



Project Profile

Banwell, United Kingdom



Excellent performance under challenging conditions

High-performing CIS Solar Power Plant in Banwell sets tone for upcoming solar power plants in the UK.

7.15 MW

Very short construction time of 2 months only

7.7 GWh of electricity per year

Electricity for approximately 1,900 homes per year

High value-focused investment

Premium quality PV system

Extremely short construction period

The construction of the ground-mounted 7.15 MW power plant in Banwell (Somerset County, England) was very short, started under tough winter conditions and taking place only between mid-January and mid-March 2015. Despite the challenging conditions and tight schedule, successful grid connection was completed on March 19th, 2015.

Perfect match: UK weather conditions and Solar Frontier CIS modules

Along with the rest of South West England, Banwell has a temperate climate. However, convective cloud sometimes forms, reducing the number of hours of sunshine. Annual sunshine rates are slightly less than the regional average of 1,600 hours. Average rainfall is around 867 mm (34.13 in). This is precisely where the advantages of Solar Frontier CIS technology come in. Thanks to their high shadow tolerance and their favorable low-light performance the CIS PowerModules are achieving higher yields than other module technology. A performance ratio of more than 90% was achieved continuously at a very early stage since the beginning of operations. The project is expected to generate around 7.7 GWh of electricity a year. The power generated from the power plant is enough to supply electricity to approximately 1,900 homes.



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Site Overview

| | |
|---------------------------|------------------------------|
| Location | North Somerset, Banwell, UK |
| Coordinates | 51°19' N, 2°51' W |
| Average global irradiance | 1,057 kWh/m ² /yr |
| Average temperature | 9.9 °C, 50 °F |
| Average precipitation | 867 mm/yr, 34.13 in/yr |

Technical Overview

| | |
|---------------------------|-------------------------|
| Date onstream | March 2015 |
| System capacity | 7,149.52 kWp |
| Panel type | SF170-S |
| Number panels installed | 42,056 |
| Tilt angle, orientation | 15°, 0° (S) |
| Expected output | 1,080 kWh/kWp/yr |
| CO ₂ reduction | 654 kg/yr, 1.442 lbs/yr |
| Inverter | Schneider PVbox |

Sustainable in every way

Furthermore Solar Frontier PowerModules comply with the stringent requirements of the RoHS (Restriction of Hazardous Substances), an increasingly important criterion for investors in reference to renewable energy. Eliminating cadmium and lead: no environmentally hazardous materials are processed by Solar Frontier.

The key to success: high quality components and reliable partners

The success of this project was also a result of the quality of the components, excellent teamwork on the part of all players, and early involvement of all stakeholders. New Energy for the World (NEW) acted as developer and EPC and demonstrated best practice in a team-oriented development approach. Value-oriented investors appreciate the high quality of all components, the outstanding performance and the Solar Frontier guarantee package. As a result, very high interest among investors was generated for the purchase of the Banwell project. After just a short time in operation, the Banwell power plant was transferred in May 2015 to an institutional investor.

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.eu

