



penelope · bacchus

Promoting Energy efficiency to Local Organisations
through dissemination Partnerships in Europe
Best Actions for Collaboration in Countries
for a High efficient Use of energy in Structural funds

- [Print](#) - [Close](#) -

Renovation of a cogeneration unit and sale of electricity -

Southwark - United Kingdom

In 1995, the power plant which supplied heating for a block of 149 apartments had to be renovated and the opportunity was taken to install a cogeneration unit and modular gas-fired boilers.

Target Groups	Sector	Field
<ul style="list-style-type: none"> - Local authority - Energy utilities 	<ul style="list-style-type: none"> - Energy supply - Buildings (including municipal properties) 	<ul style="list-style-type: none"> - CHP

ANALYSIS

CONTEXT

Southwark (230 000 inhab.) is one of the 32 municipalities which make up Greater London and is situated on the south bank of the Thames, close to the City.

Energy management and environmental protection are part of Southwark Town Council's energy policy. The general energy policy in the Borough, stimulated by the "Home Energy Conservation Act" (HECA), has forced the municipality to reduce home energy consumption by 30%.

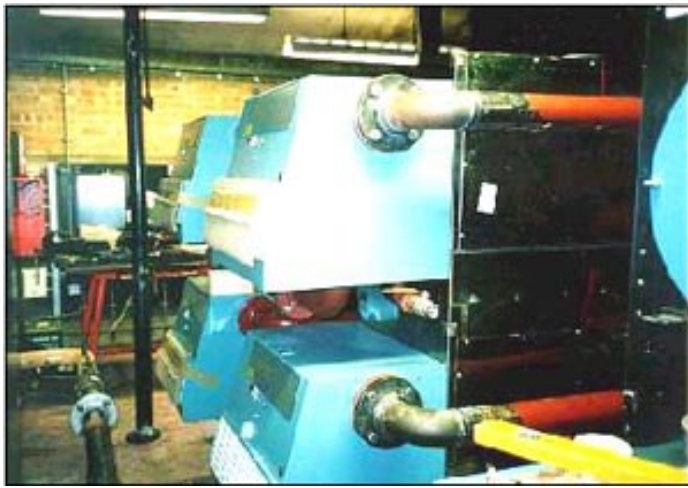
COGENERATION UNIT

The municipal building, Ovgan Estate, belonging to the municipality, was built in the 1970s and includes 149 apartments. Since 1995, a small cogeneration unit has supplied part of the building's heating and domestic hot water. The total area heated is 7 830 m², and the power required for heating is 7 to 9 kW per apartment, while heat consumption is around 28.5 MWh. A gas-powered mini-cogeneration unit called a "Countryman Cogen" was selected. The size of the motor – 110 kW electrical power and 170 kW thermal power – was chosen to meet inter-seasonal heating requirements for domestic hot water and heating for the apartments.

SALE OF ELECTRICITY

The size of the unit was not based on heating requirements but according to the pricing situation. In this way, all the heat produced by the unit is used for the building and all the electricity – apart from local needs for the boiler house – is injected into the national grid, and consequently sold to the local electricity company, "London Electricity plc".

The cogeneration unit runs from 7:00 to 24:00 throughout the year. This is mainly due to the London Electricity pricing structure. There are major differences between the price of electricity sold, which can range from 0.013 euros per kWh to 0.058 euros per kWh.



COGENERATION UNIT



BUILDING "OWGAN ESTATE"

COST AND BENEFITS

The total investment for the cogeneration unit, including delivery, installation, and the cost of connection to the national grid, was 50,500 euros.

The investment was financed by the London Borough of Southwark, helped by a 20% subsidy from the Combined Heat and Power Association (CHPA) and the Energy Saving Trust (E.S.T).

The unit was installed in May 1995 and the results obtained have permitted a return on investment to be recorded in 3.5 years, including the CHPA subsidy.

There are no penalty costs in the event of failure to supply electricity to London Electricity. In the absence of production, the only extra expense is to have to purchase electricity at a higher price than the production cost.

The entire installation is covered by the Municipality's general insurance policy. The cogeneration unit and boiler house are maintained by "Country Group Ltd". The cost of maintenance is 3,330 euros per year.

The profits made by Southwark "Housing Energy Management" are firstly economical – reduced energy costs, from which tenants also benefit, and reduced CO2 emissions.

PARTNERSHIP

When it needed to renovate the cogeneration installation at Owgan Estate, the district Housing Department contacted CHPA, to verify the type of cogeneration unit must suitable for their requirements, and to find out how to begin.

Combined Heat and Power Association (CHPA) is an organization which promotes the use of cogeneration and heating networks. The association, with its members, works with local and national governments to:

- overcome the barriers opposing cogeneration;
- ensure that government policy takes cogeneration and its development into account;
- inform politicians and companies of the benefits of cogeneration and its great potential in the United Kingdom.

The Borough of Southwark also worked in close cooperation with the Energy Saving Trust, a body financed by the government, which is in charge of promoting energy efficiency. It is often appointed to manage subsidy projects, such as the one for this project. E.S.T. which is a fund maintained by a temporary surtax on the price of natural gas, is used to subsidize pilot projects.

RECOMMENDATIONS

POLITICAL ASPECTS

This highly innovative project was mainly motivated by the Municipality's energy policy. The possibility of obtaining a CHPA subsidy to cover part of the cost of the project played a pivotal role.

Within the terms of the new liberal energy context, the Municipality is looking into the possibility of using all the electricity produced and transferring it to other buildings owned by the municipality, or selling it directly to Ovgan Estate tenants. London Electricity will decide how this is to be organized.

TECHNICAL ASPECTS

The connection and injection of electricity into the network has not caused any technical problems with London Electricity. Before it was connected to the grid, tests were run in the presence of the electricity company, to prove compliance with latest "G59" regulations, which is a set of rules and regulations which the unit must satisfy before it can be connected to the London Electricity distribution grid.

PROSPECTS

The Southwark Housing Department was recently informed that it will receive a subsidy of 70,500 euros to install a cogeneration unit with 1,036 kW of electrical power and 1,390 kW of thermal power. It will continue to do all it can to provide heating and domestic hot water to tenants, under reliable conditions and at an affordable price, and remains open to the idea of small cogeneration installations as well as to other technologies.

The Town Council remains committed to improving energy efficiency and reducing emissions such as CO2.

TO KNOW MORE

Name organisation [The London Borough of Southwark](#)

:

Phone number : [+44 171 525 1246](tel:+441715251246)

E-mail :

Website : <http://>

USEFUL INFORMATION

List of Internet sites

[english / http://www.southwark.gov.uk](#)

THIS CASE HAS BEEN REALISED BY

Organisation : [Energie-Cités](#) E-mail : cmaurer@energie-cites.org Internet : <http://www.energie-cites.org> Published : 31/7/2002

[back to top](#) ▲

Penelope Project Good Practice Database

© Energie-Cités 2001 - 2002 / [Webmaster](#)

