

Biomass Boiler Vs Multi Bank Condensing Boiler - Benefits and Dis-benefits – ANNEXE 3

FACTOR	BIOMASS BOILER	CONDENSING BOILER
<p>1) Running Costs</p> <p>(as at June 2008 no inflation allowed)</p>	<p>Wood Chips – 2.5p / kWh Wood Pellets – 4p / kWh</p> <p>Boiler will need to operate at a constant base level to ensure maximum efficiency supplemented by gas boiler at peak periods. Estimated running costs (including gas supplement) over 15 year Life Cycle;</p> <p>Wood Chips – £387,420 Wood Pellets - £535,920 Greater staff time / cost input required with monitoring unit and organising / accepting deliveries.</p>	<p>Gas – 2.87p / kWh (current price 2.05p / kWh)</p> <p>Automatic switching of multi bank units as demand increases / decreases ensures maximum efficiency. Estimated running costs over 15 year Life Cycle;</p> <p>£ 336,220 (£22,414 p.a.)</p> <p>Monitoring of gas boiler by staff – negligible Costs.</p>
<p>2) CO2 Reduction</p> <p>(in heat production / gas consumption only)</p>	<p>Use of biomass boiler to provide 60% of our heat producing needs is estimated as being able to reduce our present carbon emissions by 125 tonnes per annum.</p> <p>This does not include the additional carbon miles caused in the transportation and delivery of the biomass fuel to the Council Offices</p>	<p>Use of multi bank gas condensing boilers is estimated as being able to reduce our present carbon emissions by 61 tonnes per annum.</p>

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3) Economy in Gas consumption	Expected to reduce our present gas consumption by 60%	Expected to reduce our present gas consumption by 29%.
4) Planning / Siting Issues	Due to the inboard location of the existing boiler room and services, the only suitable location for the siting of the biomass boiler and storage container is in a “ Planning sensitive “ area which may result in the damage or removal of a significant tree. New large flue will also be a significant feature. Significant disruption involved in running new services to connect with the existing boiler house.	No Planning issues as the new condensing boiler can be positioned within the existing boiler house with minimal disruption, utilising the existing flue and pipework.
5) The Plant	Relatively new technology with limited number of Specialist Contractors.	Tried and trusted technology able to be installed by all qualified M & E contractors.
6) Servicing	Servicing costs higher due to more working parts. Limited number of specialist contractors presently available.	Servicing more economical. Able to be serviced by most competent contractors. Replacement parts readily and easily available.

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<p>7) Continuity / availability of fuel source</p>	<p>Economic supply of wood chips / pellets will depend on the success of local supplier business.</p> <p>If not supplied from a local source then transportation / additional costs and carbon miles will occur.</p>	<p>Gas supplied directly through the mains – certainty in demand.</p> <p>Price of gas potentially volatile.</p>