

## Building a market for energy efficiency: UKGBC consultation response

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The UK Green Building Council (UKGBC) is an industry network with a mission to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated. As a charity with over 400 member organisations spanning the entire sector, we represent the voice of the industry's current and future leaders who are striving for transformational change.

We strongly welcome the ambition set out in the Clean Growth Strategy to improve as many homes as practical to EPC band C by 2035. This provides a clear signal about the scale of the challenge in improving existing housing and will require the improvement of up to 19 million homes – including 11 million owner occupied properties – over the next eighteen years. To meet this challenge, we have joined with a broad range of business and environment groups in calling for energy efficiency to be recognised as a national infrastructure priority. This national programme for energy efficiency will need to be based on a comprehensive framework of incentives, advice, regulations and finance options which cover all tenures and household circumstances.

Building a genuine market for energy efficiency will be a key part of this programme and will mean moving away from the current focus on individual measures towards a whole home approach which aims to achieve tangible benefits for householders. The aim of the policy framework and the Industrial Strategy more widely should be to develop a professional home improvement sector which can deliver energy improvements as part of an integrated package of home renovation tailored to the property and householder. This will be crucial to build trust and demand, and deliver the scale and depth of interventions needed to meet the UK's carbon budgets.

### State of the market

1. **What information do you have on current rates of delivery of measures outside of Government programmes, including through DIY etc?**

No response.

2. **What information do you have on the remaining potential for energy efficiency improvements and what savings could be expected from these measures?**

Recent analysis by the UKERC and CIED has demonstrated the significant remaining potential for energy efficiency and low carbon heating in UK homes<sup>1</sup>. The report highlights that cost-effective improvements made up to 2035 could save around one quarter of current energy demand, providing an average annual saving of £270 per household. Moreover, there is the potential to extend this saving to half of current energy demand by fully utilising all existing energy saving technologies in homes.

3. **Do you agree with our assessment of the current market for energy efficiency amongst owner occupiers, including the trigger points and supply chain relationships?**

We agree with analysis set out of the current market.

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<sup>1</sup> <http://www.ukerc.ac.uk/publications/unlocking-britains-first-fuel-energy-savings-in-uk-housing.html>

In particular, it is key to recognise the point that homeowners are interested in undertaking energy efficiency alongside other renovations. This implies that building a sustainable market for owner occupiers will require policies that support the development of an integrated, multi-skilled supply chain that is able to deliver both energy and non-energy renovations to properties.

There is additional work needed for a comprehensive mapping of the energy efficiency market for all owner occupiers and analysis of expected uptake curve out to 2035, with the ambition that all homes where feasible achieve a minimum of EPC band C. This should then help to inform policy design and track progress towards this aim.

**4. Do you agree that it makes sense to prioritise those groups most likely to be open to investing in energy efficiency? And do you agree with our assessment of who those groups are most likely to be?**

The 2015 English Housing Survey outlines that there are over 11 million owner occupied properties which have an EPC rating lower than band C. Moving all of these properties up to band C by 2035 will require installation rates of 600,000 properties a year solely in the owner-occupier sector. Given these ambitious delivery rates, policies cannot only prioritise early-adopters but should instead seek to build a mass market for energy efficiency. In order to encourage the supply chain to invest, innovate and scale-up and to deliver this rate of retrofit, businesses must have confidence from the outset that there will be a long-term market covering all relevant owner occupiers.

The role of the Government should be to provide leadership and support the development of the market as a whole. Early adopters will of course represent the first customers for this market and will help the supply chain to build scale, but policies should be made relevant to all owner occupiers and it will then be down to the industry to target early adopters with the design of their services and marketing.

## **Barriers to market growth**

**5. Do you agree with our assessment of the current barriers to market growth?**

There is extensive literature on the barriers to the growth of a market and we broadly agree with the summary outlined.

**6. Are there other barriers that you think we should be addressing?**

In addition to these barriers, there is also the issue of a lack of skills in the supply chain for the delivery of whole house retrofit. Installing multiple energy saving measures as part of an integrated package with home renovations will require the development of a multi-skilled supply chain, but this is not currently being supported through policies such as ECO which tend to focus on the installation of just one or two measures. With very few installers that are able to offer end-to-end integrated home improvement solutions, awareness and demand for whole house retrofit has remained low among homeowners.

**7. Do you think there are any other important lessons to learn from past attempts to stimulate the market?**

A crucial lesson from previous schemes is that inconsistency between individual policies can undermine the development of a market. Without a clear overarching objective across the policy framework, the supply chain has developed to provide bespoke offers which are relevant to a particular policy or funding stream. For example, ECO has focused on delivering carbon and energy bills savings primarily using the most cost-effective measures, so this has failed to support the development of whole house solutions. There is the potential to overcome this inconsistency with the ambition to improve all homes to EPC band C by 2035. But it is crucial that this becomes a clear government target,

rather than just an ambition, and all home energy efficiency policies are designed to achieve this same outcome.

**8. Are there other international examples we could learn from?**

No response.

**9. Are there any barriers preventing business models for energy efficiency that have developed in other countries from also developing in the UK?**

No response.

## **Proposed approach**

**10. Do you agree with the set of proposed principles for guiding our approach?**

We agree with the principles set out, but would also add that policies should be comprehensive in order to cover the whole market for owner occupiers. The principles acknowledge that there is no silver bullet to the delivery of home energy efficiency, and this applies as much to addressing different parts of the market as to overcoming a range of barriers to deliver. It is therefore important to have a coherent set of policies which are relevant to all building types, tenures (freehold and leasehold) and household circumstances.

**11. Do you agree that the policy areas we have set out are the correct ones?**

We agree with the policy areas proposed to be covered.

## **Developing new ways for financing energy efficiency**

**12. Which of the fiscal levers described here would drive the greatest consumer demand?**

It is extremely difficult to compare the relative attractiveness of the different financial mechanisms given that they are likely to be relevant to different portions of the market (see answer to Q14). And it should be strongly noted that a programme aiming to improve up to 11 million inefficient owner occupied homes by 2035 will require a combination of all of these different financial options.

However, it is likely that low interest loans would drive the greatest consumer demand among home owners given that they would be available to a wider potential market than equity loans or mortgage extensions. They would also provide a lower cost solution to these alternatives or to a pay as you save mechanism. In theory, direct subsidy could have the same wide market appeal as low interest loans and at an even lower overall cost to the consumer than low interest loans, but this would be heavily dependent on the size of subsidy available and it appears extremely unlikely that direct subsidy would cover the full costs of improvements for all owner occupiers.

As well as the options outlined in the consultation document, UKGBC's Regeneration and Retrofit Task Group recently set out proposals for a hybrid approach, combining low interest loans and equity release into a Local Authority Revolving Fund<sup>2</sup>. Owners that have a sufficient equity stake in their homes are offered loans which are attached to the property and repaid in full when the property is sold via a local land charge. As well as minimising risk, this enables ongoing repayments to be tailored to different household circumstances. The loans would cover the costs of whole home retrofit

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<sup>2</sup> <https://www.ukgbc.org/ukgbc-work/retrofit-led-regeneration/>

improvements as a minimum, as well as wider enabling works to ensure that private households do not miss out on the full benefits of improvement works.

**13. Is there evidence to suggest that any other fiscal levers not described here could drive consumer demand?**

No response.

**14. What would be the profile of homeowners likely to take up these different incentives?**

Low interest loans would be relevant to a wide cross-section of homeowners who could afford to make the ongoing monthly repayments. This is likely to be lower cost than most other financial options available to them, with the exception of using personal savings.

As was demonstrated during the first phase of Green Deal, pay as you save mechanisms are most appealing to households on moderate incomes who are not in fuel poverty but are unable to secure alternative cheaper finance.

Home equity loans would be most appealing to homeowners who have a significant equity stake in their property but have a low income – those who are ‘asset rich but cash poor’. These households would find it difficult to cover regular monthly repayments but may be interested in using the capital tied up in their property to invest in energy efficiency.

Conditional mortgage products would of course be most appealing to mortgagees who are comfortable that they have sufficient income headroom to pay for improvements on top of existing monthly repayments.

Direct subsidy could in theory be available to all homeowners, but previous schemes have subsidised specific measures for specific amounts and would therefore skew the appeal of the scheme towards relevant properties where the installation would be cost-effective at the subsidy level available. The GDHIF was the clearest example of this skewed appeal because it was mainly used by those installing sold wall insulation that would not cost significantly more than the subsidy level.

**15. How could these incentives be designed to deliver the best value for money for Government and best savings for consumers?**

The funding options set out would be most effective if they are used in conjunction with one another to ensure there is an appropriate offer for every household. Other financial options such as the development of green mortgages should also be strongly encouraged to help create a private market for energy efficiency improvements, but until this market becomes established it is vital that all households have some viable options available to them to assist in funding energy improvements.

It is also important that these funding options should support the development of whole house retrofit integrated alongside other home renovations. This will help to support the development of an integrated renovation and retrofit supply chain which is able to deliver the deep property interventions which are attractive to homeowners. In particular, any loan options made available to householders should offer funding for additional home improvements which can be made alongside the energy improvements.

Finally, these funding options will fail to create sufficient demand to deliver the Government’s 2035 ambition unless they are introduced as part of a comprehensive programme alongside other demand drivers and support for the supply chain.

**16. What barriers, regulatory or otherwise, exist to financial institutions developing any of these products or incentives themselves?**

No response.

**17. How could Government assist financial institutions with a retail presence, local authorities and other actors to run trials of these ideas?**

The key barriers to the development of these financial options are similar to the barriers facing the development of a market for energy efficiency generally. The most important of these are a lack of demand and low levels of trust in the quality of installations.

For example, a number of local authorities have attempted to set up revolving funds for retrofit offering low interest loans and/or equity release options, but have faced barriers from poor quality installations and a lack of consumer demand. The most high-profile recent example was the Warm Up Bristol scheme which was criticised in the local press for poor quality retrofits and uncompleted work, and eventually closed in September 2017 because it was unable to sell a sufficient number of loans to make the fund sustainable.

Among financial institutions, there are similar widespread concerns with developing products for energy efficiency due to mistrust in the quality of work and concerns that there simply won't be a large enough market to make the product viable. The Each Home Counts Review is attempting to address the former concern but additional Government intervention is needed on the latter to drive demand among householders for energy efficiency.

**18. How could we ensure that any trials would lead to the development a self-sustaining market for support?**

Trials of financial offers for energy efficiency can only be translated into a sustainable market if they are accompanied by the other elements discussed in this consultation around driving demand and supporting the development of the supply chain.

## **Price signals to encourage homeowners to prioritise energy efficiency**

**19. What price signals would best drive uptake of energy efficiency measures?**

Adjusting stamp duty rates in line with the energy performance of a property would create a strong signal to homebuyers about the benefits of buying low energy properties. These adjustments can be applied as both a reduction on more efficient properties and an increase on less efficient homes to ensure that the adjustments are cost-neutral to the Treasury. The adjustments should be set at levels which would nudge homebuyers towards more efficient properties rather than providing a significant financial benefit or penalty. The adjustment amounts could be increased or decreased in a cost-neutral manner in order to increase (or decrease) the size of the nudge<sup>3</sup>.

After a homebuyer has moved in to a new property is a key trigger point for making energy efficiency improvements because they are more likely to make general property renovations at this point. A rebate mechanism should therefore be included in the stamp duty adjustment scheme whereby homeowners that make energy improvements to their property within a set period, e.g. 1 or 2 years, would be able to eligible to receive a rebate commensurate to the improvements.

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<sup>3</sup> For further information about this form of stamp duty adjustment please see UKGBC's Retrofit Incentives report: <https://www.ukgbc.org/ukgbc-work/retrofit-incentives/>

A similar scheme could also be used to adjust Council Tax in a cost-neutral way, providing an ongoing incentive for homeowners to improve their properties. This would be an even stronger driver than a Stamp Duty adjustment, although it would be more complicated to implement because it would affect all households, not just those choosing to buy or sell their property. A Council Tax adjustment should therefore be considered as a medium-term option for further driving demand once a market for home retrofit has already well established.

**20. What would be the impact on the housing market of such price signals?**

Reducing the stamp duty rates of more efficient homes should help to increase demand for these types of properties. Over time, this could begin to impact on property value and strengthen the link between energy performance and increased sale prices. If low energy properties are more attractive to buyers and attract a price premium, householders are more likely to consider efficiency improvements as part of general renovations intended to improve the quality and value of their property.

In addition, the stamp duty adjustment would send a clear signal to the mortgage industry that the government is committed to driving energy efficiency in the owner occupier sector. Anecdotal evidence from discussions relating to the LENDERS project suggest a number of major lenders would be much more inclined to factor energy performance into their affordability calculations if there was such a clear move from Government which signalled the link between the property market and energy efficiency.

**21. What protections would need to be in place to ensure that vulnerable or fuel poor customers are not unduly affected by these price signals?**

To mitigate any potential negative effects on the poorest households, the stamp duty adjustment could be designed so that properties in the 0 per cent SDLT band are not penalised for poor performance, but were given a benefit if they chose to move into better performing properties or if they chose to undertake improvements subsequent to moving into a new home. This would be easy to integrate into a revenue neutral model for the adjustment, and would significantly mitigate the possibility of money flowing from low value to high value homes as a result of the scheme.

A further means of limiting the relative impact is by introducing an appropriate cap on the size of the benefit that could be received (particularly those in the highest SDLT bands). Such a cap would ensure that there was a natural limit to the size of any net flows from low performance, low value homes to high performance, high value homes, without removing the incentive for those at the upper end of the market to take action.

**22. Could these ideas be rolled out in a smaller scale, to a particular subset of homes or in a particular geographic area, to test feasibility before a national rollout?**

Stamp duty is applied in a uniform way across the national housing market meaning the true effects of the incentive could only be understood when applied at a national level. It is also likely to act as a long-term incentive, influencing purchaser decisions as and when they buy a home and over time strengthening the link between efficiency and value. Given these limitations, any limited trials of the stamp duty adjustments would need to be clear about the outcomes that are being tested and the measures of success. It is possible that regional local trials could be conducted which test the *mechanism* for applying the adjustment to stamp duty rates but these would be very unlikely to provide a realistic test of the how *effective* it would be as an incentive for driving energy efficiency. Testing the effectiveness of the adjustment in driving demand would need to be done across a reasonably large geographical area and done so in conjunction with adequate funding options and support for the local supply chain.

## Improving awareness of energy efficiency products and technologies, their benefits and advice to consumers

### 23. What evidence do stakeholders have on the link between installing an energy efficiency measure and the value of property? What research could bolster this evidence base?

Evidence of the link between energy efficiency and property value was presented in DECC's 2013 study which showed a correlation between EPC ratings and sale prices and this remains the most comprehensive study about housing in England<sup>4</sup>. A similar study in Wales was also undertaken by the in 2016<sup>5</sup>.

It should be noted any further research undertaken in this area should focus on outcomes in terms of EPC improvements or energy savings rather than individual measures because this would be the most helpful approach to encourage whole house retrofit solutions. Conclusions on the price uplift associated with individual measures could encourage householders to pick and choose on a strict basis of measure cost vs value uplift, rather than overall energy savings achieved. This could lead to perverse outcomes such as the pushing down the cost of some measures at the expense of installation quality.

### 24. How could Government effectively deliver messages to promote energy efficiency through intermediaries and which are the most important intermediaries to target?

Estate agents could become key advocates for energy efficiency with the link to the proposed stamp duty adjustment. With a tax incentive in place for homebuyers, there would be an increased expectation that estate agents would flag up the EPC rating to buyers to better understand these costs, and this could help to drive interest in more efficient properties. Estate agents would also be well placed to inform homebuyers about the rebate element of the stamp duty incentive, thereby encouraging the new homeowner to factor energy efficiency improvements into any renovations they might undertake shortly after moving into the property.

### 25. At which additional points could homeowners be required to have an EPC, and how could this improve their value and the awareness of potential energy efficiency improvements?

No response.

### 26. How could EPCs be displayed more prominently to prospective homebuyers at different stages of the home buying process?

No response.

## Creating the conditions so that those who derive value from energy efficiency can be key players in the market

### 27. Have we captured all the main sources of additional value of energy efficiency?

We agree with analysis of additional value outlined.

### 28. What other ways could we seek to monetise the benefits of energy efficiency?

No response.

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<sup>4</sup> <https://www.gov.uk/government/news/energy-saving-measures-boost-house-prices>

<sup>5</sup> <https://www.repository.cam.ac.uk/handle/1810/260169>

**29. How could both Distribution Network Operators (DNOs) and Gas Distribution Networks (GDNs) be incentivised or required to deliver energy efficiency savings?**

No response.

**30. Do current market arrangements allow for DNOs and GDNs to fully realise the potential of energy efficiency savings? If not, what needs to change?**

No response

**31. What are mortgage lenders' plans for improving the way they factor energy efficiency into lending decisions?**

No response

**32. What support would lenders need in order to be able to commit to a voluntary target for improving the average energy efficiency of the properties they lend to?**

No response

**33. How can lenders develop a more accurate model of fuel bill savings, and would they be willing to lend 'green mortgages' on this basis?**

The LENDERS project<sup>6</sup> has clearly outlined the potential for mortgage providers to better reflect energy performance in their affordability calculations. A key next step for the project would be encouraging mortgage lenders to test the proposed methodology on their own mortgage portfolio in order to increase confidence in the approach. This should form part of a coordinated approach to implementation including strong encouragement from BEIS for trials of green mortgage products and indication from the FCA that the methodology could be mandated alongside future changes to affordability requirements.

**34. What other changes would encourage lenders to offer more 'Green Mortgage' products?**

The development of EPCs into building energy passports which include renovation roadmaps for accurately recording improvements and setting out future potential improvements to the property. BPIE published an analysis of building passports in 2016 explaining the role they could play and the various precedents and trials from across Europe. As well as the addition of roadmaps, EPCs should have the future potential to be informed by smart meter data to improve the accuracy of ratings and energy cost estimates. This could help to provide the information required by lenders in a standard and consistent format, and would help to increase trust in the quality of improvements and expected energy savings.

In addition, the European Commission has recently indicated it will look at the possibility of preferential capital treatment for 'green' mortgage lending, in direct response to the EeMAP project<sup>7</sup> proposing a standardised label for these types of products. The UK Government should take note of these developments and commit to maintaining the same capital treatment of green mortgages products as we exit the EU.

## **Enabling innovative energy efficiency products and services**

**35. How could thinner, less intrusive insulation products be made to be compliant with building regulations?**

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<sup>6</sup> <http://www.epcmortgage.org.uk/>

<sup>7</sup> <http://energyefficientmortgages.eu/>

No response.

**36. Are there any ways that current regulations are preventing innovative energy efficiency products and services coming to market?**

No response.

**37. What changes should be made to the Energy Company Obligation to ensure that it supports the development of innovative energy products and services?**

No response.

### **Improving data to open up the market for investment**

**38. Are there other ways that Government could help improve access to data on energy efficiency and performance of homes for research purposes?**

No response.

**39. What would be the impact on the market and investment in energy efficiency of the availability of better data on the actual performance of homes?**

Improved availability of data could help to encourage innovation and the development of more cost-effective approaches to energy savings, with new products and techniques assessed according to their performance rather than compliance with SAP modelling. In particular, it could help to enable the development of an energy service market for homes offering combined interventions which improve the thermal performance of a property but also seek to integrate onsite generation and storage, and to improve energy usage patterns using smart controls.

UKGBC would be very supportive of a move towards virtual EPCs based on actual performance data and it is important to note the potential implications for the wider policy framework. Basing EPCs on consumption data would of course have a significant impact on the implementation of the MEES regulations, and future tightening of the standards will therefore require careful management.

In addition, building regulations are currently based on the modelled SAP methodology and estimated performance of EPCs. With a move towards virtual EPCs, building regulations will need to transition towards using actual energy use as the means of compliance to avoid having two overlapping regulatory models based on theoretical and operational performance. The recent draft London Plan includes a requirement to submit actual performance data over five years after completion, which could provide a model for this transition for building regulations and could also offer a key test bed for the collection of data for the development of virtual EPCs.

### **Improving supply chain capability**

**40. Would the supply chain benefit from having a feature in the new Energy Savings Advice service for installers to share best practice and access a repository of advice?**

No response.

**41. Would funding for local supply chain growth and coordination lead to additional retrofit measures?**

No response.

**42. Is there anything else that central Government could do to support local retrofit supply chain growth and to support builders to carry out retrofit projects?**

The Government should also seek to support the development of a professional home improvement and energy efficiency industry through the Industrial Strategy, making retrofit a key part of the next phase of the construction sector deal. Doing so would achieve many of the objectives of the Industrial Strategy including increasing the productivity of the home repair and maintenance sector, driving innovation in retrofit techniques, as well as realising the widely recognised benefits of energy efficiency and improvements to the quality of homes for residents, communities, and local and national government.

An important opportunity to do this would be to provide funding to local authorities to undertake 'exemplar' area-based retrofit projects in their areas, focusing on areas where there are high concentrations of local authority-owned stock. These projects could provide a baseload of work for the establishment of a local retrofit supply chain and should aim to help develop a multi-skilled workforce that will be able to deliver multiple energy savings measures alongside general renovations to properties. This would build on the examples of social enterprises such as SOAR Build in Sheffield and Spacious Place in Burnley which train and employ local young people in retrofit techniques.

As well as helping to build the supply chain, the completed projects could act as demonstrators of what is achievable from high quality home retrofit and be used to drive demand for further retrofit in the local area. As noted elsewhere in this response, properly capitalising on this opportunity will of course mean having in place complementary incentives, advice and finance options for homeowners in the local area.

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