

Case Study: Fernside Solar Village



PROJECT SUMMARY

This case study provides an overview of an initiative to create a solar village comprising 100 homes, including bungalows and flats, in the Fernside Estate, managed by Kirklees Neighbourhood Housing, in Almondbury, Huddersfield.

Two nearby schools have also been supplied with domestic sized solar power systems which are now a valuable educational resource.



PV panel at King James High School

PROJECT AIMS

The project aimed to:

- Reduce tenants' fuel bills. The tenants' homes are currently heated by electric storage heaters – the residents therefore pay a higher day time charge for their electricity than households on a general tariff. The majority of occupants are disabled or elderly, some of whom face fuel poverty so will benefit from the energy generated during the day.
- Supply tenants with power from renewable energy sources. The panels will provide around 20% of electricity needs.
- Establish home school links through the installations on the schools, to encourage learning about energy in the wider community.
- Maintain Kirklees Council's leadership in the support of renewable energy both locally and in the UK by increasing its capacity to deliver large scale initiatives.

- Contribute to the council's meeting target of meeting 5% of the district's energy demand from renewable sources by 2005.
- Install a total of 108 kWp of solar PV (plus 2kWp on schools) to contribute towards meeting a SunCities target of 400kWp solar PV installed on homes in Kirklees.
- Provide educational benefits to the area through installations on two schools. Both schools are participating in a free project called School Energy. It offers learning about energy, the impacts its production and consumption have on the environment, and the importance of reducing energy consumption.

Installation commenced in mid July 2005 and was completed by October 2005.

HOW IT STARTED

The project at Fernside is part of a European scheme called SunCities. Through this programme Kirklees Council, with partners from the Netherlands and Germany, aims to install a total of 3.05 MW (megawatts) of solar photovoltaic (PV) systems in several thousand dwellings. This includes a total of 400kW of PV in Kirklees.



Photo: Sustainable Energy Installations

TECHNOLOGY

Each house features six (6) photovoltaic panels capable of producing 1.08kWp. The total area of panels is approximately 8.0m² and the system is anticipated to provide around 20% of the energy needs of each home (around 750kWh per year). Residents can see when the system is generating electricity via a monitoring device.

The energy performance of the homes has also been upgraded under the Decent Homes Plus programme, through improving wall and loft insulation and installing double glazing.

FUNDING AND EXPENDITURE

The project was funded from several funding sources as set out below:

	(£)
Total cost	495,000
Cost per kW	4,400
Funding:	
DTI – Major Development Programme	190,000
EU – SunCities programme	107,000
Kirklees Neighbourhood Housing	55,000
KMC Renewable Energy Fund	145,000 (+20,000 for schools)

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