
Standard Lithium Battery
SMI-48200A1F1
Rated Capacity 200Ah

NETWORK ENERGY

Versatility Smarter Safer High Rate

Battery specifications can meet the 1KVA-800KVA UPS/HVDC backup power demand, widely used in various medium and large-scale data centers, edge data centers, and ensuring emergency backup power and safety production for various industries.

Data Centers / Medium and Large Data Centers Cloud Computing Data Centers

Industry Applications / Petrochemical Industry Precision Manufacturing Rail Transit Financial Institutions Medical Institutions Educational Institutions

NETWORK ENERGY STORAGE PRODUCTS

(DATA CENTER)

480100

Maximum Power 50KW
Suitable for small and
mediumpower long-time backup

480140

Maximum Power 300KW
Suitable for large power short-time backup

Smart Energy Zero-Carbon Industrial Park Solution

Reduced Energy Costs

Increased Energy Supply Stability

Enhanced Clean Energy

Refined Management

Support for Carbon Asset Management

Focus on Zero-Carbon Industrial Park and Zero-Carbon Travel business scenarios, through independent product research and development and system integration design, to create integrated Source-Grid-Load-Storage-Cloud zero-carbon industrial parks and Photovoltaic-Storage-Charging-Changing-Inspection zero-carbon travel solutions, providing project planning, design, investment, construction, operation, and other full-system, full-process, full-lifecycle services.

Cloud / Digitalization
- Digital Management Platform

Storage / Security
- Energy Storage System
- Efficient Thermal Storage

Load / Low Carbon
- Zero-Carbon Travel
- Zero-Carbon Buildings

Grid / Coordination
- Grid
- Heat Network
- Cooling Network
- Communication Network

Source / Clean
- Wind Energy
- Solar Energy
- Hydrogen Energy
- Natural Gas
- Biomass

ZERO CARBON TRAVEL

Standardization

Modular Design

High Applicability

Mobility

Sunwoda Photovoltaic-Storage-Charging-Changing-Inspection Integrated Solution is based on Sunwoda's core energy storage battery technology, high-power ultra-fast charging technology, photovoltaic power generation technology, smart battery testing technology, and intelligent energy management technology. It achieves intelligent energy scheduling of integrated solar energy storage charging stations to ensure safe and efficient operation of equipment, bringing economic benefits such as peak shaving, demand response, demand charge management, and emergency standby to customers, achieving clean power and green travel, and promoting carbon neutrality.

- **High Efficiency and Energy Saving**
  Direct supply of photovoltaic power to charging piles, energy storage, and other electrical equipment
- **Clean and Pollution-Free**
  Mainly using clean photovoltaic power generation
- **Zero-Carbon Travel**
  Providing green power for electric vehicles
- **Advanced Intelligence**
  Microgrid control system providing customers with exclusive energy solutions

Photovoltaic System

Showcase Center

Energy Storage System

Liquid Cooling Supercharging

Barrier Gate System

Vending Machine

SUNWODA ENERGY 光储充检智慧驿站

Utility Energy Storage Project Cases

200MW/400MWh
Grid-side Energy Storage Project, Zhejiang Province

60MW/120MWh
Jinta Photovoltaic Energy Storage System Project, Gansu Province

65MW/65MWh
Qingyuan Agricultural-Photovoltaic Complementary Energy Storage Project, Guangdong Province

30MW/30MWh
Datong Photovoltaic Energy Storage System Project, Shanxi Province

30MW/60MWh
Neihuang Wind Utility Energy Storage System Project, Henan Province

12MW/24MWh
Xinhe Agricultural-Photovoltaic Complementary Energy Storage Project, Hebei Province

5MW/11MWh
Kanowna Solar Farm Stage 2
New South Wales, Australia

10MW/10MWh
Shuozhou Peak Shifting and Frequency Modulation Demonstration Project, Shanxi Province

PROJECT CASES

C&I Energy Storage Project Cases

0.6MW/1.29MWh
Huizhou Industrial Park, Guangdong Province

100kW/160kWh
Antarctic Scientific Expedition Station Microgrid Project

2MW/2.17MWh
Switzerland Frequency Regulation Energy Storage Project

2MW/4MWh
Guangzhou Industrial Park, Guangdong Province

Residential Energy Storage Project Cases

60kWh
South Africa Residential Photovoltaic Energy Storage Project

40kWh
Greece Residential Energy Storage Project

25kWh
Vietnam Residential Energy Storage Project

10kWh
Italy Residential Energy Storage Project

10kWh
Bulgaria Residential Energy Storage Project

Sunwoda ECHO 10
Portable Energy Storage Project in Europe/Japan/United States

Network Energy Project Cases

48V200Ah
Collaborative Project with a Well-Known Telecommunications Company in Africa

48V100Ah
Backup Utility Project for Communication Base Stations in the Philippines

48V100Ah
ETC Backup Utility Project in China

512V50Ah
Backup Utility Project for Data Centers in Shanghai

48V50Ah
Backup Utility Project for Communication Base Stations in Taiwan, China

Backup Utility Project for Domestic HVDC Data Centers

Zero-Carbon Industrial Park Project Cases

Smart Grid Technology and Equipment Special Project of National Key Research and Development Program
Distributed Energy System Demonstration with Multi-Energy Complementary Integration Optimization

Application Scenario / Multi-Energy Complementary Integration in Industrial Parks

Project Location / Huizhou, Guangdong

Installed Capacity / 12MW Photovoltaic, 2MW Gas Tri-generation, 7MW/8.5MWh Energy Storage Station, 55MWh Water Chilling Storage, 18.4MW Ice Machines, EV Charging Stations

Project Overview / The project can achieve an independent power supply of 12MW for one hour, an independent cooling supply of 25MW for one hour in the industrial park, and can guarantee the electricity load for important areas like security and data centers. From September 2019 to December 2022, the cumulative electricity generated by photovoltaics reached 32.03 million kilowatt-hours, equivalent to saving 11,500 tons of standard coal and reducing carbon dioxide emissions by 31,900 tons. Within the industrial park, the comprehensive energy cost has been reduced by more than 8%, the peak-to-valley difference has been reduced by 15%, and the power adjustment error of the interconnection lines is less than 5%. In 2021 and 2022, the project actively participated in the demand response invitations issued by the Guangdong power grid to alleviate the pressure of supply-demand balance in the power grid throughout the province.

Zero-Carbon Travel Project Cases

Nanjing Solar-Energy Storage Charging Project

The First Rural Revitalization Solar-Energy Storage Charging Project in Xutian Village, Huizhou

Shenzhen Photovoltaic-Storage-Charging-Inspection Project

Nanchang Photovoltaic-Storage-Charging-Inspection Project

FULL LIFECYCLE R&D PRODUCTION CAPACITY

Independent R&D Energy Storage Cells

High Performance

Capable of meeting the high-rate, long-cycle needs of various application scenarios

High Safety

Adopts "LiFePO4 + Graphite" System + Olivine Crystal Structure

More Stability

Uses LFP Material, Thermal Decomposition Temperature Above 800℃, Decomposition Process Does Not Release Oxygen

Comprehensive Certification

GBT36276, IEC62619, UL1642, UL1973, UL9540A, ULRecognized, UN38.3

ESS LFP-72Ah 8C

2000 Cycles
Data Center Backup

ESS LFP-100Ah 1C

5000 Cycles
Residential Energy Storage/
Base Station Backup

ESS LFP-280Ah 0.5C

8000/12000 Cycles
Utility Energy Storage/
Residential Energy Storage

ESS LFP-314Ah 0.5C

8000/12000 Cycles
Utility Energy Storage/
Residential Energy Storage

Power and ESS Cell Certification Report

Research Strength

Cell R&D and Manufacturing / BMS Design and Manufacturing / Battery Pack R&D and Manufacturing / PCS R&D and Manufacturing / Energy Storage System R&D and Manufacturing

30 Nearly 30 Years of Industry Experience

TOP3 TOP3 R&D Investment Proportion in the Industry

300+ 300+ National Patents and Intellectual Property Rights

Patented Technology

62+ Passed Self-Developed Cell Safety Testing

80+ National and Industry Standards Development

100+ Leading National/Provincial-Level Demonstrative Projects in Other Key Areas

AWARDS AND HONORS

Globally Recognized Brand Value, Widely Acknowledged by the Industry

Ranked 37th in the 2023 Global New Energy Enterprises 500
—— China Energy News and China Energy Economics Research Institute

Ranked 248th in the 2023 Fortune China Listed Companies 500
—— Fortune China

- Guangdong Provincial Government Quality Award
- Shenzhen Mayor Quality Award Gold Prize
- Guangdong Provincial Science and Technology Progress Award First Prize
- China Energy Storage Industry Technological Innovation Award
- National High-Tech Enterprise
- Shenzhen Specialized, Refined, Special, and New "Little Giant"
- Guangdong Distributed Comprehensive Energy and Energy Storage Engineering Technology Research Center
- China Energy Storage Industry Best System Solution Enterprise Award
- China Energy Storage Impact Innovation Enterprise
- China National Nuclear Corporation Best Delivery Award

INTELLIGENT MANUFACTURING

Top-Level Industry Intelligent Manufacturing and Production Capability

Passed Level Three Certification for Intelligent Manufacturing Capability Maturity

Production Capacity: Four Major ESS Production Bases
Energy Storage Cells: Actual Capacity 31.3GWh, located in Huizhou, Guangdong; Nanchang, Jiangxi; Shifang, Deyang, Sichuan; a total of 6 production lines
Energy Storage Systems: Actual Capacity 24GWh, located in Huizhou, Guangdong Zhonghao Industrial Base; a total of 19 production lines

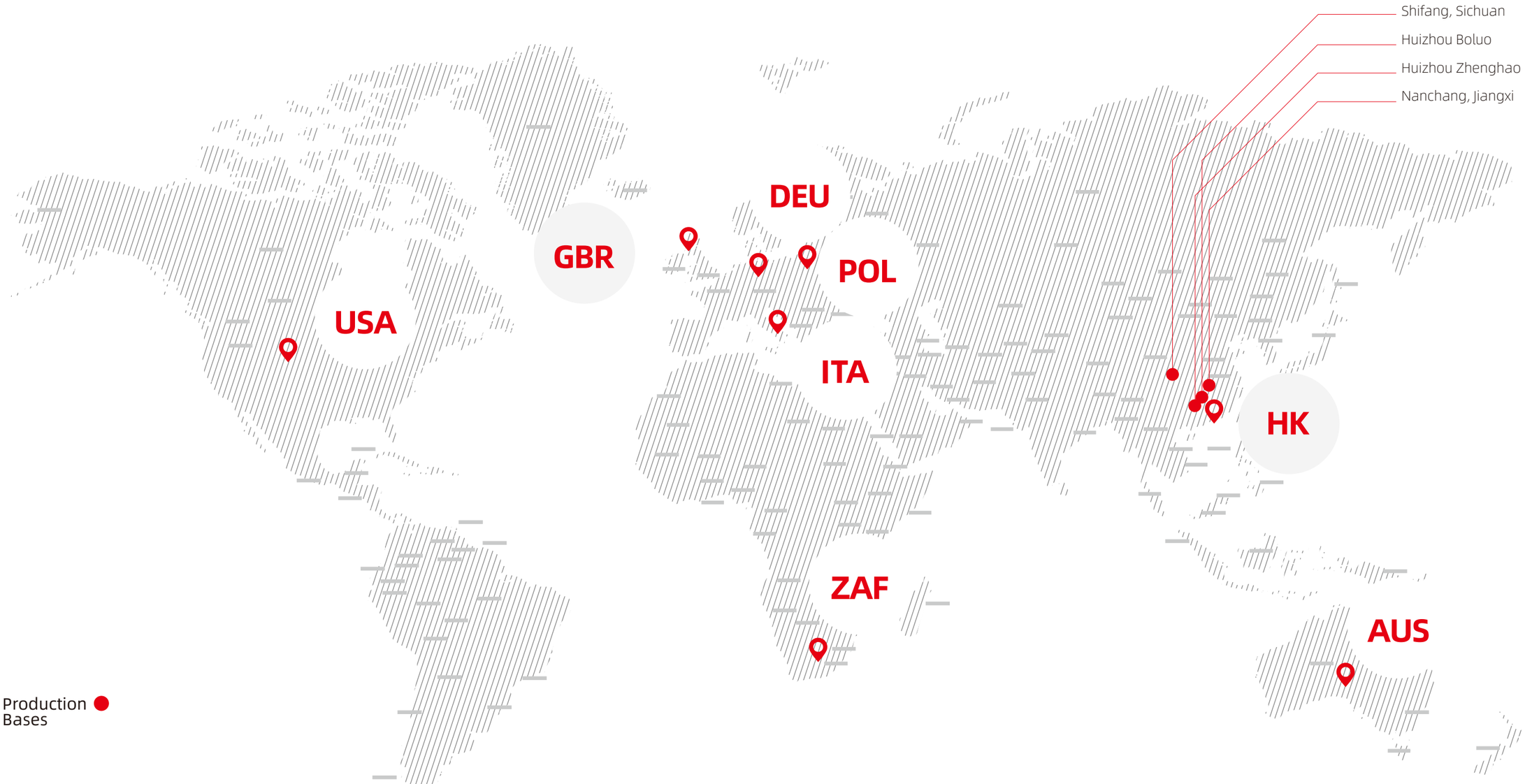
Leading Manufacturing Quality Comes First

Stringent Production Process
A complete chain of integrated manufacturing mode based on equipment and core system interconnection, including segment selection, assembly, testing, etc.

Real-Time Operation Monitoring Throughout the Production Cycle
Using a comprehensive Equipment Management System for data collection, monitoring, and analysis, real-time monitoring of the entire line and equipment status.

Comprehensive Quality Control Strategy
Ultimate safety design, comprehensive quality control system, continuous improvement to create value for customers.

Reliable Delivery Guarantee
Certification of management system, quality system guarantee, quality information system.



4 Production Bases

8 Marketing Agencies

100+ Countries and Regions Under Service Coverage

GLOBAL STRATEGIC LAYOUT

Strategic Partners

国家电网公司 STATE GRID CORPORATION OF CHINA
中国南方电网 CHINA SOUTHERN POWER GRID
国家电投 SPIC
国家能源集团 CHN ENERGY
中国华电 CHD
中国华能集团公司 CHINA HUANENG GROUP
中核集团 CNNC
LONGi 隆基
上能电气 SINENG
能科科技
NARI 南瑞集团
许继集团
欧昊集团 OUR HOUSE
H3C 数字化解决方案领导者

BUILDING ECOLOGICAL CO-CREATION AND WIN-WIN SITUATION

Baidu 百度
Alibaba 阿里巴巴
ZTE中兴
FiberHome
iTeaQ 艾特网能
orange
VERTIV. 维谛技术
vodacom
Skyworth
Haier
SUMEC 苏美达集团
LANDPORT
ELINEX
如果新能源 RENOGY
CVTE 视源股份

BUILDING A BETTER FUTURE FOR SUSTAINABLE DEVELOPMENT