

Case Study

IKAROS SOLAR

Industrial Rooftop, Zwolle



Zwolle, Netherlands



100 % of the energy generated by the Solar Frontier installation is incorporated into the energy budget for the branch of the furniture giant in Zwolle. (Photo: IKAROS SOLAR)

Site Overview

Location	Zwolle, Netherlands
Coordinates	52.52° N, 6.08° E
Average global irradiance	1,090 kWh/m ²
Average temperature	9.1 °C, 48.4 °F
Average precipitation	778 mm, 30.6 in

Technical Overview

Date onstream	October 2014
System capacity	854 kWp
Panel type	SF155-S (155W)
Number of installed panels	5,512
Tilt angle, orientation	13°, +22° (SW)
Expected output	833 MWh/yr
CO ₂ reduction	479,808 kg/yr, 1,057,796 lbs/yr
Inverter	39 x SMA-Danfoss FLX 17

Financing Bank

Private Investment

"Not only are Solar Frontier CIS modules less expensive to manufacture, they also outperform other modules in cloudy or very hot conditions, and in other ways too. The PowerModules are also more sensitive to light, so they function more efficiently when the sun is low in the sky or on rooftops that are not optimally aligned. The net result is that the customer benefits from higher power yields and a shorter payback period."

Sven Goethals,
Sales and Marketing Director, IKAROS SOLAR

Ikaros Solar, headquartered in Schoten, is one of the top businesses operating in the field of solar energy. Founded in 2006, the company has evolved into an international company with subsidiaries in Belgium, the UK, Portugal, India and Mexico. The current portfolio of Ikaros Solar consists of over 140 MW of installed PV capacity ranging from private rooftop installations to commercial solar roof systems and free field installations.

For this project, 5,512 Solar Frontier CIS modules were installed on the flat roof of the newly constructed of a well-known Swedish furniture chain branch in Zwolle. Power production using solar energy is consistent with the goal of reducing the energy consumption of its buildings and increasing its reliance on renewable energy sources. This has also been the purpose of the 12,000 m² area on the roof of the store building in Zwolle since October 2014: with an output of 854 kWp, the Solar Frontier system has helped to lower CO₂ emissions by almost 480 tons per year, representing a significant contribution to shrinking the company's ecological footprint. The branch of the Swedish furniture chain also uses all of the energy generated in this way. This makes the rooftop installation one of the first commercial projects in Holland in which self-generated electricity represents a less expensive option than buying electricity from public providers.

The particularly impressive aspect of this project has been the efficiency of the PowerModules in less than ideal conditions, during cloudy whether or when the sun is low in the sky, for example. Unlike other popular module technologies, the Solar Frontier modules still deliver substantial yields under conditions such as these.

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