

Case Study

SOLAXIS

Industrial Rooftop Kamp-Lintfort



Kamp-Lintfort, Germany



Solar Frontier modules on the east-facing roof of a wastewater treatment plant in Kamp-Lintfort (Image: Solaxis GmbH)

Site Overview

Location	Kamp-Lintfort, Germany
Coordinates	51.49° N, 6.56° E
Average global irradiance	1.000 kWh/m ² /yr
Average temperature	10.3 °C, 50.5 °F
Average precipitation	692 mm, 27.2 in/yr

Technical Overview

Date onstream	December 2011
System capacity	29.7 kWp
Panel type	SF150-L (150 W)
Number of installed panels	198
Tilt angle, orientation	10°, -84° E
Expected output	24,660 kWh/yr
Total CO₂ reduction	21,797 kg/yr, 48,053 lbs/yr
Inverter	1 x SMA STP15000 TL 1 x SMA STP12000 TL

Financing Bank

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"We chose Solar Frontier CIS thin-film modules for this installation because of the output we could expect from the eastern orientation and low tilt angle of the roof. Besides their low-light effectiveness and their high shadow tolerance, we were convinced by the simplicity of mounting combined with the resistance of dust and dirt. All of this at a good price-performance ratio."

*Thomas Kölbl,
Managing Director of Solaxis GmbH*

Solaxis, located in the Nordrhein-Westphalian town of Kamp-Lintfort (Western Germany), is an experienced partner in the distribution, planning and installation of photovoltaic and solar thermal systems. Founded in 2007, the firm's goal is to accompany its customers on the way to using renewable energy solutions. Solaxis, a company of seven employees, has installed about 4.2 MW as of 2012.

The installation, consisting of 198 Solar Frontier CIS modules, has a total capacity of 29.7 kWp and has been installed on the east-facing roof of a wastewater treatment plant. Connected to the grid in December 2011, the installation is expected to produce 24,660 kWh of energy and save about 22 tons of CO₂ emissions. The customer and operator is the local utility company of Kamp-Lintfort. The utility services 21,000 households and owns 400 kWp of photovoltaic capacity.

The Solar Frontier CIS modules were compelling because of their higher output compared to conventional crystalline silicon modules, especially in non-optimal conditions. This is the result of the modules' higher shadow tolerance and low light behavior, which ensures higher output even under non-optimal, but sometimes unavoidable, conditions, such as eastern orientation and the installation's low tilt angle of only 10°. Additional compelling factors for the Solar Frontier modules included its ease of mounting and high tolerance against dust.

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