

**You want to
maximise Your PV &
ESS Potential?**

Let's Power Up
Together!





Clean Power for All.



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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 180 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.

We have the
solution for your project!



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



740+ GW

INSTALLED

WORLDWIDE

With 740+ gigawatts installed worldwide by December 2024, 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.

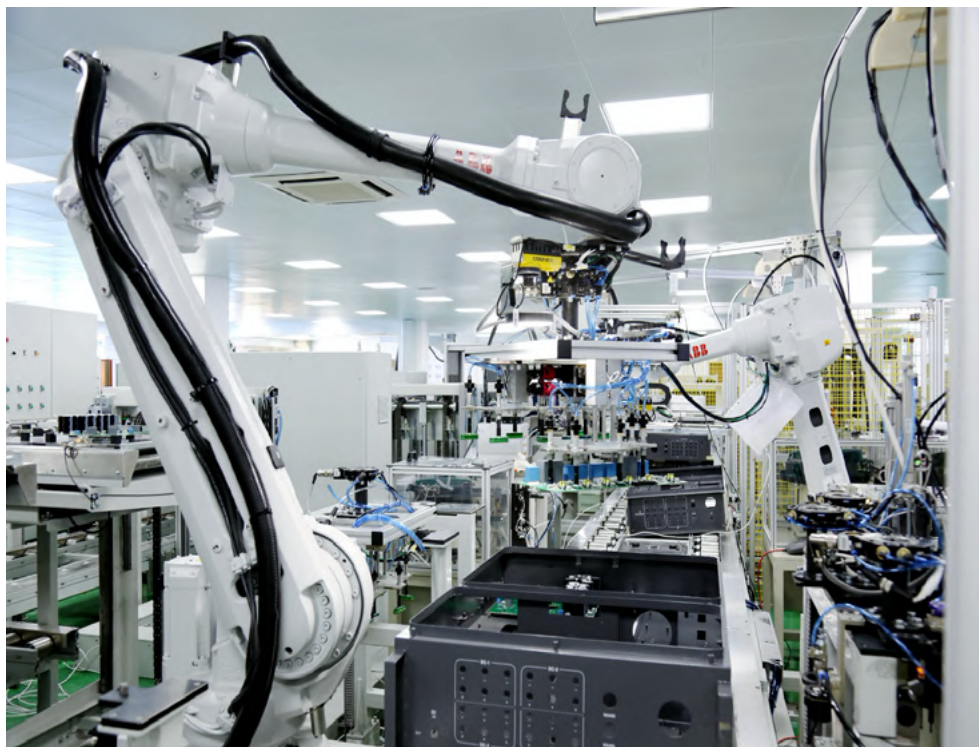
Sungrow started with humble beginnings. Our journey began in 1997, from one man with a vision – Professor Renxian Cao, and his passion to be part of the green revolution. Now various years and hard work later, Sungrow is a **world leader** in the PV inverter manufacturing industry. Within two decades, the company has supplied its inverters to **more than 180 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!

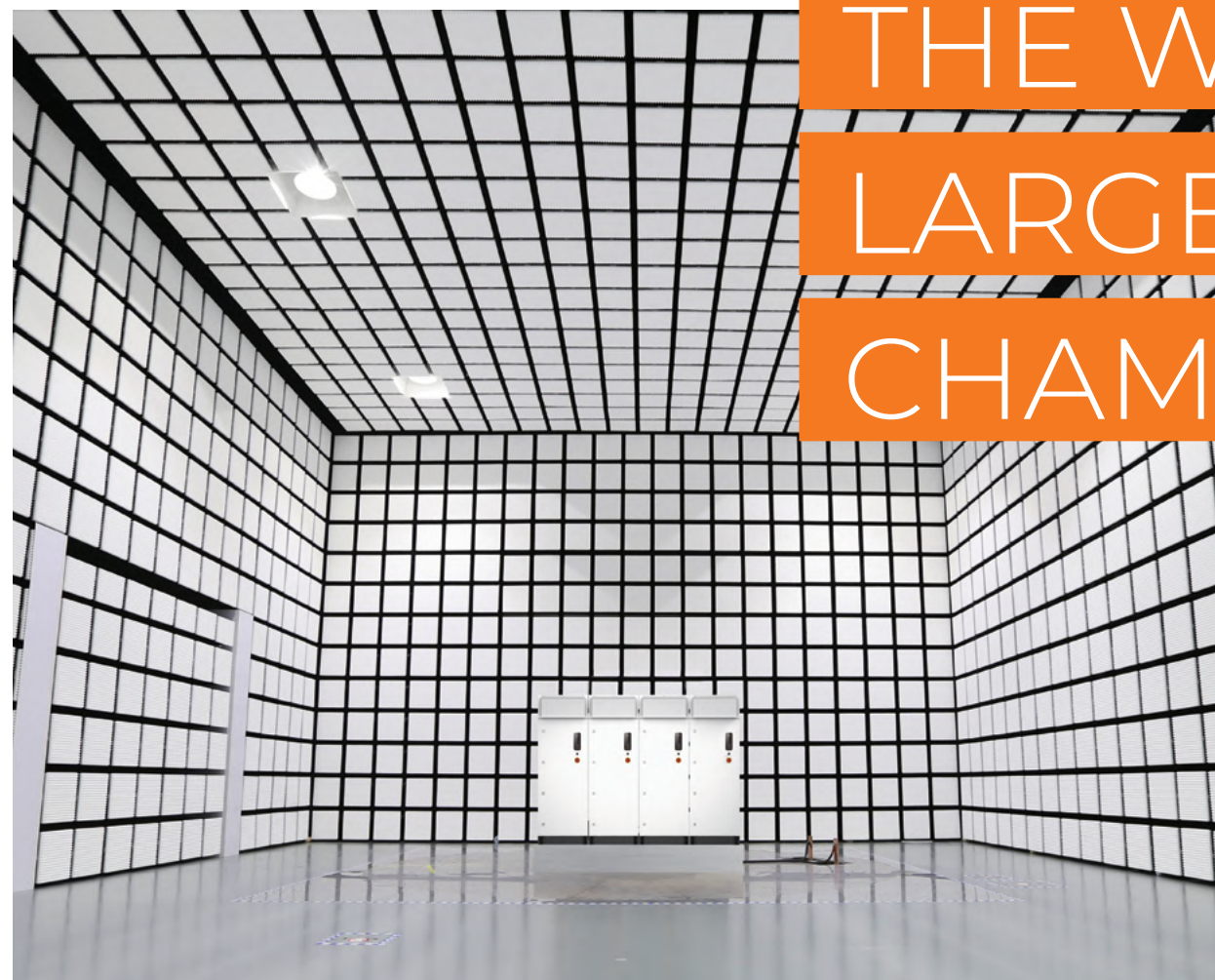
Sungrow maintains long-term cooperation with international universities like Tsinghua University, University of New South Wales, and Hefei University of Technology to recruit creative and problem-solving minds who share our aim to fight for the clean energy.

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. Additionally, Sungrow's ESS Burn Tests have been overseen and testified by DNV (Det Norske Veritas). As a world leader inverter supplier,

Sungrow prioritises the importance of product press 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!



On top and below:
Sweden's first PowerTitan projects: 6.5MW Solar + 4.4MWh BESS in Halmstad.



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.

INVERTERS AND MV STATIONS

Complete system solution for
your next solar park.

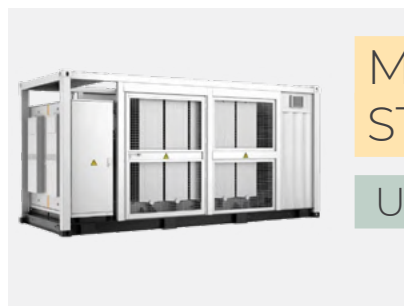
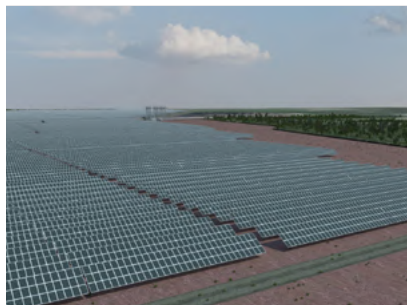


STRING
INVERTERS

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.

SG350HX-20



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.

MVS3200-LV, MVS4480-LV, MVS6400-LV, MVS8960-LV



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



MV GRID-CONNECTED PV
INVERTER 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!

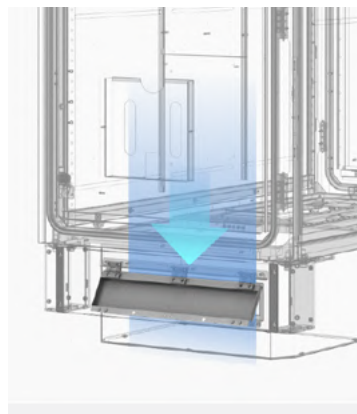
Combine **up to 8 modules** together, expanding the conversion capacity up to 8,8 MW to fit your project needs. Get a **multi MPPT solution** with central inverter layout and save costs due to **low transportation and installation efforts** and its **outdoor design**.

One single unit power conversion is 1.100 kVA and sizes 700 x 2290 x 1523 mm, 800 kg heavy.

Heat dissipation

Convenient for parallel installation:

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



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.



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.



ADAPTING TO EVERYTHING



UNLEASH THE POWER OF SUNGROW MODULAR INVERTERS: THE ULTIMATE SOLUTION FOR CHALLENGING TERRAINS.

The 77.906,4 KW_P (70.400 KW_{AC}) PV park is a hybrid plant in Balıkesir, Turkey by Elin A.Ş. combines photovoltaic and wind turbine power, offering a versatile energy solution.

The modular design has been chosen for its grid-friendly nature, ensuring smooth integration into existing energy systems. Additionally, it features a high number of Maximum Power Point Tracking (MPPT) systems, which optimize energy production efficiency.

This combination of technologies allows the plant to harness renewable energy from multiple sources, enhancing its overall performance and reliability.



SG4400UD



MODULAR INVERTER



ROUGH TERRAIN



Sixteen x SG4400UD are installed on a foundation base, close to the transformer and MV cabin.

BENEFITS

141,648 bifacial PV modules are installed at an angle of 25°, facing south, on the original bright surface of the ground. This maximises yield through light reflection.

The 1+X modular inverter here consists of 4 modules of 1.1 MW conversion power, which are distributed across the PV array and connected to the PV modules via Sungrow combiner boxes to maximise flexibility.

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 1.0), ST5015UX (PowerTitan 2.0) ,



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.

ST225kWh-110kW-2h, ST455kWh-110kW-4h, ST535kWh-250kW-2h, ST570kWh-250kW-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.

SAVING THE SUN – ESS PRIME SOLUTIONS

No.1

Sungrow is the world's most bankable energy storage company, rated by Bloomberg NEF (December 2024).

Our BESS products are built to be utilised in residential, commercial, and large-scale utility projects.

In 2023, Sungrow was the first BESS manufacturer to build a 10-MWh-liquid-cooled ESS.

With more than **25-30 GWh installed worldwide**, Sungrow's Storage division is expanding rapidly in the European region. In Europe, we are proud to have built BESS capacity of around 13.2 GWh and therefore having equipped around **25% of the EU ESS market** (as of 2024).



The largest unsubsidized grid-connected standalone battery storage plant in Europe: 100 MW /330 MWh Energy Storage plant at the 400 kV UK national grid substation in Bramley, UK.

Dr. James Li
Director ESS Europe



Sungrow has already proven itself as a world leader in Global Cumulative ESS Installations (S&P 2024)

With more than 17 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.

S&P Global
Commodity Insights

Did you know?

Sungrow has shipped ESS around **25-30 GWh** only in 2024 globally.

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.

Liquid cooled energy storage system unit ST2752UX

Higher discharge

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



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

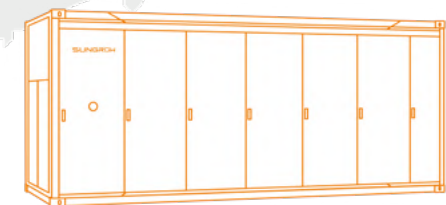
STAND-ALONE BESS

The 10.35 MW, 13.3 MWh Energy Storage System using six PowerTitan 1.0 and three Power Conversion systems (PCS) as a stand-alone Battery Park in Germany by W POWER marks a significant milestone being one of the first standalone BESS projects in the country.

This achievement showcases W Power's dedication and entrepreneurial drive to lead the energy transition. The PowerTitan 1.0 system demonstrates how advanced storage solutions can support grid stability, enhance renewable energy integration, and contribute to a more sustainable future.

“The battery storage system helps to balance fluctuations in the grid. This multi-use case improves the integration of electricity from renewables, allows energy trading and increases the efficiency of the overall energy system”,

Christian Jochemich
Managing Director W Power GmbH



POWERTITAN 2.0

BEYOND ALL-IN-ONE

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.



PowerTitan 2.0 - 2 Parts

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 up to 55% footprints compared to existing solutions. This significantly improves land utilization and reduces land investment.



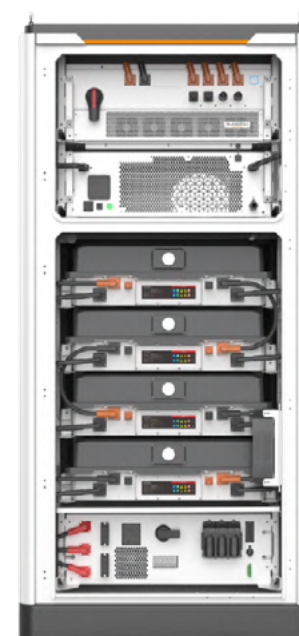
With the back-to-back layout you can design your ESS plant with 100 MWh consuming only 1200 m².



POWERSTACK 200CS

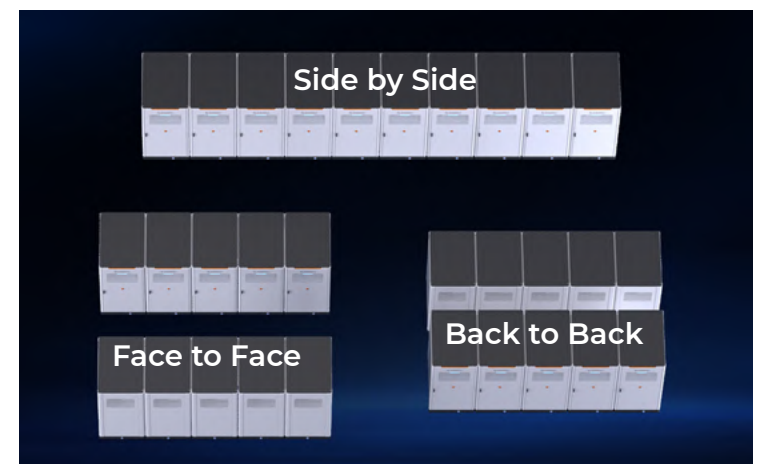
C&I ESS SOLUTION

The energy storage for commercial applications: All-in-One including PCS, BMS, battery modules and local controller in one container.



Flexible layouts

supporting multiple units in parallel



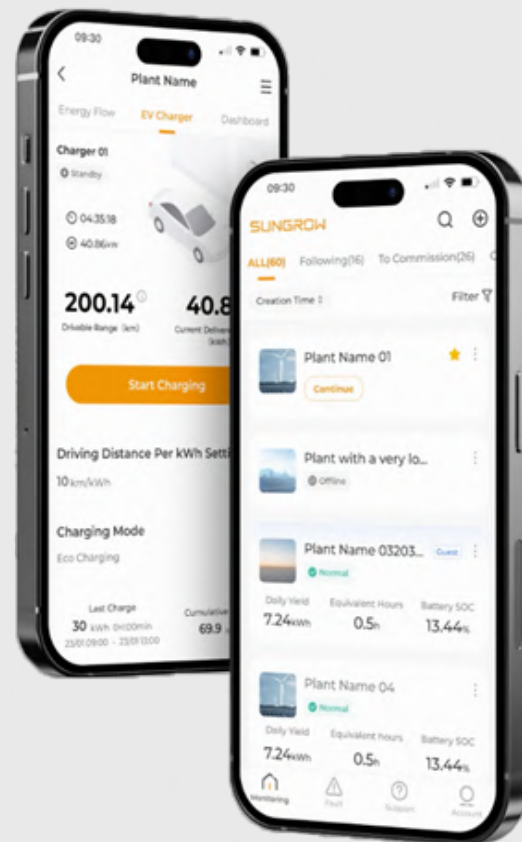
All scenario application

Component-level protection \geq IP65 and C5 Anti-Corrosion



INSTANT UPDATES

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



MONITORING

EMU200A



Energy Management Unit

Flexible Networking with RS485, Ethernet and MPLC communication
Inverter batch parameter settings and firmware updates
Active and reactive power control
IP66 protection

LOGGER4000



Intelligent communication

Communication with up to 300 devices
Automatically distributing Modbus

PPC & SCADA



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

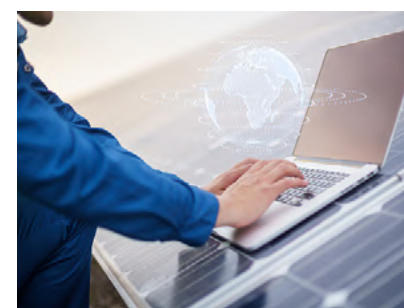


COMBINER BOXES



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

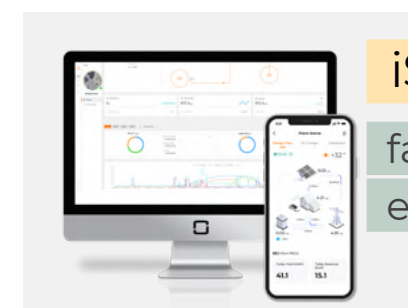
PVS-16MH, PVS-18MH, PVS-20MH, PVS-24MH



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.

EV CHARGING SOLUTIONS



EFFICIENT

Efficiency up to 96.5 % and uptime < 98% along with a standby power consumption of 10 W



RELIABLE

IP 65 & C5 anti-corrosion rating, 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



Sungrow's charging stations feature a compact design that delivers high power in a small form factor, while remaining extremely quiet.

Florian Tatzber,
Project Manager at EVN Austria



IDC480E - Ultra-Fast Charging System

The ultra-fast charger delivers up to **480kW** and supports up to eight vehicles simultaneously. Its **patented isolated air-cooling system** ensures low maintenance and eco-friendly operation. It eliminates the need for filter mat replacements, reducing

maintenance and operational disruptions. The advanced cooling ensures **consistent performance** through heat dissipation in extreme environments.

SUNGROW CHARGING FULL POWER RANGE FROM 30kW TO 480kW

Sungrow's DC fast charging stations offer high efficiency, durability, and seamless integration for large-scale EV infrastructure projects. With **IP65** protection, **C5** corrosion resistance, and advanced cooling technologies, models like the IDC30E, IDC180E, and IDC480E ensure reliable, low-maintenance operation. Fully **AFIR** compliant and **Eichrecht** certified, they guarantee precise metering and regulatory compliance. Supporting multiple connectors and high-power output, Sungrow enables rapid, flexible, and future-proof charging.



IDC480E available with air-cooled or liquid-cooled user terminal

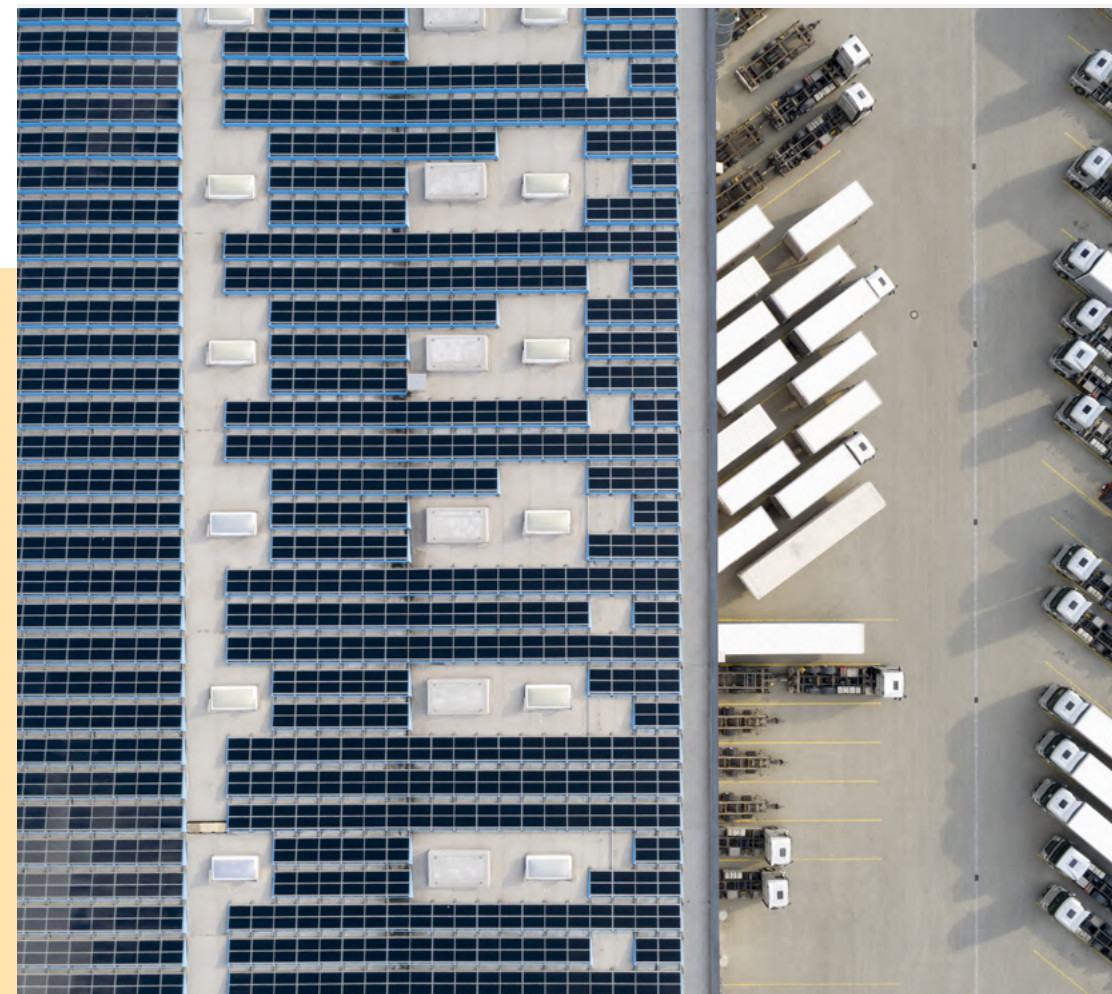
WE ARE HERE FOR YOU

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**. With our **520 Service Outlets** worldwide, 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
Regional Manager of
Sweden and Finland

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

Robert Von Wahl
Director Charging Europe



Dara Dahabreh
Head of Fulfillment
Europe



Artur Gaj
Key Account Manager
Poland - Sungrow Europe



Javier Blanco
Country Manager Spain and Portugal



Tim Frohnwieser
Director Marketing
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