

CHP slashes sheltered housing fuel bill

A DACHS CHP unit is helping a sheltered housing complex near Newcastle cut its annual fuel bill by 30 per cent.

The CHP system, supplied by Baxi-SenerTec UK, was installed alongside Potterton MB Series modular boilers that have replaced the ageing district heating system at the 32-flat Lincoln Court building in Hebburn.

Design engineer Michael Cockram of South Tyneside Council, said he and the residents were delighted with the change.

“We are closely monitoring the performance of the DACHS and it is working 24/7 with a single stop / start per day,” he said. “Power output is 5.5kW and thermal output is about 15.5kW and that is good news. Everything appears to be nicely balanced.”

Lincoln Court is using the electricity produced by the CHP to supplement the landlord supplies to the corridors, common areas and the social lounge. It is also being used for security lighting, lifts and pre-heating of hot water supplies to washing machines. This has significantly reduced the amount of electricity drawn from the Grid.

Serving the mostly single occupancy flats and warden’s accommodation, the DACHS is in constant demand. Each flat has a typical average trickle demand of about 200 to 500W of heat so, even during the summer; there is a need for thermal energy from the CHP, which means it can continue providing electricity all year round.

The unit acts as lead boiler to displace some of the new gas condensing boiler heat load. Each flat is fitted with an indirect Elson tank and direct acting valves are fitted to the primary LTHW mains to control the tanks. These operate around the clock.

Mr Cockram explained: “We are using them as a heat sink to export the thermal output from the CHP.”

The new boiler plant is fitted with direct weather compensation that can be used for off peak heating periods.

The council is currently reading the gas meters on a monthly basis to identify operational costs and possible savings.

“Central power stations operate at around 35 per cent efficiency and conventional heating at around 80 per cent,” said Mr Cockram. “The DACHS burns approximately 30 per cent less fuel than independent production of heat and electricity, reducing both carbon emissions and costs, but still produces the same total output.”

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