Heating | Case Study

MITSUBISHI ELECTRIC

Air source heat pump is reducing fuel bills and carbon footprint at Redrow's Great Milton Park

Llanwern, Newport

Housing Association

Houses 20

Customers at Great Milton Park in Newport are beginning their journey to net zero with the desire to find a more sustainable and efficient alternative to traditional gas heating.

Domestic heating currently accounts for around 14% of UK emissions, most of which is due to natural gas boilers, hence why the UK Government has introduced a ban on gas and oil boilers in new homes from 2025. This 12-month trial is fundamental to Redrow's commitment to building responsibly and will help to define its approach towards zero-carbon homes. Further trials are also being planned at Great Milton Park for the Welwyn and Henley house types using underfloor heating.

Redrow is renowned for building premium homes made for modern living. This ban has therefore set Redrow the challenge of finding a suitable, sustainable, and efficient heating system to fulfil the needs of the homes.

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The Solution

Supplied by Mitsubishi Electric, an Ecodan Air Source heat pump has been installed in an Oxford house type with a traditional radiator system. The house was handed over to it's new owner James Bailey in November 2021 and is being closely monitored over a 12-month period under 'real life' conditions.

Homeowner James Bailey said "Who doesn't want to reduce their fuel bills and do their bit for the environment? I'm really happy with the way that the air source heat pump is performing. [] I've quickly got used to the new system and feel good that it's helping me to reduce my carbon footprint".

Air Source heat pumps are more energy efficient than a traditional gas boiler, reasoning being they extract heat from the environment as opposed to burning fossil fuels. Also, they reduce local air pollutants like nitrogen dioxide that is emitted by boilers benefitting the homeowner who is environmentally aware.

Richard Keogh, technical director for Redrow commented "The drive to reduce carbon footprint and cut fuel costs means that the way in which we heat our homes is changing. Heat pump technology is a cost efficient and environmentally friendly way to heat a home and complements Redrow's existing "fabric first" approach towards sustainable design. We're hoping that this trial shows that they are also easy to operate and affordable to run as we introduce the low-carbon homes of the future".

Summary:

- MELCloud app to help Housing Association monitor tenants energy usage
- Air Source heat pump offers sustainable, efficient alternative to traditional systems.
- Heat pump and Cylinder provide hot water and heating through radiators

Product Overview: 4.5kW & 8.5kW | 210L & 250L | Radiators

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Changes for the Better

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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), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). *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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