

Boiler Upgrade Scheme Policy Position Statement

Background IET policy

The Boiler Upgrade Scheme (BUS) supports the decarbonisation of homes and small and medium non-domestic buildings in England and Wales. The scheme provides upfront capital grants of up to £7,500 to encourage property owners to replace fossil fuel heating with more efficient low carbon heat pumps.

The total BUS budget is £205 million with an additional £25 million being made available in the 2024 – 2025 financial year. The BUS is receiving a record number of heat pump grant applications and DESNZ confirmed that to date, 49000 heat pumps & biomass boilers have been installed, amounting to £328 million in grants¹. The heat sources that are currently supported are air-water (A/W or hydronic), biomass boilers, Water Heat Pumps (WHP) and Ground Source Heat Pumps (GSHP).

However, cost, consumer awareness and workforce inertia restrict the uptake of low carbon technologies. Despite these technologies being vital to reaching the UK's Net Zero targets, it is important the government take a steady approach to addressing these issues as to not further exacerbate them.

Executive Summary

The current BUS proposals lack flexibility and a holistic approach to grant qualifications. With the potential of heat pumps to reduce household Green House Gas emissions (GHG), record numbers of applicants, and a total budget £205 million it is paramount that these technologies are deployed efficiently and effectively. The IET recommends that new grants, such as the BUS, should first aim to maximise the reduction in fossil fuel emissions per £ spent. Grants should be available to support a wider variety of options that will represent the least cost to consumers in their bills and maximise GHG reductions per GBP for the taxpayer. Modifications to the scheme to ensure installer standards, widening the scheme to include hybrid/bivalent applications and payback incentives are needed to see the BUS scheme fully utilised.

Recommendations

1. Property Dependent Solutions

Not all buildings are the same and the UK's housing stock is incredibly diverse. Heat pumps can become expensive if not integrated and installed under the right circumstances, potentially causing them to be ineffective and inefficient. For example, GSHP's can be costly and hard to install at individual homes, however they can be much more appropriate for new build flat and housing block developments whereby requirements can be accommodated in the planning process. Therefore, government should consider what the best low carbon heating solution for the building is, rather than pushing a specific technology for all buildings. As there are many different heat pump technologies available, the key detail is to select the right one for the property. For example, if the building heating system and insulation cannot be upgraded to permit a low-temperature heat pump to be installed then a high-temperature heat pump might be more appropriate. Supporting and rolling out different varieties of heat pump technologies dependent on the circumstance will be vital in reducing greenhouse gas emissions from gas

¹ [Boiler Upgrade Scheme and certification requirements consultation \(accessible webpage\) - GOV.UK](#)

or oil heating. A further consideration when installing heat pumps should be long term planning, change in climate could mean that heat pump systems installed in the near term, if not designed with some additional capacity to allow for future variability, may not be 100% fit for purpose by 2050.

Government should also explore allowing BUS payments for hybrid or bivalent heat pump installations, whereby the newly fitted heat pump covers the majority of the heat demand, e.g. 90% and an existing heating source is still retained (e.g. gas or oil boiler). Existing heating systems are not usually designed to run at the lower temperatures that heat pumps can efficiently produce – they will still work, but below a certain outdoor temperature they will not be able to supply enough heat to the house. It is this upgrade of the heating system (bigger radiators and in some cases replacing pipework in walls and under floorboards) which typically makes heat pump installations expensive for homeowners.

By allowing hybrid/bivalent heat pump installations to be covered under the BUS scheme, then there would still be a reduction in emissions, with one study estimating that “a hybrid heating system consisting of an air-source heat pump and a condensing gas boiler reduced a typical UK household’s greenhouse gas emissions from heating by 30%,”² whilst minimising expensive heating system upgrades. We recommend that by 2040, considerations should be given to permit hybrid installations under transitional arrangements. This provides ample time use of an existing boiler, whilst also allowing time for the development of heating systems improvements to hopefully cover 100% of the heat demand.

If the ambition of the BUS is to drive decarbonisation in homes, then typically difficult to reach places such as rural farmhouses that are currently off the gas grid should be included in the government’s considerations and not overlooked or excluded by any overarching provisions. As of 2021, these stand at 865,940³ households across England and Wales. The use of oil for heating and hot water, emits much more CO₂ than natural gas boilers in most towns and cities which have mains gas. Furthermore, these rural houses are often older with worse insulation, which is impractical to upgrade, making a full replacement by heat pumps very costly. These types of properties can provide the best payback as they offer a large reduction of kg GHG emission per £ spent and therefore must be considered in government developments. Further GHG reductions can be made if it was permitted under BUS scheme that the oil/gas in the hybrid system could be confirmed to be biofuel.

2. Early adoption and image

Low carbon technologies must be installed appropriately and carefully if they are to maximise their impact and maintain public support. Adoption of these technologies is in part driven by word of mouth, positive and negative stories from family and friends whilst discussion becomes amplified on social media. If low carbon heating technologies are mis-sold or deployed in an inappropriate setting, it can increase bills and therefore harm perception and uptake.

Currently there is no mandatory training required for heat pump installation, and whilst the use of Trust Mark and CIBSE confirmations for installers provides some assurances, this remains

² [How a hybrid heating system could lower your bills and shrink your carbon footprint | University of Portsmouth](#)

³ [Census 2021: how homes are heated in your area - Office for National Statistics](#)

optional. This mirrors the gas network and the usage of Gas Safe to install gas boilers. Whilst Gas Safe doesn't ensure an appropriate installation, it ensures that it is safe. There is no mandatory training or minimum efficiency requirements for any heating system installation or upgrade across the UK. This creates further problems for heat pump installation as to receive the BUS grant, the installer has to be Microgeneration Certification Scheme (MCS) certified. Whilst it is imperative that this is maintained, overall heat pump training and certification is not mandated. The IET recommends creating an accreditation for heat pump installations and for the replacement of boilers, but being careful to ensure it doesn't create a tight market open to profiteering.

A trend in current heat pump installation is that the easiest properties have been targeted first. This principle is understandable however, this naturally leads to low-income households not being prioritised which will create huge issues once government subsidies end, and the boiler ban takes effect. By increasing the installation in these types of properties through a better targeted scheme, future potential issues can be resolved before they become deep seated.

Furthermore, current technical standards for installations are overly stringent and limit the adoption of heat pump technologies. For example, current standards enforce that heat pumps must maintain 20°C in negative weather. This doesn't align with Public Health England's minimum internal temperature recommendations of 18°C in the winter⁴. This standard unnecessarily raises costs of installation of heat pumps due to plumbing and radiator upgrades that must be made to handle this requirement. Reducing this standard to 18°C could lower costs and broaden adoption.

3. Costs of achieving net zero

Unless transitioning to a heat pump is made both more financially attractive and also easier to implement, then it is very unlikely that the UK will be able to meet the CCC's proposals. This is especially relevant to consumers who will be transitioning to electric vehicles (EVs) and low carbon heating systems. These technologies will need to have one of the shortest payback periods to prove they're more financially viable than their fossil fuel counterparts and be successfully widely adopted. However, current government plans don't presently offer security incentives in terms of liability for heat pump or EV payback periods. If an extra bill (through payback) is placed on top of the public's pre-existing bills, then all that will be considered is the macro figure and not the cost reductions. This makes adoption an expensive luxury most accessible to those who are already inclined and can afford it.

The IET recommends that new grants, such as the BUS, should first aim to maximise the reduction in fossil fuel emissions per £ spent. Grants should be available to support a wider variety of options that will represent the least cost to consumers in their bills and maximise GHG reductions per GBP for the taxpayer.

For Further information please contact: policy@theiet.org

⁴ [Minimum temperature threshold for homes in winter](#)