



## Hybrid installation shows value of adding renewable heating

The owners of a large family home in Essex have reduced their energy bills with the addition of a renewable heat pump to their existing heating system. The five-bedroom detached property in Shenfield has had an 11.2kW Ecodan Monobloc air source heat pump installed to meet the house's heating requirements.

Installer Manestream's John O'Sullivan says: "The client was interested in renewable technology, and especially the air source heat pump because of the fact that it's got a 3:1 ratio of energy output to energy used."



# Heating

## Case Study

### 5-bed detached house, Shenfield, Essex

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**Adding an Ecodan air source heat pump to the existing gas boiler has taken the heating bills from £2,000 to around £400 per year.**

With the gas boiler and Ecodan unit working independently, the home owners do not need to rely on metering to establish RHI (Renewable Heat Incentive) payments. With the house set up this way, those payments can be guaranteed by the deemed RHI calculation based on the house's Energy Performance Certificate.

By working in this way, the initial investment can be kept low, whilst still delivering a significant contribution to savings on household energy costs and taking advantage of RHI.

With all heat pump installations, their greatest efficiencies are achieved in well-insulated homes, and this was the case in Shenfield. The property has cavity wall insulation installed under the Green Deal, and new windows fitted. As a result, the house already had an EPC rating of C.

To assist with the electricity costs of operating the Ecodan, solar panels were also installed, which O'Sullivan estimates has reduced electricity bills by around 10 per cent. Another bonus for this installation was that the house's existing radiators were used, which meant the fit-out created minimal upheaval.

John O'Sullivan adds: "The owners have found the heat in the property much more balanced and they no longer have to constantly turn their radiator valves up and down. The Ecodan is more intelligent than the boiler, adjusting flow to ensure a set temperature."

As for the cost comparison to their boiler-fed heating system, the difference has been significant.



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## Installation Summary

### Ecodan 11.2 kW Monobloc Air Source Heat Pump and MELCloud

“Their previous heating bills were £2,000 per year, and now with the air source heat pump installed they are looking at around £400,” says O’Sullivan.

The system has also been fitted with Mitsubishi Electric’s MELCloud. This is a cloud-based solution for controlling Ecodan systems either locally or remotely by PC, tablet or smartphone via the Internet.

MELCloud also enables householders with a heat pump to view electrical energy consumed and heat energy produced, as well as giving them control of heating and hot water from anywhere in the world; the ability to set to holiday mode; weekly scheduling, and historical reports.

Combined with electricity savings generated by running the heat pump from the solar panels and the yet-to-be calculated payments from RHI, O’Sullivan sees the project as an excellent example of the benefits that heat pump technology can bring to residential properties.

“The costs of installing a new boiler are a bit lower than a heat pump, but you also have to remember that a boiler needs a service every year at £100. Remove that cost for this installation and add the payback from the RHI, and it shows the benefits long-term lie with the renewable option,” says O’Sullivan.



Telephone: 01707 282880  
email: heating@meuk.mee.com  
web: heating.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division  
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880  
IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24 Ireland  
Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

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