

Case Study

IBERDROLA

CFE Solar Power Plant in Cerro Prieto



More than 11,500 CIS thin-film modules from Solar Frontier were installed in Cerro Prieto to create the largest solar power plant currently operating in Mexico. (Photo: Iberdrola)

Site Overview

Location Cerro Prieto, Mexico

Coordinates 32°25'00,28"N,
115°13'54,51"W

Average global irradiance 2,150 kWh/m²/yr

Average temperature 22.9°C , 73.22°F

Average precipitation 35,1 mm/yr, 35 in/yr

Technical Overview

Date onstream December 2012

System capacity 1.5 MWp

Panel type SF130-L (130 W)

Number of installed panels 11,540

Tilt angle, orientation Solar Tracker System

Expected output 2,205.7 kWh/yr

CO₂ reduction 1,905 kg/yr; 4,200 lbs/yr

Inverter SMA SC500CP

Financing Bank

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"The roughly 11,600 CIS-Modules from Solar Frontier have far surpassed our expectations: We are extremely impressed by the CIS modules, because their exceptional temperature stability enables them to deliver very high yields even in the heat of Mexico."

*Luis Carrasco Marín,
Renewable Energy Division,
Strategic Renewable Technology Supply Chain*

Iberdrola Ingeniería & Construcción México SA de C.V. is a division of the Spanish Iberdrola Group, one of the largest energy supply corporations in the world. The commercial activities of the company include the provision of technical services, ranging from feasibility studies all the way through to "turnkey" projects, both for other companies in the Iberdrola Group and for third parties.

Iberdrola decided to use 130 Watt class CIS modules from Solar Frontier to generate 1.5 MW in a 5 MW project in Cerro Prieto, Mexico. About 11,600 of these modules had already been shipped in August and September 2012. The Cerro Prieto project was conceptualized, financed, supervised and is operated by the state energy supplier in Mexico, Comisión Federal de Electricidad (CFE), this is the largest PV system currently operating in Mexico. In this project, Iberdrola is using both Solar Frontier PowerModules and modules based on a competing technology.

The hot climate of Mexico, where the average annual temperature is 22.9 °C, and the fact that the Solar Frontier PowerModules are mounted on single-axle solar tracking systems, enhances the effect of the good temperature coefficient. The outstanding temperature stability of the CIS modules results in high, more stable yields in these hot climatic conditions. Even the presence of sulphuric acid (H₂S) in the atmosphere does not impair the performance capabilities or the durability of Solar Frontier PowerModules.

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