

Getting an edge and saving money with Biomass

Edge Renewables have been installing modular pipework kits and connections on various customer sites to facilitate the delivery of air-blown woodchip to fuel stores for Biomass boilers.

Edge Renewables located in the heart of rural Shropshire on the picturesque Wenlock Edge, is leading the way with air-blown woodchip delivery to customer sites.



Woodchip is delivered straight from the delivery truck by air pipes connected via a lipped-end pneumatic air coupling to JACOB 150 mm diameter galvanised modular pipework, straight to the customer's woodchip store. The advantage is a saving on overall height as there is no overhead auger required, achieving a more even fill as the air system delivers woodchip evenly across the storage area.

To compensate for the increase in air pressure and to remove dust, a 100 mm diameter aspiration air pipe is connected to an extraction fan on the delivery truck. The enclosed delivery process also avoids dust leakage to the atmosphere.

JACOB (UK) Director John West said:

"We have worked with Edge Renewables on a number of customer installations and have a range of modular pipework sections, bends and connections ideally suited for quick assembly on-site to meet the requirements of each installation".

Edge Renewables Tim Pote said:

"We are really happy with the new blown delivery system on our lorry; we can discharge up to 8.5 tonnes into any store once the fill tubes have been installed. The smaller delivery lorry means we can access most sites and, along with our 8 tonne and 18 tonne capacity walking floor vehicles, we can meet the requirements of almost every customer!"

The story begins in the sustainable forests of Mid-Wales, where supplies of softwood are sourced for processing as woodchip to comply with the Biomass Suppliers List (BSL) requirements by Edge Renewables.



CASE STUDY



After processing as woodchip, the fuel is dried to reduce the moisture content to 20-30% depending on customer requirements. Edge Renewables currently supply around 30,000 tonnes of woodchip annually.

Customer's biomass installation

The 16th Century Grade 2 listed building has been both a home and a school in the past but now renovated with new wiring, plumbing and biomass heating, the brick built mansion with swimming pool and adjacent dwellings/farm buildings is a comfortable home once more.

The biomass installation includes a 199kW HDG Biomass boiler, woodchip feed system and controls. The boiler house takes on the appearance of wood-clad double garage bays, with the plant room adjacent to the woodchip store.

Woodchip is delivered via air conveyor pipes from the truck straight to the store, using universal pneumatic flanged connections and JACOB modular pipework. The biomass installation includes heat meters to monitor the heat generated per kWh. The HDG Compact 200 boiler is run using G30 woodchip with moisture content between 25-28% and is fully compliant with the Renewable Heat Incentive (RHI). Heated water is stored at 80 DegC in a 4000L tank, piped underground to buildings located 20m from the boiler.



Cost Savings

The installation was completed in 2011 and recently upgraded to accept blown delivered woodchip. The capital investment of approx. £90k is offset against savings of £16k annually on heating oil and £23k RHI payments. The fuel cost for woodchip is approximately £10k per annum. Therefore the indicative savings are £29k per annum over 20 years.

CASE STUDY



Edge Renewables Tim Pote said:

“Even with the reduction in the Renewable Heat Incentive (RHI), there is still an attractive investment opportunity in Biomass, which will continue to offer the owner savings for a period of 20 years.

“The annual cost of woodchip has historically been a lot cheaper, with far less price volatility, but can be managed to be cost effective with planned monthly deliveries.

“The introduction of woodchip blowers and dust extraction fans on the Edge Renewables vehicle fleet has increased the efficiency of filling the woodchip store to maximise the storage capacity without the need for a top loaded auger.”

Edge Renewables design and install fully accredited renewable energy heating and electricity generating systems, including Combined Heat and Power (CHP) installations to suit individual customer requirements.

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