



Case Study: 10% Renewables, Sydenham Road, Croydon

Client:

Wates

Solar Twin Ltd
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Main Contractor:

Ruskin
HOMES

Ruskin Homes approached Solartwin in October 2004, about a block of 41 flats they proposed to build, a mixed development of private units for sale, and social housing for London and Quadrant Housing Association. Croydon Council were one of the first to require that on larger housing developments, 10% of all energy used in the properties should come from renewable sources.

Solar thermal is widely recognised as the most cost effective of renewable energy sources .

Ruskin Homes were able to calculate the typical energy consumption of the apartments of this type. For Solartwin to provide 10% of the total energy demand, 12 systems would be required, 9 for private housing, three for the larger social housing units. Each system is expected to provide up to 70% of the hot water requirements across the year, and will reduce CO₂ emissions by 250kg annually.

The installation

The building had already been designed with a large flat roofed area in the centre, with plenty of room for three rows of four panels. These were to be connected to flats on the fourth and fifth floors, with one system going to a third floor unit.

Solartwin approved installers have carried out the installation, working closely with Ruskin Homes, to co-ordinate the associated building and plumbing works. Work has been completed in several stages.

Solartwin supplied special leg mounts with spreader plates, that were mounted on the timber deck of the roof, then weathered into the roofing felt. We then fixed A frames to the bespoke supports with 'Z' clamps. Pipe runs have been enclosed in galvanised ducting across the roof, then run through floor and ceiling voids to airing cupboards, where the systems are connected to open vented thermal stores.



Performance

The panels are mounted at 45 degrees, and facing almost due south. The 45 degree angle increases winter collection, whilst having minimal impact on useable summer solar collection. With each Solartwin panel generating 1000kwh per annum at the point of delivery, this equated to 2000 kwh per annum per system of displaced gas.

Seldown Blocks D & G Renewable Energy Technology Datasheet:

Renewable energy type: Solar thermal
Application: Domestic hot water
Number of collectors: 12
Orientation: South
Angle of tilt: 30 degrees
Collector total aperture: 33.6 sqm
Panel type: freeze-tolerant

Pump type: 24V variable speed
Power supply: 5 Watt PV cell (x12)
Calorifiers: 170 litre thermal store (x12)
Backup fuel: Gas
Global warming target: save 2000 kg CO₂ p.a.
Manufactured in: England

