

# GLOBAL LEADING NEW ENERGY COMPANY

CREATE A  
SUSTAINABLE  
FUTURE



SUNRISE ENERGY CO., LTD

CHANGZHOU· CHINA

TEL: +86 519-81688389

WEBSITE: [www.sunriseenergy.cn](http://www.sunriseenergy.cn)

E-MAIL: [info@sunriseenergy.cn](mailto:info@sunriseenergy.cn)

CUSTOMIZED DESIGN  
MODULES PRODUCING  
POWER STATION DEVELOPMENT



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# SUNRISE BRAND IS FOUNDED SINCE 2006

Sunrise Energy has M10 and G12 series of solar modules. For now we have provided solar modules and customized solutions to over 100 countries worldwide.

MBB half cut P-type and N-type high-efficiency modules, support full-black, bifacial, double-glass and other customized requirements. Bifacial module can achieve up to 30% backside power gain. Solar photovoltaic systems cover household, commercial and industrial distributed and centralized photovoltaic power plants, providing thousands of solutions to help customers achieve maximum profitability. Sunrise adheres to the brand positioning of "CREATE A SUSTAINABLE FUTURE". We are committed to promoting the development of green energy in the world through solar energy and working together to create a zero carbon future for the planet.



## ENTERPRISE VISION

Become a world-class new energy enterprise with advanced technology



## COPORATE SPIRIT

Innovation and transcendence, pursuit of excellence



## BUSINESS PHILOSOPHY

Create value for customers  
seek development for employees  
and take responsibility for the society



## SUNRISE ENERGY HAS AN ANNUAL PRODUCTION CAPACITY OF 2GW

Sunrise has formed the sales territory from domestic to overseas at present. Adhering to the leading technology, the new intelligent production line is a strong guarantee for us to serve customers and respond to market changes.

**120+**

Global business partners

**100+**

Patents

**100+**

Provid solar modules and customized Solutions for different countries all over the world

# MAIN BUSINESS



Solar module manufacturing and sales



Solar system integration and sales



Light storage intelligent energy solutions



R&D of aqueous battery manufacturing



Investment of solar station

Sunrise has more than 100 core technology patents for its main business and has been awarded the honors of "AAA rating of the highest credit rating of Chinese enterprises", "High-tech enterprise", "Excellent brand of Jiangsu Province", "Top ten influential enterprises" and "Top ten innovative Solar Module enterprises".

# MORE STABLE PERFORMANCE MORE RELIABLE YIELDS

Authoritative certificated Solar Modules

**25+** years warranty-free use

- P-type high-efficiency modules **25** years of warranty
- N-type high-efficiency modules **30** years of warranty



- Ammonia resistance, acid resistance, waterproof, fireproof, wind resistance, high strength
- National quality inspection agency and authoritative third-party certification
- The installed capacity of the same area is higher
- Patented design, strong heat dissipation easy maintenance and more efficient

## PHOTOVOLTAIC SYSTEMS

### -ZHAOYANGBAO

**Designed for life  
satisfy your requirement**

Sunrise exclusively researches and develops, intelligent photovoltaic personalized solutions, including modules, inverters, brackets and cables. From professional team, management mechanism to service guarantee, not only effectively guarantee power generation, but also create whole life cycle benefits for our customers.

## Intelligent Energy Management

- Real-time monitoring system, flexible and efficient control
- Intelligent peak and valley reduction to optimize electricity consumption
- 72-hour worry-free guarantee







# SUNRISE PROVIDE INTEGRATING SOLUTION OF PHOTOVOLTAIC, ESS, CHARGING, POWER MANAGEMENT

In power production, energy storage systems can realize energy transfer and promote the application of new energy. Through the establishment of a microgrid, peak and frequency modulation can be achieved, and the operation stability of the power system can be improved. The problem of limited photovoltaic and wind power can be improved, which has a higher economy, and it can reduce instantaneous power changes and reduce the impact on the grid.

## 'Photovoltaic + Energy storage' microgrid application solution

The microgrid system is a power generation and distribution system that can achieve self-control, protection and management in accordance with predetermined goals. It can be connected to the external grid to form a networked microgrid, or it can be operated in isolation to form an independent microgrid.

## The advantages of Sunrise Energy Storage System in realizing the internal power balance of the microgrid

-  Balance the internal power of microgrid
-  Improve power reliability
-  24 All day power supply
-  Provide stable power for the load
-  Seamless switching between grid connection and off grid





## INVESTMENT OF SOLAR STATION

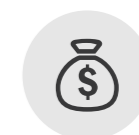
Sunrise can make efforts in the "development, investing, product, and design" sectors to encourage the implementation of projects. It has the project capabilities to deeply participate in the development, investment, construction, operation, and maintenance of photovoltaic solar station.



Project developers



EPC



Investors

# AQUEOUS BATTERIES SELF-DEVELOPING AND MANUFACTURE

Aqueous battery works on the principle of a "rocking chair" battery with metal ions as carrier, characterized by the use of an aqueous solution containing metal ions as the electrolyte. The aqueous battery is developed and manufactured by our company alone, with core technology and 10+ innovative patents. The product is 100% safe, 100% environmentally friendly and cost effective.



**100% SAFE**



**100%  
ENVIRONMENTAL  
FRIENDLY**



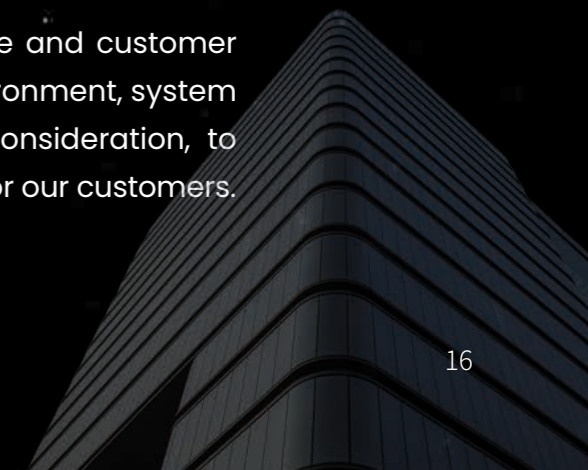
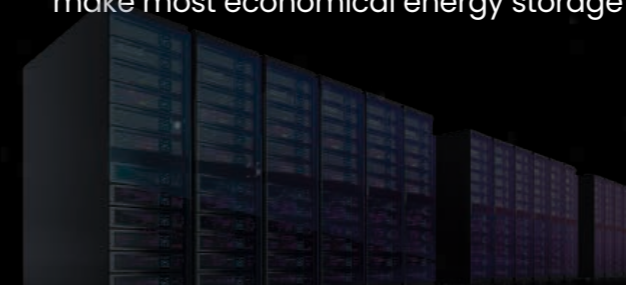
**COST-EFFECTIVE**

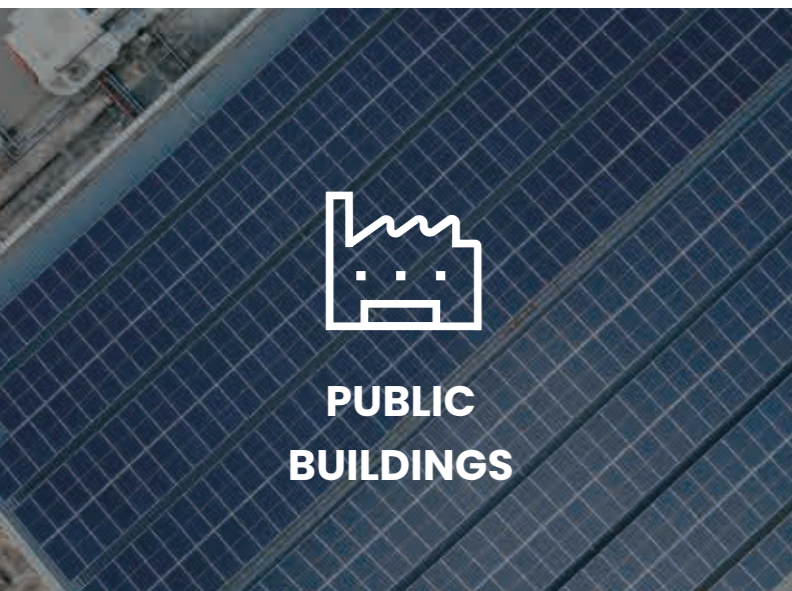


# ENERGY STORAGE SYSTEM INTEGRATION AND SALES

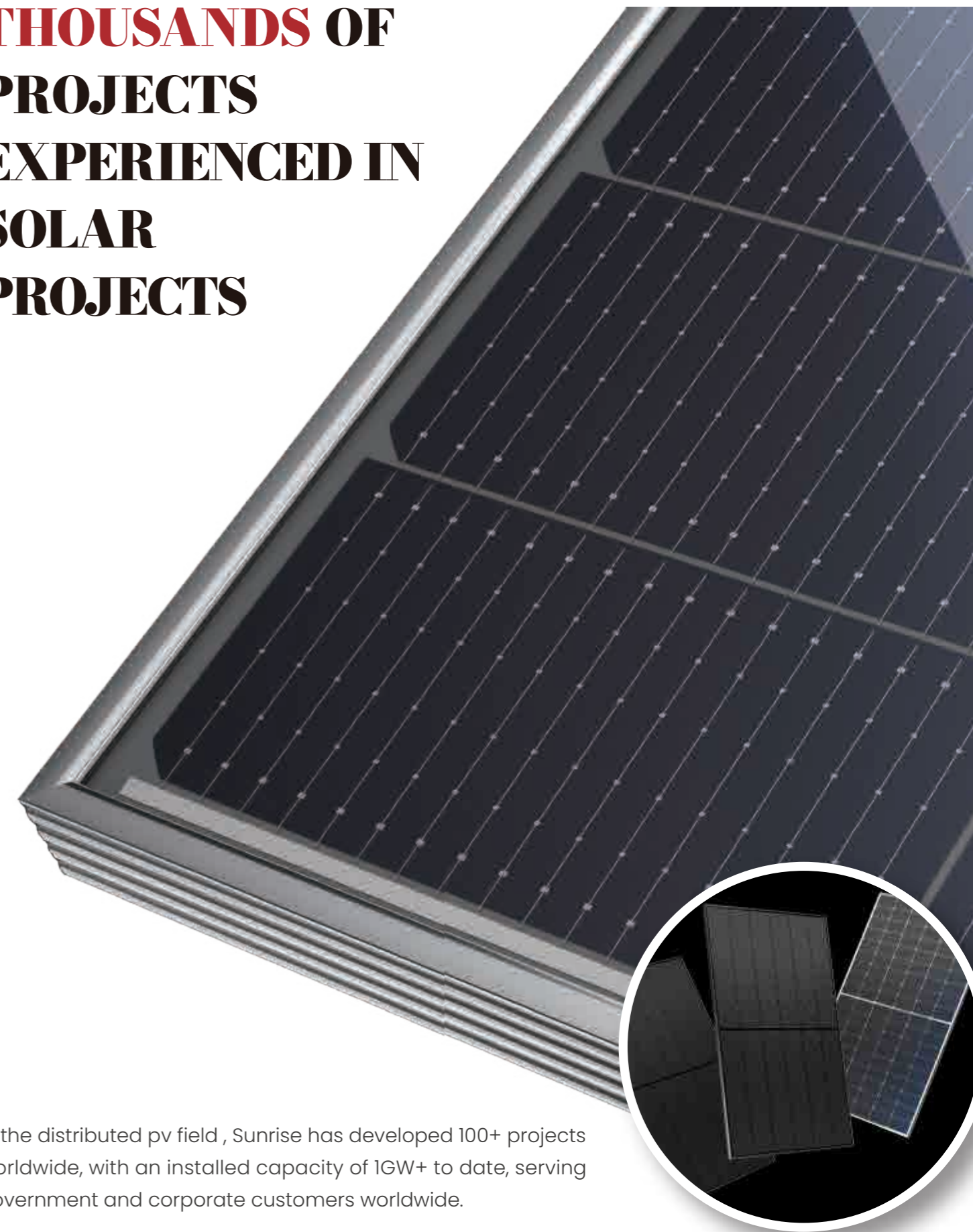
**System integration services  
mainly focus on user side  
energy storage**

It is a combination of distributed energy storage and customer usage. Our technical team takes installation environment, system costs, terminal consumption and so on into consideration, to make most economical energy storage solution for our customers.



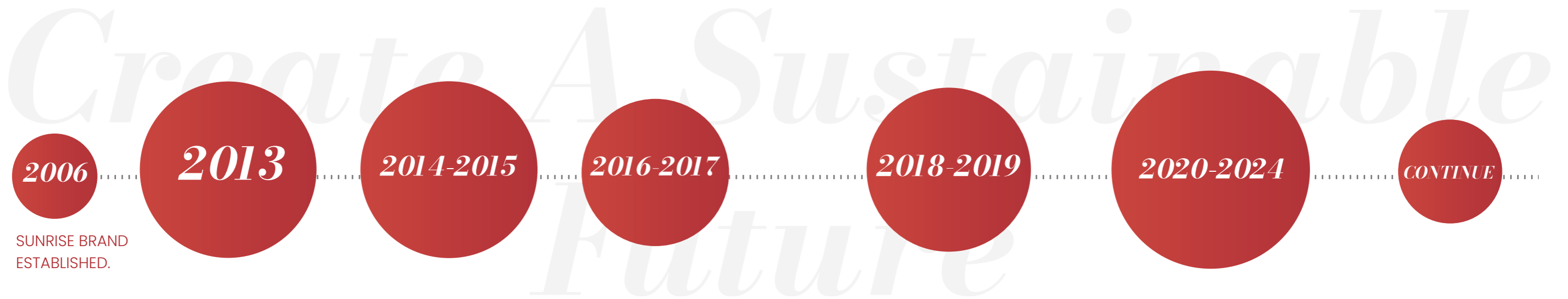


# **THOUSANDS OF PROJECTS EXPERIENCED IN SOLAR PROJECTS**



In the distributed pv field , Sunrise has developed 100+ projects worldwide, with an installed capacity of 1GW+ to date, serving government and corporate customers worldwide.

# DEVELOPMENT



SUNRISE BRAND  
ESTABLISHED.

## 2006

Sunrise brand established.

New production base was completed, and the annual production capacity exceeded 500MW.

Sunrise signed an exclusive authorization agency agreement with HSBC on financing of PV projects for Australian residents.

## 2014-2015

Sunrise was awarded the title of "excellent brand of Jiangsu Province".

Participating in pv project investment of Australian public utilities.

## 2016-2017

"Zhaoyangbao" original household PV power generation system released.

Involved in domestic and international photovoltaic project investment and construction

## 2018-2019

Sunrise was awarded the title of "outstanding PV enterprise" in Guangzhou International PV Exhibition.

Sunrise was award the title of "China's most influential brand enterprise", and the new automatic production line was officially put into operation.

## 2020-2024

New fully automatic production line for M10 and G12 PV modules

Internationally renowned brands in Jiangsu Province's key cultivation and development

The N-type high-efficiency & MBB Solar modules with has been officially put into production

World premiere of aqueous battery at the Munich exhibition in Germany, 100% safe and environmentally friendly.

Over 100 acres of new plants are under construction to expand the energy storage business

N-type TOPCon light weight double glass solar module put into production, deepen co-operation with Sri Lankan government

# EXHIBITION EXPERIENCE

**SUNRISE**  
昊宇光伏

**2015**

THAILAND PV EXHIBITION



**2014**

UK PV EXHIBITION



**2012**

SOLAR EXPO



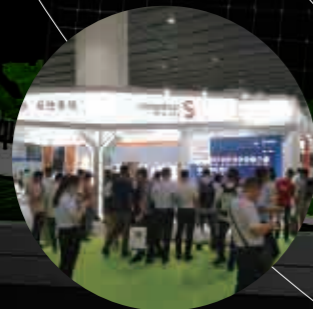
**2006**

European Photovoltaic Solar Energy Conference and Exhibition



**2018**

PV Guangzhou



**2019**

Middle east electricity



**2020**

Energy and Environment International Trade Fair



**2021**

CBTH PV



**~up to now**

The smarter E Europe 2022

**2024**

 South Africa  Thailand

 Brazil  UK





## **INTELLIGENT MANUFACTURING TECHNOLOGICAL INNOVATION OUTSTANDING QUALITY**

Manufacturing is not only reflected in product technical performance, but also in production equipment, quality management and customer service. Sunrise firmly believes that innovation is the core factor for enterprises to maintain growth, and the improvement and innovation of details in R&D and production have converged into a qualitative leap.

**30+**  
R&D engineers

**23%**  
Module Efficiency



## HIGH EFFICIENCY MODULAR AUTOMATIC PRODUCTION LINE

In order to realize the flexibility of manufacturing process and maintain the high standard of product quality, Sunrise divides the module production into several relatively independent and highly interconnected modules, scientific use of statistical engineering, equipment improvement and a variety of management systems combined with lean production, and has fully automatic production line to ensure the consistency of product quality, improve product quality, improve production efficiency, lower production costs and raise returns for investors.

**15%**

Production costs  
reduction

**15%**

Equipment efficiency  
improvement

**24\*7**

Real time monitoring  
system

**100+**

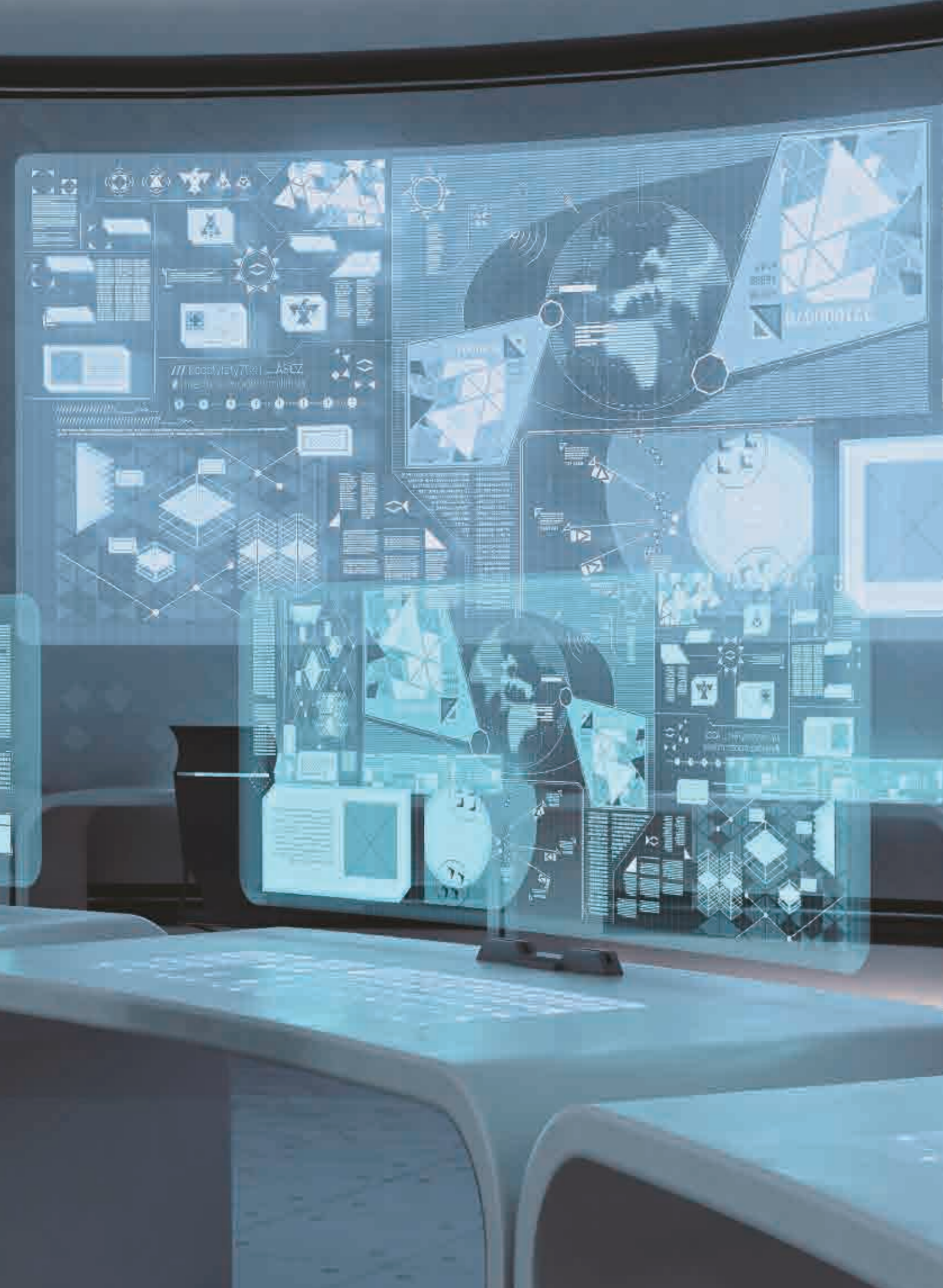
Production and process  
improvement patents

**99.4%**

Excellent products

**35%**

Production efficiency  
improvement



# QUALITY MANAGEMENT SYSTEM



In order to enhance the customer's satisfaction with product quality, Sunrise vigorously improves the process equipment and conducts professional training for its employees from time to time. Based on the on-the-spot investigation and comprehensive evaluation of DNV.GL 's expert group, Sunrise successfully passes the three system certification, including ISO9001 (quality management system certification), ISO14001 (environmental management system certification) and OHSAS18001 (occupational health and safety management system certification).

## RAW MATERIAL CONTROL



Perfect supplier system  
Automatic screening of incoming materials and manual secondary sampling inspection  
Storage environment with constant temperature and humidity  
Supplier quality system management

## PRODUCTION CONTROL



300 + quality monitoring points  
Triple test 100% EL  
Online quality control to minimize modules cracks  
AAA level HALM tester

## FACTORY INSPECTION



OBM test



A worker wearing a blue protective suit, cap, and mask is operating a large industrial testing machine. The machine has a large monitor displaying data and several control buttons. The background shows a cleanroom environment with other equipment.

## EMBODIMENT OF QUALITY RELIABILITY

Starting from the source of production, Sunrise strictly controls every link. With professional and strict requirements, every modules delivered to customers can withstand the harsh monitoring and harsh environment inspection.

### INCOMING TEST

**100%** Raw material inspection

**80** Incoming material quality test (single piece tension, EI test, EVA crosslinking degree test, junction box cable resistance test, frame stability test, etc.)

### STRICT EI DETECTION

**3** The module passed three EI tests before lamination and final inspection

### ADVANCED TESTER FOR WHOLE PRODUCTION LINE

**100%** Production line is equipped with industry-leading performance tester

### BOTH APPEARANCE AND APPEARANCE

**100%** Appearance inspection



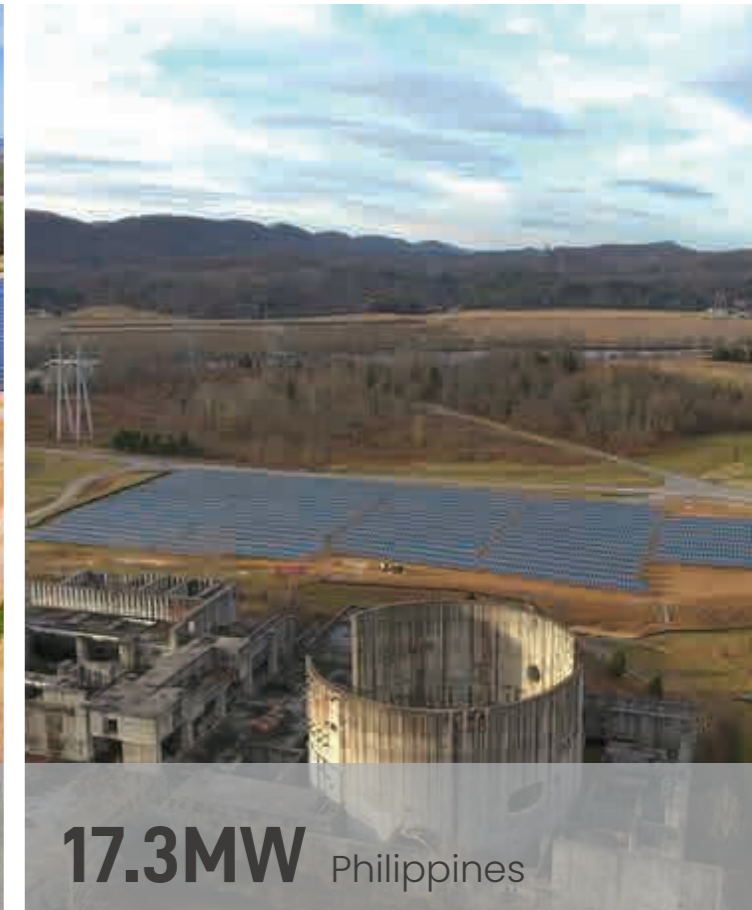
**11.75MW**  
MONTENERO, ITALY

**GROUND POWER STATION PROJECT**

With years of industry experience, Sunrise provides cost-effective and reliable photovoltaic products for large-scale solar power stations with professionalism and enthusiasm, so as to maximize the return on investment.



**15.2MW** Spain



**17.3MW** Philippines



**13.5MW** Germany



**15MW** Florence, Italy



**1.8MW** Hamada, Japan



**3.75MW** Estonia



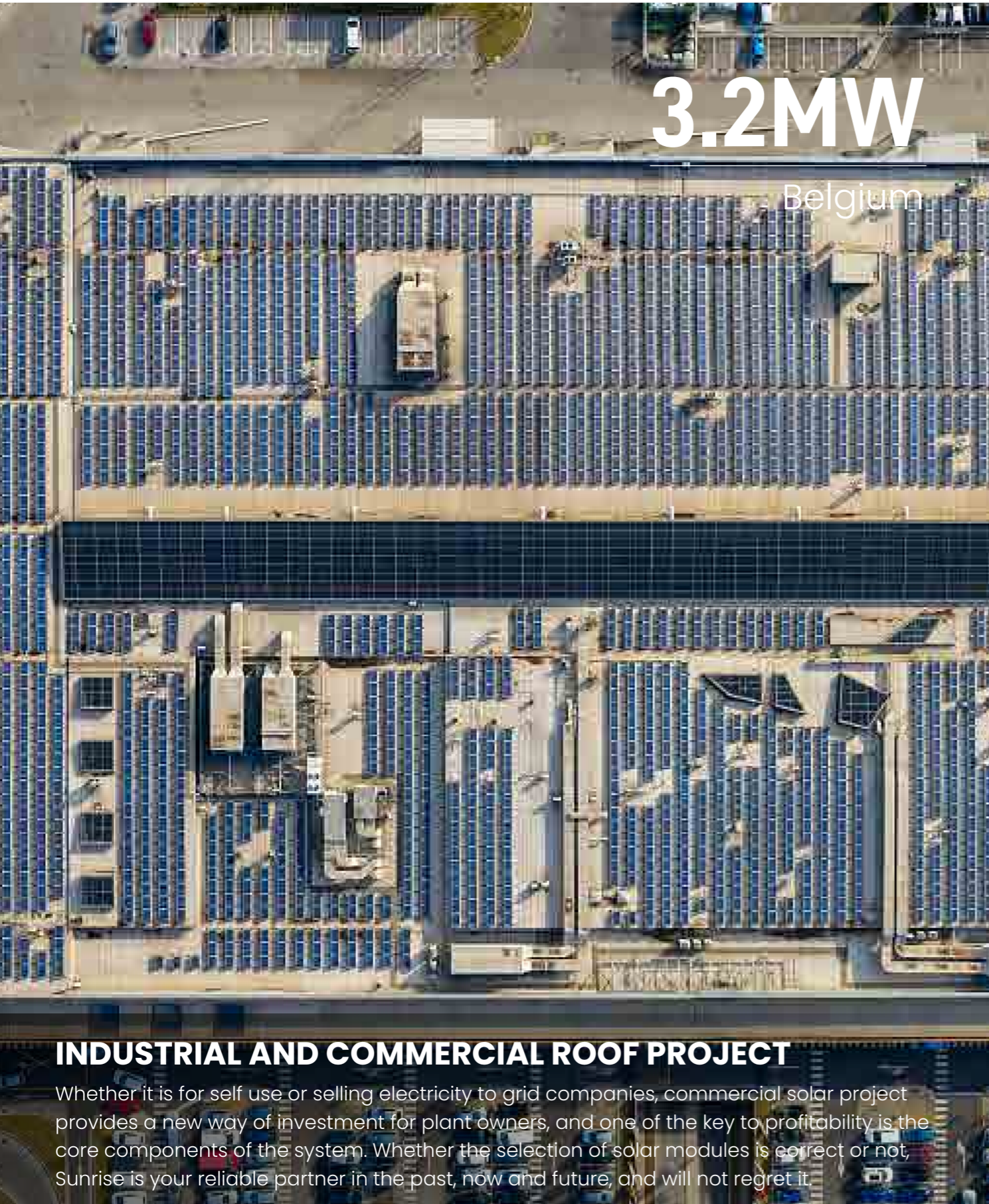
**2.2MW** Bucharest, Germany



**1.16MW** The Netherlands



**5MW**  
BULGARIA



**3.2MW**

Belgium

**INDUSTRIAL AND COMMERCIAL ROOF PROJECT**

Whether it is for self use or selling electricity to grid companies, commercial solar project provides a new way of investment for plant owners, and one of the key to profitability is the core components of the system. Whether the selection of solar modules is correct or not, Sunrise is your reliable partner in the past, now and future, and will not regret it.



**3.5MW**

Bozhou, Anhui



**2MW**

Zhengzhou, Henan



**1.1MW**

Nantong, Jiangsu



**1.2MW**

Melbourne, Australia



**350KW** Sydney, Australia



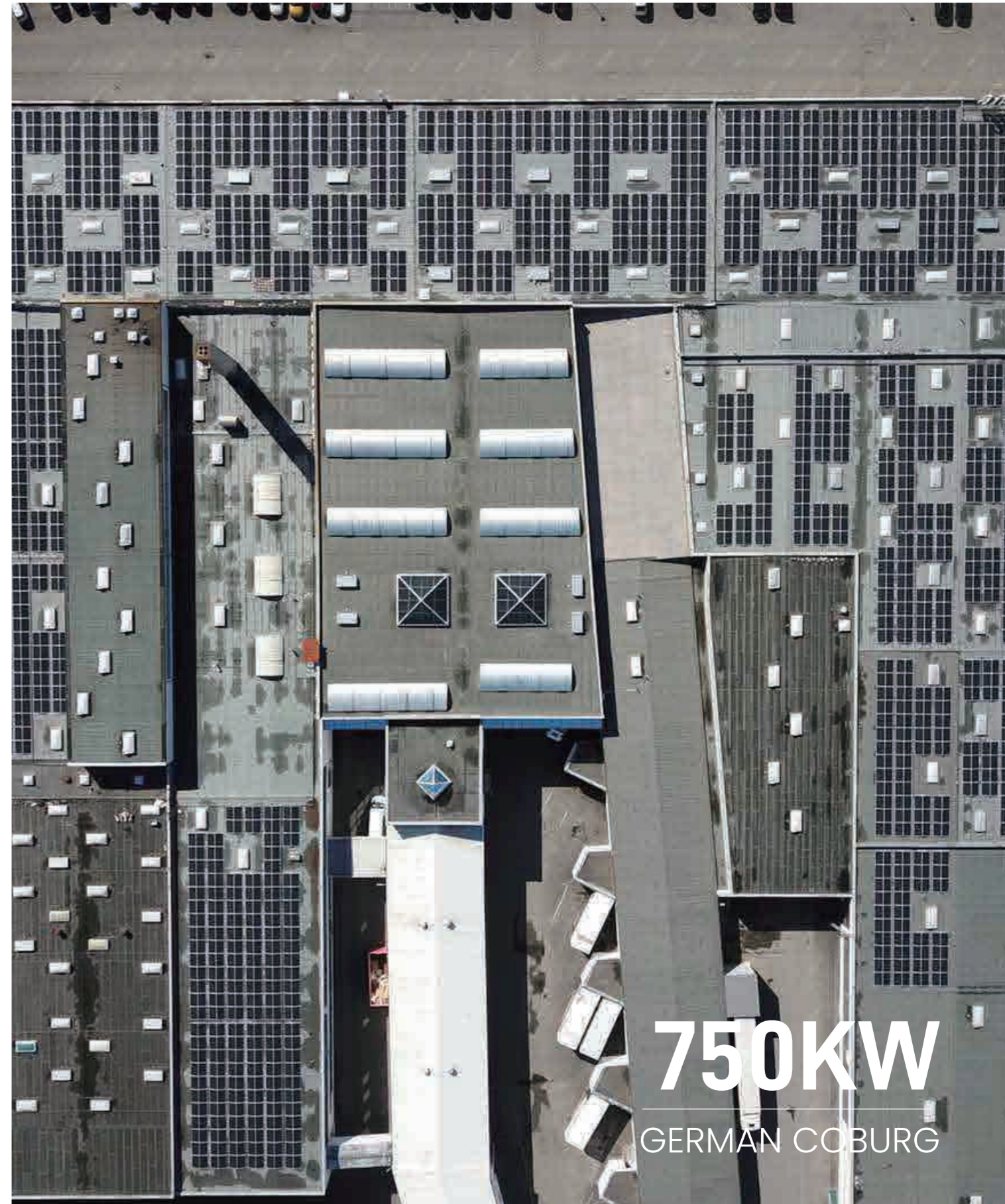
**201KW** Brussels, Belgium



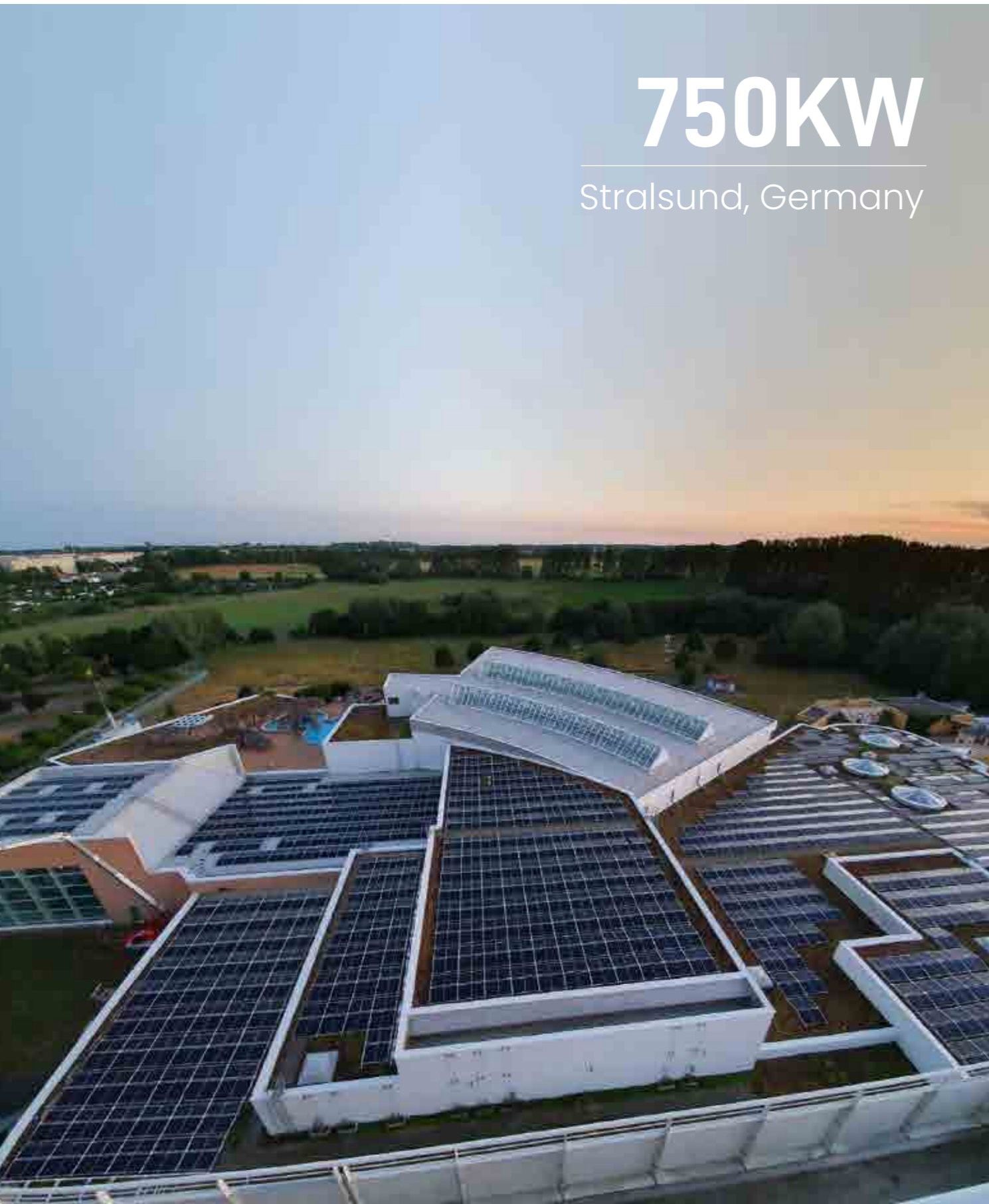
**139KW** Spain



**240KW** Manila, Philippines



**750KW**  
GERMAN COBURG



**750KW**

Stralsund, Germany



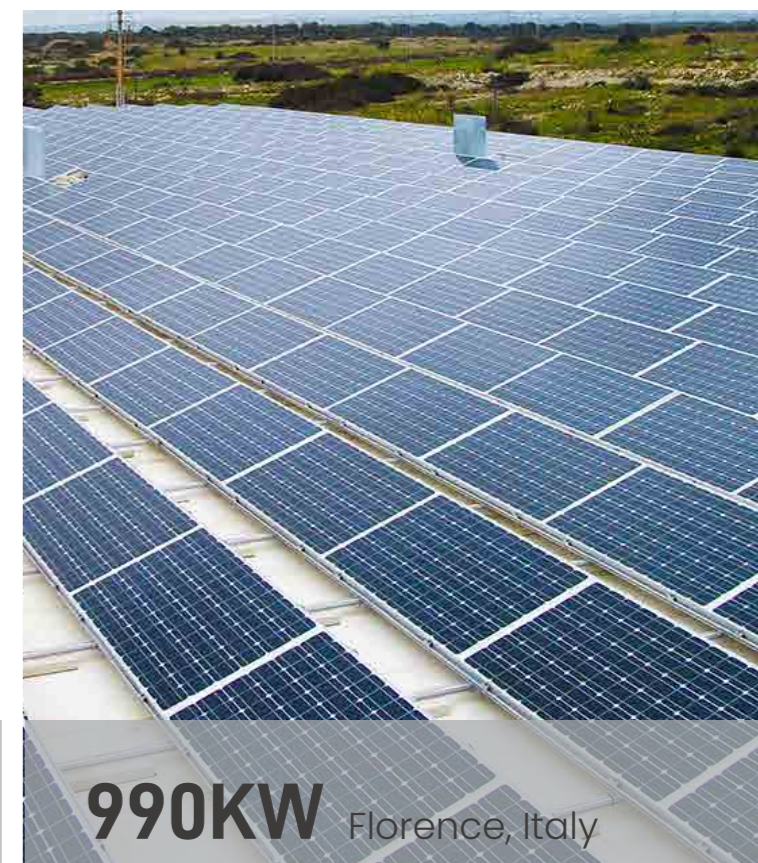
**240KW** Bulgaria



**700KW** Germany



**250KW** Germany



**990KW** Florence, Italy

# COOPERATIVE PARTNER



 **Footprint of business**

 **Global headquarters**

**Changzhou, China**

No.20, Tongzi River West Rd.,  
Zhonglou District, Changzhou  
City, Jiangsu Province