

Eassie, Nevay & Kirkinch Solar Water and Biomass

Introduction

The new Hub has been designed after an extended period of consultation with the community at large. An outline questionnaire was sent to all households in the area, and discussions were organised with eight user groups including the WRI, church and school. Between 2005 and 2006 the Eassie Nevay and Kirkinch Community Association re-organised as a company with limited liability, and arranged for the proper legal transfer of the hall and land. This provided an administrative structure to properly manage its affairs and the Community Hub project.

The directors recognised that the Association should undertake full consultation in a careful, detailed and rigorous manner. To this end a committee structure was set up to reflect the expertise and the interests of a broad spectrum of users and potential users.

From the initial consultation a draft design brief was created. This in turn informed subsequent research in an iterative manner. In January 2006 a draft design was shown at a community event organised to invite ideas and criticism. In 2007 the Community Survey was distributed and processed, the Community Profile was finalised (subsequently revised in 2008), and responses from user groups collated. The result was The Hub, completed in 2011. The hall is fitted with low energy lighting controlled by sensors, solar water heating and rainwater harvesting. The building achieved a Class B energy rating.



Equipment

Windhager 260E, Biowin Exclusive Pellet Boiler. This has a maximum output of 26kW and can modulate this down to 30%. It is fed from a 4.4 tonne galvanised steel pellet hopper. The boiler is vacuum fed from the hopper which can be fed by blown delivery. The current estimated annual use is 6 tonnes

The Association approached their local Community Energy Scotland CARES Development Officer, and after gaining access to a wide range of accredited installers and researching previous Community Energy Scotland projects, the group were able to access guidance and advice about a variety of system options.

The following selection process for the biomass boiler installation was carried out:

- Prices were obtained from three installers and a matrix was drawn up to allow like for like comparison to be made.
- Rationale for selection was based on quality, cost, maintenance and the locality of the installers in the Eassie area.

Cost and Grant Funding

Total project cost	£ 25,806	The remaining funding was obtained through the Principle Funder: Scottish Rural Development Programme
CARES grant	£ 23,226	
CARES grant percentage	90%	

Fuel Bill Savings

Wood pellet is currently selling for the equivalent of 45 pence per litre of heating oil, whereas heating oil is currently 56 pence per litre. This represents a substantial cost saving.

Emission Savings

Estimated kWh savings p.a.	75,628
Annual Co2 savings (tonnes)	18.907
Lifetime Co2 savings (tonnes)	283.605

Project Monitoring

The boiler and controls were supplied and installed by Glendevon Energy and mated to innovative skirting heating by local plumbers Peter Drummond Ltd. The boiler control systems are fully automated and intelligent, allowing detailed records to be kept of fuel used and time to next service. Members of the Association perform routine ash removal at intervals c. 800 hours, and long term servicing is carried out by Glendevon. The Association has created an online blog to facilitate education and involvement of the wider community in promoting energy efficient usage of the new building.

Local Impact

Approximately 1,000 people within a ten mile radius benefit from this resource that meets their social and leisure needs, and some of their educational, health and fitness requirements. Use of the new Hub is expanding and is being marketed to provide additional facilities (e.g. community café, tele-medicine, sports) and provides a venue for small businesses to sell their products.

Lessons Learned

This new build took a great deal of planning and effort; the heating system has performed without incident. Various named and anonymous ENKCA benefactors donated sums from a few pounds to £5,000 and one, who wishes to remain anonymous, made an interest free loan of £100,000. Many people contributed gifts, time and resources to fund raising events, and others supported us by attending those events.

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