

Case Study

ZEN ENERJI

COMMERCIAL ROOFTOP ANTALYA



Antalya, Turkey



Solar Frontier CIS modules on the flat roof of a branch of the Turkish building supplies store chain TEKZEN. (Image: TEKZEN)

Site Overview

Location	Antalya, Turkey
Coordinates	36.80° N, 30.40° E
Average global irradiance	1,966 kWh/m ²
Average temperature	18.8 °C, 65.8 °F
Average precipitation	1,056 mm, 41.6 in

Technical Overview

Date onstream	February 2014
System capacity	29 kWp
Panel type	SF145-S
Number of installed panels	200
Tilt angle, orientation	10°, 0° (S)
Expected output	1,884 kWh/kWp/yr
CO₂ reduction	31,470 kg/yr, 69,379 lbs/yr
Inverter	Fronius IG Plus 120V-3

Financing Bank

Private Investment

"As the largest DIY retailer in Turkey, TEKZEN is proud to be a pioneer. Having decided for solar energy, we were impressed by the advanced technology offered by Solar Frontier. Our system produces more electricity than we estimated. TEKZEN has a deep sense of social responsibility, and we believe solar energy is the right way to reduce CO₂ emissions."

Mert Öneren, General Manager TEKZEN

ZEN Enerji is a capital company focusing on solar projects in Turkey. The core business of the company was based on the planning and the installation of solar plants, however by the end of 2013, the company re-shaped its activities to investment projects.

This rooftop plant was installed in February 2014 on the flat roof of a branch of the Turkish building supplies store chain TEKZEN in Antalya, in the region of Manavgat, southern Turkey. All in all, 200 Solar Frontier CIS modules and the corresponding elevated rails were installed. The 145 Wp modules were aligned to south and should cover the energy need of the branch in large part. This 29 kWp installation serves as a pioneer for a number of potential solar projects as TEKZEN plans to use more of its 100 Turkish branches for the production of solar energy. In addition, the Solar Frontier CIS installation represents an excellent example for demonstrating self-consumption solutions in Turkey, which become more and more attractive due to the continuously rising energy costs.

Despite the low tilt angle of 10°, a yield of 1,884 kWh/kWp per year is predicted for this Solar Frontier CIS installation. Once again, the excellent temperature stability of Solar Frontier modules pays off, which provides an excellent energy output even under challenging conditions such as the high temperatures at the location of the installation in the south of Turkey. The ability to generate high energy outputs even under these conditions was the decisive criterion for TEKZEN to chose the CIS modules of Solar Frontier for its first solar project.

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