

Sheffield Road Flats, Barnsley, 470kW



Barnsley Metropolitan Borough Council has adopted a policy of positive preference for biomass heating and intends to apply wood heating throughout their building portfolio where space and access permits.

In 2005 wood heating was installed by Econergy to provide community district heating for three tower blocks with a total of 166 flats.

Two Fröling Turbomat wood boilers of 150kW and 320kW were installed. Operating in parallel they provide a high degree of turn down with a total output of 470kW. The fully automated boilers are 90+% efficient taking woodchip at up to 50% moisture content.

Heat meters were installed in the flats for the tenants to purchase their hot water and heat.

The combination of biomass heating and improved insulation has enabled the council to substantially reduce the heating bills and there-by address fuel poverty objectives.

Right; Fröling Turbomat fully automated wood fuelled boilers



Wood fuelled boilers Biomass energy services District Heating

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Woodfuel reception, storage and transfer

The brick boiler house and woodfuel storage bunkers with hydraulic lids were constructed on the outside of one of the three blocks of flats. Woodchip is delivered into the storage bunkers using a using a high “scissor lift” fuel trailer.

Well specified woodfuel reception, storage and transfer is vital to the smooth operation of any woodfuelled boiler installation. The key challenges are usually -

- ensuring good access for a suitable delivery vehicle
- transferring the fuel from the delivery vehicle to the store in a reasonably short amount of time
- maximising the useful volume of fuel store (i.e. making sure that it is filled up).

Operation

Econergy now acts as an Energy Service Company (ESCo). Econergy is contracted to deliver heat at a given price and is responsible for boiler operation, maintenance and fuel supply. Annual consumption is a estimated to be around 500 tonnes.

To meet the woodfuel demand Econergy has also facilitated the set-up of local fuel supply company, Silvapower.

Carbon Saving

The displacement of gas heating saves approximately 300 tonnes of CO2 emissions per year.

Funding

The wood boiler and fuel supply infrastructure investments have been co-funded by the Council, Yorkshire Forward and the Bioenergy Capital grant funds

Award Winning

Barnsley Metropolitan Borough Council won first prize in the 2006 Ashden Sustainable Energy Awards for the successful roll-out of its biomass



Above: Purpose built woodfuel storage bunkers with hydraulic lids. Fuel is delivered into the bunker using a high “scissor lift” fuel trailer.