



# Project Gam

Otjozondjupa Region, Namibia

HopSol

Solar Power Plants

“The people of Gam have experienced for the first time in their lives how it is to have electricity in the village, how it is to have street lights during the night and how the standard of living can improve with generating their own green power. When we switched on the lights for the very first time in Gam, it was a big public party! We are proud that we have been able to empower these people with our technology.” Bjoern Wilschke, CEO HopSol Africa (Pty) Ltd.

**292 kWp**  
System capacity

**642 MWh/yr**  
Expected output

**425 tons**  
CO<sub>2</sub> reduction / year

**2,016**  
Installed panels

**tsmc solar**

New Power.  
New Thinking.

# Project Gam

Otjozondjupa Region, Namibia

Gam is a settlement with more than 1600 inhabitants in Otjozondjupa Region / Namibia who never had electricity. The Namibian Ministry of Mines and Energy awarded HopSol with the construction of a solar power plant to provide this settlement with energy. On 22 October 2014 the biggest off-grid solar power plant in Namibia has therefore started operation in Gam and provides the whole Gam settlement with electricity made from the sun.

In addition to the positive effects to the Otjozondjupa Region in terms of access to electricity, the project had also positive effects on the job market in the area: more than 30 locals of the settlement were employed by HopSol and its subcontractors to make the solar power plant come into existence.

The solar array is combined with a battery bank which has a capacity of about 2.5 MWh (576 pieces of 2 Volt cells). The batteries and inverters together fill a room of 6m by 40m and the whole installation covers an area of about two soccer fields. The solar system operates fully automatically controlled by SMA Sunny Island Inverters and satisfies a maximum demand of 200kW for 24 hours.



## Installation

Location	Otjozondjupa Region, Namibia
Coordinates	Lat E 20°14'20.75", Long S 20°48'42.22"
Average global irradiance	2500 kWh/m <sup>2</sup> /yr
Average temperature	25.7 °C max ~ 11.95 °C min
Average rainfall	300 mm

## Technical Specifications

System capacity	292 kWp
Panel type	TSMC (TS-145C1)
Quantity of installed panels	2,016
Tilt angle, orientation, inclination	20° North
Expected output	642 MWh/yr
Total CO <sub>2</sub> saved	425 tons per year
Inverters	16 SMA STP 20000TLEE; SMA SI8.0H (36x) plus MC- Box 36
Expected output	642 MWh/yr
Date of inauguration	October 2014

### About TSMC Solar

TSMC Solar Ltd. is a wholly-owned subsidiary of Taiwan Semiconductor Manufacturing, Inc. (NYSE: TSM), the acknowledged semiconductor dedicated foundry segment leader with market capitalization exceeding \$90 billion. TSMC's solar business was founded in May 2009 and is headquartered in Taichung, Taiwan, with regional sales offices in Hamburg, Germany; San Jose, California and Boston, Massachusetts. Visit us at [www.tsmc-solar.com](http://www.tsmc-solar.com)!

### About HopSol

HopSol provides turn-key solutions for photovoltaic solar power plants. HopSol's head office is located in Wilen, Switzerland and the headquarter for the southern African region, HopSol Africa (Pty) Ltd, has been established in Windhoek, Namibia. HopSol has specialized in photovoltaic solutions for deserts and desert-like regions and acts as a wholesaler of all relevant parts for photovoltaic solar power solutions. Due to the specific climatic conditions in desert regions the selection of the right technology is decisive in order to ensure an outstanding economic performance of investments in solar power plants. Therefore HopSol trusts in superior quality CIS/CIGS-modules as one crucial success factor. For further information please visit [www.hopsol.com](http://www.hopsol.com).