CASE STUDY

SUNGROW ALWAYS ANSWERS

SUNGROW INVERTERS
SG36KTL

CHALLENGE
This PV plant is one of the first Sungrow installations in Italy. It was connected to the grid in 2011, when central inverters for PV plants around 1 MW were the most commonly used solution. One of these inverters had a failure in 2018, however the exact same model was out of production and could therefore not be replaced with an identical one.

SOLUTION
The former Sungrow central inverter SG100K3 had been replaced with three string inverters of the type SG36KTL-M. Due to the MC4 connectors of the SG36KTL-M inverters, installers simply mounted the solar cables directly from the roof into the inverters, even without using combiner boxes. The SG36KTL-M fitted perfectly into the existing cabin while the AC side remained unchanged.

BENEFIT
Besides solving the temporary production stop in a fast and efficient manner, the replacement proved that even out-of-production Sungrow inverter can be replaced easily with new string inverters in a cost- and time-efficient way. Furthermore, string inverters in their compact form save space inside the (meanwhile redundant) cabin (SG36KTL-M’s protection degree is IP65).

Location
Bianzè, Piedmont, IT

Rooftop PV plant 6800 sqm
4171 PV modules

Revamping with SG36KTL
Sungrow inverters

Single central inverter replaced with three new string inverters

Annual production forecast
680000 kWh
The photovoltaic generator has a DC power of 735,78 kWp. The original installation of the PV modules had been combined with an Asbestos roof cover replacement. Now the PV generator is mounted on fixed roof structures, directly connected to the metal sheets with 4171 pieces of 60-cell mixed power, from 230 to 240 Wp PV modules in portrait layout with East-West orientation.

After the revamping installation, the PV plant in total has 5 Sungrow SG100K3 central inverters, still running at optimum performance since 2011, three new SG36KTL-M string inverters plus four existing string inverters of 12.5 kW (3rd party brand).

In a special purpose cabin next to the building, the former SG100K3 and SG36KTL-M inverters are jointly installed, each of which managing the different photovoltaic modules strings on the roof. SG36KTL-M inverters avoid the usage of original combiner boxes, which are still needed for the central SG100K3. The entire installation process took only 4 hours.

Design and implementation of all revamping activities were performed in collaboration of Sungrow, Semperlux and Coenergia.