

Case Study

HopSol

Residential Rooftop Swakopmund



Swakopmund, Namibia



Solar Frontier modules on the award-winning villa by architect Erhard Roxin. (Photo: HopSol)

Site Overview

Location	Swakopmund, Namibia
Coordinates	22.7° S, 14.5° E
Average global irradiance	2,050 kWh/m ² /yr
Average temperature	15 °C, 59 °F
Average precipitation	13 mm/yr, 0.5 in/yr

Technical Overview

Date onstream	August 2012
System capacity	3.6 kWp
Panel type	SF150-L (150 W)
Number of installed panels	24
Tilt angle, orientation	30°, 180° N
Expected output	6,718 kWh/yr
Total CO ₂ reduction	3,782 kg/yr, 8,338 lbs/yr
Inverter	SB 4.000 TL-20

Financing Bank

—

"For this villa and the extreme climatic conditions of the Namibian coastline, Solar Frontier's CIS thin-film technology offered me an ideal combination of excellent technical performance and outstanding aesthetic integration of the modules in the overall context of the property."

*Erhard Roxin,
Architect and homeowner*

HopSol provides turn-key solutions for photovoltaic power plants. HopSol's head office is located in Switzerland and the headquarter of HopSol Africa (Pty) Ltd has been established in Windhoek, Namibia, for its customers in southern Africa, where they have specialized in fulfilling the requirements of the solar industry for desert regions. Furthermore, HopSol acts as a wholesaler of all relevant parts for photovoltaic solar power solutions. Superior quality of modules and balance of equipment, along with engineering experience for desert conditions are crucial success factors.

This 3.6 kWp installation on the roof of an award-winning villa of the architect and owner of the property, Erhard Roxin, was connected to the grid in August 2012. The installation is optimal for PV with roof orientation to north and a tilt angle of 30 degrees. The roof system's 24 Solar Frontier's CIS thin-film modules will generate more than 6,700 kWh of electricity annually, thereby avoiding almost four tonnes of CO₂ emissions.

For this uniquely located facility close to the Atlantic coast, the owner had several reasons to select Solar Frontier modules as first choice. They are well suited for the extreme climate conditions of Swakopmund as despite high temperatures the modules generate higher output levels. This is due to the technology's low temperature coefficient. Also, the good low-light behavior leads to higher yields in the case of fog, which frequently comes from the sea. The salt mist resistance of the modules makes them an optimum solution for coastal regions as well. The combination of these unique properties plus the integration of the black modules in the overall appearance of this villa fully convinced the the architect and homeowner.

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