



Transforming heating in Whithorn

The lives of social housing tenants in Whithorn, Newton Stewart, Scotland have been transformed with installation of air-water heat pumps to provide energy-efficient heating in their homes.

The project involved a total of 85 properties and was delivered by a partnership of Dumfries and Galloway Housing Partnership (DGHP), Scottish Gas Community Energy (SGCE) and Daikin UK. It is an excellent example how a forward thinking social housing provider can apply renewable technologies to improve tenants' living standards and lower fuel bills, thus helping to alleviate fuel poverty and reduce carbon emissions.

The situation – rural social housing with households in fuel poverty

The aim in Whithorn was to improve energy efficiency standards and reduce fuel bills in low income areas, providing a package of energy efficiency measures best suited to an individual property.

Whithorn and the surrounding area is not connected to the mains gas supply, so properties are reliant on electric storage heaters or open fires and back-boilers for heating. These appliances are relatively inflexible and often do not heat up the fabric of a home sufficiently. Damp and condensation can also be an issue, as is the storage and delivery of fuels.

Given the village's rural location, it was clear renewable energy technologies were a better alternative to fossil fuel systems as they would provide tenants with the most energy efficient systems, thus reducing environmental impact and cutting fuel bills too.

Dumfries and Galloway Housing Partnership (DGHP) owns and maintains more than 10,200 homes across Dumfries and Galloway. DGHP is committed to meeting the Scottish Housing Quality Standard (SHQS) requirements, which include ensuring its homes have a Standard Assessment Procedure rating of 60.

The SHQS, introduced in 2004, is the Scottish Government's principal measure of housing quality in Scotland. It sets out five broad housing criteria, including energy efficiency, which must be met by social landlords.

The solution – Daikin air-water heat pumps

After extensive surveying and heat load testing, DGHP and SGCE arrived at the conclusion that the best solution was to fit Daikin Altherma LT Split 6kW air-to-water heat pumps to the social housing provider's 85 homes in the village.



The challenge – changing approaches to installation and heating use

The move from inefficient, traditional heating systems to a modern, efficient renewable energy solution required a change of culture at all levels. Some tenants were initially sceptical about the concept of “free heat from the air around us” and also needed to adjust to the idea of more output at lower temperatures being more efficient and effective than short bursts of higher temperatures from inefficient sources. An excellent programme of communication between DGHP and the tenants, with visits from a tenant liaison officer, ensured this challenge was met. Word of mouth about the effectiveness of early installations also spread quickly.

As well as being a new concept for the tenants, the installers also had to get to grips with the Daikin Altherma air-to-water heat pumps and the differences between these and the previous heating systems they had worked with.

As part of the project, Daikin committed to working with DGHP and SGCE to deliver a programme of training for installers and engineers to ensure they understood not only the installation process itself, but also the surrounding concepts of heat pump best practice. This also meant they could engage with tenants to ensure they understood the implications of the new system and how to get the best from it.

The installation process – minimum disruption and fuss

The training that Daikin provided also ensured tenants experienced minimal disruption. Work began in May 2011 with 85 installations completed across the village by March 2012. Most installations were completed at each home within one day so residents did not go without heating.



The results – DGHP’s highest ever rated project

Danny Queen, the DGHP Project Engineer who oversaw the installations explains: “We visited all of the homes where the Daikin Air-water heat pumps were installed and have conducted follow-up telephone satisfaction surveys as well. Customer satisfaction, especially with the installers putting in the heat pumps (a testament to the training they received) has been measured at almost 100%. Overall tenant satisfaction is the highest of all the projects DGHP have run.”

Mrs Murphy of Isle Street in Whithorn says: “I find the new system great, it is a far nicer heat than we had previously and the controls are so easy to use.”

Miss Frain of Isle Street adds: “It’s a really good system to be honest, I understand how it works and I don’t miss the coal fire any more.”

Mrs Jolly from Kings Road, Whithorn, says: “I think the new system is superb and its such a step up from what we had before. My whole house is warm rather than in certain rooms. It also saves me £20 a week.”

Daikin Altherma air-water heat pumps have been used successfully across the country and are growing in popularity as a highly efficient home warmth solution. However the partnership between Dumfries and Galloway Housing

Partnership, SGCE and Daikin to convert the social housing in Whithorn is a beacon project that shows the way forward in terms of what can be achieved to improve social housing conditions for tenants whilst improving efficiency and reducing emissions.