

# Solar helps reduce carbon emissions

The London Borough of Southwark has invested in Centrica's solar photovoltaic (PV) package at a cost-effective price that will also reduce carbon emissions in the district.



## Delivering solar PV in a restrictive space

The tight conurbation of the London Borough of Southwark presented many challenges in finding a suitably sized building which offered a cost-effective price to introduce solar PV.

## Finding additional on-site capacity

Veolia worked in partnership with the London Borough of Southwark to provide a long-term integrated waste management solution that diverts over 90% of the borough's household waste away from landfill. The Devon Street facility handles all the borough's household waste and recycling using the best available recycling and treatment technologies.

The recycling and waste management takes place in one integrated building and the roof area of 30,000m<sup>2</sup> has presented Southwark with an ideal platform on which to mount a large-scale cost-effective PV array.

Centrica Business Solutions worked with the main contractor to build the current design and identified areas with sufficient capacity to take additional loads. It also ensured the integrity of the building, and that warranties remained, while also maintaining compliance with current building regulations.

The site has a supply of 2.3MVA which powers heavy process plant, conveyors and odour extraction on a 24/7 operation. The district network operator (UKPN) – played a key role in modelling the installation to determine any adverse effects of PV on such scale in such a tight conurbation, before granting approval.

## Results

We worked closely with CA Building Products to ensure that residual guarantees would not be compromised through the mounting rail and clamp system.

An optimised inverter solution was chosen to enhance the performance of the PV system on a waveform roof.



Annual CO<sub>2</sub>  
reduction



Peak  
output



PV panels covering  
gross area of four  
football pitches

## Why Centrica Business Solutions?

- Worked closely with the London Borough of Southwark and PFI contractor, Veolia to design the best solution, tailored to the building's roof structure
- Ability to provide a cost-effective large scale solar photovoltaic (PV) in a tight conurbation
- Ensured that residual guarantees would not be compromised through the mounting rail and clamp system
- Provided detailed performance and monitoring data at modular level

With constantly varying light and pitch conditions, the optimised solution manages light, shade and varying pitch through module mounted optimisers to ensure each PV module performs to the maximum.

The SolarEdge optimised inverter solution introduces further benefits, including DC Safe®, an automatic Direct Current (DC) isolation at the module, as well as a detailed monitoring package, providing the client with performance data at module level. The installation led to an overall CO<sub>2</sub> reduction of 337 tonnes, including 256 during Phase 1 of the project.