



Walk Barn Farm: New low carbon dwelling

Description:
A renewable technology project aiming to reduce energy costs and carbon emissions for a new build.
Renewable Technologies:
The evaluation of technologies focused on using either a biomass boiler or a Ground Sourced Heat Pump (GSHP) to provide heating and Solar PV to reduce the dependence on national grid electricity.
Study Outcomes:
It was concluded that all technologies were viable. However, it was recommended that a biomass boiler running on wood pellets, Solar PV and a GSHP would significantly reduce annual fuel costs and carbon emissions.

Table comparing the costs, payback time, revenue, annual financial savings and CO₂ emissions produced with each of the technologies evaluated

<u>Technologies evaluated</u>	<u>Capital costs exc VAT</u>	<u>Payback time</u>	<u>Annual financial savings</u>	<u>FIT Revenue and potential RHI Revenue</u>	<u>CO₂ Emissions produced</u>
Ground Sourced Heat Pump (GSHP)	£12,708.91	11.2 Years	£470.00	£852.17	3,604 kg
Pellet Boiler	£23,000.00	12.1 Years	£322.00	£1,574.00	663 kg
Solar PV	£10,225.00	9.1 Years	£286.00	£952.60	Nil

If you are interested in renewable energy technologies, want to know whether your site is suitable and how much energy & CO₂ emissions you could save contact our office on 01953 798112.