



BUSINESS

Case study Pathfinder Trust North Devon

RENEWABLE ENERGY 4
DEVON



Introduction

Pathfinder Trust is a social enterprise (in this case a charity) that provides training and support for communities and businesses in Devon. They have a site in Braunton that was on the ground floor of a building in the centre of the village. As the charity grew, they wanted to utilise the first floor of the building as well.

Project development

- The original space heating was provided by wall-mounted electric storage heaters. The running costs of these heaters was very high, and a drain on the charity's finances.
- A large bank of computers meant that the operating costs of the charity were very high and they were very keen to explore ways of reducing these costs whilst reducing the environmental impact of the business.
- The local RE4D Business Mentor helped the charity to consider the various options for replacing the electric heating system, advising that a pellet boiler would provide a suitable and cost efficient solution. Being a charity, Pathfinder IT was able to apply for funding for the full cost of the boiler installation.
- Several quotes were obtained and Pathfinder accepted the specification and quotation from a local company called Eco Exmoor that supplied Okofen boilers.
- Planning permission was required for the boiler house and flue at a cost of £175. The installation took place in November 2007.

How the system works

The boiler and pellet store is located behind the main building, with a heat main taking the hot water to the heat distribution system, consisting of wall mounted radiators, installed by Braunton based plumber, Rick Yeo.

Costs and benefits

- The cost of the boiler system was £19,967. The client received an AONB grant of 45% with the remainder covered by European ERDF funding.
- The boiler is expected to supply about 23,000 kWh of heat annually, which would cost at least £2,300 if produced by electricity.
- 4 tonnes of pellets were bought for £750 but less than half were needed over the Winter of 2007/08, so even if all are used during the boiler's first 12 months, there would still be a saving of £1,550 per year.
- Supplying this amount of heat from electricity would cause 9890 kgs of CO2 emissions, but using the pellet boiler will cause approx 437kgs of CO2, a reduction of 9453 kgs per year.

Technical details

Boiler	ÖkoFEN PES 25 wood pellet central heating boiler, Vacuum system.
Fuel Storage	ÖkoFen S280 x 1m Special FlexiTank Enviro pellet storage system. Capacity approx 3.5 tonnes of fuel, 2870 mm x 1000 mm x 1950 mm.
Distribution Unit	2 heating circuits and 1 domestic hot water circuit including:- pumps [Grundfoss electronic], mixer, mixer motor, fully insulated unit with sensors.
Installers	Rick Yeo - Heat Distribution System. Eco Exmoor for boiler and boiler house.
Output	Thermal/electric 25kWt peak Annual power generation 23000kWhs

Wider benefits

The pellet boiler provided a low carbon heating solution for a traditional building. It was able to be retro-fitted, and the status of the company enabled it to acquire full financing which would be unlikely for alternative systems.

Operating costs are low, the viability of the business has been improved, which is particularly important for a charity. The carbon footprint of the business and building has benefited dramatically.

George Curry said: "As a not for profit business that benefits the wider community the pellet boiler will serve an example of how renewable energy can be retro fitted to improve both the buildings and the businesses performance. After a few teething problems the first couple of weeks everything is now working brilliantly ... Many thanks for all your support with this project, it's fantastic to have it all completed."

Further information

www.eco-exmoor.co.uk
www.path-finder.org.uk

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For independent advice and support

