



RENEWABLE ENERGY

CATEGORY: ENERGY

CASE STUDY YEAR: 2007

Business Details:

Whitelee Farm Cottages
Otterburn
Northumberland



<http://www.whiteleeholidaycottages.com>

Description:

Whitelee Holiday Cottages is a self-catering business, which sits high in the moors of the Northumberland National Park just over the Scottish Border. The farm and its surroundings are rich in nature and this has driven the owners to take many steps to reduce the impact the business is having on the environment. The business was originally graded at the bronze level during the advisory process but with the implementation of recommendations they gained a final grading of SILVER. The outstanding features of the business include a 2.5KW wind turbine and solar panels which heat hot water for the lets. There are also Photovoltaic panels producing electricity and 2 ground source heat pump systems for central heating. The combination of these technologies is significantly reducing the impact the business has through its energy consumption.



Economic

Due to the lack of energy monitoring before and after the project it is difficult to quantify direct cost benefits to the business but there is no doubt they will be very considerable. The owners only contributed around £1000 pounds to the cost of the whole project so they have saved approx £56,000 on the cost of the equipment alone.

Cost of Project: £57,000; the vast majority of which came through grant aid from the Northumberland National Park and Energy for Enterprise.

Savings Made: No details on savings made

Payback Time: No details on payback time



Environmental

Reduced reliance on oil consumption for heating and hot water and a reduction in carbon emissions from the electricity use related to the business operations. 1 KWh of energy produced through burning kerosene produces around 0.24kg of CO₂ and producing 1KWh of electricity produced in a coal fired power station results in 0.97kg of CO₂. So the potential benefits to the environment are significant.



Social

This project has ensured that the business has a secure energy supply, which will not be affected by fluctuations in the wholesale price of different energy sources. Emissions would be cut considerably for any business adopting these technologies particularly for those who depend on oil for heating. Transportation related to fuel deliveries will be minimised and the employment could be created in the fledgling renewables industry.

WEB

Solartwin: <http://www.solartwin.com>,

Proven Energy: <http://www.provenenergy.com>,

Green Energy: <http://www.greenenergy.org.uk/pvuk2>,

The National energy Foundation: <http://www.nef.org.uk/gshp>

