Case Study

TOPS ENERGY: REVAMPING OF TWO 1 MW PHOTOVOLTAIC PLANTS WITH FIMER PVR-65-TL INVERTERS

FIMER, leading manufacturer of renewable energy solutions, has provided **16 PVR-65-TL** three-phase string inverters, **S2 model**, to **Tops Energy Srl**, an independent company specializing in Operation & Maintenance (O&M) services and advanced technical solutions for photovoltaic plants.
The inverters are installed in **two twin photovoltaic systems with a capacity of 1 MW each,** located on the outskirts of Brindisi and featuring similar electrical and mechanical architectures.

The project

Tops Energy Srl specialists managed the entire **revamping project**, which involved the replacement of **four 250 kW central inverters**, by a different manufacturer, which could no longer be repaired.

One of the technical peculiarities of the project was to **proceed with the revamping by exclusively replacing the low voltage (LV) components**, while maintaining the existing medium voltage (MV) infrastructure, including the transformers with a secondary voltage at 275 V.
The FIMER PVR-65-TL inverters were chosen because they can operate effectively in this specific technical context.

The solution

PVR-65/75/80-TL is the new platform by FIMER designed for the efficient revamping of photovoltaic systems equipped with central inverters with output voltage from 270 Vac to 320 Vac.
These three-phase string inverters with power sizes from 65 to 80 kW, maximize the return on investment in large existing PV systems while enjoying all the advantages of a decentralized setup. Thanks to a structure with up to 6 MPPTs, the energy production is optimized even in shading conditions.

The high-power module and the compact size assure further savings for installation and in logistics and in maintenance; the standard wireless access from any mobile device, the built-in User Interface (UI) and the installer mobile APP simplifying multi-inverter installations, make the configuration of inverter and plant easier and faster.

The model chosen for this revamping intervention is **PVR-65-TL**, **S2** type.

Main features include:
- 2 MPPTs (paralleled) for a connection to external String combiner boxes (the range is also available with 6 independent MPPTs)
- Transformerless inverter
- 65 kW for 270 Vac
- Wi-Fi as standard for configuration
- Two Ethernet ports for plant level communication
- Double stage topology for a wide input range
- IP66 Environmental protection
- Maximum efficiency up to 98.9%

Aldo Sciscioli, Director at Tops Energy, commented: "*The plant has improved its Performance Ratio (PR), which had previously been affected by the frequent shutdowns of the old inverters. This result was achieved without replacing the photovoltaic modules, despite significant complexities at junction box level.*
The improvement will continue in the coming months, thanks to the gradual resolution of anomalies that had gone undetected due to the lack of effective insulation monitoring on the DC side before the replacement of the inverters."

FIMER: the Partner in Technology for Energy Transition
With a comprehensive portfolio of solar energy solutions and integrated digital services, FIMER actively supports the energy transition, providing state-of-the-art technologies for both new and existing PV plants in residential, C&I and utility settings.

Insights and the main local distributors on the official website: **www.fimer.com**

About FIMER

FIMER is a brand owned by MA Solar Italy, a leading manufacturer of renewable energy solutions. The Company, specializing in the production of solar inverters, offers a wide range of solutions designed for any application. With local training centers, 2 production sites, one in Italy and one in India, FIMER is close to its customers in the evolving dynamics of the energy sector.

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About Tops Energy

TOPS Energy (Technical OPerations Services) is the leading Independent and Specialized provider of construction and O&M services to Utility Scale PV Plants, dedicated to design, construction and operation of utility scale PV plants ensuring the best quality level and overall energy production performances. The main purpose of the company is to help customers significantly improve the level of performance and performance of their plants.
TOPS Energy is part of the INDITEL group.