

#### Risen Energy Co., Ltd.

Address: Tashan Industry Zone, Meilin Street, Ninghai, Ningbo, China Tel: 400 8291 000 Fax: +86 574 59953599 Email: marketing@risenenergy.com Website: www.risenenergy.com

Note: The data in this manual is updated until the end of July 2024, and Risen Energy reserves the right to change the manual without prior notice.

# **CREATING A NEW LIFE** FOR MANKIND THROUGH GREEN NEW ENERGY

I.I.I.



#### www.risenenergy.com



# Renewable Energy Solution Provider

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Project Cases

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Risen Energy Power

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Global Presence

**P23** 

SYL Energy Storage

## Company Profle



Risen Energy Co., Ltd. was founded in 1986 and went public on the Shenzhen Stock Exchange SME Board in September 2010, with the stock code 300118. The company is primarily engaged in the research, development, production, and sales of PV grid-connected power generation systems, standalone PV power supply systems, solar cells, and solar modules. It has established offices and subsidiaries worldwide, creating a global sales network in countries such as China, Germany, Australia, Mexico, India, and Japan, aiming to provide green new energy globally.

Based on the company's strategic goals, the company established the Global Photovoltaic (PV) Research Institute in November 2023, which is mainly responsible for integrated technology research, product development, product iteration and technology management. The institute is dedicated to providing cutting-edge carbon-reducing PV solutions and establishing a globally high-efficiency PV R&D innovation center. This will offer robust technical support to enhance companies' product and technological competitiveness. Risen Energy regards the Global PV Research Institute as a platform for global PV technology exchange and cooperation, promoting the widespread adoption of this technology worldwide while laying the groundwork for realizing our vision of "Risen Energy grows worldwide for hundreds years"



91GW+

15000 +Global employees

**48GW** Modules capacity in 2024

90+ Countries/regions with

**Mission** 

## Vision

Creating a new life for mankind through green new energy.

#### **Service**

Customer-centered, providing value through service.

#### Continuously improving the energy pattern with technological innovation and the quality of human life.







Financing eligibility ranking



business operations

Tier 1 leading PV module manufacturer

03/04

## Development History



Company established, rubber and plastic products 10 million RMB sales, 100 employees

Entered the solar industry Exceeded 100 million RMB sales, 500 employees

Listed on GEM, over 2 billion RMB sales

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Started a new undertaking, expanded to internet finance and new materials



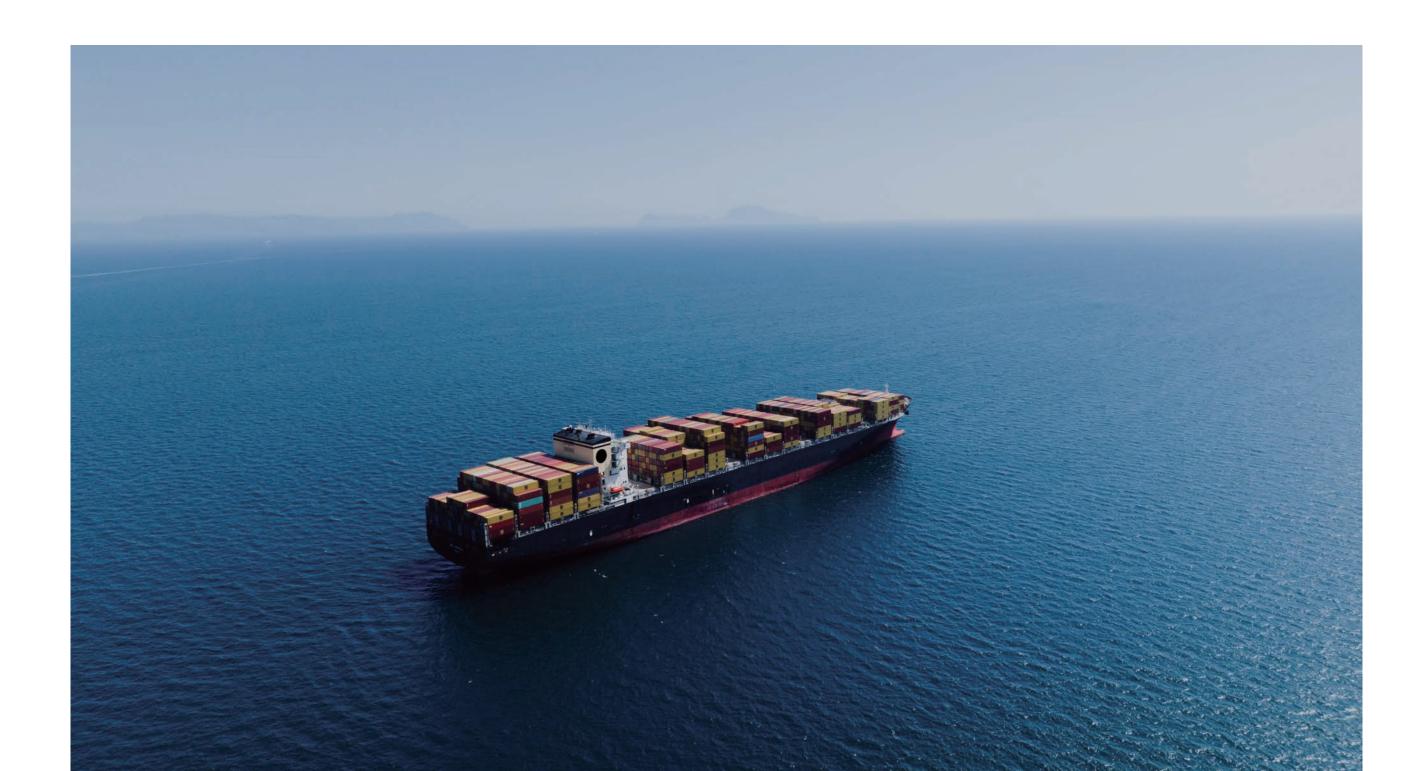
Launched the "Two New Strategies", achieved the "10 billion RMB operating income" goal.

Diversified layout

**Renewable Energy Solution Provider** 

# Diversified Layout

Polysilicon	Crystal Pulling	Solar Cells	Modules
		Ground Power Stations	C&I Statio



BIPV

ons

#### Energy Storage

07/08

## Global Layout

#### Japan

Address: 〒104-0031 東京都中央区京橋2-12-2 NEWS Xビル 8階 TEL: +81 3 3538 3533 FAX: +81 3 3538 3536

#### South Korea

Address: 서울특별시 구로구 디지털로32가길 16(파트너스타워2차) TEL: +82 70 4264 3210 FAX: +82 2 830 4614

#### Beijing

Address: Room 601-602, block D, Haige Communication Industrial Park, South Wuquan Road, Fengtai Science Park, Fengtai District, Beijing TEL: +86 15313388792

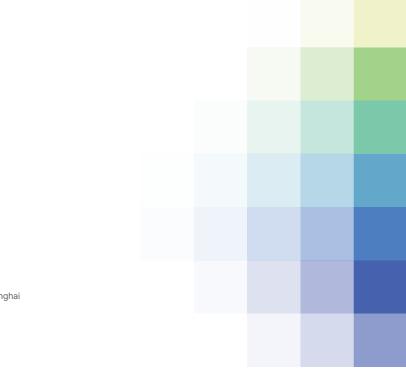
#### Shanghai

Address: Room 209, F2, Block C, Baosteel Pudong International Trade Building, 88 Hedan Road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai TEL: +86 574 59953588

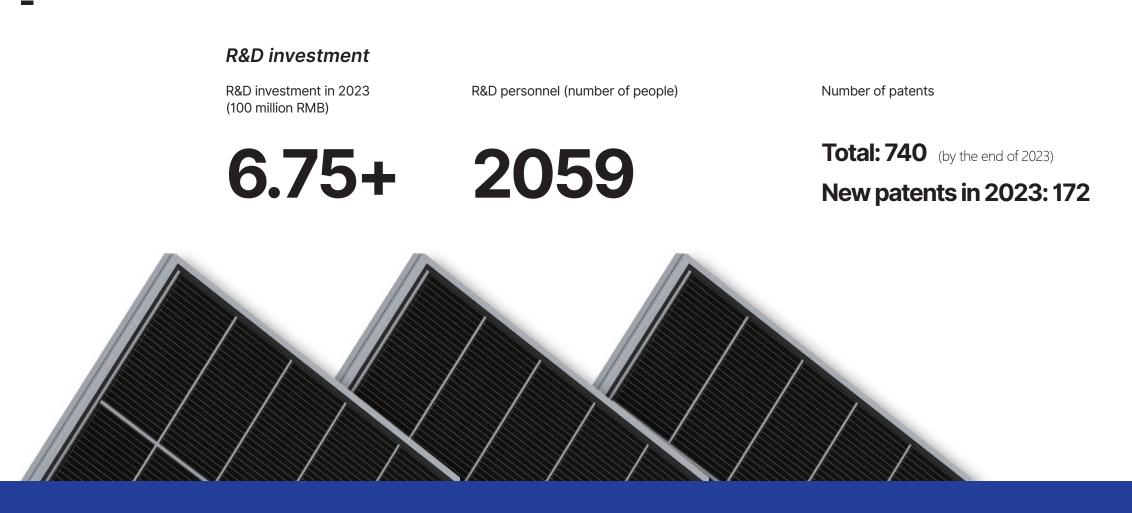
#### USA

Address: 2570 N. First Street, 2nd Floor, San Jose, CA 95131 TEL: +86 13656473355





## Core Advantages



## Technology advantages >>>

#### *n*-type HJT Hyper-ion module

210 technology platform
25.5%+ cell efficiency
767.38Wp+ maximum power output
The first to launch the 0BB cell technology
The ingenious stress-free Hyper-link
interconnection technology
120+ independent patents

#### *n*-type TOPCon module

SMBB

25%+ efficiency of cell mass production 635Wp+ power output Use the rectangular wafer of G12R

#### *p*-type PERC Titan module

210 technology platform The first to launch 500W+ module Efficient and reliable packaging technologies 670Wp+ power output Lower BOS and LCOE

#### Supplier Quality Management

Annual audit supervision; daily assessment; major abnormal improvement promotion; new material introduction and change management, etc.

#### **Global Customer Service**

Dedicated to serving customers, handling customer complaints, improving customer relations, surveying customer satisfaction, feedback on customer issues, and driving internal improvement.

#### Performance Management System

Reliability control of material products, corporate standardization, system and institution development, cross-regional audits, and quality performance management, etc.

#### Certified Product Management System

Quality monitoring and improvement of each part of the production process, including incoming materials, processes, and outgoing products, to promote full-staff quality management.



## **CNAS-certified** National Laboratory

Hot-spot endurance test

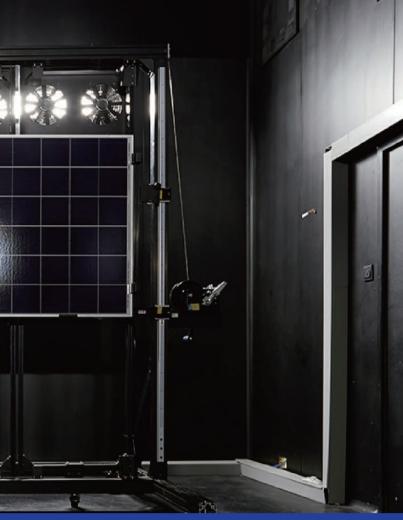
Mechanical load test

## Borg power rating

## Destructive test

## UV test

## Wet leakage current test



#### Class AAA steady state solar simulator



## Professional certifications >>>

#### Comprehensive product and system certifications



- ISO 14001: 2015 environmental management system
- ISO 45001: 2018 occupational health and safety management system
- ISO 14064 greenhouse gas emission verification







## Product advantages >>>

Product warranty

Product warranty				
Product series	Product warranty	Power warranty	First-year degradation	Annual degradation
Hyper-ion	<b>15</b> years	<b>30</b> years	1%	0.3%
TOPCon	conventional products: <b>15</b> years all-black products: <b>25</b> years	<b>30</b> years	1%	0.4%
TITAN	conventional products: <b>12</b> years all-black products: <b>25</b> years	mono-facial: <b>25</b> years bifacial: <b>30</b> years	2%	mono-facial: <b>0.55%</b> bifacial: <b>0.45%</b>
	performance of mod	ules		
All modules are tested and certifie Fully automated cell and module p	production lines with comprehensiv	ve quality		
control and barcode traceability s Excellent low-light performance.	systems.			
Module efficiency sorting: 0~+3%				
Standard snow load 5400Pa and Upgraded IEC Standard certificat				
Industry-leading heterojunction m	nodules with ultra-high conversion nd module power up to 767.38Wp+	efficiency:		
Product certification				
IEC61215: 2016; IEC61730-1/-2:20	16, UL61730		<b>J</b> ,	
IEC61701 Salt Spray Corrosion Tes IEC62716 Ammonia Corrosion Tes			The ,	
IEC62804 PID Test			//9/	$\mathcal{O}_{\mathcal{A}}$
IEC60068-2-68 Dust and Sand Te	est			197
IEC62782 Dynamic Load Test LID Test				/////0,
LeTID Test				
Regional certifications from other	countries and regions			

## **Risen Energy BIPV**

Breaking the barrier between photovoltaics and buildings

#### Super Tile BIPV System A simulated tile shape that integrates PV with buildings

Optional formats: Tiled type or stacked type Tile-like design Equal emphasis on energy efficiency and aesthetics for high-end villas Easy and efficient installation

#### *C&I BIPV System Higher returns and safety*

Super Roof / Converging energy Roof / Empowering energy Roof 30-year lifespan design Increased installed capacity by 10%-30% Fireproof, waterproof, and dustproof





#### Car-home BIPV System Clean energy for zero-carbon travel

Optional optical storage and charging solutions Transparent frame cover design Pre-fabricated and all-steel structure Exquisite components for minimal installation

## **Risen Energy Power Station Development**



#### **Risen (Ningbo) Electric Power Development Co, Ltd.**

energy.

distributed power stations.

With a specialized EPC project design and construction management team, the company offers one-stop services throughout the entire process that includes consulting, site survey, system design, engineering installation, acceptance testing, after-sales service, and system upgrades.



Risen (Ningbo) Electric Power Development Co, Ltd. as a wholly-owned subsidiary of Risen Energy Co., Ltd., it is a high-tech enterprise that integrates research, design, investment, construction, and operation in the field of new

The company is committed to being a one-stop solution provider for clean energy systems, with a focus on new energy technology research, optimized design, EPC management, and support from operation and maintenance services. This encompasses the coordinated development of ground and

## **One-stop** Solution

Planning



Designing

## 

#### Solution design

and a state

Each PV project is unique. At Risen Energy, our professional engineers will work with you to design the best solution that meets your power capacity needs, budget, and building structure. We specialize in providing customized designing schemes and professional technical planning for your property through site inspections and equipment selection.

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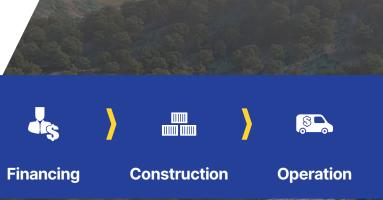


#### **Construction & installation**

Members of our construction team are all well-trained with professional experience in on-site installation. Risen Energy will provide each customer with a professional installation scheme tailored to different site conditions. By imposing strict construction controls and selecting top-quality equipment, we aim for the efficient delivery of each project and to build an optimized PV power system for all customers.



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## **Risen Energy Energy Storage Products**

Risen Energy SYL is a high-tech enterprise integrating R&D, production, sales and service in energy storage. The company is committed to becoming the world's leading "Energy Storage+" smart energy system supplier, and has a technical R&D team of over 200 people. The company's products cover Li-ion battery, pack, C&I and large-scale energy storage, with customers covering China, the US, the UK, Germany, Czech Republic, Canada, Australia, Thailand, Japan, Philippines and many other countries.



	Water Fire Suppression System	
Grid-side Liquid Cooling	Intrusion Detection System	i
Saving on-site Labor Cost	Golden Shield Controller	
Flexible Deployment		
5016kWh battery@2500kW power	Lock-level Visual Switch	6
Multiple Safety Design	Short-Circuit Protection	
Adaptable to Site Layout		
	Fire Suppression System	

	<b>C&amp;I</b> BIPV Time Shifting
	<b>Microgrid</b> Data Centers Microgrid with Diesel Gen
	Po Po Po Pia Pe Vir Ciri
	Grid S • Pea • Inc • Grid • Bla • Dis • Imp

#### User-side

- Time Shifting
- Demand Charge Reduction
- Backup Power
- Microgrid with Distributed Generation

#### nsets

#### ower Generation Side

#### Renewable Integration

#### eration Side

- ower Output Smoothing
- lanned Generation Tracking
- eak Shaving, Frequency and Voltage Regulation
- irtual Inertia

#### id Side Ancillary Services

#### Side

- eak Shaving, Frequency and Voltage Regulation
- crease Grid Flexibility
- rid Investment Deferral
- ack-Start
- stribution Capacity Reduction
- proving the Economics of Distribution Grid Operation



**150MW** Location: Inner Mongolia, Ch

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## **22MW**

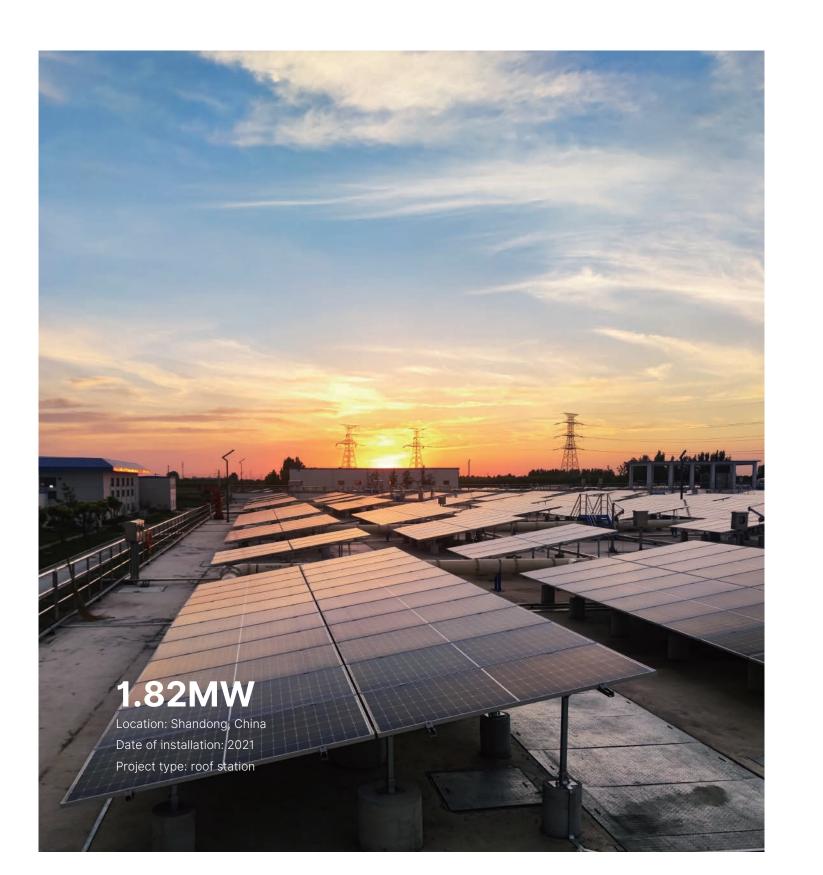
Location: Qinghai, China Date of installation: 2024 Project type: Ground mounted

## **15MW**

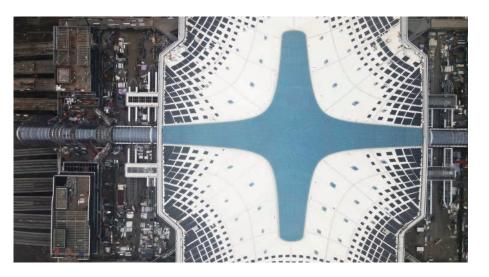
Location: Germany Date of installation: 2024 Project type: Floating mounted



Location: Guizhou, China Date of installation: 2022 Project type: Ground mounted



**3MW** Location: Zhejiang, China Date of installation: 2022 Project type: roof station



**4**MW Location: Shandong, China Date of installation: 2022 Project type: roof station



**5.3MW** 

Location: Korea Date of installation: 2024 Project type: roof station









Location: Anhui, China Date of installation: 2022 Applications: Peak-shaving, energy smoothing, and frequency regulation



Location: USA Date of installation: 2022 Applications: Energy transfer, energy smoothing

#### **5.47MW** Location: Zhejiang, China Date of installation: 2022

Project type: C&I - BIPV

**15KW** Location: Jiangsu, China Date of installation: 2022 Project type: Residential - BIPV

# 20KW

Location: Zhejiang, China Date of installation: 2023 Project type: Residential - BIPV

## 300KW

Location: Yunnan, China Date of installation: 2022 Project type: C&I - BIPV





