

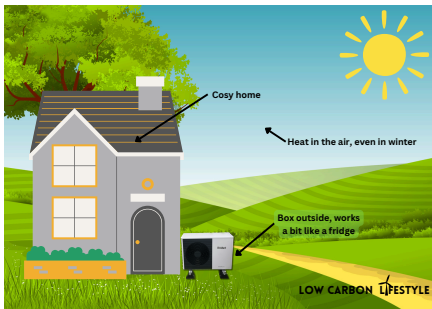
What are heat pumps?

Heat pumps are one of the main ways we can reduce emissions at home in response to the climate emergency, but for many of us, heat pumps are an unknown quantity, something we may have seen mentioned in news or online but without much detail as to what they are, how they work or why we should get one.

So, simply, heat pumps are a heating system that **we can use at home to replace gas boilers** and to reduce emissions linked to heating.



So, what are they?



If you have a fridge at home, then you have a form of a heat pump. A fridge is moving heat from one place to another through a process that uses a little bit of electricity, a heat pump that we could use for heating our homes is doing the same, moving heat from outside a house to heat the inside.

What we tend to think as the 'heat pump' is a box outside the house, this box takes heat from the air and uses a little bit of electricity to concentrate that heat, and moves it, or pumps it, through some pipes into the house, into a radiator circuit and a hot water tank inside your house. The heat it takes from the air is 'free' so the only energy we are using is the little bit of electricity which means we talk about heat pumps being 300% or more efficient.

Heat pumps provide heat to keep you warm at home, but also heat water in a hot water cylinder to make sure you have hot water for every day life at home (showers, baths, washing up and much more!)

Climate change super tool

Because a heat pump is not burning anything, and because our electricity supplies are getting cleaner and cleaner, a heat pump reduces emissions compared to a gas boiler by a big jump, in 2024 a heat pump is likely to be **70% lower emissions** than a gas boiler for the same heat in a home.

How much money could you save?



Heat pumps are one of our best tools in reducing emissions in homes, and, if installed well, can reduce costs in a home as well. So how much can a heat pump save on heating costs...? Unfortunately, in 2024, electricity costs are quite high, and tend to be around 4x higher than gas costs, so if we are moving from a gas boiler to a heat pump, we need to have an efficiency of 350% to break even on gas heating, and above 350% to start saving money. This is possible if a heat pump installation is sized, designed and installed well, but we should be clear, with current energy tariffs, a heat pump is likely to break even on costs rather than give big savings.

There are heat pump only tariffs from companies like Ovo Energy or Octopus Energy that can help reduce costs and make savings.



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