CASE NOTE

ABB solar inverter transforms Sicilian sunshine into clean energy
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In one of the largest solar parks in Italy, the innovative technology of ABB’s high-power string inverter helps to efficiently and reliably generate power.

The new photovoltaic park in Naro, in the province of Agrigento, is one of the largest ground-mounted photovoltaic systems in Italy. Its five solar fields consisting of 51,000 photovoltaic panels, distributed over an area of 53 hectares, allow a total energy production of 17.6 MW.

Manni Energy, specialized in the design, realization and management of power plants using renewable energy sources, and ABB, which together with its experience in the development of solar power solutions, provided 80 string inverters necessary for transforming and distributing the power produced to the main network, joined forces to realize this project successfully.
The features of the PVS-175 inverter, including the plug and play connections, allow a quick and easy installation.

The PVS-175 inverter is particularly suitable for operating in large ground-mounted systems with distributed architecture.

The award-winning PVS-175 string inverter was the perfect solution for this large ground-mounted distributed generation solar power plant. This high-performing model, characterized by high-power density in the string inverter segment, is capable of generating a maximum power output of 185 kW. With a maximum input voltage of 1500V, the inverter allows the most recent solar panel technologies to be used, while its output voltage of 800V is optimized for distribution on the alternating current side. These features translate into substantial savings in terms of materials and installation times, in addition to logistics and maintenance costs. To make the most of the solar array and further increase power production, each block of panels was fitted with mono-axial trackers that follow the sun’s movement from east to west. The utilization of 12 maximum power point trackers (MPPTs), special features of the PVS-175 inverters, made it possible to optimize the management of the 1700 installed trackers, achieving maximum power output under all conditions, with energy yields of 2,000 kWh per installed kilowatt.
Furthermore, the built-in digital communication platform makes the PVS-175 a highly advanced inverter for communications and control, offering effective and reliable remote monitoring of the five systems that make up the solar park. Inverter management through mobile devices and Wi-Fi connection with a guided procedure made configuration and commissioning especially quick. This is a fundamental feature, in particular when working with such large-scale systems.

The use of the PVS-175 inverter also yields benefits in terms of savings in time and costs, with its simple, rapid installation, thanks to an all-in-one design without any external components, modular construction with wiring box that can be removed from the power module, as well as providing plug and play connection. All of this comes with simple maintenance and easy direct access to internal components.

Innovative technology, high performance, flexibility and ease of installation make the ABB PVS-175 an excellent product, guaranteeing performance, reliability and economy, also for complex, large-scale systems.
General informations

**Sector:**
Utility

**Structure:**
Ground-mounted installation

**Sales Manager:**
Marco Vergani

**ABB products used in the system:**
PVS-175 - high power string inverter