

Family home makes energy savings with Ecodan heat pump system from Mitsubishi Electric

Heating



The owner of a large family home in Northumberland has reduced his energy bills with the installation of **Mitsubishi Electric air source heat pump**.

The five-bedroom dwelling in Blyth was built in 2003 and is now home to a family of four. The brief was to replace the property's natural gas boiler with a thermal store.



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Peter McNaughton and his family were already environmentally-conscious as the dwelling had a voltage optimiser and an EV charge point installed.

The property also had 3.5kW of solar panels, so the addition of a heat pump system would enable the McNaughtons to maximise the benefits of solar PV.

Peter explained: "The gas boiler in the property was about 12 years old and beginning to fail, the thermal store was obsolete and some of its parts were becoming harder to source.

We also had 3.5kW of solar PV exporting electricity during the day while we are at work. Installing an air source heat pump meant cheaper bills and revenue from the Renewable Heat Incentive (RHI).

The only real challenge was finding a way to utilise the existing pipework without having to completely re-pipe the system."

After taking advice on radiator sizing and system design, Oakes Energy, of Castle Eden in Co Durham, installed an **11.2kW standalone coastal Ecodan**, 100-litre buffer vessel, 500-litre cylinder, with associated pumps, expansion vessels and controls.

One challenge that had to be taken into consideration was where to locate the 500-litre cylinder. It was decided the garage rather than the airing cupboard was the most suitable option as the ceiling would not have been able to support its weight.

In addition, two Baxi Solar Thermal panels were installed to assist with hot water production and a Solar iBoost to harness exported PV electric into the hot water cylinder via the immersion heater.



Case Study

“As more families have heat pump systems fitted I’m sure they will pass the word on to neighbours and friends and their popularity will increase.”

Jason Oakes

Business Development
Director at Oakes Energy



QUALIFIES FOR
7
A++
years
RHI PAYMENTS*

ecodan[®]
Renewable Heating Technology

Five-bed Home, Blyth, Northumberland

A Metering and Monitoring Service Package (MMSP) was added to generate additional income, and a Wi-Fi adaptor with MELCloud to give remote control and energy monitoring capabilities.

Mitsubishi Electric’s MELCloud system is a cloud based solution for controlling the Ecodan system either locally or remotely by PC, Mac, tablet or smartphone via the Internet. Set-up and remote operation of the Ecodan heating system via MELCloud is simple and straightforward.

Peter commented: “Adding a new cylinder with Solar iBoost and Solar Thermal meant that during the summer months hot water production would be free, and during cooler months the PV could contribute to the running cost of the air source heat pump.”

Peter and his family are delighted with the new system which, thanks to the RHI compliant MMSP, will deliver more than £1,500 per annum. The total income now from all the property’s green technologies stands at **over £3,000 per annum for the next seven years.**

Jason Oakes, Business Development Director at Oakes Energy, would recommend the Ecodan system to other families looking to maximise the potential efficiency of their property.

He said: “Ecodan heat pumps are a great addition to any family home, particularly in areas that are off the gas grid. They can make a real difference to your energy costs and it's environmentally friendly as well.”



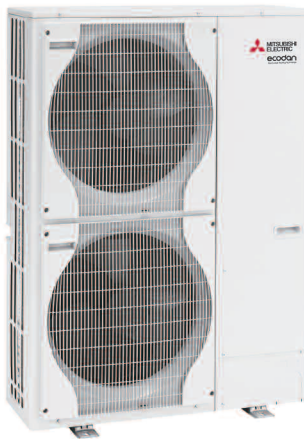
*The Domestic Renewable Heat Incentive (Domestic RHI) is a Government financial incentive to promote the use of renewable heat. People who join the scheme and register receive quarterly payments for seven years for the amount of clean, green renewable heat it's estimated their system produces.

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Installation Summary



- 11.2kW Coastal Ecodan unit
- MELCloud Wi-Fi Interface



PUAZ-W112VHA(-BS)



MAC-567IF - Wi-Fi Interface

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air-conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774) or R134a (GWP:1433). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No 626/2011 from IPCC 3rd edition, these are as follows: R410A (GWP:1975), R32 (GWP: 550), R407C (GWP:1650) or R134a (GWP:1300).



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