Environmental Audit Committee
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Rt Hon Kwasi Kwarteng MP
Minister of State
Department for Business, Energy and Industrial Strategy
1 Victoria Street
London SW1H 0ET

By email

21 December 2020

Dear Kwasi,

My Committee held an evidence session on heat pumps on 25 November as part of our inquiry into technological innovation and climate change. We received 56 pieces of written evidence and held an oral session with representatives from Energy UK, The Regulatory Assistance Project, the Energy Networks Association and BEAMA Ltd. I am writing to raise some of the issues from the session and would be grateful if you could respond in writing.

The installation of 600,000 heat pumps every year by 2028, as outlined in the Government's Ten Point Plan, is a welcome but ambitious target. Several barriers to achieving this were identified in the evidence we received highlighting the scale of the challenge. We welcome the proposed consultation in early 2021 on policy approaches to underpin the development of the UK heat pump market and the upcoming Heat and Building Strategy, yet clear direction is needed now to help realise the Government's ambitions.

The increase in the deployment of heat pumps relies on the development of a secure supply chain that can ensure sufficient production and high-quality installation. Evidence suggests that, whilst the initial growth in installers will come from reskilling existing gas and electrical engineers, there needs to be a concerted attempt to bring new entrants into the market. Whilst we welcome the launch of the Green Jobs Taskforce and the Green Homes Grant Skills Training Competition, we were told that the Government must create a visible, long-term market that makes heat pump installation a stable and desirable profession. **Will you commit to funding a dedicated training programme, working with the Department of Education, to support a long-term strategy for education and training in green jobs?**

We heard that going forward, it is vital that installation quality and standards are maintained. The Microgeneration Certification Scheme (MCS), a quality assurance scheme supported by BEIS,

is a requirement for heat pump installations made under the Domestic RHI, the Green Homes Grant and the Clean Heat Grant. However, between 2014-2017 there has been a 65% reduction in MCS accredited installers. We were told there are currently only 850 MCS accredited heat pump installation companies in the UK, equating to roughly 2,000 individual installers (in comparison to the 100,000 plus Gas Safe engineers). **Please tell us how your Heat and Building Strategy will address the much-needed increase in certified installers to meet expected demand? Will you consider introducing similar installation standards to new build properties?**

The Green Homes Grant is a commendable initiative and its extension by one year is welcome. However, if we are to succeed in increasing the number of heat pump installations from under 30,000 per year to 600,000 per year by 2028, the Green Homes Grant must be extended further to become a multi-year scheme. This will give installers and consumers the confidence needed to invest in the initiative and help open the heat pump market. **Will you, in 2021, review and consult on reforms to the scheme to better target potential installers? Will you commit to extending the Green Homes Grant to become a multi-year scheme beyond 2022?**

Ensuring that heat pumps are affordable will be key for a successful mass roll-out scheme. We heard that heat pumps are typically three to four times more expensive to purchase and install than conventional gas boiler alternatives. Buildings with poor thermal insulation will also have to undergo significant remedial work (such as new radiators, insulation, underfloor heating) to allow for heat pump efficiency. The Northern Housing Consortium told us it will cost an average privately owned household £19,300 for retrofit and £5,000 for a heat pump.[1] However, we heard from you that the average cost of retrofit for a privately rented property (without a heat pump) is expected to cost just £4,700.[2] **Could you please clarify what efficiency measures are installed under your estimated retrofit cost of £4,700? Do these measures allow for the household to support a heat pump efficiently? If they do not, will you publish an updated cost estimate of the level of retrofit required to support a heat pump?**

The Government has placed low carbon policy costs on the electricity side of consumer bills. As a result, the cost of electricity is roughly four times more expensive than gas. This drives out operational cost savings for customers relative to gas boiler use and, in some instances, increases heat pump bills. This acts as a significant barrier to heat pump adoption. Demonstrating the operational cost savings that could accrue from heat pump use (relative to gas boiler use) is a key selling point for customers. **We were told that reviewing the policy costs across gas and electricity could significantly improve the customer case for heat pumps, making them cheaper to run than gas boilers in many more domestic settings. Will you consider reviewing where policy costs fall on energy bills?**

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[1] Q176
[2] Q265

A central challenge to the increased uptake of heat pumps is to ensure they are being installed in the most appropriate and suitable properties first. The technical suitability of heat pumps depends on a range of building characteristics (e.g. its fabric efficiency) in addition to the physical characteristics of the building (e.g. location, space constraints, planning constraints). We heard that the Climate Change Committee has identified 10 million homes which are heat pump ready and a further 10 million that can be upgraded to be reasonably efficient to host a heat pump. **Have you identified these 20 million homes in order to target them? If not, how do you plan to do so? Does your estimated retrofit cost of £4,700 per household apply to the 10 million homes that can be upgraded?**

We welcome the introduction of the Future Homes Standard to 'future proof' new build homes with low carbon heating and high levels of energy efficiency. We are concerned, however, that the implementation of this was first by 2025, then by 2023 and is now in the "shortest possible timeline"[3]. This does not accurately reflect the UK's commitment to accelerating our path to net zero. We were told that a definite date is needed to set a trajectory for industry to mobilise behind and drive necessary demand to meet the scale of deployment set out in the Ten Point Plan. The Energy White Paper's commitment to a consultation on whether it's appropriate to end gas grid connections to new homes being built from 2025 is a welcome step. **Will you commit to bringing forward the Future Homes Standard ahead of 2024, in line with the Climate Change Committee's recommendations?**

The Climate Change Committee has stated that hydrogen could play a valuable role in combination with heat pumps as part of a hybrid system. Within this system, heat pumps powered by low-carbon electricity, provide heat efficiently for most of the time, with hydrogen boilers contributing mainly as back-up to meet peak demands. This can avoid the need for disruptive measures such as large radiators and solid wall or floor insulation, manage grid congestion, and will allow consumers to shift between electricity and hydrogen to take advantage of lower prices. **How does the Government intend to support hydrogen-ready hybrid heat pumps? Will hybrid heat pumps be included in the upcoming Hydrogen Strategy?**

While heat pumps are known in residential applications, they are much less recognised for their contribution potential in commercial and industrial applications. Ground source, water source and air source heat pumps installed in non-domestic settings are currently eligible for non-domestic RHI support. However, the non-domestic RHI will close to new applications on 31 March 2021 despite having supported the installation of only 2,396 heat pumps to date. The Clean Heat Grant, which is set to replace the domestic RHI, will not contain support for non-domestic heat pumps above 45kW. **Will the Government consider extending the non-domestic RHI? If not, will it consider providing incentives, such as grants, for large (above 45kW) heat pumps in non-domestic settings?**

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[3] HM Government. 2020. The ten point plan for a green industrial revolution p.20

Finally, one of the biggest barriers to the mass deployment of heat pumps is public awareness and acceptance. Heat pumps are not a technology with which most people are familiar, and the potentially disruptive installation and high capital cost can deter many. A key challenge is therefore a need to create a situation in which heat pumps can become the favoured choice for consumers. Government information and communication is vital, along with standardised information for the retrofitting process. **Will you commit to proactively raise awareness of heat pump technology as a viable alternative to conventional gas boilers? How, in your Heat and Building Strategy, will you explore the challenge of the mass adoption of heat pumps?**

I would be grateful for a response by 29 January 2021.

Yours sincerely,

Rt Hon Philip Dunne MP
Chairman of the Environmental Audit Committee