

The cost of retrofitting heat pumps in the UK.

This short paper explores the latest DESNZ data on heat pump retrofitting and calculates the cost to the public purse (including bill payer subsidies) of achieving any carbon savings. Where estimates have been used, they have erred on the side of caution.

Heat pump volumes

According to DESNZ, in the financial year 2025/26, 49,880¹ Air Source Heat Pumps (ASHPs) were retrofitted into UK homes. The overwhelming majority of these were funded as part of government/public schemes, as follows:-

ECO	11004 units
SHDF	2637 units
HUG	794 units
BUS	30962 units
TOTAL	45397 units, or 91 per cent of all retrofitted ASHP installs.

Subsidy costs

Every heat pump sold in the UK is subsidised, they are VAT zero rated, so there is an immediate 20 per cent cost saving. This is estimated to cost the Exchequer £1000 per unit installed.

In addition, the various government-backed schemes attract additional subsidies ranging from £7500/unit for the BUS to fully funded installations (£15,000 for the others). Adding the VAT subsidy to the additional targeted scheme subsidies,

The total cost to the public purse of the subsidies and bill payer contributions (ECO is funded via energy bills) is £498,620,000 (for the financial year 2025/26).

¹ <https://www.gov.uk/government/statistics/heat-pump-deployment-statistics-march-2026>

Carbon savings

Heat pumps use electricity with a lower carbon intensity factor than a natural gas boiler, which applied to the Ofgem Typical Domestic Consumption Value of energy usage, delivers a saving of 1.525 t of CO₂e per annum. Over the whole of the retrofit market, 49880 units, this delivers an overall carbon reduction of 76,067 tonnes. Assuming a 15-year life of a typical heat pump, it equates to a total lifetime carbon saving of 1,141,005 tonnes. **This has been delivered at an average cost of £437/tonne of carbon.**

Conclusion

At over £400/tonne of carbon saved the current policy of ASHPs to replace gas boilers is above the government's own valuation of carbon, suggesting weak value for money; it is higher than most other current policy measures, suggesting an outlier cost to the public purse and it is near the top end of the Marginal Abatement Cost curve, suggesting premature high-cost decarbonisation.