Ecodan delivers domestic bliss to Grimsby household





Heat pumps are an increasingly popular choice amongst homeowners and landlords seeking an efficient, cost-effective heating solution. This movement towards cleaner, low emission technologies is driven by a number of factors but rising oil prices are certainly playing a key role.



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Case Study

In the UK, around 2.5 million domestic dwellings remain off the gas grid and one million of those rely on oil to heat their properties



The government recently announced its intentions to phase out the use of heating oil to heat buildings and although a timescale and strategy have yet to be finalised, this move signals a clear intent to promote sustainable solutions and clamp down on systems that produce high levels of carbon emissions.

The recent refurbishment of an end of terrace house in Grimsby featured multiple installations designed to improve the overall energy efficiency of the property. Alongside solar PV panels located on the roof, well insulated walls, new double-glazed windows and doors and power assisted radiators, the two-bedroom property is now benefiting from a **Mitsubishi Electric Ecodan 8.5kW air source heat pump, supported by a package cylinder unit**.

The versatile Ecodan heat pump was chosen as a direct replacement for a redundant solid fuel heating system which had recently been condemned. As there was no mains gas to the estate, the client initially began looking at LPG boiler or oil solutions. However, once the efficiency and long-term cost benefits associated with air source heat pumps were made clear, the decision to go with Ecodan was a straightforward one.

In properties with high levels of thermal efficiency, such as the newly refurbished Grimsby dwelling, Ecodan is capable of dramatically reducing energy costs and CO₂ emissions, meeting heating and hot water demands all year round. For every **1kW of electrical input**, Ecodan is capable of capturing and upgrading heat from outdoor air and providing the property with an average of **3.2kW of heat output**.



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Case Study

The house is toasty warm and as for the noise what noise?

On several occasions when in the garden the only way I have been able to tell if the heat pump is on is to look at the fan

Keith Danes

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Terraced House, Grimsby

On top of these efficiency benefits, current resident Keith Danes was able to take advantage of the Government's domestic Renewable Heat Incentive (RHI) scheme and secure financial support in return for generating renewable heat. Following recently announced tariff increases for air source heat pumps, payments could total around £850 per annum for up to seven years.

Keith Danes is more than happy with the new setup and comments, "At present it is costing us around £1.88 per day to heat the property, provide for all of our hot water and cooking needs. Bearing in mind that this is in the winter with lower solar generation and higher heating needs I am convinced that this was the right way to go.

"The RHI is paying about \pounds 2.45 per day, 365 days a year and whichever way you look at it I am better off. Either I have paid all of my electric bills for the next seven years in advance and will get a profit or the installation costs are very nearly covered.

The installation was carried out by leading multi-disciplinary building services company, Airco Refrigeration & Air Conditioning Ltd, a Mitsubishi Electric Business Solutions Partner and business with extensive knowledge of the Ecodan range. Dean Hordon from Airco explains why a heat pump was the perfect fit for the property.

"Although a number of separate sustainability measures have been put in place at the Grimsby property, the newly installed products and systems combine to produce a home with outstanding efficiency credentials, providing the residents with low maintenance technologies designed to guarantee comfort throughout the year."

Speeding up commissioning and easing general operation of the new system is the advanced fifth generation controller - FTC-5.

The controller allows for intelligent room temperature control as standard and will give residents the ability to measure consumed energy and produced heat to the nearest kWh.

Working in tandem with features such as fan assisted radiators from the Smith's Eco-Powered Low range, the new Ecodan heat pump system will provide the residents of the revamped Grimsby property with efficient and reliable heating for years to come.

"The Domestic Renewable Heat Incentive (Domestic RHI) is a Government financial incentive to promote the use of renewable heat. People who join the scheme and register receive quarterly payments for seven years for the amount of clean, green renewable heat it's estimated their system produces.

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Terraced House, Grimsby

Installation Summary



- 8.5kW Ecodan unit
- Packaged cylinder
- FTC controller



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