

Case Study

GREEN SOLAR AG

Residential Rooftop Erlbach



Erlbach, Germany



On a private rooftop in the town of Erlbach, Bavaria, 125 CIS thin-film modules from Solar Frontier have been installed in east-west orientation. (Image: green solar AG)

Site Overview

Location	Erlbach, Germany
Coordinates	48,18° N, 12,47° E
Average global irradiance	1,165 kWh/m ²
Average temperature	8.3 °C, 46.9 °F
Average precipitation	705 mm/yr, 27,76 in/yr

Technical Overview

Date onstream	January 2012
System capacity	18.75 kWp
Panel type	SF150-L (150 W)
Number of installed panels	125
Tilt angle, orientation	30°, -121° E, +59° W
Output	17,179 kWh/yr (05.04.2012 - 05.04.2013)
Total CO ₂ reduction	14,185 kg/yr, 31,273 lbs/yr
Inverter	Danfoss TLX 8-15k

Financing Bank

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"More than 30% of the electricity produced is consumed immediately in the home. Only the innovative Solar Frontier CIS technology made this project economically feasible and could thus satisfy our customer in every aspect!"

*Christoph Strasser
sales director green solar AG*

Medium-sized systems provider green solar AG is headquartered in Winhöring (Altötting), Germany. The company offers its customers turnkey photovoltaic systems for rooftop and free-field plants, taking over the complete support for projects from planning and installation to associated services. As a service provider for renewable energy, the company has experience of more than 1,500 completed projects.

The installation of this private rooftop in the Bavarian town of Erlbach with 125 Solar Frontier CIS thin-film modules took place in January, 2012. Due to the excellent low-light behavior of the CIS technology, which plays an important role especially on roofs with an east-west orientation, the customer chose the CIS thin-film modules from Solar Frontier. CIS Solar Frontier modules begin working earlier and continue working longer before the sun sets and thus achieve a higher output compared to crystalline silicon modules.

Despite non-optimal conditions for PV as an East/West oriented rooftop, the plant has achieved a yield of 17,179 kWh according to green solar AG, exceeding the output forecast of 16,022 kWh by about 7%. The annual CO₂ savings of just over 14 tons are a welcome contribution to climate protection. Another reason to choose the lead- and cadmium-free Solar Frontier CIS modules was their aesthetics. The black design of the modules fits very well with the modern architecture of the private house.

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