Response to BEIS/MHCLG Call for Evidence –

Energy Performance Certificates for Buildings

October 2018

*Introduction*

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 very much welcome this Call for Evidence and the ambitious and wide-ranging suggestions it contains for making EPCs more reliable and accurate and better equipped to drive energy efficiency action on the part of building owners. This is as all the more important as EPC ratings already underpin existing Government policies such as the Private Rented Sector Minimum Energy Efficiency Standard (MEES) – and they sit at the heart of the aspiration in the Government’s Clean Growth Strategy for all homes to be EPC Band C by 2035.

Furthermore, there is an expectation that EPCs will increasingly be used as the basis for investment decisions such as mortgage applications. This will necessitate a greater level of EPC accuracy and reliability than currently exists. As our responses to individual questions make clear, we believe that the increasing use of actual – rather than modelled – performance data will be critical to this process. In addition, we strongly endorse the suggestion that building owners be given access to all the data that underpin the EPC rating; and that this information is able to be shared with relevant third parties like assessors and installers.

We hope that many of the suggestions made in the Call for Evidence are implemented as soon as possible.

*Responses to individual questions:*

**Question 1: Have we captured all of the current uses of EPCs? Are there any existing or emerging uses we should be aware of?**

The call for evidence captures most of the current uses of EPCs. However, it omits to mention that EPC ratings underpin the Government’s Fuel Poverty Strategy for England, which sets a target for as many fuel poor homes as is reasonably practical to achieve EPC Band C by 2030, with interim milestones of Band E by 2020 and Band D by 2025. In addition, having a home with an EPC rating of E, F or G is one of the eligibility criteria for NEST, the Welsh Government’s fuel poverty scheme. Other local energy efficiency schemes also often use EPC ratings to target potentially eligible households.

The Housing Health & Safety Rating System (HHSRS) is used by local authority environmental health officers to assess whether there are health and safety risks in dwellings. An EPC rating of F or G is used by them as a proxy for a Category 1 hazard for excess cold.

We are also aware that some of our more far-sighted retrofit contractors are using raw EPC data to determine whole-house retrofit strategies, particularly on public projects. The data are put into a model, and specific performance outcomes are modelled for a combination of retrofit interventions. This is proving a very valuable way of tailoring interventions and optimising whole-house retrofit plans.

**Question 2: Do you agree that we have identified the key attributes for EPCs? Are there other important attributes we have not listed? Please indicate below how important you consider each attribute and provide details to explain your answer.**

Yes, the key attributes have been identified.

We believe that all three identified attributes – quality; encouragement of action; and availability – have significant importance, and we are therefore loath to rank them.

**Question 3: Which attributes are important for which uses and why?**

No response.

**Question 4: What evidence do you have relating to the reliability of EPC assessments? Do you have any information on how reliability varies across different properties, and/or the likely sources of variation in assessments? It would be helpful to indicate how recent this is.**

Evidence provided to us by our members reflects the concerns about EPC reliability flagged up in the Call for Evidence. Too often the results for similar properties will vary from assessor to assessor. These variations include things as basic as room measurements, depth of insulation, wall type etc. We believe that this unreliability is due to a number of factors, but there is no doubt that a competitive environment for producing EPCs often drives poor outcomes. In some cases, EPCs are being produced at very low cost, meaning that a detailed assessment is simply not possible.

We are also aware of other concerns – not flagged up in the Call for Evidence – that the current quality control system for assessors is inadequate. There are two key issues here:

* First, the various accreditation and certification bodies are all competing for customers, which does not necessarily encourage rigour in the auditing process.
* Second, audits of EPCs are predominantly desk-based, which means that there is little risk to an assessor in delivering inaccurate assessments of items which are difficult to desk-audit or are not necessarily revealed by the photographs required as part of the EPC assessment.

**Question 5: Which of the suggestions provided above do you think would be effective in improving the reliability of EPC ratings? Do you have any other suggestions for improving EPC reliability? Please provide reasoning and any evidence you have to support your response.**

All of the suggestions provided have merit. But in particular we believe that better data inputs are key to improving the reliability of EPCs.

The Call for Evidence rightly identifies what we consider to be a key issue – the fact that survey data collected during a previous EPC assessment are currently not available to subsequent assessors. This means that at the time of a subsequent assessment, the property has to be re-measured, which wastes time and can unnecessarily inflate cost. A subsequent assessor may have to guess the property’s age and construction – and is also likely to lack documentation about the various measures and technologies installed when the home was new.

Our suggestion therefore is that all the data generated during an EPC assessment should be stored on a secure database to which the building owner has access, at no additional cost, in a standard open data format. The building owner should additionally be able to share this information with designated third parties, including EPC assessors. This would obviate the need for re-measuring and would make subsequent assessments quicker, cheaper and more reliable. It would also be likely to encourage energy efficiency improvements by the building owner, as advice on suitable improvements could be made more tailored and less costly.

**Question 6: What evidence do you have on the accuracy of the models used to produce EPCs (SAP, RdSAP, SBEM, DSM) in comparison to other methods such as the co-heating test?**

We would refer you to a piece of work done by the Zero Carbon Hub, which compared SAP, PHPP, Energy Plus and IES models on the same dwellings with the same assumptions.[[1]](#footnote-1) It found that the SAP assessment produced results that were surprisingly close to those arrived at by more sophisticated models. This suggests that the building physics model underpinning SAP is strong, as long as the input data are correct.

**Question 7: Are you developing any kind of tool for measuring the energy performance of buildings (controlling for the effects of occupant behaviour) using smart meter data or other data, which could be relevant for EPCs?**

No.

**Question 8: What evidence do you have on how the accuracy of EPCs could be improved using the tools and data sources outlined above, or through any other means? Do you have any views as to how these approaches could best be incorporated into the current EPC framework?**

As the Call for Evidence makes clear, there is often a substantial difference between the modelled and actual performance of a building – the so-called ‘performance gap’. It follows that the use of actual performance data will play a large part in improving the accuracy of EPCs. This will include smart meter data and the evolving Internet of Things infrastructure. This will allow for the gathering of more granular data, which can usefully disaggregate fabric and services performance from occupant behaviour.

**Question 9: What evidence do you have on how frequently people are likely to make updates to their properties which would change the EPC score?**

We don’t have any such evidence.

**Question 10: Which of the suggestions provided above do you think would be effective in ensuring that the information on EPCs is up to date? Do you have any other suggestions for ensuring EPCs remain up to date? Please provide reasoning and any evidence you have to support your response.**

UKGBC has long argued that the current 10-year validity period for EPCs is far too long. We would favour a 5-year validity period, which would strike a balance between the need for up-do-date information about a property’s performance (especially in the context of the MEES requirements for privately rented properties) and the cost to building owners. In our response to Question 5, we have already shown how the storage of EPC assessment data can make repeat EPCs less costly to obtain.

**Question 11: Would you support introducing new EPC trigger points at any of the stages listed above (or any other stages)? What evidence do you have relating to the advantages and disadvantages of any of these trigger points?**

*Additional Trigger Points*

We would strongly support the introduction of new EPC trigger points as suggested in the Call for Evidence – i.e. when major renovations, such as extensions, are undertaken, and additionally when energy-saving measures like wall insulation, replacement windows or a new boiler are installed. In the latter case a mechanism that generated automatic updates to EPCs could ensure that ratings are up to date, without the need for a new assessment.

*Houses in Multiple Occupation*

On the specific point about Houses in Multiple Occupation (HMOs), we would strongly advocate the introduction of a requirement for an EPC for the whole building to be produced when a single unit in the building is marketed for rent.

HMOs are disproportionately occupied by vulnerable people who have no other choice about where they live. Energy efficiency problems (such as damp and unhealthily low temperatures) are more prevalent in HMOs than in other types of home.[[2]](#footnote-2) Despite this, the domestic MEES does not apply to the overwhelming majority of HMOs. It only applies where a property has an EPC, and there is currently no obligation to obtain an EPC for an individual non-self-contained unit within a property.

Requiring an EPC for the whole building to be produced when a unit in an HMO is rented out will go part way to triggering the PRS minimum standard. However, it would also need to be accompanied by a minor amendment to the Energy Act 2011. The Act currently only applies where properties are let out under a single tenancy, not multiple tenancies (as is generally the case with HMOs). A simple amendment to Section 42 of the Energy Act 2011 could extend the definition of ‘domestic private rented property’ to include a property let out on more than one tenancy. A private member’s bill introduced by Dr Alan Whitehead MP in the 2014/15 Parliamentary session showed how this could be done.[[3]](#footnote-3)

*Green Mortgages*

We would strongly support the requirement for an up-to-date EPC to be produced as a condition of the grant of a green mortgage on an existing property.

It is important to note, however, that a lender would wish to see an energy performance rating of a very high quality before deciding to grant such a green mortgage. The rating would likely have to encompass other things too, e.g. how healthy and comfortable the building is. An interesting international example comes from Switzerland, where lenders use the Minergie rating system as the basis for making lending decisions. Currently 30 Swiss lenders have preferential mortgage deals for buildings with a good Minergie rating.[[4]](#footnote-4)

**Question 12: What evidence do you have on how useful the EPC recommendations are to consumers when they are considering making changes to a property? How effective are they at encouraging consumers to take action?**

The Call for Evidence quotes research by Consumer Focus showing that 8%-17% of respondents reported acting on EPC recommendations.[[5]](#footnote-5) However, since this time, a new EPC design has been introduced, which presents recommendations in a clearer and more engaging way. This suggests that further research in this area would be useful.

**Question 13: Which of the suggestions provided above do you think would be effective in encouraging building owners to make appropriate energy performance improvements to their property? Do you have any other suggestions? Please provided reasoning and any evidence you have to support your response.**

We endorse the suggestion that EPC recommendations should be made more relevant and compelling for the building owner – please see our fuller comments on this in our response to Question 20 on Green Building Passports. This could include providing suggestions in the EPC about appropriate trigger points for improvement works, such as periods of refurbishment. The investment planning process for businesses typically focuses on a specific need – e.g. glazing – but, if planned strategically, could encourage taking advantage of the disruption to introduce a package of complementary measures to improve operational efficiency.

However, it is critically important to remember that improving EPC recommendations cannot on its own drive significantly increased levels of energy efficiency improvements. What is needed is a comprehensive policy and regulatory framework, which will include a trajectory for tightening MEES for both domestic and non-domestic buildings; fiscal and other incentives (e.g. stamp duty and council tax incentives, variable business rates); better advice and information; targeted financial offerings; and improved quality standards and control. The Government must also upgrade into firm policy commitments its aspirations for (a) all homes to be EPC Band C by 2035; and (b) business energy productivity to be improved by 20% by 2030. These policy commitments must be clearly signalled to all building owners over the coming years to encourage them to take action.

**Question 14: What are your views on introducing operational performance ratings for non-domestic buildings, either on the EPC or separately?**

UKGBC has been at the forefront of advocating the phased introduction of operational performance ratings for non-domestic buildings. There is strong evidence from the Australian NABERS scheme, amongst others, that mandatory operational ratings can radically drive down energy use. Our recent UKGBC discussion paper, [*Accelerating the energy productivity of non-domestic buildings*](https://www.ukgbc.org/wp-content/uploads/2018/10/Paper-for-BEIS-UKGBC-roundtable-140918-FINAL.docx)*,* sets out our views in more detail and also contains a suggested trajectory for the introduction of mandatory operational ratings.

**Question 15: What evidence do you have on how useful the EPC rating and cost information are to consumers when purchasing or renting a property? Are consumers using information on the EPC to negotiate property prices or rents?**

A survey conducted by Consumer Focus in 2011 showed that EPCs were very rarely used to negotiate property prices or rents. Only 6% of respondents had used the information in their EPC to negotiate the sale or rental price.[[6]](#footnote-6)

**Question 16: Do you have any evidence on consumers’ understanding of the energy efficiency rating used in EPCs? Do you think a different rating such as carbon emissions or primary energy would have a better impact for consumers?**

Prior to the re-design of the EPC, Consumer Focus conducted research with consumers on the then content and format of the EPC.[[7]](#footnote-7) The research showed that consumers found the Environmental Impact Rating (EIR) confusing and therefore tended to ignore it. The Energy Efficiency Rating (EER) was found to be better understood and more widely used by consumers. These findings were taken into account when the EPC was redesigned and, amongst other things, the EIR (or CO2 rating) was removed.

This evidence suggests that introducing a different kind of rating – e.g. a carbon emissions rating – would be counter-productive.

**Question 17: Which of the suggestions provided above do you think would enable prospective buyers and tenants to make more effective decisions based on the information on the EPC? Do you have any other suggestions? Please provide reasoning and any evidence you have to support your response.**

We would strongly endorse the suggestion that information about policy goals and minimum standards should be added to the EPC. As per our response to Question 13, we believe that property owners will be much more encouraged to make energy efficiency improvements if they can see that poorer-performing properties will be gradually phased out of the market. This will also help to drive a price premium for more energy efficient properties. Furthermore, a consumer is much more likely to take climate change seriously and feel motivated to ‘do their bit’ if they can see that the Government is taking a lead. Alongside this, we would make the further suggestion that all measures necessary to upgrade a property to meet the Government’s long-term policy goals should be listed in the recommendations – not just those that are automatically generated as being ‘cost-effective’.

Furthermore, the EPC should include details of an exemption to minimum standards for a rented property to increase visibility. As a minimum, rented properties that have been granted an exemption should have this listed on the EPC. In this way, both tenants and local authority enforcement would be able to understand easily whether the property is compliant, while also ensuring that landlords with valid exemptions are more easily able to market their properties.

We also support the suggestion that work be undertaken with property comparison sites to improve the provision of EPC data. And finally we agree with the Green Finance Taskforce that mortgage lenders should include EPC ratings on mortgage statements.

**Question 18: What evidence do you have on how easy it is to access EPC data or Open Data? If you are currently a user of the Open Data Communities website, what do you use the information for and how valuable is this website as a source of data?**

No response.

**Question 19: Which of the suggestions provided above do you think would improve the ability of building owners and other stakeholders to make effective use of EPC data? Do you have any other suggestions? Please provide reasoning and any evidence you have to support your response.**

We welcome the fact that the Government has made EPC certificates available for free through the Open Data Communities website. However, as previously noted, property owners do not have access to all the data collected during the EPC assessment process. Giving consumers access to all these data would bring significant benefits to both them and those third parties with whom the information is shared. [See our fuller comments in our response to Question 5.]

**Question 20: How useful do you think a ‘data warehouse’, ‘building log book’ and/or ‘green building passport’ would be in increasing take up of energy efficiency improvements or supporting existing initiatives? What kinds of data might usefully be included in addition to EPC data and how could these proposals best be implemented? How might more comprehensive assessments be encouraged without making them a requirement for homeowners?**

*Data Warehouse*

As per our responses to Questions 5 and 19, we consider that the creation of a so-called ‘data warehouse’ and ‘log book’ would be very useful, and would help drive much greater understanding on the part of the building owner of the current performance of their property. In the social housing sector in particular, a full database of stock attributes would be created, which could be effectively mined to institute stock-wide improvements.

In addition to EPC data, other information which could be added would include: photographs of each external elevation (not just the audit photographs); percentage of windows facing each orientation; certificates issued at the time of energy efficiency improvements, which would reveal technical details for the benefit of others subsequently recommending or undertaking works.

Furthermore, a ‘data warehouse’ could integrate other datasets, such as the Home Energy Efficiency Database (HEED), which provides a record of energy efficiency installations that have been implemented in the domestic building stock. In future the database could also integrate data from smart meters on the property’s actual energy use.

*Green Building Passports*

Alongside the above, we strongly support the development in the UK of ‘building passports’ or ‘renovation roadmaps’ – an innovation in which Germany has taken the lead with their so-called ‘Sanierungsfahrplan’.

These passports provide a guide to homeowners and installers, showing how deep renovation can be achieved in stages that avoid or reduce costs. They also highlight key dates for Government objectives and upcoming regulation, as well as available incentives and finance offerings. Crucially they also set out the appropriate sequencing of improvements in order to avoid unintended consequences.

The passports were first developed in the State of Baden-Wuerttemberg, led by independent energy and environment research institute IFEU, who were then commissioned by the State government to develop them as a replacement for the State’s conventional energy performance certificates. IFEU developed the passport in consultation with stakeholders and worked closely with EPC software providers and energy advisers and through a pilot to finalise and integrate the product into the State’s suite of policy instruments in 2015 with the aim of promoting the incorporation of improved energy performance into building renovation.

The State offers subsidies towards the cost of passports of €200 to €500, leaving a cost to building owners of between €250 (e.g. individual flat) and €1,000 (e.g. multi-family building). There is an additional incentive for a homeowner in Baden-Wuerttemberg to obtain a passport. If he/she does so, then the federal requirement (when replacing a heating system) to provide 15% of the heat from non-fossil sources is reduced to 10%. This serves to increase the rate of passport adoption, and, taken together with the State subsidy, is ‘pump-priming’ the market for passports, with the aim of driving cost reductions.

There is now a [federally available version](https://www.dena.de/newsroom/meldungen/2017/individueller-sanierungsfahrplan-unterstuetzt-hauseigentuemer-bei-modernisierung/) (currently voluntary), created by the German Energy Agency under contract from the Federal Ministry of Economy and Energy, which was launched in 2017. It also satisfies EPC requirements. The Federal Office for Economic Affairs offers a subsidy towards the cost of passports of up to 60% or a maximum of €800 for single or two-family buildings and €1,100 for larger apartment blocks.

The forward plan for passports is that they should provide a key element of the policy infrastructure for driving green renovation, for example by requiring payments from building owners who are behind EPC rating milestones on the way to 2050.

**Question 21: What evidence do you have on compliance with the requirement for providing an EPC when purchasing/letting a property, or the requirement to display the EPC rating in property listings? Does this differ by tenure type or by any other subset of the building stock? What evidence do you have on the reasons for lack of compliance with the requirement for an EPC?**

We have no further evidence beyond that cited in the Call for Evidence.

**Question 22: What evidence do you have on what enforcement work is currently being done to ensure that EPCs are being produced?**

No response.

**Question 23: Which of the suggestions provided above do you think would be effective in improving compliance with the requirement for an EPC, bearing in mind the other changes to EPCs being considered. Do you have any other suggestions? Please provide reasoning and any evidence you have to support your response.**

We strongly endorse the suggestion that enforcement requirements for the MEES and EPCs be better aligned. A number of local authorities in areas with two-tier local government have raised the concern that enforcement responsibilities are currently split between upper-tier and lower-tier authorities. This makes little sense.

Given that the domestic private rented sector has the highest proportion of the worst-performing (F and G-rated) properties and that levels of EPC compliance are also low, any steps that encourage provision of EPCs for privately rented properties are to be welcomed. In particular, we think that the provision of an EPC should be a requirement of access by landlords to both tenancy deposit schemes and landlord licensing schemes.

**Question 24: What evidence do you have on costs of EPCs, how easy it is to procure an EPC or on consumer attitudes about EPC costs?**

No response.

**Question 25: Which of the suggestions provided above do you think would be effective making the process of procuring EPCs easier or more affordable, bearing in mind the other changes to EPCs being considered. Do you have any other suggestions? Please provide reasoning and any evidence you have to support your response.**

As per our responses to Questions 5, 19 and 20, we believe that storing comprehensive data in a ‘data warehouse’ has the scope to reduce significantly the cost of procuring EPCs.

**Question 26: This Call for Evidence has outlined a number of options for making improvements to EPCs. Of the suggestions discussed in this document or which you have put forward, is there one or more you think is particularly important, or are there any other suggestions you have or comments you want to make about EPCs?**

We would like to make one additional point. As things stand, the presence in a building of emerging technologies such as batteries and EV charging is not taken into account in the EPC assessment. However, a transition towards a smart energy system will make the inclusion of smart technologies increasingly important. By way of further example, energy storage opens up the potential for time-shifting demand, but the EPC is unable to account for this. As well as including smart technologies in EPC recommendations, a ‘smartness indicator’ could also be introduced into the EPC to make householders aware of the opportunities for improving energy management through these new technologies.

**UKGBC**

**October 2018**

**For further information, please contact:**

Jenny Holland, Public Affairs & Policy Specialist

jenny.holland@ukgbc.org

1. Zero Carbon Hub, *Carbon Compliance for Tomorrow’s New Homes, Closing the Gap between Designed and Built Performance,* August 2010 <http://www.zerocarbonhub.org/sites/default/files/resources/reports/Carbon_Compliance_Topic%204_Closing_the_Gap_Between_DvAB.pdf> [↑](#footnote-ref-1)
2. NEA and Future Climate, *Fuel Poverty and Houses in Multiple Occupation: Practitioners’ Views, Final Report,* March 2016 [↑](#footnote-ref-2)
3. Houses in Multiple Occupation (Energy Performance Certificates and Minimum Energy Efficiency Standards) Bill, <https://publications.parliament.uk/pa/bills/cbill/2014-2015/0082/15082.pdf> [↑](#footnote-ref-3)
4. <https://www.minergie.ch/media/170830_kgeld_print.pdf> [↑](#footnote-ref-4)
5. Consumer Focus, *Room for Improvement: The impact of EPCs on consumer decision making,* 2011

   <http://webarchive.nationalarchives.gov.uk/20120117165059/http://www.consumerfocus.org.uk/publications/room-for-improvement-the-impact-of-epcs-on-consumer-decision-making> [↑](#footnote-ref-5)
6. Consumer Focus, *Room for Improvement,* 2011 [↑](#footnote-ref-6)
7. Consumer Focus, *As easy as EPC? Consumer views on the content and format of the energy performance certificate* [*http://webarchive.nationalarchives.gov.uk/20120117163324/http://www.consumerfocus.org.uk/uncategorized/as-easy-as-epc-consumer-views-on-the-content-and-format-of-the-energy-performance-certifcate*](http://webarchive.nationalarchives.gov.uk/20120117163324/http://www.consumerfocus.org.uk/uncategorized/as-easy-as-epc-consumer-views-on-the-content-and-format-of-the-energy-performance-certifcate) [↑](#footnote-ref-7)