Grantham Research Institute on Climate Change and the Environment

Centre for Climate Change Economics and Policy

Response to the BEIS consultation 'Improving home energy performance through lenders'

Submission by the Grantham Research Institute on Climate Change and the Environment and the ESRC Centre for Climate Change Economics and Policy

February 2021

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Key messages

1. Significant funding will be required over the coming years to reduce greenhouse gas emissions in residential buildings and deliver on the Government's 2050 net-zero target. The banking sector, and in particular mortgage lenders, are in a unique position to drive energy efficiency improvements in buildings.
2. This consultation process has the potential to yield invaluable information on cost-effective energy efficiency improvements that can be achieved within the timeframe of existing financing schemes. We therefore welcome this consultation but stress that it must be accompanied by a range of complementary policies and initiatives.
3. It is essential that this initiative is accompanied by efforts to improve the quality of Energy Performance Certificate (EPC) data. It is difficult to see how any credible penalty regime could be implemented before data quality issues are addressed. There is well-established evidence that EPCs can be a poor predictor of actual energy consumption and savings. In addition, there is growing evidence of considerable error in the EPC generating proces, and recent research estimates that many homes are placed within an incorrect EPC band.
4. This initiative must be accompanied by complementary policies such as minimum standards and government financial support. Recent cuts to the ECO scheme and ongoing deployment issues with the Green Homes grant highlight the need for a broader package of policy reform in the residential sector.
5. Lower-income and energy-poor households living in less energy-efficient homes may be disproportionately affected by this policy. To remedy this, the initiative must be complemented with effective home renovation subsidies targeted at energy-poor households and those in dwellings where cost-effective improvements may not be possible.

Chapter 1: Disclosure of portfolio energy performance data

Question 1. Do you agree with the principle of all lenders publicly disclosing information on the energy performance of their portfolios?

Yes, in principle.

Question 2. Do you agree with the proposed EPC information lenders will be required to collect? If you disagree, please explain why.

Yes. The EPC database is a publicly available data resource which provides considerable information on the energy performance of the building stock. The UK is quite unique in making this data accessible and must be complemented for this. The specific type of data-matching required for this initiative has already been undertaken in the UK by some retail banks and by the Bank of England. The Energy Efficiency Financial Institutions Group (EEFIG) is undertaking this work across the EU, with the participation of some UK banks.

Question 3. Do you agree with the proposed disclosure information? If you think there is other information that would be useful to disclose that is not included in this proposal, or you do not agree with the proposal, please explain why.

Yes, but this must be accompanied by efforts to improve EPC data quality and link it to actual energy consumption data.

Question 4. Do you agree that the option to provide additional commentary alongside disclosures would be useful? If not, please explain why, including any alternative proposals.

Yes. Contextual information would help explain the results. In particular, commentary would be required in instances where certain banks could only achieve a low level of concordance due to the profile of their portfolios.

Question 5. Do you agree with the proposal that all lenders, irrespective of market share, be required to publish energy performance data on their websites as well as on GOV.UK aligned to annual reporting deadlines? If not, please explain why.

Yes. However, the matching of EPC data with loan data is not always straightforward. In particular, address matching of multi-occupancy buildings such as blocks of flats can be quite difficult. While the EPC database holds a Unique Property Reference Number (UPRN) for each property, most banks will not hold this information. Address fields are often not standardised and require considerable cleaning. The potential for error and low concordance is much higher in multi-occupancy buildings.

Depending on the lending profile of the bank, some banks might find it easier to match than others.

In the longer term, efforts should be made to require all buildings to be identified with a UPRN or for addresses to be standardised using Ordinance Survey AddressBase or similar.

Question 6. Do you agree with the proposal that government use the disclosure information to publish 'league tables' of lenders? If not, please explain why.

Yes. This is undertaken on a voluntary basis for other sectors, for example the Transition Pathway Initiative collects and compares environmental, social and governance (ESG) information for a range of carbon-intensive sectors.

Question 7. Do you agree that properties financed by a Buy-to-Let mortgage should be included in the scope of the policies proposed in this consultation? If not, please explain why, including any alternative suggestions.

Yes. The private rented sector has low energy performance and more efforts must be made to encourage landlords to upgrade their properties.

Question 8. Do you agree with the proposed trajectory to mandatory disclosure? If not, please outline the reasons why.

Yes. The move to mandatory disclosure is reasonable if sufficient numbers of lenders do not adopt the voluntary targets or if the trajectory of improvement falls below decarbonisation goals.

Question 9. Do you agree with the proposal that disclosure information be subject to spot check audits proportional to the size of the lending portfolio? If not, please explain why, including any alternative proposals.

Yes.

Chapter 2: Improving the energy performance of lenders' portfolios: target-based approach

Question 12. Do you agree the voluntary target should be set at a portfolio average of EPC Band C by 2030? If not, please outline the reasons why.

It would seem reasonable to align this initiative with wider targets for the building stock. However, significant errors have been identified within the EPC database and effors must be made to address them. A particularly relevant example is a recent academic paper which estimates, on the sample of 1.6 million dwellings with repeated EPC measurements in the UK, that 24% of band D homes are incorrectly rated as band C (Crawley et al., 2019).

Question 13. Do you think a revised EPC should be required to demonstrate improvements in energy performance? If not, what alternatives should be explored?

Yes. For this initiative to work, it would seem quite important that there is dynamic updating of the EPC database. Without this, it would be extremely difficult to assess progress. However, this will be fraught with difficulty unless efforts are made to improve the accuracy of EPCs and link them with actual energy consumption data, which BEIS already holds through the NEED database.

Question 16. What actions could the government take to incentivise the lenders to sign up to a voluntary target? Please provide evidence to support your answer where possible.

One way to incentivise a voluntary target would be through a government commitment to fund measures which are not currently cost-effective. A certain proportion of energy efficiency improvements will be cost-effective. Some will not, and will have extremely long payback periods, as evidenced by Rosenow et al. (2017). The government could leverage this initiative and the systematic identification of these properties to target financial support to those households.

Question 17. Do you agree government should consider the option of setting a mandatory improvement target, should insufficient progress be made under a voluntary scheme?

Yes.

Question 18. Do you agree with our proposed approach to the penalty regime? If not, please explain why, including any alternative proposals.

A regime in which the penalty is in proportion to the foregone CO_2 savings would seem reasonable. However, it is impossible to see how this would be credible unless based on actual, measured energy savings or unless significant improvements are made in EPC data quality.

Question 19. What public tools could be used to calculate foregone emissions savings so that lenders can assess their own liabilities?

A well-established international literature provides evidence that predicted savings (based on EPC improvements) are considerably lower than actual savings – see, for example, Fowlie et al. (2017). Any penalty regime would need to take this into account. We believe that the NEED database could be integrated into this scheme to provide evidence of actual savings. This could enable regular recalibration of estimates in order to ensure the predicted savings are as accurate as possible.

Question 20. Do you agree that the money collected from penalties be used to fund energy performance improvements? Please provide evidence to support your answer.

Yes. See our response to Q16. This money could be directed towards energy efficiency improvements that have very long payback periods or are not cost-effective based on current lending costs and energy prices. The money could also be directed towards energy-poor households unable to self-fund energy efficiency upgrades.

Question 21. Do you think that only those lenders that are on trajectory to meet their target should benefit from these funds?

Not necessarily. It would depend on where the funding is targeted. If targeted towards the borrower, rather than the lender, it should go towards those energy efficiency improvements that will yield the largest carbon savings, irrespective of the lender.

Question 22. Do you agree that lenders below a certain value or size threshold should benefit from certain derogations from a mandatory target? If so, what form should these take and how can we avoid creating any policy loopholes?

Lenders with specialist portfolios, for example those targeting multi-occupancy buildings, former council blocks or low-income households, may face more barriers to upgrading their portfolios than others. Some benchmarking should occur following the first full round of disclosure.

We would advise that all lenders should undertake the matching scheme in the first year. Derogations could then be considered on the basis of a detailed assessment of their portfolios.

Question 23: Do you agree with the proposed alternative option of a mandatory target of a portfolio average EPC Band C by 2030 from the start of the policy? If you disagree, please explain why, highlighting any alternative target you think would be appropriate.

This seems reasonable. However, the decision should be based on a thorough review of portfolios following the first annual round of disclosure. Please also see our responses to Q12 and Q19 regarding the inaccuracies in EPC data.

Wider considerations

Question 24. These policy proposals rely on the information provided by the EPC. Are there any impacts of data collection using EPCs that we have not considered? If so, how could these be managed effectively by lenders?

See our responses to Q12, Q19 and Q23. We know EPCs do not correlate well with actual consumption in some cases. As part of this initiative, households could be encouraged to provide annual energy bills or a comprehensive data integration framework involving the NEED database could be considered.

There is growing understanding around the limitations in the EPC data quality, relating either to how data is input by the assessor into the EPC model in use (e.g. RdSAP) or the accuracy of the model itself. These issues were assessed in detail in the 2018 Call for Evidence on EPCs and will inevitably have negative impacts on any policy proposal underpinned by EPCs as a measure of energy performance. While it is important to understand the extent to which these isssues may undermine the policy proposals in this consultation as a whole, special attention needs to be given to properties that face a disproportionate risk of being inaccurately rated under EPCs.

There is evidence to this challenge in the literature. Hardy and Glew (2019) estimate that between 36% and 62% of all EPCs lodged in the UK between 2008 and 2016 possess a degree of error. Their analysis shows that errors occur more frequently in certain local authorities which may be explained by there being higher percentages of flats/maisonettes in these places, as these housing types appear to cause more issues in the EPC rating process than others. Furthermore, Crawley et al. (2019) studied a set of 1.6 million existing dwellings in England and Wales with repeated EPC measurements and found that the measurement error in the process of generating EPC ratings generally decreases with increasing building energy efficiency. For instance, the predicted error (one standard deviation) varied from 8 EPC points at the upper end of the F band to 2.4 in the B band.

Such variation in the degree of error in EPCs can unfairly disadvantage some mortgagors, especially where the degree of error correlates with certain household characteristics. Fuel-poor households in particular will need to be safeguarded from any adverse effects of the policy proposals (see answer to Q33 for wider discussion), including those arising inherently from the use of EPCs as the data collection method. This is because fuel-poor households are more likely to live in energy-inefficient houses, which also face a higher probability of EPC error. Properties with a Band E rating or worse were home to over 30% of fuel-poor households in England in 2018, while accounting for less than 15% of EPC-rated properties occupied nationally.

The Climate Change Committee, in its policy report accompanying its Sixth Carbon Budget advice, calls for an urgent reform of EPCs to ensure they are fit to support near-term progress. Such a reform should ensure EPC data quality is improved across all properties.

Question 33. What other methods of protecting fuel poor mortgagors should the government consider in designing its proposals? Please provide evidence to support your answer where possible.

See our responses to Q16 and Q20. Money from penalties potentially could be targeted in the form of subsidies towards these borrowers. Low-income households may be disproportionately affected by the policy. Those who may not be able to afford energy efficiency improvements may be negatively affected if less efficient homes become harder to sell in the case that lenders restrict lending to poor performing properties.

Therefore, individual policy changes must be part of a broader package of policy reform to mitigate regressive distributional impacts. Compensatory policies have to address all drivers of fuel poverty. This includes vertical inequities – between high- and low-income households, and horizontal inequities – where income levels are similar but other household characteristics such as number of occupants, location type and building characteristics differ.

Judicious use of the revenues from the penalties should be considered alongside government grants. This is particularly important given the backdrop of falling installation and rollout of energy efficiency measures resulting from government cuts to schemes such as ECO. Between 2014 and 2019 measures to make the UK's leakiest homes more energy-efficient collapsed by almost 85%, according to BEIS data. Ongoing deployment issues with the Green Homes Grant, where just 5% of the £1.5 billion budget has been spent, illustrates just how difficult it can be to increase the installation of energy efficiency measures.

Question 38. Are there other impacts these policies could have on mortgage processes that we have not considered? How do we ensure that intermediaries, such as brokers, have access to the information necessary to advise consumers?

See our response to Q33. By creating incentives to lend to more energy-efficient homes, this policy could lead to funding being targeted at higher-income borrowers in better quality homes.

Question 39. How can we ensure that our policies do not disincentivise lending to poor performing properties?

See our responses to Q33 and Q38. At a minimum, this initiative must be complemented with effective subsidies targeted at lower-income households in dwellings where cost-effective improvements may not be possible.

Question 40. How might these policies impact on house prices and households' ability to borrow in the market? What could the government do to mitigate any unintended impacts on households?

There is some evidence that EPCs are capitalised into house prices. As this scheme would likely increase the salience of EPCs this could create some market distortions, particularly around thresholds used within the policy, such as Band C.

Question 42. What costs would compliance with these policies likely generate for lenders? Please provide an estimate of these costs where possible, including evidence to support your answer.

The initial data-matching exercise and first round of disclosure should not pose significant costs for lenders. We would strongly support this first step at least.

Question 44. Do you think that the government should introduce a requirement on lenders to check that privately rented properties comply with the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015?

Yes.

Question 45. Do you think it would be sensible for these proposals, for example annual disclosure of portfolio-wide EPC information, to be applied to smaller non-domestic buildings that require similar energy performance upgrades to homes?

Yes. Given that a non-domestic EPC register exists, this data could also be leveraged.

Question 47. What are your views on how we could tighten standards to drive greater carbon savings? Do you have views on introducing a dual metric, an alternative carbon target, or any other suggestions?

Standards need to be accompanied by incentives. Many energy efficiency improvements are not cost-effective. In addition to this proposed initiative, government funding needs to be targeted towards these buildings and occupants.

However, many energy efficiency improvements *are* cost-effective. This process should yield significant information on the set of cost-effective energy efficiency improvements that can be achieved within the timeframe of existing financing schemes. Some lenders might have considerable opportunity sitting on their balance sheets. This opportunity needs to be leveraged.

A benchmarking exercise following the first round of disclosures should be undertaken. Following this, additional mechanisms such as variable targets depending on the baseline EPC level of the portfolio, or trading of obligations, could be considered.

The Climate Change Committee's Sixth Carbon Budget advice signals to a predominantly electrified future for residential heat on the pathway to net-zero by 2050 (CCC, 2020). The CCC's Balanced Net Zero Pathway requires over 1 million heat pump sales per year by 2030 (in new and existing homes) in a total market of 1.8 million boiler installations currently. Therefore, how the policy proposals in this consultation would interact with the UK's long-term heat decarbonisation strategy needs to be studied with great scrutiny.

As already acknowledged in the consultation document, EPCs currently do not automatically incentivise a switch to low-carbon heat. EPC ratings are linked to the cost of the type of energy used, meaning they will not reflect emissions savings achieved through replacing a gas boiler with a heat pump where electricity remains a significantly more expensive fuel compared to gas.

There is a clear need to ensure these policies are designed with a view to reward emissions savings that do not yet translate to cost savings that would naturally result in an improved EPC rating. Introducing a dynamic carbon factor within the EPC methodology which gets updated as the electricity grid is further decarbonised could be one option to consider. Although not part of the main EPC ratings that would underpin the current policy proposals, the urgency to align the methodology of measuring energy performance with the government's net-zero ambitions is highlighted in the outdated Standard Assessment Procedure (SAP) assumptions for grid carbon intensity. The CCC points out that the current version of SAP (SAP 2012) assumes a grid carbon intensity that is four times higher than the projected 15-year grid average, with the planned grid carbon intensity in the forthcoming version of SAP (SAP 10) still remaining around twice as high.

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