



SOLAR ASSET CARE INNOVATION.™

## CASE STUDY GRU.CO. S.r.l., Italy

# Alectris Generates a 38% Production Increase from Underperforming Solar Portfolio

// *Finally I am glad to say that I found a good and professional O&M contractor. I was extremely skeptical at the beginning due to a very bad previous experience. Alectris immediately took steps to improve the production of my PV plants following a rigorous analysis, and the benefits were notable, significant and durable. We have been working together for more than a year now and I am completely satisfied.* //

Michele Romanin Jacur,  
General Manager GRU.CO. S.r.l.

## The Solar PV Portfolio

The project owner is a reputable Italian family company active in several business sectors who has diversified into renewable energy investments. The solar PV portfolio is made up of four plants, approximately 1 MWp each for a total of 4MWp. The portfolio is located in Puglia, Italy. It was constructed between 2010 and 2011. It is a fixed, ground mounted installation.

## The Challenges - Project and Policy

The solar PV portfolio had been in operation several months when it started to exhibit severe technical deficiencies and under-performance. In addition to the performance issues of the portfolio, the owner was concerned about a changing policy environment including the reduction of the Italy FIT (feed in tariff) incentives and rumors of heavier taxation would compress margins further.

The underperformance of the portfolio was attributed to:

- Plants were constructed under extreme time pressure
- EPC Contractor had limited experience in solar PV
- EPC Contractor who undertook the O&M of the plants experienced financial difficulties and neglected O&M performance

## Results of Underperformance

The results of inadequate solar operations and maintenance included:

- High costs of continuous interventions
- Low PR (<66%)
- Low Uptime (<93%)
- Low IRR

## Project Overview

**Client Name**  
GRU.CO. S.r.l.

- Alectris Services Performed**
- Plant Checkup and Diagnostic
  - Engineering
  - ACTIS Implementation
  - Plant Turnaround
  - Solar Operations and Maintenance

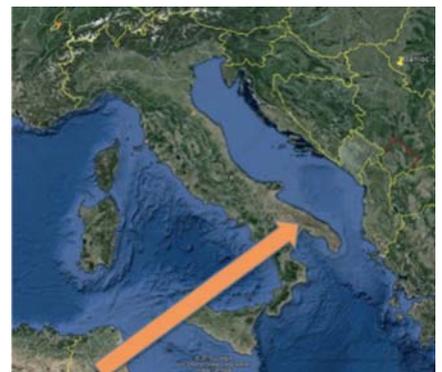
**Portfolio Location**  
Puglia, Italy

**Completed**  
2010 - 2011

**Installation Type**  
Ground Mount / Fixed

**System Size**  
4 plants totaling 4MWp

**Products**  
CEEG  
EEI, Ingeteam Inverters



## The Solution - An Integrated Approach to Margin Protection

Alectris provides an integrated care approach to solar photovoltaic (PV) energy assets. This holistic, step by step process helped identify the main causes of the performance issues and ensured the corrections would create the desired performance results.

### Step One - First level Survey and Remedies to Immediately Stem Losses

Alectris stepped into this portfolio of distressed plants as the solar O&M manager starting in late 2012. The company started with a diagnosis of the plants and recommendations for initial performance enhancements. This led to the implementation of immediate actions aimed at increasing the portfolio's energy generation and performance availability. The first objective was to bring the plants back to satisfactory availability levels (>98%).

### Step Two - Implement ACTIS for Holistic View of Plant Performance

The first three months constituted a transition period to run a complete and thorough plant diagnosis, suggest and implement a series of discretionary variations aimed at correcting all the engineering and construction mistakes and increasing significantly the portfolio's performance. In parallel to the diagnostic phase, ACTIS, the Alectris award winning Solar Enterprise Resource Planning platform, was used to manage the plants and monitor progress.

### Step Three - Apply Performance Measures Across the Portfolio

With a clear view of the performance issues and strong initial results, the Alectris team was able to replicate the process to all the plants to boost the plants' energy generation and performance. With ACTIS and the Alectris team in place, the investor will continue to have strong returns and increase even further in the future.

## The Outcome

**Dramatic increase of the solar portfolio's profitability.**

Beginning with the initial plant turnaround, the results are very strong. In a few months since Alectris took over the portfolio's solar operations and maintenance (O&M) activities, it has registered a yield optimization of +38%. These are the results only from the initial phase. The Alectris team is already planning actions together with the investor to further boost performance by 2-4% in the coming months.



*Full white paper available upon request.*



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