

Case Study

BE NETZ AG

Commercial Rooftop Beromünster



The black CIS thin-film modules are well integrated into the roof of the Art Gallery 4. (Image: BE Netz AG)

Site Overview

Location	Beromünster, Switzerland
Coordinates	47.20° N, 8.17° E
Average global irradiance	1,186 kWh/m ² /yr
Average temperature	9.1 °C, 48.4 °F
Average precipitation	1.223 mm/yr, 48.2 in/yr

Technical Overview

Date onstream	December 2011
System capacity	22.23 kWp
Panel type	SF130-L (130 W)
Number of installed panels	171
Tilt angle, orientation	45°, -41° E
Expected output	20,295 kWh/yr
Total CO ₂ reduction	11,426 kg/yr, 25,190 lbs/yr
Inverter	SMA SunnyBoy 2500

Financing Bank

Private Investment

“This aesthetic, roof-integrated thin-film solar installation with Solar Frontier modules is well integrated into the landscape. It provides energy for an art installation by the internationally renowned artist Wetz and highlights the ambitions of the KKL B (arts and cultural center Beromünster), to provide themselves with renewable energies.”

Stephan Roth,
Project Manager photovoltaic BE Netz AG

The BE Netz AG, headquartered in Lucerne, Switzerland, is a competent partner in building service technologies. The company is specialized in generating energy and heat from solar energy. The services of BE Netz AG include engineering services, planning and realization of photovoltaic and solar thermal systems and replacement of heating systems with renewable energies. With their experience from numerous solar systems, BE Netz AG provides its customers with individual and customized solutions in renewable energies.

The 22 kWp system with CIS thin-film modules was installed at the end of 2011 on the roof of an art gallery, which is on the grounds of the state broadcaster Beromünster. The area, containing a broadcasting building and the 215 m high transmission mast de-commissioned in 2008 was acquired by the Swiss artist Wetz for a symbolic 5 Swiss francs, and has now been converted into an arts center. In collaboration with BE Netz AG, the Energy Academy was established, which advocates for the promotion of renewable energies.

The 171 thin-film modules on the roof of the Art Gallery 4 supply the area with electricity and heat from renewable energy sources, along with a solar thermal plant and a wood chip heating plant, the area with electricity and heat from renewable energy sources. Installed on the southeast side of the building, the PV system will generate over 20,000 kWh of energy annually and will avoid almost 12 tons of CO₂ emissions. The Solar Frontier modules convinced the customer, in addition to their high performance even under non-optimal irradiation angles, especially by their black appearance, which additionally upgrades the overall look of the building.

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