

# Case Study

## BELECTRIC FRANCE

### Free-Field Solar Power Plant Bessan



Bessan, France



The Solar Power Plant with the 29,931 modules is the first Free-Field Solar Power Plant, based on Solar Frontier's CIS technology. (Image: BELECTRIC France)

#### Site Overview

<b>Location</b>	Bessan, France
<b>Coordinates</b>	43.37° N, 3.38° E
<b>Average global irradiance</b>	1,480 kWh/m <sup>2</sup> /yr
<b>Average temperature</b>	15.1 °C, 59.18 °F
<b>Average precipitation</b>	640 mm/yr, 25.2 in/yr

#### Technical Overview

<b>Date on stream</b>	September 2011
<b>System capacity</b>	4.19 MWp
<b>Panel type</b>	SF140-L (140 W)
<b>Number of installed panels</b>	29,931
<b>Tilt angle, orientation</b>	15°, 0° S
<b>Expected output</b>	5,570,000 kWh/yr
<b>Total CO<sub>2</sub> reduction</b>	4,010,000 kg/yr, 8,840,537 lbs/yr
<b>Inverter</b>	SMA: SC 400HE, SC 500HE, SC 630HE

#### Financing Bank

Saar LB

*"With Solar Frontier modules we were able to achieve the economics we needed while at the same time having optimal aesthetic integration with the environment."*

*Jochen Meyer, CEO BELECTRIC France*

BELECTRIC designs, manufactures and constructs photovoltaic systems around the world. Beside Free-Field Solar Power Plants, they offer a wide product range consisting of photovoltaic rooftop installations as well as photovoltaic parking lot rooftops or photovoltaic greenhouse installations. The company is headquartered in Lower Franconian Koltzheim and employees 2,000 people in 15 nations.

BELECTRIC France, based in Vendres, and building on the company's tradition, develops and constructs roof-mounted photovoltaic systems and utility-grade-free-field solar power plants through its own engineering team. Taking advantage of BELECTRIC's expertise, Bessan is the first power plant in France to use Solar Frontier's cadmium and lead free CIS modules.

Based on an idyllically located historical vineyard in the south of France, this installation took only six weeks from planning to grid connection. The 29,931 black modules are installed at an incline of 15 degrees – lower than the more usual 25 degrees – and thereby integrating the homogenously black plant even better into its surroundings.

With an installed capacity of 4.19 MWp, the RoHS compliant Solar Frontier CIS modules are expected to generate an annual output of 5,570,000 kWh and a CO<sub>2</sub> reduction of 4,010 tons per year.

#### About Solar Frontier

Solar Frontier is committed to creating the world's most ecological, economical solar energy solutions, on the world's largest scale. 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](http://www.solar-frontier.com)