

Case Study

PRIMA SOLAR

Commercial Rooftop Sonneberg



Sonneberg, Germany



Solar Frontier modules can be installed also on agricultural buildings, such as Sonneberg, thanks to their ammonia resistance. (Image: Prima Solar)

Site Overview

Location	Sonneberg, Germany
Coordinates	50.31° N, 11.18° E
Average global irradiance	1,053 kWh/m ² /yr
Average temperature	8.7 °C, 47.7 °F
Average precipitation	551 mm/yr, 21.7 in/yr

Technical Overview

Date onstream	April 2012
System capacity	1,724.4 kWp
Panel type	SF150-L (150 W)
Number of installed panels	11,496
Tilt angle, orientation	14°, 151° N/ -29° S/ -119° E/ 61° W
Expected output	1,538,165 kWh/yr
Total CO ₂ reduction	824,456 kg/yr, 1,817,614 lbs/yr
Inverter	decentralized 8 x Sinvert PVM10 4 x PVM13 75 x PVM17 7 x PVM20

Financing Bank

Deutsche Kreditbank AG

"The environmentally friendly CIS modules, free of cadmium and lead, not only offer the highest output, thanks to their black appearance they also integrate very well into the agricultural environment. An additional extremely important factor to us is the fact that the modules are well suited for corrosive environment. TÜV Rhineland has certified the ammonia resistance of Solar Frontier's CIS modules."

Ronny Rohr,
Managing Director of Prima Solar GmbH

Prima Solar, located in Neuruppin, Brandenburg, offers its customers full package photovoltaic solutions for small residential rooftops up to bigger commercial installations. They cover all related areas starting from planning to finance and installation. So far the company has completed more than 800 solar installations for residential and commercial customers as well as for investors.

Within only three weeks, 11,496 Solar Frontier CIS thin-film modules of the type SF 150-L were installed on several rooftops of agricultural buildings in Sonneberg. The installation mounted on several cowsheds has a total capacity of 1,724.4 kWp and is expected to generate 1,538,165 kWh of electricity per year. Thus about 340 four-person households can be supplied with solar energy and consequently 824 tons of CO₂ are avoided yearly.

Thanks to its unique CIS technology, Solar Frontier modules show good performance even under circumstances considered to be less than optimal, such as low tilt angle of only 14 degrees or an east-west orientation. Due to their good low light behavior and high shadow tolerance, Solar Frontier's CIS thin-film modules generate higher output levels than crystalline modules. In addition, Solar Frontier's modules have passed all ammonia resistance tests, certifying their suitability for installation in corrosive environments, typically found in agricultural plants hosting cow and hen farming. The CIS modules are free of cadmium and lead and due to their black appearance integrate well in the surrounding environment.

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