

Case Study

HopSol

Commercial Rooftop Windhoek



Solar Frontier modules on several chicken coops under the hot Namibian sun. (Image: HopSol)

Site Overview

Location	Windhoek, Namibia
Coordinates	22.6° S, 17.1° E
Average global irradiance	2,363 kWh/m ² /yr
Average temperature	19.9 °C, 66.4 °F
Average precipitation	362 mm/yr, 14.3 in/yr

Technical Overview

Date onstream	September 2012
System capacity	69.6 kWp
Panel type	SF150-L (150 W)
Number of installed panels	464
Tilt angle, orientation	14°, 180° N
Expected output	151,102 kWh/yr
Total CO ₂ reduction	85,070 kg/yr, 187,545 lbs/yr
Inverter	4 x Sunny Tripower STP 17.000 TL-10

Financing Bank

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"This installation will have a payback time of less than five years and will then supply another 20 years and more green electricity almost for free. Facing annual electricity price increases of approximately 20%, this is a fantastic prospect."

*Eckhard Waldschmidt,
Owner of the chicken farm*

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 nearly 70 kWp system was installed on a chicken farm on several rooftops of the Waldschmidt Eggs company in the Namibian town of Windhoek. On the rooftops of the parallel running chicken coops, CIS modules of Solar Frontier were installed in two rows facing to the north, with a low tilt angle of only 14 degrees. The system will annually produce more than 150,000 kWh of electricity and thus offset over 85 tons of CO₂ emissions. The PV installation will cover about 70 % of the annual electricity demand of the chicken farm, which underlines the environmental commitment of the company.

Besides the ecological aspects of this installation, the economics were also a crucial factor for the owner. Due to the high irradiation levels, increasing energy costs in Namibia and the high efficiency of the Solar Frontier thin-film modules, the owner of this PV installation is expecting a payback time of less than five years. Another important criterion for the use of Solar Frontier's CIS modules was the ammonia resistance of the modules. The Solar Frontier modules combine all these advantages and thus represent the most ecological and economical solar power solution for Waldschmidt Eggs.

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