

Case Study

LIFE LONG ENERGY

Commercial rooftop Darlington



Darlington, UK



The Solar Frontier modules are visibly upgrading the new stadium of the football club due to their appealing appearance. (Image: Life Long Energy)

Site Overview

Location	Darlington, UK
Coordinates	54.51° N, 1.54° W
Average global irradiance	1,100 kWh/m ²
Average temperature	8.8 °C, 47.84° F
Average precipitation	660 mm/yr, 25.98 in/yr

Technical Overview

Date onstream	February 2014
System capacity	142.1 kWp
Panel type	170-S (SF170 W)
Number of installed panels	836
Tilt angle, orientation	15°
Expected output	156,000 kWh/yr
CO₂ reduction	81,500 kg/yr
Inverter	Schneider contact 20,000 and 10,000

Financing Bank

Private Investment

"For our stadium project in Darlington we needed a solar solution that presents the building in the right light and does not show a loss in yield due to possible shadow on the modules. Due to their numerous advantages the PowerModules of Solar Frontier were the best option."

*Danny Brown,
Darlington Mowden Park Rugby Football Club*

Life Long Energy is a medium sized business based in Nottingham, UK. With its 150 years of experience in renewable energy and construction, the company is a well-established and reputed player in the sector.

With its capacity of 142.1 kWp, this impressive Solar Frontier installation represents the largest on roof thin film installation in the United Kingdom. The solar system was installed at the Northern Echo Arena in Darlington, which is home to the Darlington Mowden Park Rugby Football Club and comprises a total of 866 PowerModules, which are based on the CIS technology. On site, the modules are exposed to partial shade due to the steels of the cantilever roof. This will, however, only slightly limit the output of the installation as Solar Frontier CIS modules are knowingly producing unrestrictedly energy although under partial shade. For the installation of Darlington Mowden Park Rugby Football Club, thus, an annual output of 156,000 kWh was calculated.

Accordingly, the new Solar Frontier facility helps the club to reduce the cost of operating their new and considerably larger stadium. Thanks to the PowerModules of Solar Frontier, the club can now cover the resulting higher energy requirement with solar energy. The responsible project managers are enthused about Solar Frontier's PowerModules: in a direct comparison with the polychristalline modules which were also installed on the roof, the Solar Frontier modules showed higher yields which can be attributed, amongst others, to the excellent low light behaviour of the 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