PV power plant projects with up to 500 megawatts of power have been implemented all over the world. SMA not only provides robust, high-performance Sunny inverters and system technology components for these projects, but also offers system solutions ranging from DC to medium voltage designed for maximum availability and specifically for the use in photovoltaic projects. These solutions ensure maximum plant availability and therefore reliable yields.

We strive to promote comprehensive technological development with a focus on important PV issues such as further yield maximization, system cost reduction and grid integration."

Dr. Jürgen Reinert, Executive Vice President (Technology)
The SMA Group is the global market leader in photovoltaic inverters and an energy management group that offers key innovative technology for future power supply. We are represented in 21 countries, and over 30 gigawatts of PV power worldwide have been implemented using SMA inverters and system technology.

For more than 30 years, SMA has been producing inverters for every type of PV module and every power class. This outstanding experience is integral to the development and production of current and future technologies, resulting in continual optimization.

With this experience, SMA experts ensure the future success of a PV investment with PV power plants built to guarantee an economic, long-term, secure and reliable supply of electricity for millions of people.

EPC contractors, power plant operators, investors and financing banks profit from PV power plants with minimal risks. Only if inverters as the key components of a PV power plant work reliably over the plant’s entire life span, maximum yields and stable cash flows are possible.
INVERTERS ARE THE MOST IMPORTANT TECHNOLOGICAL COMPONENTS AND SMART CONTROL UNITS OF ANY PV POWER PLANT. THEIR QUALITY DECISIVELY INFLUENCES PREDICTABLE ENERGY YIELDS.

SMA offers utility-scale system solutions for centralized and decentralized plant architectures. Customers can choose single inverters or complete intelligent systems depending on their needs.

**Ready for global use**

The SMA Utility Grade seal of quality stands for successful implementation of profitable PV power plants. SMA Utility Grade combines advanced inverter technology with a wide range of flexible system technologies and comprehensive services, including software, monitoring and control systems. All products and system solutions are fit for use all over the world, and withstand challenges such as heat, cold, altitude, salty air and monsoons. SMA invests 100 million euros per year in R&D to provide highly advanced technical solutions for the systems of tomorrow.

**Minimum self-consumption of energy**

With sustainable products and system solutions from SMA, PV power plants become successful projects for everyone involved. SMA’s central inverters are distinguished by the highest efficiency in the world for standard devices and 110 percent power at ambient temperatures of up to 25°C. Their extremely low self-consumption, particularly in the high power classes, ensures maximum energy yields.
Unique SMA Test Center

With optimal temperature behavior in the operating range from -40°C to 62°C and the smart cooling concept OptiCool for increased life spans, SMA central inverters are prepared for use in all regions of the world. They go through extensive and rigorous testing in the SMA Test Center, which is unique in the world.

Easy installation and maintenance

Optimized architecture and compact design for every type of PV power plant reduce wear, service times, maintenance and downtime costs. SMA products and system solutions are easy to transport, install and commission.

The next generation

A new generation of central inverters as well as innovative and smart complete system solutions, are already waiting in the wings. They will ensure even more power, even higher yields and an even more cost-efficient energy supply for perfectly satisfied partners.
WITH ITS COMPREHENSIVE PRODUCT PORTFOLIO, SMA OFFERS IDEAL SOLUTIONS FOR ALL PV POWER PLANTS.

SMA central inverters of the Sunny Central CP XT series provide top performance with low system costs and optimized specific prices. With 100 percent power during continuous operation at up to 50°C and capability for 10 percent increased efficiency up to 25°C, Sunny Central CP XT inverters lead the industry worldwide.

Integrated plant control

SMA Sunny Central CP XT inverters meet all requirements for plant monitoring and control with their integrated communication interfaces to the SMA Power Plant Controller, combined with the Sunny String Monitor. The SMA Power Plant Controller reliably manages plants with a centralized or decentralized topology as well as mixed structures.

Decentralized with Sunny Tripower

For decentralized plant structures, SMA’s portfolio includes the MV Tripower Package. A technically strong combination of high performance Sunny Tripower inverters for project business, the reliable SMA Transformer Compact Station and a perfectly coordinated communications package.

Optimized transformers

SMA’s comprehensive system packages are ready for global use: Equipped with a medium-voltage solution, as interface between the DC and AC grid. Their preconfigured components and transformers optimized for use with PV inverters guarantee maximum yields at lowest electricity production costs.
**Link to the grid worldwide**

Equipped with the power of either one or two robust Sunny Central CP XT inverters in the power class of your choice and with appropriate transformers, the SMA MV Power Station is the perfect turnkey solution for PV power plants. It is available worldwide and ideal for PV power plants in sunbelt regions.

**Also in the U.S. and Canada**

The Compact MV Power Platform impresses with quality, easy transportability and optimal grid integration capabilities and is specifically designed for the North American market.

**Solutions for diesel hybrid systems**

SMA’s Fuel Save Solution offers smart integration of photovoltaics in new and existing diesel systems. The combination of Sunny Central CP XT or Sunny Tripower inverters, the SMA Fuel Save Controller, an optional storage battery, and plant monitoring as well as remote diagnosis via the Sunny Portal allows easy and efficient power generation.
For years, SMA has been providing specific answers for the requirements placed on PV power plants worldwide. Inverters that serve as grid managers and intelligent PV plant control systems are the basis for maximum yields and stable grids. Across the world, SMA experts work together with responsible committees to establish grid regulations and to contribute their expertise in the area of grid management.

Grid connection ensured

SMA inverters meet the requirements and regulations of local grid operators worldwide. With the ability to provide reactive power even at night, SMA inverters are fit for the future already today. Decisive for power plant operators and investors are the simulations done by SMA experts already during the planning phase, which make it possible to provide required statements regarding the reliability and functionality of a PV power plant – a prerequisite for on-schedule grid connection and protection against potential shutdowns.
“Perfect integration of PV into the transmission lines is extremely important for the long-term success of photovoltaics. SMA offers solutions to meet these requirements and also increasingly give PV systems characteristics of power plants. In this way, they can replace conventional must-run units as part of the energy transition.”

Roland Grebe, Chief Technology Officer
WITH SMA AS YOUR PROJECT PARTNER, YOU ARE ENSURING THE SUCCESS OF YOUR PV POWER PLANT PROJECT FROM THE VERY START.

Make it easy for yourself. At your side, from the initial consultation to the final commissioning, you will always have a team of experienced specialists focused on achieving the best plant design and highest energy yields from the very beginning.

Guaranteed PV expertise

Over 20 years of project experience worldwide and the concentrated expertise of SMA employees guarantee maximum success. With SMA, PV power plant projects are in the best possible hands throughout their entire service life.

PV POWER PLANT EXPERTS
TECHNICAL CONSULTING

Our experts determine and evaluate grid specifications worldwide and serve as consultants on all PV system technology and plant design issues.

ENGINEERING

During the planning stages, we prepare simulations and develop communication devices for PV power plants.

PROJECT MANAGEMENT

SMA project managers maintain a seamless order process and coordinate the commissioning of the PV power plant.

SERVICE

With modular service contracts, successful spare parts management and proactive maintenance, PV power plants are in the best possible hands with SMA.
EXCELLENT SERVICE AROUND THE WORLD

FROM QUALIFIED CONSULTING ADVICE ON THE SMA SERVICE LINE TO DIRECT ON-SITE SUPPORT, YOU CAN COUNT ON SMA SERVICE ALL OVER THE WORLD.

SMA’s service concept for Sunny Centrals and all medium voltage solutions focuses on flexibility and individual solutions. Customers can configure their contract from various service modules. Especially for investors, it pays off to supplement the factory warranty with additional service modules from the very beginning.

**Maximum availability**

Proactive maintenance means that service work is optimally scheduled to guarantee the highest possible system availability. Global spare parts management ensures that needed spare parts are at the right place at the right time – everywhere in the world.

**Secure yields**

Remote Service allows SMA to keep an eye on the performance of its inverters at all times. The service concept has been extended with this additional module for even more reliable yields. In the event of a failure, a solution is quickly implemented, ensuring continued maximum availability.
“The service concepts for Sunny Centrals and SMA’s medium voltage solutions combine the advantages of maximum flexibility and maximum safety. That is our contribution to protecting our customers’ investments and optimizing yields.”

Jan Mollik, Product Manager Service
SUCCESS CAN BE PLANNED

WORLDWIDE, THE LARGEST PV PROJECTS ARE IMPLEMENTED WITH SMART PRODUCTS AND SYSTEM SOLUTIONS FROM SMA.

Secure your investment’s future by planning your PV power plant with SMA. Today, PV projects with a capacity of up to 500 megawatts and beyond are implemented all over the world — and that figure is on the rise.

Future-proof PV power plants

Profit from SMA’s long-standing expertise in photovoltaics and its global network with access to all relevant PV markets. Make your PV power plant project a success. With SMA, you are investing in the future and ensuring long-term energy yields and cash flow.

Find out more at www.SMA.de/power-plants

Contact us at Powerplants@SMA.de

More than nine gigawatts of installed Sunny Central power in over 30 countries speak for themselves
10 MW, Adelanto, U.S.

44 MW, Bang Pa-In, Thailand

128 MW, Templin, Germany