

Energy Saving Trust response to the UK Government’s Department of Business, Energy and Industrial Strategy consultation ‘A market-based mechanism for low-carbon heat’

Question 1. Do you have views on the proposal to apply this mechanism to the heating appliance market, basing the obligation on the sale of fossil fuel boilers and applying it to appliance manufacturers?

We welcome these proposals as one part of a suite of policies aimed at increasing the proportion of heat pumps sold in the UK, moving towards the government’s installation targets and ultimately decarbonising heat. However, on its own we do not think this will make a significant enough contribution to the government’s heat pump targets, though without more detail on the proportion of heat pump installations required by the mechanism or the size of the penalties levied against non-compliant manufacturers it is hard to determine the likely market effects.

Underpinning this policy must be a commitment to robust standards (for both equipment and installation), consumer protection and market surveillance to help ensure that high quality products are sold and that manufacturers do not meet their obligation by selling inferior products. An investment in improving the skills of the existing workforce and training new installers will be needed. Stakeholders that we engage with regularly describe this as one of the most significant supply-side barriers. Consumers should also be supported with expert and impartial advice. Heat pumps remain unfamiliar to many and as their prominence grows the likelihood of miss-selling increases. Consumers should feel comfortable with their purchase of a heat pump and confident that it will perform as advertised and heat their home to a suitable level at an affordable price. The performance of the eventual scheme should be monitored on an ongoing basis to allow for proactive policy redesign in case of the emergence of deployment issues. We think given the potential scale and complexity of the market-based mechanism it would be worthwhile road testing elements of the mechanism before the launch of the full scheme in 2024, perhaps with a subset of manufacturers or in a smaller geographic area to address any underlying issues.

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Our view is that the proportion of sales which must come from heat pumps should be stepped up over time. The consultation document describes this as a theoretical approach, we believe a firm commitment to ratcheting up the proportion of heat pump sales over time should be made as part of the final policy. This will provide a significant incentive to the industry to support the roll out of heat pumps in the UK.

Question 3. Do you have views on how competitive pressure can be maintained to support cost reductions and efficiencies in the heat pump market over time, as have been seen in other sectors? Are there further steps that you feel it would be justified to take within the design of this market-based mechanism to support this?

We think that for this policy to be successful from a consumer perspective (which is essential for the overall success of heat decarbonisation) consumers must be confident that they are buying a high quality product. In a competitive market quality of product should be a key differentiating factor. The majority of existing heat pump manufacturers produce high quality, efficient and long-lasting products, a policy that encourages new entrants into the market could, without the right checks in place, incentivise the manufacture and sale of poor quality products to make up quotas. To counter this, robust quality and efficiency standards should be put in place alongside a consumer protection framework and sufficient funding made available to undertake market surveillance. Quality standards could be based on existing standards such as MCS 007.

The other step which we think should be taken to maintain competition and ensure the right outcomes of the scheme is a commitment to offering consumers impartial and expert information and advice. Informed consumers will be better able to select the right products for their situation and will provide an incentive to manufacturers to improve their product lines and service offerings. Providing suitable information and advice will mean providing detailed web-based resources, telephone advice and the training of installers and suppliers who provide advice to consumers regarding their home heating system. We recognise that this approach concerns more than the proposed market-based mechanism but it is our view that these steps are key foundational and enabling factors which will help to ensure the success of multiple policies and the wider push for heat and building decarbonisation.

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Question 5. Do you have views on this alternative ‘supplier obligation’ proposal? If the government were to pursue this approach, what design considerations would help to make it work best for the energy retail market and for consumers?

While we recognise that building on the success of the ECO scheme and its existing energy supplier infrastructure is appealing we do not support this alternative proposal. We think that such a scheme would place the obligation on the wrong party, could complicate delivery and see increases to energy bills. There is a risk that this could incentivise some energy suppliers to source poorer quality imported systems with no benefit to the UK manufacturing base. With this said, it is clear that energy suppliers will play a crucial role in delivering a range of low carbon heat policies including this market-based mechanism owing to the fact that suppliers engage much more often with households than heating system manufacturers. Suppliers should be encouraged and supported to engage with their customers on issues of heat decarbonisation and energy efficiency. Innovative partnerships between manufacturers and energy suppliers should also be encouraged. As energy service business models develop it may become beneficial to reconsider which parties are obligated through the market mechanism. Being able to adjust criteria or the workings of the mechanism through an iterative approach will be essential for the continued success of the scheme.

Question 7. Do you have views on the treatment of high-temperature heat pumps in the market-based mechanism? Please provide evidence to support your response.

We do not think there is a strong case for excluding high temperature heat pumps from the scheme given the desire to promote the widespread uptake of heat pumps. High temperature heat pumps can be useful in certain circumstances such as in existing homes, which is the primary focus of this mechanism, and particularly in hard-to-treat homes. In reality, high temperature heat pumps will usually only operate at higher temperature ranges for a few days in a year and so excluding them from the scheme does not seem sensible. It is important to note here that low temperature heat pumps are not just capable of heating small or well insulated buildings – though it is certainly true that there are some buildings that are more difficult to heat with low temperature heat pumps than might be the case with a fossil fuel boiler. In reality, most homes could be heated using a low temperature heat pump, as long as the central heating system is designed and sized correctly. Homes can present challenges when significant parts of the central heating system need improvement, which adds cost. In the most difficult

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cases, it might even be prudent to completely replace all the radiators and pipework – but these cases are extremely rare. In the most difficult homes, solutions can often be found which either use two heat pumps rather than one (cascade systems) or use “high temperature” variant heat pumps.

On a practical level, we think it would be challenging to implement such an exclusion as functionally, low and high temperature heat pumps operate in much the same way, with overlapping temperature ranges which makes the distinction between them arbitrary. High temperature heat pumps should only be installed where the circumstances of a home require it, making impartial and expert advice and support necessary once again.

Question 10. a) Do you have views on whether the market-based mechanism is an appropriate tool for supporting ‘smart’ heat pump capability and use, and any limitations of this? Please explain your answer. b) Do you have views on whether this should be through differentiated incentives (see section below), through the exclusion of ‘dumb’ heat pumps from qualifying scope, or another approach?

b. It is our view that the use of smart controls as part of a heat pump heating system should be encouraged. If appropriately designed, the market-based mechanism could encourage the use of smart controls with heat pump systems. Ensuring appropriate control of heat pumps will be a key factor in achieving high performance factors and acceptable comfort levels for consumers, at an affordable cost. Smart systems could also provide more immediate and intuitive feedback on performance, enabling householders to learn more appropriate control habits. Smart controls will be a key enabler for demand flexibility and allowing consumers to gain benefits from time of use tariffs both at a household and a system level.

With this said, we do not agree that ‘dumb’ heat pumps should be excluded from the market-based mechanism as these heat pumps are still highly efficient and effective. Smart controls can still be used alongside these devices and as this policy ultimately aims to increase the rollout of heat pumps our view is that unnecessary barriers shouldn’t be put in place.

Question 11. Do you agree hybrid heat pump systems should be included in the market-based mechanism? Yes / No. Please explain your answer.

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Yes though with caveats and qualifying criteria. As a key principle all hybrid systems should be capable of operating at 100% heat pump capacity so that households aren't left with a system that isn't able to meet their needs if gas is removed. Hybrid systems should not be permitted in new build properties, there is no reason why a new build shouldn't be able to be heated adequately with a full electric heat pump system. BEIS should also consider excluding all-in-one hybrid systems as they are often more expensive and lock-in unnecessary gas use. A 'hybrid' system that is made up of a new independent heat pump sitting alongside the legacy gas system to give reassurance to a consumer would still be acceptable. We see value in setting a limit on the number of hybrid heat pump system installs, as suggested in the consultation.

Question 12. Do you agree that the mechanism should differentiate between different types of hybrid system/product to focus incentives on those which are most consistent with the policy's objectives? Yes / No. Please explain your answer.

See response to Q11.

Question 14. Do you have views on our proposed approach for alternative low carbon heating appliances under the market-based mechanism?

We welcome the commitment to heat pumps in the proposed approach and agree with the principle that other low carbon heating technologies are either suitably mature to not require market support, are unlikely to heat a significant number of homes or could incentivise the installation of fossil fuel systems. For these reasons, we think that biomass boilers should be excluded from the obligation, given the importance of meeting the 2028 heat pump installation target.

Though they are not discussed in the consultation document we think that 'hydrogen ready' boilers and other hydrogen technologies should be explicitly excluded from this scheme because the immediate priority must be on scaling up the installation of heat pumps by supporting the creation of an effective market. If any alternative low carbon heating technologies are included in the scheme they should have to be installed alongside heat pumps (e.g. solar thermal).

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Question 15. Do you agree with the proposal to distinguish qualifying installations under the obligation by appliance capacity rather than by building use? Yes/no. Please explain your response.

Yes. We agree with the rationale set out in the consultation document that the desired outcome of this policy is an increase in the sale of heat pumps and that in any case the same heat pump systems are being used in many non-domestic settings which have similar floor sizes to domestic properties. For these reasons we don't think any benefit will be gained from excluding non-domestic sales and installations.

Question 16. Do you believe there is a need to go further to limit the scope of qualifying installations in non-domestic properties under the obligation, for instance through an upper limit on floor-size of properties? Yes/no. Please provide evidence to support your response.

No. While we recognise that the main aim of this mechanism is to drive innovation, lower costs and increase sales in the smaller-sized domestic heat pump sector we don't think that allowing larger systems to be included will significantly hamper this ambition. In any case, we need to decarbonise heating everywhere and at all scales and larger heat pump systems are equally in need of innovation and refinement. It seems unlikely that obligated manufacturers will be able to 'make up the numbers' by opting to install significant numbers of large heat pump systems in non-domestic settings.

Question 17. What challenges may be involved in focusing the obligation on retrofit installations only, excluding those in new-build properties, and how might these be addressed?

It is right that the consultation document recognises that this mechanism is best applied exclusively to the retrofit market. Installing heat pumps in new build properties is already a no-regrets approach which does not need any further government support other than the regulations set out in the Future Homes and Future Buildings Standards (and their equivalents in the devolved nations). The challenges in the retrofit market stem from the fact that we have a diverse and inefficient housing stock and so the needs of different homes and archetypes differ. For this reason, it is crucial that households are supported in making the transition to heat pump systems with impartial

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and expert advice tailored to their needs, which offers guidance on heat pump technology but also any enabling actions which can increase the benefits of having a heat pump installed (e.g. insulation measures, smart controls). Without installers meeting the PAS 2035 standard and assessing the fabric efficiency of the property prior to the installation of the heat pump, there is a risk the heat pump will not work efficiently. More cost will then be incurred down the line to improve the energy performance of the home.

Question 19. Do you support the proposal to incentivise the installation of low carbon heating systems that replace fossil fuel heating systems more strongly than those that do not? Yes/no. If yes, do you have comments on how this could work most effectively?

No. While we support the desired outcome of replacing polluting fossil fuel systems with heat pump technology we would be concerned that households with inefficient and expensive direct electric heating would be last in line to receive heat pumps or be passed over by manufacturers in favour of households with fossil fuel systems because the carbon savings would be less than households with gas boilers.

Adopting differentiated incentives based on which heating systems are being replaced also presents a significant administrative challenge for the obligated parties. We are not convinced that these challenges could be easily overcome and so the intended incentive wouldn't be effective.

Question 20. Do you support the proposal to incentivise the installation of low carbon heating systems that replace more carbon-intense fossil fuel systems more strongly than others? Yes/no. If yes, do you have comments on how this could work most effectively?

Yes. While the same concerns remain regarding the deprioritisation of households with direct electric heating systems compared to those with fossil fuel systems, something which we think should be addressed, our view is that prioritising the replacement of more heavily polluting oil, LPG and coal systems ahead of gas boilers would be beneficial in both carbon abatement and cost reduction terms. Already, the replacement of these systems with heat pumps would save the majority of households

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money with minimal additional fabric energy efficiency improvements and so this low-regrets approach should be prioritised.

With this said, the same administrative challenges highlighted in our response to Question 19 will remain if differentiated incentives based on the replaced heating system are adopted. If these challenges can be addressed and a workable system implemented then we would support this proposal.

Question 24. Do you have views on the most appropriate central target for the policy? What metric, including but not limited to those here, do you believe would work best to meet the policy aims and design principles? Please provide reasoning to support your response.

We do not take a view on the specific target, metric or mechanism used to incentivise the rollout of heat pumps. We prefer to focus on the outcomes of whichever approach is taken. In our view, a credit-type system should be designed to increase heat pump rollout, targeting the most polluting systems and those households who are paying the most for their heating now, where possible. It should support high quality heat pump manufacturers, underpinned by high standards, consumer protection and product surveillance. Credits (or a similar alternative) should not be seen as an indefinite solution – it cannot be the case that manufacturers of high carbon (oil, LPG or gas) boilers can be allowed to continue manufacturing and selling these systems unabated into the 2030s by paying other companies to manufacture heat pumps to ‘offset’ their outputs. To guard against this, some kind of sliding scale whereby an increasing share of the obligation must be met through an obligated manufacturer’s own products could be effective. The cost of individual credits could also increase over time so that there is an increasing market incentive to switch to producing heat pumps over fossil fuel systems. The number of certificates should also increase periodically to align initially with government installation targets, with the option to increase the number of certificates to align with the CCC’s balanced pathway scenario.

Question 26. Do you have views on options for, or considerations related to, the delivery and administration of the proposals set out in this consultation and/or to the role of an administrator? Please provide reasoning to support your response.

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We support the proposal that Ofgem would be the administrator for the scheme given their extensive experience administering large scale programmes of a similar nature. With this said, and assuming the intended scope of the market-based mechanism is UK-wide, we would welcome clarity on what role if any the Utility Regulator in Northern Ireland would have in administering the scheme and how Ofgem will administer the scheme in NI given that its usual remit extends to GB only.

Question 28. Do you agree with the proposal to apply the obligation to the manufacturers of all fossil fuel boilers sold on the UK market, including non-UK companies? Yes/no. Please provide reasoning to support your response.

Yes. Regardless of where heating systems are produced the manufacturers of these systems should be encouraged to transition to low carbon alternatives and heat pumps in particular. We recognise the increased market surveillance and product standard challenges this represents but think that if this obligation were not imposed on imports in the same manner as UK-manufactured products this would likely disadvantage UK manufacturers and would not deliver the market signals and decarbonisation outcomes we want to see. Sufficient investment in market surveillance should be provided to ensure that all manufacturers selling heating systems in the UK meet the obligation.

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