CASE STUDY

1MW MARKET PARITY PV PLANT

SUNGROW INVERTERS

SG60KTL

Location
Fulgatore, Sicily, IT

Challenege
This PV plant is the first Market Parity project equipped with Sungrow inverters, based in Italy. In times without feed-in tariff, the challenge was to build a new ground-mounted PV plant that was able to compete with Sicilian electricity market prices, balancing CAPEX and OPEX in order to be price-competitive.

Solution
The solar park has been built in the sunniest region of Italy, on a plain field with modules facing the sun in southern direction, to catch as much irradiation as possible. Beside the size of the PV plant, around 1MW, the customer had chosen a solution with string inverters installed next to the PV module strings.

Benefit
Being operative within Market Parity is the largest benefit of this PV plant. The string inverter configuration also gave significant advantages such as string identification and monitoring, easy installation and maintenance. The SG60KTL string inverter is IP65 certified, so it can be installed outdoors without any issues.

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Description

The photovoltaic generator has a DC power of 993.14 kWp; it is mounted on fixed ground mounting structures, on a plain ground with a tiny slope of 20 degrees. The total amount of PV modules is of 4,048 pieces of two different brands and power, 1,968 of 230Wp and 2,070 of 260Wp, in portrait layout with south orientation.

There are 17 Sungrow SG60KTL inverters, fixed on the same mounting system used for the PV modules. The PV plant has been connected to the grid on July 2018, building operations lasted around two months.

Inverters are installed under the modules just to protect them from direct sunlight.

The 1 MW PV plant equipped with 60kW string inverters has major advantages - both technical and economical.

Design and implementation of activities were performed in collaboration of Sungrow and OTT Service s.r.l.