

Nevis Centre Woodfuel Installation and Integration

Introduction

The Nevis Centre is a large, well used multi-use centre located in a busy area of Fort William. This large modern building houses: a sports hall/stage and performance and concert area, children's nursery area, youth activities area, bowling alley, cafe and car area. Energy costs for the Nevis Centre were very high. Their previous heating and hot water systems were being provided using a diesel run fuel system. Previously, the staff and management of this centre had been earnestly trying to reduce running costs. In order to do this they decided to install a wood chip fuelled biomass system.

The Centre received letters of support for their woodchip boiler, from members of the community keen that the Nevis Centre should be using green energy to heat the building - especially as there is an abundance of wood within the Fort William area. The new biomass system has had the effect of significantly reducing heating and hot water costs, giving a more stable energy platform, whilst at the same time cutting CO₂ emissions for the Nevis Centre as a result.



Equipment : 350kW Veto Boiler and Maxicont Containerised Wood Fuel Unit

With the assistance of their local Community Energy Scotland Development Officer the Nevis Centre embarked on a thorough knowledge building exercise that took them to many other biomass installs and also to fuel suppliers. As with all biomass installations it was important that they fully understood the operational responsibility that running a woodchip system entailed..

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

- Five different installers were asked to provide quotes for design and installation
- The centre selected two of the best responses
- Presentations by the two chosen installers of the final designs at the centre, allowing board members a detailed look at proposed installations before selection
- Additional advice was also sought from an outsourced engineering company for the selection

Rationale for selection was based on quality, cost, maintenance and the locality of the installers to the Fort William area.

Cost and Grant Funding

Total Project cost	£181,680	The remaining funding was obtained through: LEADER (25%) Scottish Government's Third Sector Funding (20%) Own contribution from Linnhe Leisure Ltd (5%)
CARES grant ¹	£90,840	
CARES grant Percentage	50%	

¹ N.B. The project was approved during the period of the Scottish and Community and Householder Renewables Initiative – however, due to the scale and timeline of the project, it was completed during the period of the CARES programme.

Fuel Bill Savings

In the year 07/08, the bills for the Nevis Centre were £31,475 and the projected running costs of the new system is £16,623 – giving an annual savings for the Nevis Centre of £14,825. Additionally, contributing to this saving is the higher efficiency of the technologies. The previous diesel run installation had an 80% efficiency while the new boiler has a 90% efficiency.

Emission Savings

Estimated kWh savings p.a.	474,957
Annual CO ₂ savings tonnes	142.5
Lifetime CO ₂ savings tonnes	3562.18

Project Monitoring

The installers of the boiler system supplied the Nevis centre with an energy supply and maintenance package costed at 3.5p per kWh of heat energy produced. The Nevis Centre monitor electrical and heat energy use through a smart utility management package which allows them to view graphs of electricity usage and what the related costs are. Thus far it has resulted in reduced energy bills. Monitoring of the system is carried out remotely through a telephone link..

Local Impact

Reduced running costs have allowed much needed additional funds to be re-invested into the building fabric and to subsidise ongoing community activities, costs and upgrades of facilities in the centre in general. This will eventually include further energy efficiency measures. Following the installation, significant savings have also been made in relation to water conservation and charges - whilst this is not related to energy, it does demonstrate a growing culture of prudence and efficiency at the centre with attention toward reducing costs and saving resources.



Karen Paterson from Community Energy Scotland with Nevis Centre staff Willie Duncan (left) and Gordon Bales (right)

Lessons Learned Account Manager Gordon Bales said:

“We are extremely satisfied with our unit, and we have a good working relationship with our supplier Highland Wood Energy. The Directors are pleased they choose biomass, but are also looking at other options to save energy. The lessons learned are, that we use a high amount of energy to heat and light the centre, and we must identify energy wastage, and have a system in place to reduce the Centre’s energy costs”.

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