

Case Study

SCHIRRA SOLAR CONSULTING

Residential Rooftop Mehring



Mehring, Germany



Despite frequent fog during the morning hours, Solar Frontier's CIS modules achieve high efficiency because of their good low light behaviour.

Site Overview

Location	Mehring, Germany
Coordinates	49.48° N, 6.50° E
Average global irradiance	1,250 kWh/m ² /yr
Average temperature	9.5 °C, 49.1 °F
Average precipitation	788 mm/yr, 31.0 in/yr

Technical Overview

Date onstream	December 2011
System capacity	8.4 kWp
Panel type	SF150-L (150 W)
Number of installed panels	56
Tilt angle, orientation	20°, 70° W
Expected output	7,107 kWh/yr
Total CO ₂ reduction	5,594 kg/yr, 12,333 lbs/yr
Inverter	6 x Sunny Boy 1200

Financing Bank

Private Investment

"We decided to use Solar Frontier CIS thin-film modules to meet the high aesthetic requirements of our customer's solar installation. The homogeneous black modules make the barrel-shaped rooftop into an eye-catcher. Based on the good low light behavior, even under variable tilt angles, CIS thin-film modules are also the best option for us."

*Dirk Schirra,
Managing Director Schirra Solar Consulting*

Schirra Solar Consulting GmbH, located in Wasserburg on Lake Constance, is a professional solar energy partner particularly for small and medium-sized crafts enterprises. Founded in 2009, Schirra Solar plans and installs turnkey solar systems.

Schirra Consulting GmbH has several sales offices and collaborates with a number of other solar energy specialist firms.

In December 2011, a roof-mounted solar installation with 56 Solar Frontier 150 Watt CIS thin-film modules was installed by the master roofing company Tobias Weber and was connected to the grid on a private barrel-shaped rooftop in Mehring, in the Rhineland-Palatinate. For this special shape of rooftop with its variable tilt angles, planning and technical expertise are of high importance. The rooftop installation has a total installed capacity of 8.4 kWp and is expected to produce 7,107 kWh and saving about five tons of CO₂ annually.

The challenge of this installation is to produce high yield even if there is often fog during the morning hours due to the proximity to the river Mosel. Solar Frontier CIS thin-film modules were found to perform better than other technologies because of their low light behaviour. In addition to the high efficiency of the modules under low angle irradiation on west aligned rooftops, the aesthetic design of the lead- and cadmium free modules were also compelling factors. The modules' homogeneous black design enhances the special style of the roof, too.

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