

BIOCOGEN: EXISTING PLANT FLAGSHIP

Slough Heat & Power

Slough, Berkshire
United Kingdom



Views of the Power Plant and the Slough Trading Estate

BACKGROUND

The plant has been operational since the 1920's and ran separate from the National Grid until the 1980's. It is a license exempt generator and distributor. SH&P is a subsidiary of Slough Trading Estates (established in the 1920's)

TECHNICAL INFORMATION

There are three generating stations with more than 90MWe capacity in total. Currently, in 2003, SH&P are running an estimated 20MWe of plant/ boilers on wood fuel. Electricity generation goes to the estate and is also exported to the National Grid (as a full participant under NETA). SH&P supplies major industrial facilities (e.g. a Mars confectionary business), commercial and domestic properties on the estate through a steam and hot water network.

Technology Used: Conventional power plant consisting of Gas Turbine, Gas Boilers, Steam Turbines and Fluidised Bed Boilers. The two fluidized bed boilers are designed to burn a mixture of fuels (coal, gas and RDF) and were converted to wood fuel in 2001/2002.

The project operates all year round.

FUEL SUPPLY

A mixture of virgin wood fuel and bio-waste streams. Woodfuel in the form of chips or pellets. Chips from forestry management, tree surgeons, sawmills and demolition timber. RDF (refuse derived fuel) briquettes are produced on site from non-recyclable paper and packaging waste streams.

SH&P is considered a GOOD example for the UK for the following reasons:

- One of very few large biomass projects, a leader in the field
- Co-firing, but moving progressively from fossil to renewable fuels
- Uses a multiplicity of fuels and is catalysing the establishment of a local sustainable wood fuel supply in the region through partnership with TV Bioenergy
- Sizing is appropriate to the industrial estate that hosts it, a regional rather than a national player more able to communicate with local communities
- Technology is tried and tested and flexible allowing the move to be made to sustainable fuels
- Entrepreneurial private sector management able to deal with changes in the market and with legislation

POSSIBLE IMPROVEMENTS

- Major modifications to fuel handling systems are still required to make the most of wood fuel use
- Considering pellet production and supply locally again opening up the market for smaller (including domestic) projects in the region
- Progressive move to clean, green wood waste fractions from mixed/ contaminated waste
- An eventual move to a mixture of existing wood plus energy crop (e.g. SRC) fuels

ADDITIONAL INFORMATION

Slough Heat & Power have been recognised as a regional exemplar in the SE England Energy Strategy document “ Harnessing the Elements”.

WEB SITE DETAILS

www.sloughstates.com/static/ob_c_e_shp.asp

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