



What's happening?

Best practice at *Blackfriars* Solar Panels

Overview:

The improvements being made at Blackfriars station will ensure, not only a better journey experience for passengers and make London's South Bank and other tourist attractions much more accessible, but also a sustainable station through the installation of the largest solar photovoltaic (PV) roof array in UK.

The designers were able to incorporate over 6,000m² of PV panels onto the new roof of the historic structure, an area almost as large as Wembley stadium's football pitch.

- Any extra energy produced will be fed back into the grid
- Low maintenance due to no moving parts, and a micro smooth surface enables self cleaning at a 5° tilt
- Highly reliable and predictable energy production
- Longevity as PV panels last 40 to 60 years

In addition to solar panels, other energy saving measures at the new station will include sun pipes for natural lighting, rainwater harvesting and thermal insulation.



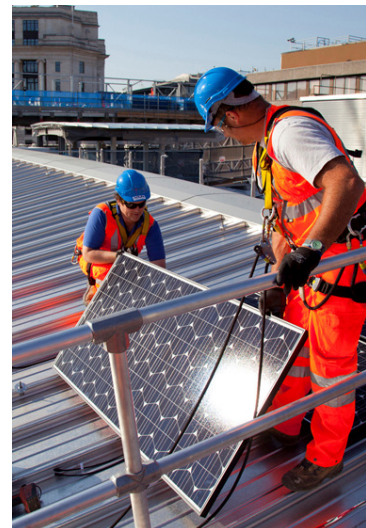
Meeting our objectives & targets:

Installation of the PV panels will allow the station to reduce its energy consumption and costs during operation. It will also comply with the Network Rail Sustainable Design and Construction Strategy (restrict carbon emissions) and CEEQUAL (evidence of the project considering energy usage during operation).

The PV panels convert the sun's light into DC electricity. Inverters will then convert the DC electricity to AC which is then used by the station. Any excess electricity created is fed into the National Grid.

Best Practice:

- Over 4,400 solar panels will span the bridge
- The solar panels will generate up to 50% of the station's energy and reduce carbon dioxide emissions by an estimated 511 tonnes each year,



Installation of the first panel - Oct 2011