GREENPRINT FORUM VISIT

Anglia Woodfuels – 23rd April 2007

On 23rd April 2007 18 members of the Greenprint Forum were given an introduction to the use of wood chip as a renewable energy source. The visit included a tour of a wood chip production facility at Bentwaters Park and two wood chip boilers installed in premises within Suffolk Coastal district.

The tour organiser, Gary Battell, Woodland Advisory Officer at Suffolk County Council, has helped to support the installation of 6 woodfuel boilers in Suffolk County Council premises. These are fuelled by wood chips or pellets and have proved very reliable with no need for backup arrangements.

In his introduction to the tour Gary touched on the national woodfuel strategy that can be found on the Forestry Commission website http://www.forestry.gov.uk/pdf/fce-woodfuel-strategy.pdf/$FILE/fce-woodfuel-strategy.pdf which sets a national framework for the use this renewable fuel.

When considering wood chip as a fuel source it is important to ensure there is sufficient space for storage of the fuel on site and that the premises are large enough to benefit from this type of installation. Grants are available to support industrial and community schemes covering up to 40% of the costs and for smaller domestic installations grants of £1,500 are available.

East Suffolk is leading in the eastern region in terms of the number of wood chip boilers installed and wood chip production and supply.

The group was shown a wood chip boiler that had recently been installed at a farmhouse in Brundish. The boiler is 93-94% efficient and emissions through the flue are lower than for oil-fired boilers. The boiler is a 45kW unit providing hot water and heating to a 6 bedroom farmhouse. The wood chip store provides capacity to hold 2 months supply of wood for summer use and 6 weeks supply during the winter (5 tonne storage capacity). The wood chip has <30% moisture content and the chips are 30mm long and fed into the boiler via an auger. A fan helps to dry the wood chips which are ignited by hot air at 900 degrees Celsius. The maintenance requirements are similar to a gas or oil boiler. The payback period has been calculated to be 7-12 years and the installation cost was approximately £20K plus the buildings to house the equipment and fuel storage. The boiler generates low levels of ash which can be removed every 6 weeks. The cost of the fuel is approximately £50-£75 per tonne + delivery cost and about 15-18 tonnes of wood chip was being used a year by this particular installation. The boiler has a life expectancy of 20 years and requires routine maintenance on an annual basis. In its operation the boiler does use some electricity to power the fans and ignition system which costs £20-£40 per year.

The key to keeping the operating costs down was to source the cheapest material the boiler could run on and this could include some chipping on site from fallen trees etc.

The group was then shown the boiler installation at the new Rendlesham Primary School. The school has the capacity to store 5 tonnes of wood chip which would last about 3.5 weeks during peak demand. This is a 120kW Binder wood chip boiler with a payback period of 10-12 years. The expected CO2 savings compared with oil will be 75-90 tonnes per year.

The tour finished with a visit to Bentwaters Park to look at Anglia Woodfuels' chipping and storage facilities.

Further information can be found on the Energy Innovations website www.energyinnovationsuk.com

P Gore
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