

Belle Isle Castle Wood Pellet Boiler

Action Renewables
the future of energy, today



Location

Belle Isle Castle Estate incorporates self catered or catered accommodation outside Enniskillen, Co Fermanagh.

The Installation

The Estate installed an Austrian KWB USV D 100kW boiler system in March 2006. The system comprises a 2000 litre accumulator tank, a 3-phase converter and ascending feed screw with its own drive unit. A fibreglass storage silo, holding 9 tonnes of fuel, was also erected outside, fibreglass being the preferred material for storing wood pellets.



This new boiler provides both heat and hot water for the castle for about 8 months of the year. However, during the warmer summer months when only hot water is required the castle will continue to use electricity.

Fuel Usage

In the previous year (March 2005 - March 2006) the castle consumed 26,971 litres of oil at a total cost of £8,900 (average 33p/litre). Wood pellet usage and costs over the last year are as follows:

22/03/06	2.00 tonnes	£200-00
06/04/06	5.44 tonnes	£544-00
19/05/06	6.02 tonnes	£650-16
24/11/06	5.90 tonnes	£637-20
29/01/07	<u>6.50 tonnes</u>	<u>£704-16</u>
	25.86 tonnes	£2735-52

This resulted in a saving of over £6000. The boiler was run for a total of 2703 hours.

Paybacks

Assuming current oil prices hold, it is hoped that the new system will have paid for itself within 5 years.

Carbon Dioxide Savings

Most importantly this new system will not only reduce the cost of heating but will greatly reduce pollution through emissions of carbon dioxide. Burning 26,000 litres of oil creates 67.6 tonnes of carbon emissions whereas wood pellets are carbon-neutral.

Costs

This project cost around £30,000 and received a capital grant from the Department of Enterprise, Trade and Investment, through Action Renewables, Innovative Demonstration of Wood Heating and Heat Pumps Scheme.

The boiler was installed by Rural Generation Ltd of Londonderry and the wood pellets are supplied by Balcas Limited, Co. Fermanagh.

The Castle hopes to greatly increase awareness of the potential for wood energy through its installation at Belle Isle Castle, a busy tourist destination with a significant amount of public access. For further information please contact the estate: <http://www.belleislecastle.com/>

