

Case Study

TREE

Commercial Rooftop Gravina in Puglia



Gravina in Puglia, Italy



Rooftop installation with Solar Frontier modules in the sunny Gravina in Puglia, Italy. (Image: TreE)

Site Overview

Location	Gravina in Puglia, Italy
Coordinates	40.9° N ; 16.3° E
Average global irradiance	1,628 kWh/m ² /yr
Average temperature	16 °C, 60.8 °F
Average precipitation	596 mm/yr, 23.5 in/yr

Technical Overview

Date onstream	June 2012
System capacity	70.20 kWp
Panel type	SF150-L
Number of installed panels	468
Tilt angle, orientation	7°-15°, 8° (SW)
Expected output	1,616 kWh/kWp
CO₂ reduction	63,869 kg/yr, 140,807 lbs/yr
Inverter	7x Omron KP 100L

Financing Bank

—

"I have already been working with Solar Frontier for several years and I am enthusiastic about the quality of their CIS modules. I chose Solar Frontier's CIS technology since it guarantees great energy yields under all possible conditions."

*Ing. Domingo Pace,
Co-owner and designer at TreE*

TreE is an engineering company based in Gravina in Puglia, Italy and well-known in the area. They were among the first ones in the country to install PV plants and last year, TreE constructed mainly rooftop applications.

This 70.20 kWp plant was installed on the roof of a farm in Gravina in Puglia, South Italy. When the plant was installed the Italian support programme for solar energy, the Conto Energia, was still in force. The 468 CIS modules were chosen for their good proportion of generated kWh per installed kWp as the majority of the produced energy is fed into the grid. Thanks to the numerous advantageous characteristics of Solar Frontier's CIS modules the farmer can now access up to 10% more power than with comparable modules. Also the executing installer is enthusiastic about Solar Frontier's modules and gladly recommends them to his customers.

The farmer is very satisfied with the amount of energy produced by his PV plant: although the low tilt angle and the south-west orientation of the installed panels are not optimal for this location, the CIS modules show an excellent energy output and provide a yield of 1,616 kWh/kWp. In this case, the ammonia resistance of the Solar Frontier CIS modules played a fundamental role when it came to choosing the module type as in a part of the farm there are living farm animals. Due to the high average temperature in the location in the sunny south of Italy, the high temperature stability of the CIS modules was also a crucial criterion.

About Solar Frontier

Solar Frontier is committed to creating the world's most ecological, economical solar energy solutions. Our proprietary CIS technology (denoting key ingredients copper, indium, and selenium) has the best overall potential to set the world's most enduring standard for solar energy. For more information visit www.solar-frontier.com and www.solar-frontier.eu