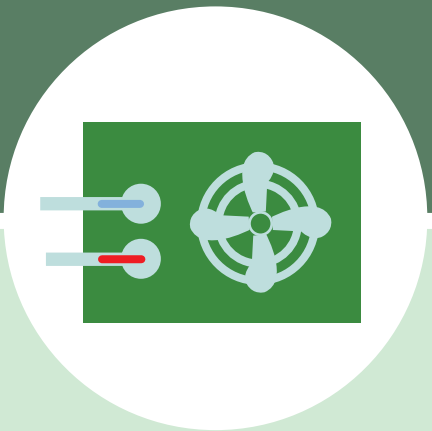
Heat Pumps



Replacing your boiler with a Heat Pump can be one of the most effective ways to de-carbonise your heating system. Different types of Heat Pump are suited to different properties, and the savings you could make depend on your home and your current heating system.

Is a Heat Pump is right for your home?

1. Is your home well insulated?

Heat pumps are most efficient when operating at low temperatures, so your house needs to be well insulated for the system to work well. If you are keen to reduce your energy usage, look at insulation options before changing your heating system.

2. Do you have space for the unit?

Air Source Heat Pumps need to be installed in an outdoor space where air can flow freely around them - an external wall in a sunny spot is ideal. Ground Source Heat Pumps require more outdoor space, both for the unit and the pipes.

3. What is your existing heat source?

Replacing an Electric or Solid fuel boiler with a Heat Pump will not only reduce your carbon emissions, but could also save you a lot on your energy bills. Replacing a Gas Boiler with a Heat Pump can also reduce your carbon emissions, but you are likely to see less of a financial benefit.

4. What is your existing heating system?

Heat Pumps work best with low temperature heating systems, so installing underfloor heating or larger radiators will allow you to make the most of your Heat Pump. If you do not currently have a 'wet' central heating system, you may need to have one installed, or consider an air-to-air heat pump instead.

Typical Costs and Savings...

275kgCO_2e
Annual Carbon Savings

£150
Annual Bill Savings

£10,000
Typical cost

Keep it Renewable

Heat Pumps use renewable heat from solar energy absorbed by the air or the ground; but they also require some electricity to function.

Make sure that you are on a 100% renewable electricity tariff to maximise the impact of your low carbon heating - or even better, team a heat pump with Solar PV panels to generate the electricity yourself!

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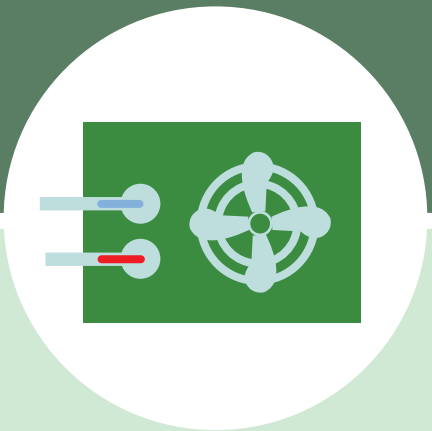
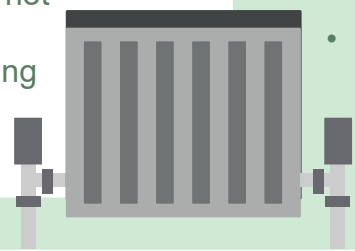


Heat Pumps work by absorbing heat from the air or ground via a fluid, even when temperatures are as low as -15°C. This fluid passes through an electrically powered compressor, which increases the temperature, allowing it to heat your home and water.

Low Temperature Heating

Heating systems powered by heat pumps operate at lower temperatures than traditional heating systems, so although your radiators may not feel hot to the touch, they will be providing background heating to keep your home at a constant temperature.



The Benefits of Heat Pumps

- Highly efficient, reducing your energy usage
- Potential financial savings on heating bills
- Low maintenance heating system
- Does not require fossil fuels for operation
- Fewer health and safety risks than gas
- Financial incentives may be available

Ground Source Heat Pumps

Generally fall under permitted development, but may need permission in certain circumstances

Require a large garden (around 500m²) or to bore deep holes (70 -100m deep)

Access required for excavation machinery

Significant financial incentives may be available

Up to 450% efficient

Air Source Heat Pumps

Unit is visible on outside of property - may require permission in some instances

Require mounting on an external wall with free air movement - potential visual impact

Access required for installation & maintenance

Significant financial incentives may be available

Up to 350% efficient

Other types of Heat Pump

Whilst the most common domestic heat pumps are air-to-water and ground-to-water, water-to-water heat pumps or air-to-air heat pumps may also be worth consideration in some circumstances.

Next steps...

If you are interested in Heat Pumps NEP are here to help! For advice or to arrange a technical survey please contact our Home Improvements Team.

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