

An aerial photograph of a large solar farm. The solar panels are arranged in neat, parallel rows that stretch across a flat, arid landscape. The panels are dark blue or black, contrasting with the dry, brownish ground. In the background, there are some green fields and a dirt road.

New Life: Retrofitting Solar Plants for Optimal Performance

When photovoltaic systems were in their infancy, in Italy and other locations, there were often limitations. Now that costs have fallen and technology has vastly improved, Valmont Solar™ is helping modernize plants for improved efficiency and profitability.

PROJECT:

Nardò (Lecce)

LOCATION:

Southern Region of Apulia, Italy

PROJECT SIZE:

10 MW

CHALLENGE:

PV plant with outdated technology

SOLUTION:

Complete analysis and retrofit with new Convert-1P Single-Axis Solar Tracker Technology

Technological improvements and worldwide uptake have led to lower installed costs per MW for new PV plants. But an overlooked secondary market has emerged: existing solar plants that could be optimized with newer technology to increase output and profitability.

To help conserve resources and improve life, Valmont Solar upgraded a 10MW facility near Nardò, located in the bootheel of Italy.

First, Valmont Solar experts prepared a preliminary layout and performed a parametric analysis to identify the best tracker angle, the ideal number in the string and the proper space between them, to maximize the site's layout density for greater collection potential.

Once new string inverters were installed, Valmont Solar replaced the existing fixed-tilt structures with high-efficiency Convert trackers. Convert trackers from Valmont Solar have a modular design for simple installation and operation and a long, hassle-free life.

With a project of this kind, it's important to minimize the plant's downtime. Our supply chain expertise allowed complete batches of material to be delivered, and aided the efforts to tackle the project efficiently, disassembling, installing and activating the trackers by series

The finishing touch was the Convert Control System for real-time performance data, alarms including remote maintenance capability and weather monitoring, and seamless integration into the plant's SCADA system.

The retrofit was completed in less than three months and boosted the plant's productivity by 22%.

"The Nardò project was the first example of a fully revamped PV plant in Italy. It was completed with quality and in record-breaking time, thanks to professionals and companies involved from the beginning. Revamping and repowering represent a continuously expanding market and give new life to PV Systems — another great step toward sustainability and a growing economy."

— Matteo Demofonti
Business Line Manager, EMEA