

# Winter trials prove Ecodan's credentials

Live trials of Mitsubishi Electric's award-winning Ecodan® over the past winter have clearly demonstrated that the low-carbon heating system lives up to expectations and is more than capable of dealing with whatever the British weather throws up.

All three different models in the range have been put through their paces in four different locations around the UK. The properties include a 3-bed terraced house, a 4-bed semi, a large 5-bed detached home, and the BRE Visitor's Centre in Watford. Of the houses, only the 3-bed property was newly built, with retro-fitted Ecodan unit replacing the traditional heating system in the other two.

## Real data not lab data

"We saw temperatures drop to -9°C and -10°C at times which is exactly what we were hoping for as it meant we were able to put theory into practice," explained Max Halliwell, product Marketing Manager for Mitsubishi Electric Heating. "All too often, system claims are based on technical data or lab tests under very favourable conditions and this presents a confused message to the public.

"What we are now able to do is categorically state that Ecodan will deliver the performance necessary to cope extremely well throughout the British year and show that this has been achieved in a variety of different properties and heating configurations."

The units in the properties delivered COP's ranging from 3.0 to 3.33, despite some of the lowest recorded outdoor temperatures for decades. A level of 3.33 shows that 2.33kW of renewable energy is being harvested from the surrounding air for every 1kW of electricity used and Ecodan is therefore operating at an efficiency level of 333%.

"All of these have hit much higher COPs at some point over the winter, but we wanted people to be able to trust the figures we use so we have averaged them out over the whole period," added Halliwell. "We are delighted with these results especially as we know that we will be able to improve on them and they all go to help reinforce our belief that Ecodan really is the most viable, mass-market alternative to gas and oil-fired heating."

## As 'plug and play' as you can get

Unlike many other air source heat pump systems, Ecodan has been specifically designed for the UK market and deliberately tailored to be easy to install by a suitably qualified plumber or installer who has been on the special one-day course.

More information on the trials, further details on the full range of products, advice on where to find an installer or how to become an approved Ecodan installer, are all available by calling 01707 278666 or by visiting [www.mitsubishielectric.co.uk/heating](http://www.mitsubishielectric.co.uk/heating).

## 5-bed retrofit

The Ecodan system installed in this large 5-bedroomed house near Newcastle, Tyne and Wear, delivered an average winter COP of 3.25 with an average ambient outdoor temperature of 4°C.

The 14kW Ecodan system has been retrofitted to the property and supplies both combined space heating and all hot water requirements for the 1999 detached house.

This is home to a family of four including two young children aged four and six.

Over the winter period, the owners have reported savings in running costs of between a half and two-thirds when compared to the previous LPG boiler.

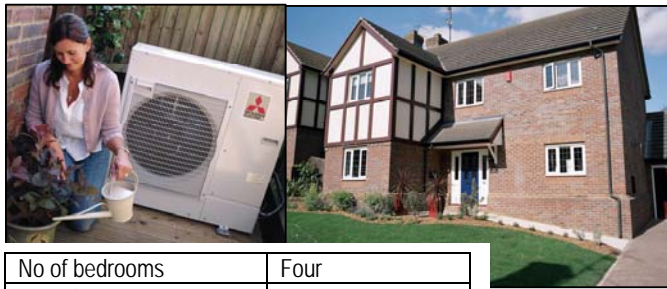
**50%**  
cut in  
running  
costs

No of bedrooms	Five
Age of property	1999
Previous heating system	22kW-rated LPG boiler
Replaced with	Ecodan 14kW unit
Radiator upgrade	Unchanged
Average COP	3.25
Average outdoor temp	4°C
Running cost reduction	50 – 66%
CO <sub>2</sub> reduction	50%



Award winning Ecodan ... Award winning Ecodan ... Award winning Ecodan ... Award winning Ecodan ... Award winning Ecodan ... Award winning Ecodan





No of bedrooms	Four
Age of property	2000
Previous heating system	29kW gas boiler
Replaced with	Ecodan 8.5kW unit
Average COP	3.33
Average outdoor temp	6°C
Running cost reduction	41%
CO <sub>2</sub> reduction	50%

**HEATING  
SEASON  
COP  
3.33**

## 4-bed retrofit

This 4-bedroomed semi-detached house in Toddington, Bedfordshire was the first UK property to be installed with Ecodan and the latest trial data shows the system delivering an average COP over this past winter of 3.33 using an 8.5kW Ecodan unit – against an average ambient temperature of 6°C.

The property is home to a family of four with very young children and they have been delighted with the reduction in running costs of 41% over the old gas-fired system, and equally pleased with the 50% reduction in carbon emissions.

## 3-bed new build

Developers must be mindful of the standards for newly built properties in the Code for Sustainable Homes, which is where Ecodan can help houses achieve Level 3 and 4.

The 5kW Ecodan system on this new, 3-bedroomed end-of-terraced property in Langford, Hertfordshire has achieved an average COP of 3.25 over the winter against an average ambient temperature of 7°C.

No of bedrooms	Three
Age of property	2008
Previous heating system	None
Replaced with	Ecodan 5kW unit
Average COP	3.25
Average outdoor temp	7°C



The family of three have a new baby and the home is heated by traditional radiators with the smallest of the Ecodan range (the 5kW) providing all the heating and hot water required.



## Commercial



**HEATING  
SEASON  
EFFICIENCY  
300%**

The BRE Innovation Park visitor centre, opened in 2008, was created by remodeling a showhome originally built by Hanson, first in 2005, then again in 2007.

This resulted in a visitor reception facility, presentation area, meeting space and a large balcony terrace.

The previously unheated building now features a retro-fitted system fed by an 8.5kW Ecodan unit, to provide heating to the 150m<sup>2</sup> visitor and exhibition space and also all hot water demands.

The system has delivered an average COP of 3.0 against an average ambient temperature of 4.4°C.

No of bedrooms	None
Age of property	2005
Previous heating system	None
Replaced with	Ecodan 8.5kW unit
Average COP	3.0
Average outdoor temp	4.4°C

**bre**



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