

## Coalburn Miners Welfare Charitable Society Air to air heat pumps

### Introduction

The Coalburn One Stop Shop is the hub of the community, providing a Post Office, ATM, cafe, function rooms, local food and second hand shops. It hosts a range of activities such as councillor surgeries, committee meetings, parties, flower arranging and dance classes. It is owned and run by the Coalburn Miners' Welfare Charitable Society and has provided a service to the Coalburn community since 1925, used by approximately 3,500 people per month.

The charitable society provides services at affordable prices, and survives on very tight finances. They decided to look into lower running costs to help the centre to become more self-sufficient in managing finances and eventually relying less on grants. In 2010 they installed solar thermal and solar PV panels and insulation with help from CARES and wanted to do more.



### Equipment

#### 6 x Daikin 14kW air to air source heat pumps with ceiling mounted indoor units

The society needed to replace old air conditioning units in their function suites on two floors of the building because it was no longer possible to purchase the refrigerant used in them. The rest of the building was heated by radiators from an oil fired boiler installed in 2003.

It was decided that it would be best to simply replace these air conditioning units with new, efficient air to air heat pumps. The large function rooms are used intermittently, and the Society wanted to keep the heating of the rooms separate from the rest of the building to help maintain flexible, independent control, as they had problems with heating being left on in rooms that were not being used in other parts of the building. The oil fired boiler was still relatively modern and so the group were reluctant to change this as part of a possible larger overhaul of the heating for the building. They had also discovered that they needed insulation in the loft space above the social club area.

Heating of the function suites in the past was done using the air conditioning units, and had to be supplemented by the use of portable electric heaters. It was predicted that the new air to air source heat pumps would perform much better so that portable heaters would not be needed anymore, and that it would be half the cost to heat the function rooms.

### Cost and Grant Funding

Total project cost	<b>£23,496.00</b>	The remaining funding was obtained through: South Lanarkshire Rural Communities Trust - £6,174 Lanarkshire Social Economy Development Fund - Environmental Implementation Grant - £2,622.00
CARES grant	£15,000.00	
Grant percentage	64%	

### Fuel Bill Savings

The savings from installing the air to air source heat pumps were estimated at £1,419.00 per year.

## Emission Savings

For air-air heat pumps

Estimated kWh savings p.a.	2,0571
Annual Co2 savings (tonnes)	8,846
20 Year Lifetime Co2 savings (tonnes)	176,920

## Project Monitoring

The society takes regular electricity meter readings and will continue to do this. They will also keep a close eye on how the system is being used to ensure that efficiency is maximised whilst providing a comfortable space for people to be in. There is an interpretation board about the project in the foyer too to raise people's awareness and encourage them to use energy efficiently too.



## Local Impact

The Society has been striving to be self sufficient since 2007 and the savings on the heating bills will help with their incremental steps to achieving this goal. All savings go back into helping to provide services for the local community and help to give more stability to the organisation and at the same time the environmental impact of the building is reduced. With the variety of renewable technologies in the building, it is an exemplar for the local community to be able to learn from, with help from the interpretation in the foyer.

## Lessons Learned

George Greenshields, Project Manager said:

"It's important to get training from the installer about how the heat pumps work and to be able to have them visit again to help you to ensure the system is being operated properly after a period of getting familiar with it. We have put up instructions next to the controls for the heat pump which help people to understand how to use them properly. They aren't always heeded so it's important to keep an eye on how they are being used and to check that they are turned off at the end of the day. Use whatever functions that are available to minimise poor control of the system by inexperienced users. For example, look for control options that allow programmable timing and a restriction on how high or low the temperature can be set, around a minimal band of comfortable temperatures (eg min. 18 oC; max 23 oC). Keep a steady temperature and the units run great and make sure the filters are checked and cleaned regularly and serviced at least once a year."

## For further information, contact:

*Coalburn Miners Welfare Charitable Society Contact:*

George Greenshields  
Project Manager  
42 Coalburn Rd  
Coalburn  
South Lanarkshire  
ML11 1OH

T: 01555 820060

E: [georgegreenshields@coalburnmw.org.uk](mailto:georgegreenshields@coalburnmw.org.uk)

*Community Energy Scotland Contact:*

Iona McDonald  
Development Officer – Argyll and Bute  
Unit 5  
Lochavulin Industrial Estate  
5 Crannog Lane  
Oban  
PA34 4HB

T: 0141 275 4889

E: [iona.mcdonald@communityenergyscotland.org.uk](mailto:iona.mcdonald@communityenergyscotland.org.uk)