

**You want to
get the most out of
your PV plants?**

Seems like you should
get to know us!





Clean Power for All.



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We have the solution for your project!

We started with an idea – harnessing the solar energy for human use. This idea formed into a business in 1997. Since then we have never looked back. **We are present in more than 170 countries in the world** and have built a **professional workforce of 13,000 employees worldwide, whereof 500+ in Europe.**

As a smart energy inverter provider our aim is to to maximise the energy output in the PV systems. Our **‘innovation first’** mindset is what makes us unique in the industry. To ensure **we are at the cutting edge of technology**, we have the largest taskforce to develop products for all types of solar projects.

We have proved ourselves in Europe, now **it’s time to continue our winning streak** – we are ready to offer a range of PV inverter solutions to all the types of European markets.



PV Inverter



Energy Storage System



EV Charging



Hydrogen Research & Equipment



Smart Operation & Maintenance

For every application and system size, Sungrow has the solution for your project. With a dedicated team of experts in presales support, system engineering and project execution – we make sure that your project becomes a success story. Many top Tier customers are meanwhile committed to Sungrow because we keep what we promise!

OUR STORY



515+ GW

INSTALLED

WORLDWIDE

With more than 515 gigawatts installed worldwide by December 2023, Sungrow is the first company to reach this milestone. The journey to the top has been challenging, but a rewarding one.

We give a platform to new perspectives, and like-minded individuals who want to contribute to the progress and development of clean energy.

Sungrow is a true pioneer in the solar industry. Our vast expertise range in **residential, commercial, large-scale utility, floating solar, energy storage and EV charging**. Sungrow is truly a one stop destination for all your inverter demands.

Sungrow started with humble beginnings. Our journey began in 1997, from one man with a vision – Professor Renxian Cao, and his passion to be part of the green revolution. Now various years and hard work later, Sungrow is a **world leader** in the PV inverter manufacturing industry. Within two decades, the company has supplied its inverters to **more than 170 countries**, opened its offices in more than **20 countries for local onsite support**.



The 105 MW_{AC} PV park is one of the largest in Turkey and was the first installation of the 1+X modular inverter solution in the country.

FOCUS ON INNOVATION

BUILDING THE NEXT GENERATION PRODUCTS



We focus on the best – for you. That is why more than 40% of our workforce is dedicated in maintaining the superior industry standards we have become known for.

Excellent work is the only route to achieve our mission:
Clean Power for All!

Sungrow maintains long-term cooperation with international universities like Tsinghua University, University of New South Wales, and Hefei University of Technology to recruit creative and problem-solving minds who share our aim to fight for the clean energy.

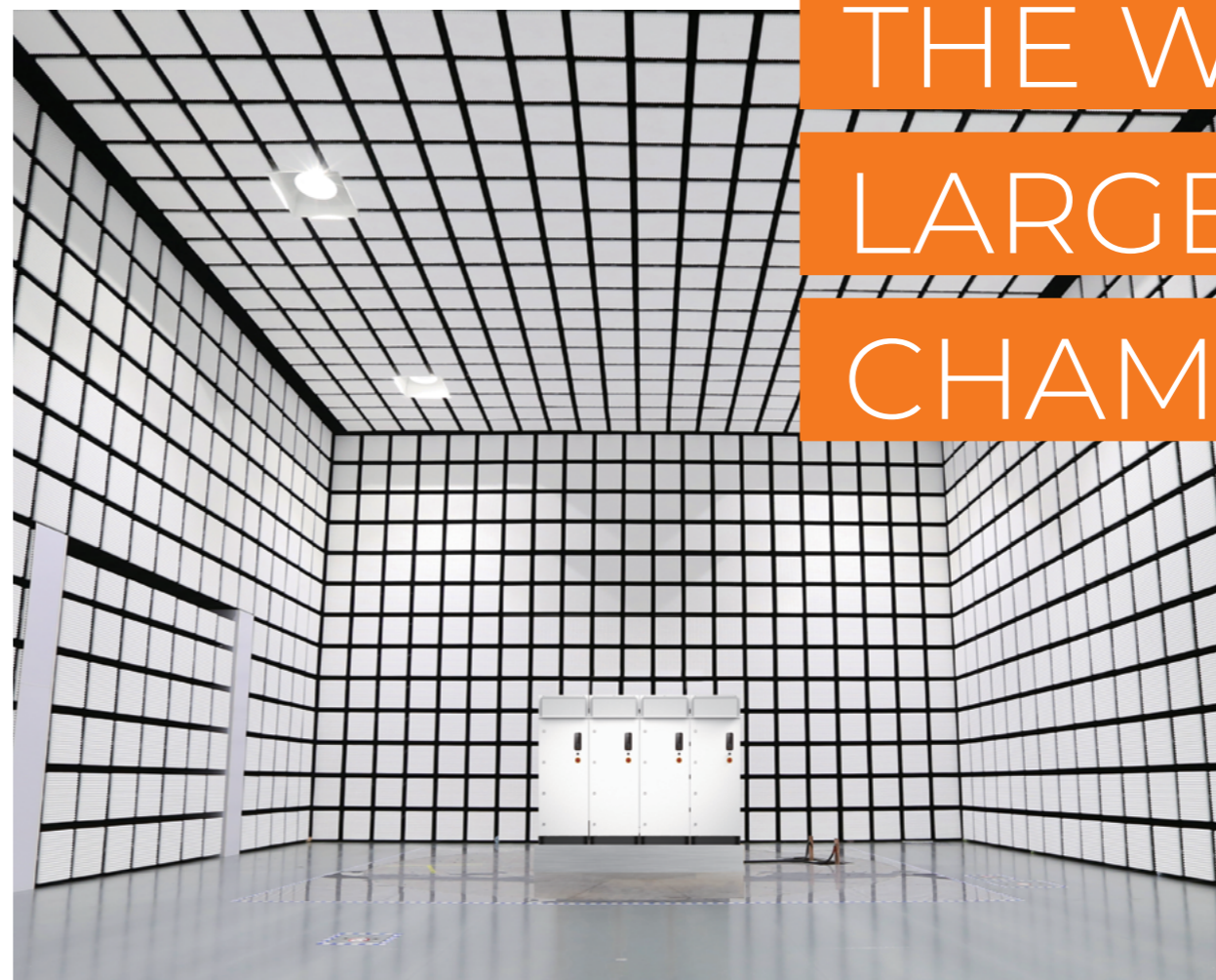
BRINGING YOU SUPERIOR QUALITY!

Sungrow has an **industry-leading testing centre** certified by all major international certification bodies including TÜV Rhineland, **TÜV SÜD, CSA, UL and CNAS**. Sungrow inverters have passed over one thousand independent quality and reliability tests, a feat unmatched by most inverter manufacturers.

As a world leader inverter supplier, Sungrow prioritises the importance of product process control and

technology upgrading. That is why Sungrow has invested in the most **state-of-the art equipment to give you the highest quality products you deserve.**

The 10m Anechoic Chamber, first of its kind in the industry, has the capacity to test large equipment such as a **PV inverter turnkey station as large as 5 MW and as heavy as 20 tons.**



THE WORLD'S LARGEST EMC CHAMBER

Sungrow's state of the art EMC chamber can test large electrical equipment like a PV inverter turnkey station as large as 5 MW and as heavy as 20 tons at a distance of 10 m

THE STARS WHO BRING MAGIC TO LIFE

OUR LOCAL FOOTPRINT

Sungrow – a multinational company who believes that language is core to a culture.

With a workforce of **over 500 employees in Europe**, we are more than ready to assist you in your preferred language.

To understand the need for the European market, Sungrow has a dedicated

system engineering team, focusing on **grid integration and System Solutions**, in Pamplona, Spain and Munich, Germany.

Our System Solutions offer the right consultation from the start, with the focus on providing an optimized solution to fit our client's PV plant.

We support our project clients with

the sizing of the plant, to **ensure the compliance of active and reactive power** required at the point of connection, based on the EU631 country requirements, among others.



On-site with you:
Your success is our success!



One of the largest PV plants in Germany with Sungrow inverters in Tramm-Göthen:
172 MWp with SG3125HV-20 plus 7.2 MV skid



THE HEART OF A SOLAR SYSTEM

OUR PRODUCT RANGE

Sungrow is known for its adaptability and fast response to market requirements. To manage varied needs for different markets, we offer the option of customised inverters.

The perfect recipe to harness solar as an energy source: PV module, DC/AC inverter and grid. The inverter sits at the heart of this system. Superior quality inverters are required to do the heavy lifting.

That is why we have created a range of inverters to manage the different loads at a given project site.



No matter where you or your project are, no matter what your needs are – we are there for you.

CENTRAL INVERTERS

Complete system solution for your next solar park.



CENTRAL
INVERTERS

3,125 MVA

High power into small space Compact solution for outdoor application, shipped with a standard 10 ft container. The 3.125 MVA powerhouse includes effective cooling, L/HVRT, power ramp rate control and active & reactive power control. All you need for your large-scale PV plant.

SG3125HV-30



CENTRAL TURNKEY
SOLUTIONS

UP TO 6,250 MVA

All-in-One for the faster commissioning Sungrow turnkey solutions include inverter, low voltage panel, transformer, medium voltage switchboard, auxiliary transformer in a 20 or 40 feet container. That enables quick and easy delivery on-site, as well as a very fast commissioning.

SG3125HV-MV-30, SG6250HV-MV



1+X MODULAR
INVERTER

UP TO 8,8 MVA

Modular solution for your tailor-made PV plant Take the central solutions to the next level. All the advantages of central and string inverters combined. 1,1 to 8,8 MVA block flexible design to fit your project with modular outdoor inverters, plug&play installation including wireless communication.

SG1100UD, SG3300UD, SG4400UD, SG6600UD, SG8800UD



TURNKEY SOLUTION FOR
1+X MODULAR INVERTER

UP TO 8,8 MVA

All-inclusive for the faster commissioning Integrated transformer, MV switchgear and LV auxiliary power supply for power conversion up to 8,8 MVA delivered in all-inclusive containers, ready to be installed on-site. More reliability thanks to the inverters and MV factory test.

SG1100UD-MV, SG3300UD-MV, SG4400UD-MV, SG6600UD-MV, SG8800UD-MV

THE 1+X MODULAR



SUNGROW'S FIRST MODULAR SOLUTION FOR UTILITY!

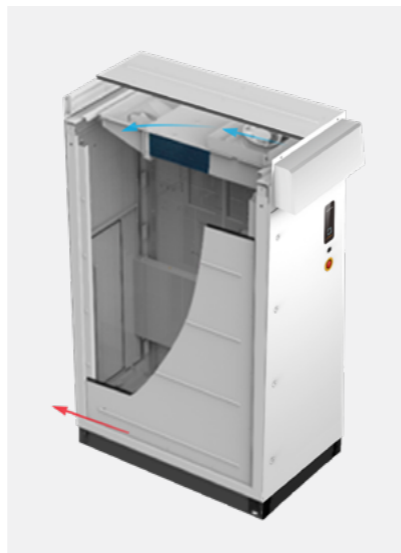
Combine **up to 8 modules** together, expanding the conversion capacity up to 8,8 MW to fit your project needs. Get a **multi MPPT solution** with central inverter layout and save costs due to **low transportation and installation efforts and its outdoor design.**

One single unit power conversion is 1.100 kVA and sizes 700 x 2290 x 1525 mm, 900 kg heavy.

Heat dissipation

Convenient for parallel installation:

Short air duct, hot & cold air interference-free for electro-cavity.



Modularization

Plug and play

Maintenance without professionals:

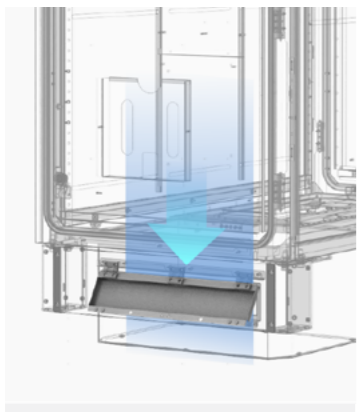
More convenient O&M: backup of the inverter can be on-site, replaced directly in case of fault with reduced maintenance time.



Independent Cavity

Electronic components are sealed in electro-cavity:

IP65 reactor & fans in heat dissipation cavity, electronic components in separate electro-cavity with overhead heat exchanger.



HERO PRODUCT

STRING

INVERTERS & MVS

Complete system solution for your next solar park.



STRING INVERTERS

UP TO 352 kVA

Smart and strong The best solution for hilly terrains or different-oriented PV modules projects. These multi-MPPT inverters give the maximum output in every condition, with longer lasting support thanks to the IP66 protection degree, the smart cooling system and the C5 protection against corrosion.

SG125HX, SG350HX-20



Credits: BELECTRIC



MVS FOR STRING INVERTERS

UP TO 8,96 MVA

Medium voltage stations complete your PV plant This tailor made solution makes for a perfect addition to your multi-megawatt PV plant. This powerful system includes a transformer, medium voltage switch board, auxiliary transformer in a 20 ft container, ready to connect to the inverters.

SG250HX: MVS3150-LV, MVS6300-LV, MVS6750-LV
SG350HX: MVS3200-LV, MVS4480-LV, MVS6400-LV, MVS8960-LV

ESS, PCS AND BATTERY

Utility storage solution for your solar park.



UTILITY ENERGY STORAGE SYSTEMS

UP TO 210 MVA
UP TO 5,015 MWh

All-inclusive ESS Highly integrated Energy Storage Systems for easy transportation and O&M. Long-lasting life and high performance thanks to air conditioning or liquid cooling systems with intelligent cell-level temperature control that ensures higher efficiency and longer battery cycle life.

ST2236UX and ST2752UX, (PowerTitan), ST5015UX (PowerTitan 2.0), ST3440KWH(L)-3150UD-MV, ST3727KWH(L)-3450UD-MV, ST6710KWH(L)-3150UD-MV, ST7454KWH(L)-3450UD-MV, ST5015KWH-2500KW-2H, ST5015KWH-1250KW-4H



C&I ENERGY STORAGE SYSTEMS

UP TO 250 kW
UP TO 1145 kWh

Scalable configuration Supports the parallel use of multiple systems, for commercial and industrial ESS, covering a storage capacity up to 2 MWh. Cloud technology enables remote maintenance and monitoring and built-in EMS with multiple operation mode selection increase revenue.

ST535kWh-250kW-2h, ST570kWh-250kW-2h, ST225kWh-110kW-2h ST1070kWh-250kW-4h, ST1145kWh-250kW-4h



PCS AND DC/DC SOLUTIONS

UP TO 6,9 MVA

Flexible and compact storage Power converters to connect the Battery Storage System both on the AC side and on the DC side of utility-scale PV plants. Integration with Smart EMS to realise self-consumption, peak-shaving, frequency regulation and other ancillary services delivery stable and powerful supply to the renewable grid.

SC1200UD, SC1375UD, SC1575UD, SC1725UD, SC2000UD, SC2500UD, SC210HX, SC2750UD-MV, SC3150UD-MV, SC3450UD-MV, SC4000UD-MV, SC5000UD-MV, SC5500UD-MV, SC6300UD-MV, SC6900UD-MV



LIQUID COOLED BATTERY PACK*

UP TO 6,9 MVA

LFP Li-ion Battery Systems Discover unparalleled performance with our state-of-the-art liquid-cooled heat dissipation system. Benefit from a 2-year extension in system life and 75% reduced maintenance time, thanks to our innovative self-sealing connectors. Ensure battery safety with 24-hour advance alerts and real-time, intelligent monitoring.

SOLAR PLUS STORAGE FARM

The 5.5 MW_{AC} PV park in Germany by EPC Suntec has been built on an adequate private land in which grid was already available for the connection and delivery of the energy produced on-site.



“It’s the first PV + ESS project in Germany. Intelligent energy storage that allows to shift energy to a time where it is of greatest value, and to provide grid services around the clock.”

Moritz Rolf,
Vice President SG Europe, Central, Northern, Eastern Europe, Benelux & Turkey



POWERTITAN WORTH THE HYPE

SUNGROW’S LEADING ESS SOLUTION!

Liquid cooled technology is used for the thermal management of Battery during the operation. This is a big difference compared with the existing mainstream technology which is Air-cooled.

This new technology allows the pre-installed Battery Modules to reduce the shipment as well as installation cost.

Higher discharge

- Higher efficiency
- Better cell temp. consistency to reduce barrel effect
- Lower Aux power consumption



Liquid cooled energy storage system unit ST2752UX

Low costs

- Pre-installed modules to reduce installation cost
- Highly integrated design, using up to -34% lesser land area
- Liquid cooled technology with auxiliary consumption reduced by up to 50%

Beyond flexibility

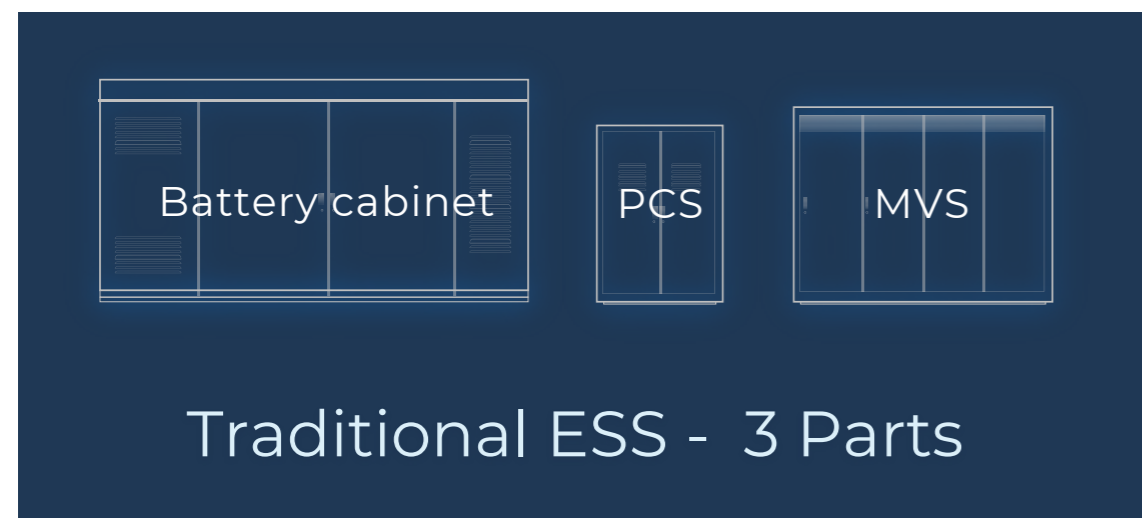
- Cluster-level energy management
- Easy to configure O&M
- Mix of old and new batteries possible
- Easy to expand

HERO PRODUCT

POWERTITAN 2.0

EMPOWERING HIGHER

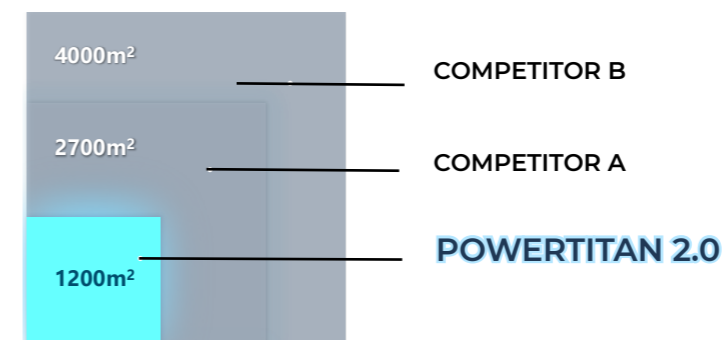
INTEGRATION



PowerTitan 2.0 - 2 Parts

What gives PowerTitan 2.0 such economic advantages? The answer is AC storage design.

In PowerTitan2.0, the battery unit and the PCS are integrated into one. As the traditional three-part structure of “battery cabinet, PCS, and MVS” is simplified into a two-part structure, the efficiency and performance have seen a great improvement.



Did you know?

Sungrow has installed **more than 11 GWh** of ESS worldwide by December 2023.

BACK-TO-BACK LAYOUT

With AC storage design, the footprint of the PCS is saved. In this solution, a 10 MWh block consists of two back-to-back standard 20-foot storage containers. Taking a 100 MWh plant as an example, the PowerTitan 2.0 solution only occupies 1200 square meters, saving 55% footprints compared to existing solutions. This significantly improves land utilization and reduces land investment.

FOOTPRINT SAVING of 55%



With the back-to-back layout you can design your ESS plant with 100 MWh consuming only 1200 m².

SAVING THE SUN – OUR ENERGY STORAGE OPTIONS

Sungrow is listed as one of the top battery storage companies in the world. Our ESS products, combined with the Samsung SDI technology, are built to be utilised in residential, commercial, and large-scale utility projects.

With more than 6GW installed worldwide, Sungrow's Storage division is expanding rapidly in the European region. Currently, **our storage system is leading in the UK** (one of the largest markets for ESS), **with over 25% market share** (as of 2022).

With the rapidly expanding ESS team, **we will expand our market to all of Europe** – that's a promise!



The largest unsubsidized grid-connected standalone battery storage plant in Europe: 100 MW/100 MWh Energy Storage plant at the 400 kV UK national grid substation in Minety, UK.

James Li
Director ESS Europe

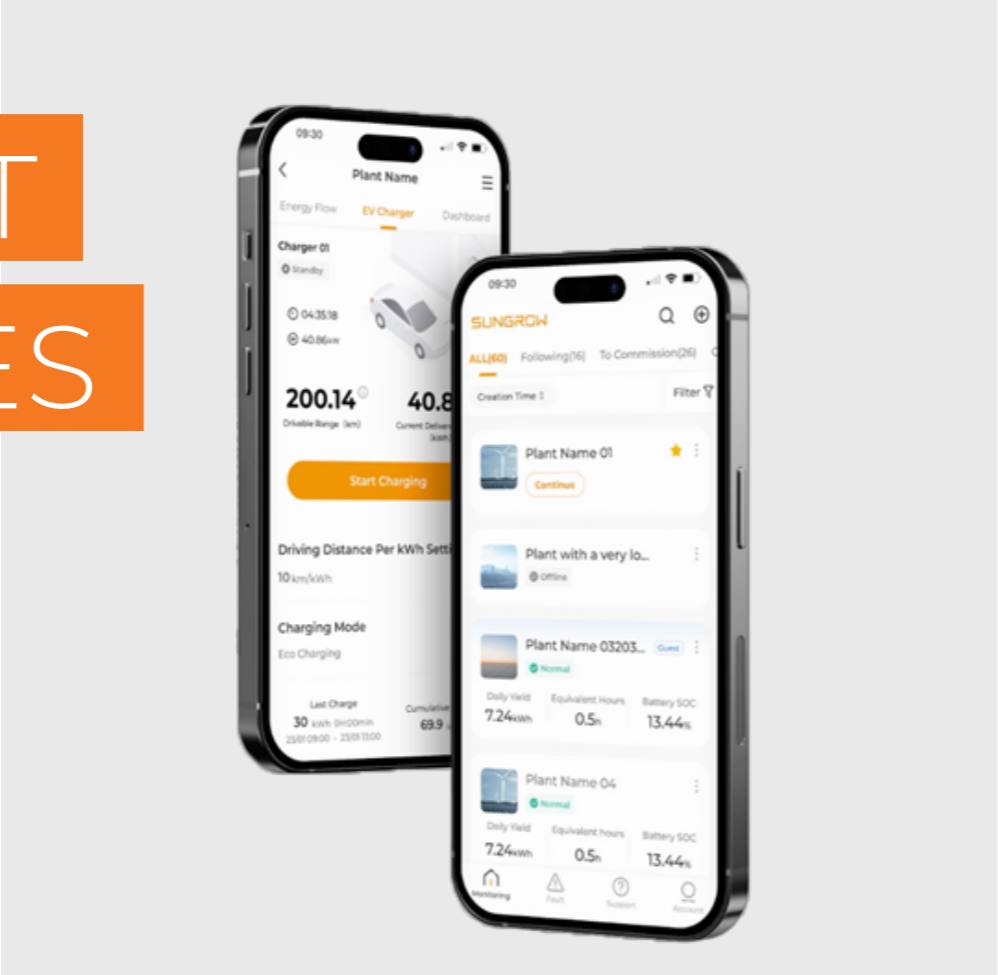


Sungrow has already proven itself as a world leader in PV inverter solutions. (IHS Markit Ranking, 2022)

With more than 16 years of experience in Storage systems, we want to make it easier for clients with a 'one stop shop' convenience for PV and storage inverter solution systems. Relying on its cutting-edge renewable power conversion technology and industry-leading battery technology, Sungrow focuses on integrated energy storage system solutions.

INSTANT UPDATES

Sungrow provides you with the perfect solutions for controlling and monitoring your utility-scale PV projects.



MONITORING



Smart Communication Box & Energy Management Unit

Flexible Networking with RS485, Ethernet and MPLC communication

Inverter batch parameter settings and firmware updates

Active and reactive power control

IP65 protection



Intelligent communication

Logger 3000:

Communication with up to 200 devices

Logger4000:

Communication with up to 300 devices

Automatically distributing Modbus



The value of partnerships

Sungrow's long lasting partnership with premium monitoring brands like Inaccess, Gantner, Green Power Monitor Zebotec and many more provide perfect monitoring solutions for your pv plant.

Stay up-to-date, no matter where you are!

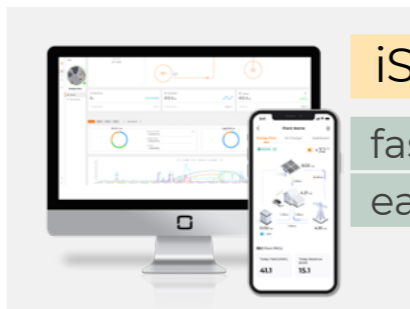
ACCESSORIES



COMBINER BOXES

The best connection between pv field and inverters - These combiner boxes include string current and voltage monitoring. Efficient and safe due to 1500V-Specific PV fuse, both positive and negative terminal, plus 1500V-Specific PV SPD with fault alarm.

PVS-16MH, PVS-18MH, PVS-20MH, PVS-24MH



iSolarCloud



fast, free, and easy to use

iSolarCloud - Superior Monitoring on the go, higher yield. Get the most out of your PV plant with our free to use platform. Access smart features such as remote troubleshooting, mass parameter setting or smart reporting. The iSolarCloud App is 100% GDPR compliant – your security is our top priority.



NEW URBAN DC CHARGING IDC30E & IDC180E



Our 30 kW AND 180 kW DC chargers are having MID, Eichrecht and OCPP 1.6J, ready for OCPP 2.0.1, plug and charge and are able to **charge EV batteries between 200 to 1000 V_{DC}** which covers all the EV car brands to date. They resist harsh outdoor conditions such as wet, dusty and salty environments thanks to its IP65 rating. The electrical emissions are suitable for residential purposes (EMC Class B).



EFFICIENT

Efficiency up to 96.5 %, along with a standby power consumption of 10 W



RELIABLE

IP 65, dust & rain proof, for a long lasting product life time



FRIENDLY

Extreme low noise of ≤ 50 dB as well as EMC of Class B residential emission



BEYOND CHARGING

Compatibility with new cars and backends, while having an easy integration with PV and battery systems



User can enjoy IDC180E's easy cable management system



The noise level of **50 dB is adequate for a residential area** and is comparably quieter than a regular cooling fan used at home.



All DC products are equipped with the EU standard **CCS2 plug**.



Sungrow EV chargers are **compatible with current and future electric car models**.



The charger are flexible in its installations. The 30KW can be **wall or pole mounted** or trolley optionally.



WE ARE HERE FOR YOU

Our 'customer first' approach to service

Service is the key to **optimal performance and higher yields in PV systems**. Our service range is active in more than **16 countries in Europe**. Our vast network of partners in the continent further allows us to provide a **fast response to on-site and off-site maintenance in Europe, North Africa, and the Middle East**.

We believe in comprehensive service – That's why we don't just offer traditional service options, we provide you a comprehensive hands-on training covering operations, maintenance, and product management for your installation.



Tao Gu
Sungrow Service Director Europe



To support our partners and customers in Europe, we are **working harder than ever before** so we can deliver a reliable service network and infrastructure in your region.

TRAINING

OPPORTUNITIES

Being prepared in all scenarios

We want to give you the skill set to ensure a smooth and safe function of your PV plant – we offer you the **opportunity to master the art of our PV inverters!**

With our state-of-the-art **Sungrow Academies** in Spain and Germany, learn all about the **day-to-day handling** and operation of our

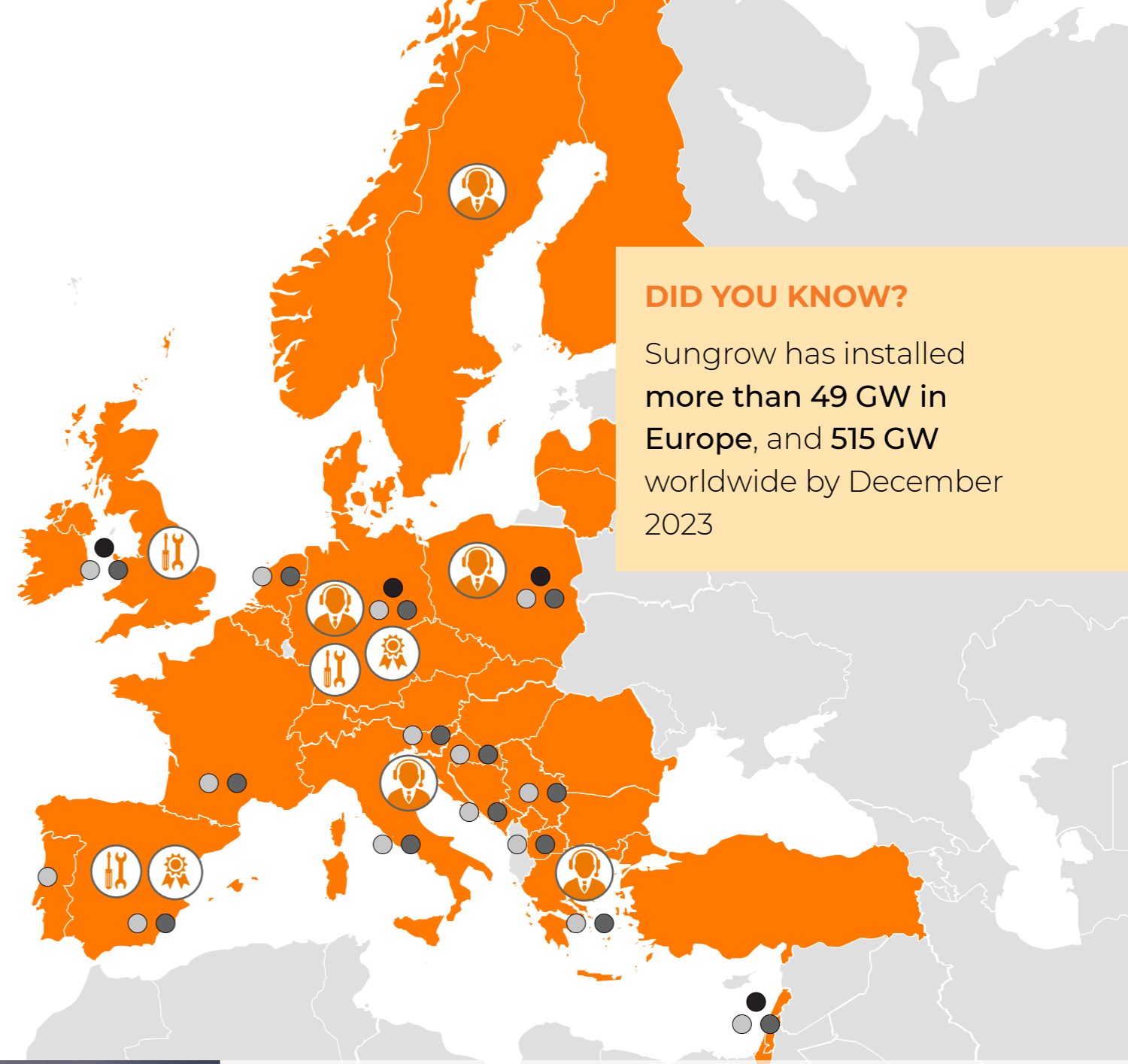
inverters with **on-site or online seminars with the Sungrow experts.** You will have a **comprehensive hands-on learning environment** to adapt to the ever-evolving PV technological trends. To top it up, we also offer a recognised certification to all the successful participants. That's an offer too good to give up!

Live trainings, just for you! We have built state-of-the-art training centres to **give you the right support** for your needs.



DID YOU KNOW?

Sungrow has installed **more than 49 GW in Europe**, and **515 GW worldwide** by December 2023



16 ON-SITE SERVICE PARTNERS

 **5 Hotlines**

 **3 Repair Centers**

 **2 Training Centers**

 **Service Level 1**

 **Service Level 2**

 **Service Level 3**

FACES OF SUNGROW

Sit back and relax

We will take care
of the rest!



Raphael Henkel
Head of Northern Europe

Moritz Rolf
Vice President BeNeLux,
Central, Eastern, Northern
Europe, Turkey

Robert Von Wahl
Director Charging Europe



Estefania Taibo
Team Lead
Project Management
Southern Europe



Artur Gaj
Key Account Manager
Poland - Sungrow Europe



Javier Blanco
Regional Senior Solution Manager



Friederike Schams
Head of Market Strategy
Europe



Andrés Doebel
Head of ESS DACH



Vittoria Gratarola
Product Manager



Jane (Jie) Gao
Senior Solution Engineer
EV Charging Europe

**Want to know
what more
we can offer?
Let's connect!**

Learn more on
www.sungrowpower.com