



Department for
Energy Security
& Net Zero

Lord Callanan
Parliamentary Under Secretary of
State for Energy Efficiency and
Green Finance

**Department for Energy, Security
& Net Zero**

The Baroness Parminter
Chair, Environment and Climate Change Committee
House of Lords
London
SW1A 0PW

31st March 2023

Dear Lady Parminter,

Inquiry on Boiler Upgrade Scheme – Government Response

I was grateful to receive your letter dated 22 February 2023 concluding the Committee's inquiry into the Boiler Upgrade Scheme.

Thank you for the time spent by the Committee conducting this inquiry. The Government acknowledges the concerns with the scheme and wider policies that were raised by the Committee. The Department for Energy Security and Net Zero has co-ordinated with across Government to address these. Please see my responses to the points raised in the Committee's report set out below.

Scheme take-up

How will the effectiveness of the BUS marketing campaign be monitored, and is there a review point scheduled for considering what further marketing activities are needed?

Pre-marketing campaign polling was undertaken to collate current levels of awareness and understanding of heat pumps and the scheme. This will be repeated post campaign and used alongside performance data gathered during the campaign to evaluate its success, identify lessons learnt and consider next steps for marketing.

The paid activity has been performing well so far, with a significant increase in clicks to the BUS gov.uk page driven by social media and paid search advertisements. In the first 14 days of running, the activity resulted in a 62% increase in clicks to the gov.uk page compared to the previous 14 days. The data so far suggests that the campaign is meeting its objectives of raising consumer awareness and understanding of heat pumps and of the BUS. The independent evaluation of the scheme will seek to add

further insights about the effectiveness of the marketing campaign by exploring how BUS property owners heard about the scheme.

We will extend and enhance the current marketing campaign to increase consumer awareness and take-up.

What evidence has been used to determine the grant levels? What factors are you taking into account when reviewing the grant levels, and what consideration are you giving to increasing the grant levels in general to support scheme take-up?

Grant levels for the scheme were set based on consumer willingness to pay evidence, the current upfront capital cost of each technology, social research with Domestic Renewable Heat Incentive (RHI) applicants, installation data from existing schemes and market intelligence through engagement with industry.

Monthly take-up of heat pumps in England and Wales under BUS so far has been higher than the volumes seen during the Domestic RHI. Since launch, BUS has redeemed an average of 840 heat pump installations per calendar month, compared to an average of 590 accredited heat pump installations per calendar month seen over the lifetime of the Domestic RHI¹. Installations under BUS are also better value-for-money for the taxpayer (the average subsidy amount for an ASHP was £9,000 under the Domestic RHI²).

The current grant levels mean that some consumers will pay as little as £2,500 when installing an ASHP, once the grant has been taken into account. Moving forward this could be even less where households are able to access additional incentives through mortgage lenders. These include up to a £2000 reward when installing a heat pump in your property and discounted interest rates. There are also a growing range of attractive unsecured finance offers available to help meet upfront costs. These include 0% finance available for a 2-to-5-year period.

We continue to keep the evidence for the grant levels under review, through taking on board feedback from stakeholders including trade associations and installers as well as looking closely at application numbers, to ensure these are appropriate to incentivise consumer demand but also represent value for money. We have the flexibility to amend grant levels outside of the scheme regulations and any announcement of a grant level change would be followed by a 28-day notice period to industry before coming into force.

What assessment have you made of the implications for the BUS' emission savings and supply chain development of the low ground source heat pump take-

¹ Figures rounded to the nearest 10. Comparison of BUS voucher redemptions paid (May 2022 – January 2023) with equivalent Domestic RHI accredited applications (May 2014 – March 2022). To enable a like-for-like comparison with BUS, the Domestic RHI figures used do not include installations in Scotland or in social housing properties.

² Internal analysis using an internal DESNZ subsidy calculator to estimate the average lifetime subsidy payment for a typical DRHI homeowner who applied to the scheme with an ASHP in 2022. The estimated payment has been discounted by 3.5% per annum in line with HMT Green Book guidance.

up? What thought have you given to increasing the grant level for ground source heat pumps?

As of the end of February 2023 the BUS has paid 216 Ground Source Heat Pump (GSHP) vouchers, and a further 7 Shared Ground Loop GSHPs³. This is in line with the Central Scenario of the published BUS Impact Assessment (IA) which estimated approximately 200 GSHP deployments in each scheme year. The IA acknowledged that deployment of GSHPs may vary depending on the number of non-social housing shared ground loop systems that come forward under the scheme. Support for GSHPs is also provided by a number of other Government schemes that are encouraging supply chain development, with installations often more prominent in social housing.

We continue to keep the evidence for grant levels across technologies and other criteria under review based on deployment data and feedback from industry and maintain the flexibility to amend them.

What assessment has been made of the impact of using EPC ratings as an eligibility criterion on BUS take-up, and the benefits of removing the requirement to improve take-up?

The Government recognises that the energy efficiency of a building can improve heating system performance and the achieved efficiency of a heat pump system. Households can apply for the scheme regardless of their EPC rating. The minimum insulation requirements – loft and cavity wall insulation – are relatively low-cost measures that will have a positive impact on running costs.

EPCs are part of the Microgeneration Certification Scheme (MCS) installation standards and they provide a level playing field when installers are undertaking performance estimates and calculating expected running costs for customers.

When engaging with stakeholders, we have heard from several large installers that EPCs are an important part of their process and are used in suitability assessments ahead of visiting properties. However, other installers assert that the EPC requirements are a hindrance to their ability to scale up deployment as they can present a cashflow or logistical barrier to potential applicants, and that the recommendations are not always accurate.

We are keen to take the right approach going forward while considering all stakeholder views, so we will consult on whether to make a change to the EPC requirements when we review the scheme regulations.

What consideration have you given, or will you give, to designing in an explicit, optional role for local authorities within the BUS, and providing incentives for them to undertake this role?

³ Boiler Upgrade Scheme Statistics (Feb 2023) - <https://www.gov.uk/government/collections/boiler-upgrade-scheme-statistics>

The intent with the design of the BUS is for a simple consumer offer, with an installer-led application process, through which industry can ramp up heat pump deployment. Feedback from industry and consumers since the scheme launched shows that the simplicity of the design is working well.

Local Authorities are involved in the deployment heat pumps through the Home Upgrade Grant (HUG). The Government has allocated up to £630 million to successful local authorities for the next phase of the scheme, which will be delivered from April 2023 to March 2025.

We continue to look for new ways to engage stakeholders on the BUS, including Local Authorities, to build awareness and encourage promotion of the scheme. A communications toolkit was created following a specific request for promotional assets from one Local Authority, and we have seen a positive response to this from stakeholders.

To what extent were the delayed launches of the BUS and the digital portal considered as exceptional circumstances that might justify rolling over the first year's budget? Has there been, or will there be, wider consideration of the appropriateness of applying the principle of annularity to the first year of the BUS, given the urgent need to scale up the low-carbon heat market?

As scheme administrator, Ofgem have been processing applications for funding in a timely manner since the scheme launched and this has not acted as a barrier to demand under the scheme.

Departmental budgets are set each financial year and need to be spent in the period allocated, which is central to financial accountability and spending control in the public sector.

The budget of £150 million per annum remains available for years 2 and 3 of the scheme. We want to work with industry to maximise use of the BUS budget, which is why we have announced an expanded marketing campaign for year 2 of the scheme. We are also aware that long term certainty is essential for industry to invest and scale up deployment so we have also announced that the BUS will be extended from 2025 to 2028.

Scheme administration

What lessons have been learnt from setting up the scheme, including the online portal, and how will these lessons be shared across the Department for Energy Security and Net Zero and other government departments?

Lessons have been learnt from both the successes and challenges with setting up the scheme. Recommendations for future scheme development will be shared across the Department and other government departments.

The launch of the scheme was predominantly positive with Ofgem processing applications in a timely manner even prior to the launch of the online portal. The simple consumer offer was an important success factor, as well as regular engagement with industry from both Government and Ofgem.

The timeline for delivering the online portal was very tight. However, its development accelerated once Ofgem took delivery in-house and it was successfully integrated into the scheme application process.

Skills, research and development and policy certainty

What barriers have been identified by the Electrification of Heat Task Group and Net Zero Buildings Council to training 12,400 heat pump installers by 2025 and 50,200 by 2030, and what action is being taken by Government to address these barriers?

The Government is working closely with industry to ensure that sufficient installers are available to install heat pumps. There are currently around 1,500 businesses in the UK certified with the Microgeneration Certification Scheme (MCS) to install heat pumps, estimated to employ around 4,500 installers. As MCS certification is only required for installations receiving Government grant funding, the total number of installers is likely to be greater.

Recent Government research confirmed that demand is the main driver for installers to offer heat pumps, with two-thirds of current heat pump installers citing demand as the main reason to offer the technology.

Industry is already investing in upskilling the existing workforce in response to growing demand. For example, Octopus Energy is investing £10 million in a new training centre in Slough, and Ideal Heating have announced a new multi-million pound training centre in Bridgehead near Hull.

The Government is investing in heat pump installer skills to ensure there are sufficient installers to meet increasing demand for heat pumps. On March 2nd 2023, Government announced £5 million to train heat pump installers and heat network professionals across England. This can support 10,000 training opportunities up to 2025.

This builds on the Home Decarbonisation Skills Training competition. The latest £10 million phase launched on 20th September 2022 to fund training for people working in the energy efficiency, retrofit and low carbon heating sectors in England. The previous £6 million phase of this scheme in 2020 and 2021 supported almost 7,000 training opportunities, including training for over 2,000 heat pump installers.

As of the end of February 2023, a total of 1036 MCS-certified installer companies have created a BUS account with Ofgem, and this number continues to grow. We are

confident that this number of companies represents sufficient capacity to fully support demand under the scheme.

How will the Government spur the necessary investments in R&D and manufacturing capacity to enable the successful roll-out of heat pumps in line with the 2028 target? Is the Government developing an R&D and technology roadmap, as called for in the Rt Hon Chris Skidmore MP's Net Zero Review, and, if so, will heat pumps form a part of this?

Attracting investment across the heat pump supply chain is critical to the successful rollout of heat pumps in the UK. That is why we are investing in research and development, such as the Heat Pump Ready Programme, which is providing up to £60 million in innovation funding to develop coordinated strategies for the rollout of heat pumps and support the development of technologies that make heat pumps cheaper and easier to install.

Over the past year, we have seen investments from manufacturers in local supply chains to help meet the growing demand for heat pumps. Existing boiler manufacturers, like Ideal Heating and Vaillant, have invested millions of pounds to start heat pump assembly in the UK. We have also seen Mitsubishi Electric invest over £15 million to increase production of heat pumps from its Livingston factory, while Octopus Energy have bought a stake in Northern Irish heat pump manufacturer Renewable Energy Devices.

We want to see further investment. We are helping to build a thriving British manufacturing sector in low carbon heating by providing support to businesses to encourage investment. We intend to provide up to £30 million through the Heat Pump Investment Accelerator Competition to strengthen and build resilience in the heat pump manufacturing supply chain. It is estimated that the Competition will result in £270m of private investment in manufacturing facilities, resulting in up to 3,000 low carbon jobs and creating capacity to produce up to 270,000 heat pumps or components a year. The Competition launched on 30th March, with the competition application window expected to go live later in the Spring.

What plans does the Government have to review the scale of the BUS with a view to increasing the overall budget, and will you commit to conducting a review to consider extending the BUS based on the criteria above to provide industry, would-be heat pump installers, and consumers as much certainty as possible on plans for the scheme beyond 2025?

The Autumn Statement announced that £6 billion of new Government funding will be made available from 2025 to 2028, in addition to the £6.6 billion allocated in this Parliament. This provides long-term funding certainty, supporting the growth of supply chains, and ensuring we can scale up our delivery over time.

On 30th March, we announced that we will extend the BUS to 2028. This will provide long-term certainty for industry, encouraging greater investment in heat pumps and increase heat pump deployment towards our target of 600,000 installations a year by 2028.

In addition to the announced BUS extension a range of policies will combine to support the heat pump market towards 600,000 per year by 2028, including: the Future Homes Standard, a new Clean Heat Market Mechanism, consulting on phasing out new oil, coal and LPG heating, as well as other capital schemes like the Home Upgrade Grant and Social Housing Decarbonisation Fund.

Is work ongoing in parallel to the Energy Bill to produce draft regulations to implement the market-based mechanism for low-carbon heat, and what indication can you give of the direction of travel to industry, would-be heat pump installers, and consumers for the market-based mechanism and £6bn of energy efficiency funding for 2025-28?

Work is ongoing to develop the detailed design of the market-based mechanism for low-carbon heat, and to inform the development of scheme regulations, in parallel to the passage of the Energy Bill. On 30th March, Government published a second consultation on the scheme which is an important step in providing further clarity on the details of the scheme for industry and in enabling stakeholders to contribute to completing the scheme's implementation.

The Government has committed a further £6 billion from 2025 to 2028 as part of the Government's 15% energy reduction target by 2030, and we can confirm that the Boiler Upgrade Scheme will be extended to 2028.

Costs

Does the Government accept that current grant levels preclude low-income households from benefitting from the BUS? What work has the department done to establish low-carbon heat pathways for households across income levels and ensure that lower-income households are not left behind?

The Government recognises that low carbon heating measures can currently be costly to install and out of reach for many low-income families without appropriate support. Therefore, we will deliver energy efficiency and low carbon heating upgrades to over half a million low income and fuel poor homes in the coming years through our Social Housing Decarbonisation Scheme, Home Upgrade Grant (HUG) and Energy Company Obligation Scheme. Under HUG Phase 2 there are separate funding pots per household for energy efficiency upgrades and low carbon heat such as heat pumps, to help drive the deployment of low carbon heat.

The Government wants to make the transition to low carbon heating affordable and achievable for all. Working with industry we have set an ambition to reduce the upfront cost of a heat pump by at least 25% by 2025 and for them to be as cheap to buy and

run as gas boilers by 2030 at the latest. With the price of an air source heat pump starting from £2,500 when taking the grant into account, the cost can be comparable to that of a new fossil fuel boiler for some consumers. Industry is also responding well with a range of finance and mortgage incentives to help customers with the upfront costs of switching to low-carbon heating.

What consideration has been given to offering government-backed low-interest loans, and how is Government supporting the private sector to develop new financial products and heat-as-a-service offers which could help households meet heat pump installation costs?

The aim of the BUS is to build the supply chains for installing low carbon heating ahead of the introduction of planned regulations and market-based approaches later in the decade. We are working with lenders to support the development of green finance products and industry have brought forward new lower cost offers in conjunction with the BUS grant.

A number of large installers provide heat pumps with 2-5 years interest free loans, similar to interest free offers available for boilers. In addition, there are also longer-term loan products available for up to 10 years. Some mortgage providers are providing cashback and additional borrowing on heat pumps and other green home improvements including insulation.

The Green Home Finance Accelerator, which launched in October 2022, is also making up to £20 million of grant funding available to support the development of innovative green finance products and services to diversify the market and enable owner-occupiers and private landlords to decarbonise their properties.

Heat-as-a-service is one of a number of green financing solutions, which could aid the decarbonisation of heat. Between 2017-2019, the UK Government funded a trial of heat-as-a-service in 100 homes as part of the Smart Systems and Heat (SSH) programme with the Energy Systems Catapult. This demonstrated the potential of the concept, but barriers to commercialisation remain, and we are further exploring the feasibility and barriers preventing wider adoption of heat-as-a-service through programmes like our ongoing Heat Pump Ready innovation programme.

When can we expect the next update on the Government's Review of Electricity Market Arrangements, including proposals to weaken the link between wholesale gas and electricity prices?

The government recognises the case for rebalancing energy costs to ensure that heat pumps are no more expensive to operate than a gas boiler and will be comparatively cheap to run over time. The current high gas prices mean that electricity has become comparatively cheaper. However, with gas still setting the electricity price a lot of the time, there is a case for wider market reform which is one of the reasons Government has launched the Review of Electricity Market Arrangements (REMA).

On 7th March we published a summary of responses to our summer consultation, which sets out our current thinking on the future of our electricity market arrangements. In the next stage of REMA, we will gather additional evidence on the remaining options ahead of consulting again later in the year on a narrower range of options.

Options for decoupling gas and electricity prices remain under consideration – we are examining whether they go further than the existing CfD, which will increasingly insure consumers against high gas prices, and their wider impacts on the market, including investor confidence.

What steps are the Government and Ofgem taking to promote a greater take-up of time-of-use tariffs, given the reductions in running costs they could deliver to households?

Smart meters, technologies, tariffs and services will enable consumers to change their consumption patterns to match times of cheap and abundant low carbon electricity and give consumers greater control over their energy use and comfort levels. The joint Government and Ofgem Smart Systems and Flexibility Plan set out actions to unlock the benefits of consumer flexibility and enable the market for small-scale demand side response to emerge.

Ofgem confirmed in April 2021 that it would introduce half-hourly settlement on a market-wide basis. Market-wide half-hourly settlement means that energy suppliers will use data about when energy is actually being used and how much it costs, reducing the need to rely on estimates based on a profile of the average customer. The timelines for this are currently subject to consultation.

Energy suppliers can already choose to settle consumers half-hourly, and tariffs are available that reflect this.

We have already announced up to £65 million through the Flexibility Innovation Programme which will include support for the design and development of innovative tariffs, products and services under the Alternative Energy Markets Programme.

Advice and support

What assessment have you made of how advice is currently being provided to households about energy efficiency and low-carbon heating, and what steps are being taken to promote best practice? What consideration has been given to introducing a personalised advice service across England and promoting the role of retrofit coordinators to help households navigate low-carbon heating installations?

We recognise the importance in helping consumers navigate the transition to low-carbon heating which is why we are scaling up the information available to help

households on schemes like the BUS through dedicated gov.uk pages⁴ and a new national phoneline that offer tailored and impartial advice on home energy efficiency improvements, as well as a tool that can help assess the suitability of a home for a heat pump⁵.

Trusted organisations such as the Energy Saving Trust and Which? also provide important advice services to help consumers consider their options for installing low-carbon heating.

Schemes such as BUS require installers to be MCS certified. These installers will be able to assess the suitability of a home for a heat pump, including carrying out a building heat loss calculation and providing the customer with a performance estimate for the system.

Some customers may want to go further and have a whole-house assessment carried out by a Trustmark registered Retrofit Assessor. This may help identify further opportunities for reducing home energy bills.

What assessment have you made of the adequacy of aftercare support available to households and policy measures that could be used to encourage greater support?

All installers participating in the scheme must be MCS certified. The MCS heat pump installation standard requires that installers provide homeowners with a comprehensive document handover pack upon installation of their heat pump. This pack includes the manufacturer user manual and warranty details along with the maintenance requirements of the system and maintenance services available.

MCS operates its own audit programme for BUS installations to provide assurance that these have been carried out in accordance with MCS standards. At the same time, the Government continues to support consumer organisations including Which?, Energy Saving Trust and the Consumer Codes with their public information and communications on heat pumps, by providing the latest government information on relevant schemes and helping them to tailor advice on key topics.

Other policy barriers

What is the timeframe for launching the heat network zoning delivery consultation and what plans are there to put forward a deadline for zone designations? What resources will be provided to enable local authorities to participate in this process?

⁴ Boiler Upgrade Scheme gov.uk page <https://www.gov.uk/apply-boiler-upgrade-scheme>; Find ways to save energy in your home gov.uk tool <https://www.gov.uk/improve-energy-efficiency>; Energy saving tips to save money gov.uk page <https://helpforhouseholds.campaign.gov.uk/energy-saving-advice>

⁵ Check if a heat pump could be suitable for your home tool <https://www.gov.uk/check-heat-pump>

The 2021 Heat and Buildings Strategy committed to the introduction of heat network zoning in England by 2025.⁶ An initial consultation⁷ was held in 2021 and the Government aims to consult on the design of heat network zoning regulations, based on the powers in the Energy Bill, later this year.

We recognise that heat network zoning policy will be dependent on local government having the right resources to deliver its responsibilities effectively. A pilot of the zoning methodology is currently underway in 28 towns and cities across England. This and other Government studies will provide evidence which we will use to inform detailed policy design, including around local government resource requirements.

What is the timeline for the Government's next round of updates to EPCs, and will these changes ensure that heat pump installations are consistently valued, and recommendations for all properties are feasible?

The Government recognises the concerns which have been raised about the way that EPCs work and agrees that improvements can be made. The EPC Action Plan, published in Summer 2020, set out a programme of work to improve the accuracy and reliability of EPCs, their usefulness to users, and to improve access to EPC data and the government is continuing to progress those actions. Some improvements within the Action Plan will require changes to the Energy Performance of Buildings Regulations and the Department of Levelling Up, Housing and Communities plans to consult on these later in 2023.

Work is underway to improve the metrics and information provided on EPCs. This will encourage better fabric efficiency and the deployment of low carbon heating systems including providing better information about the associated costs and benefits. The Government is currently working on proposals for improving EPC metrics, and intends to consult on these this year, taking account also of recently published proposals from the Climate Change Committee.

What plans are there to relax the requirement arising from Permitted Development Rights to site a heat pump a certain distance from neighbouring properties?

The Government wants to encourage the uptake of heat pumps by making them easier to install and removing regulatory barriers, whilst ensuring that their installation has minimal impact on the wider environment. We have already seen incredible innovation in heat pump technologies over the past decade, particularly in efficiency and noise reduction, and we must ensure that regulations keep pace with this progress.

The Department for Energy Security and Net Zero has commissioned an independent review of heat pump planning rules and noise emissions, the outcome of which will inform whether the existing permitted development rights are fit for purpose and in line

⁶ <https://www.gov.uk/government/publications/heat-and-buildings-strategy>

⁷ <https://www.gov.uk/government/consultations/proposals-for-heat-network-zoning>

with advances in heat pump technology. Subject to the findings of the review, to be published in the Summer, we will consult on proposed changes to permitted development rights in England. We will also work with the Devolved Administrations to share evidence on best practice.

Thank you once again for the time spent conducting this inquiry.

A handwritten signature in blue ink, appearing to read "Martin Call", with a long horizontal flourish extending to the right.

LORD CALLANAN
Parliamentary Under Secretary of State for Energy Efficiency and Green Finance