Tower Hamlets turns up the heat

Tower Hamlets council used public finance initiative (PFI) funding to create a district heating scheme to provide cheaper heat and hot water to a housing estate. The scheme was particularly important as it tackled fuel poverty in an area where the majority of residents received state benefits.

Project

The Barkantine combined heat and power (CHP) district heating scheme replaced the original heating network that ran from the turn of the century to the end of the 60s. The new system supplies heating and hot water to around 500 homes. The Tower Hamlets council scheme was the first of its type in London when it started running in 2001.

Funding

The scheme has received PFI funding of more than £6 million, plus a £12,500 grant from the Energy Saving Trust. The PFI credit from the Department of the Environment, Transport and the Regions was approximately £5 million. Tower Hamlets council estimates that it spent 1.5 years of staff time and £250,000 on establishing the scheme.

Following the initial set-up work, it then set up a multi-disciplinary team to design the scheme, negotiate a PFI contract and implement the project. The London Power Company (LPC) is the private sector partner and provided 80 per cent of the total capital costs.

Motivation

The district heating scheme provides affordable heat and hot water to a deprived area, reducing fuel bills for connected residents. It is estimated that around 80 per cent of those living on the Barkantine estate receive state benefits.

Making a positive environmental impact was an important factor in the choice of a CHP district heating system. The project's aim is to reduce carbon dioxide (CO2) emissions by 30 per cent, which is consistent with CO2 targets of the Home Energy Conservation Act.

Barriers

Residents of the Barkantine estate were initially unwilling to have communal heating. They felt that the old warm air communal heating system on the estate had been inefficient and badly-managed.

To allay these concerns, the council’s Energy Efficiency Unit set up a consultation process to explain the benefits. An energy advice service was set up to give independent advice to tenants. Community meetings and an exhibition were held on the estate - the latter attended by London Electricity, boiler manufacturers, the local MP and councillors.

The communications, advice and events were a key factor in boosting residents' confidence in the proposed scheme. The low price of heat on offer, when compared to gas prices, was also important in influencing the tenants.

To make sure people fully understand the system and are able to ask questions, a community liaison office is on site daily. There is also a tenant consultative committee. Three resident representatives
and three LPC staff meet every six months to discuss the quality of the service and potential improvements and expansion of the scheme.

**Lessons learned**
Seven council staff worked on the project overall, with five of these putting in more than 300 days working up the business case. More time was spent developing, progressing and negotiating the scheme than Tower Hamlets initially expected. For future developments, the council would establish a team dedicated to the project.

The council originally planned to enter into a joint venture with London Electricity Group. Tower Hamlets would have owned 20 per cent of the venture. The council decided that it didn't have the necessary powers to participate and there were legal constraints.

Instead, a concession agreement was signed between the council and the private sector partner whereby Tower Hamlets will get a share of any profits in excess of the expected return every two years. This will be used to fund energy efficiency measures in homes on the estate. At the end of the 25-year contract the plant will revert to the council.

**Benefits**
The scheme saves approximately 8,000 tonnes of CO2 per year, or 200,000 tonnes of CO2 over the length of the contract.

Each household saves 2 tonnes of CO2 each year, which means they produce a third less than the average UK resident. Each home has saved approximately £1,000 since 2001.

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