National Retrofit Hub response to the 'Reforms to the Energy Performance of Buildings regime' consultation 2024-2025

Since May 2024 the National Retrofit Hub has been conducting an in-depth exploration into how EPCs could be reformed to enable the local delivery of good quality retrofit at scale. We conducted cross-sectoral engagement to build a consensus on the change needed.

We welcome the Government's EPDB Framework Consultation, and hope to continue engagement to ensure EPCs deliver on their full potential.

This document should be read alongside the National Retrofit Hub Report *The Future of Energy Performance Certificates: A Roadmap for Change*.

Our response to the reform consultation is as follows:

What EPCs measure

1. To what extent do you agree or disagree that information using an energy cost metric should be displayed on EPCs?

Strongly agree

A cost rating is the most likely metric to motivate householders to make performance upgrades to their homes. It is a well understood metric, and its impact on the householder is clear.

The energy cost metric should be improved. This rating should be based on the building's energy use intensity, plus fuel type costs. This metric should be used to set and measure progress against fuel poverty targets.

The rating should be presented alongside an average yearly cost of energy for the building, based on typical use-patterns. The cost should be dynamic, based on current energy prices, with a reference generated date.

Information could be provided on running costs should energy prices increase, similar to mortgage projections, i.e.: if the cost of electricity rises to 'x', the typical energy cost of this home per year will be 'y'. There is also an opportunity to provide **bespoke information** related to this metric, where a householder can input information about how they occupy the budling, and receive a unique energy cost based on their use-case.

This will also be a more effective indicator of, and incentive for, carbon performance, once energy costs are rebalanced.

2. To what extent do you agree or disagree that information derived from a fabric performance metric should be displayed on EPCs?

Agree

We understand that the government is not yet ready to incorporate a metric focusing on occupant health. **In the absence of a health metric a fabric performance metric would be useful as a proxy for thermal comfort and may give some indication of the building's risk of damp and mold.**

A combination of cost, carbon and health metrics would provide better motivation for householders to make performance upgrades, as the benefits associate with each are clear and direct. The fabric performance metric has a more indirect link to occupant benefit, therefore this **link, between the fabric rating and occupant benefits such as thermal comfort, should be made clear in the EPC presentation** if this metric is selected. There is strong industry support for a health metric - 87% of the 300 professionals we surveyed thought that information on a building's impact on occupant health and wellbeing should be included in an EPC.

The government should also consider how **adequate ventilation, to provide good indoor air quality,** can be incentivized by EPCs, within the recommendations to householders and the ratings, in the absence of a health metric. The ratings proposed in this consultation would not necessarily be improved by the installation of ventilation, and therefore this important measure may be overlooked.

The fabric metric, if introduced, should include inputs on the **condition of building fabric**, and be linked to recommendations for repairs and maintenance where these would improve building performance. BS 7913 states, that: 'Elements such as walls can be over a third less energy-efficient if damp.'

3. When evaluating the fabric performance of buildings, which methodology do you think should inform the basis of calculating a fabric metric?

HLP/HTC

The **most accurate methodology for calculating the fabric metric would be with real-world measured data via a HLP or HTC**, and this should be the preferred route. Householders and the finance sector have concerns around the accuracy, reliability and comparability of EPCs. The inaccuracies in EPC data limit the ability of financial institutions to accurately fund properties. **Incorporating a more accurate calculation of a building's performance would enable these institutions to fund more performance upgrade work**, unlocking green finance. 86% of the 300 industry professionals we surveyed wanted to see real-world data incorporated into EPCs.

We also acknowledge that it might not be possible for all EPCs to use real-world data straight away. A **tiered system, with a confidence rating,** could allow high accuracy EPCs to be created using real-world data, while still enabling low-cost accessible EPCs to be produced using modelled calculations. High confidence rating EPCs would have a higher cost, however value could be provided for householder if they enabled access to low-cost green finance, government grants, or guarantees of performance.

FEES is unlikely to be appropriate for use as the desktop calculation, particularly if used alongside real-world measurements, due to the **clear and evidenced performance gap**, and inaccuracy between this compliance measurement and real-world performance (see evidence from Leeds Beckett University, CIBSE, the Carbon Trust and others). **A more accurate calculation methodology, based around CIBSE TM54 of PHPP should be used.**

4. To what extent do you agree or disagree that information based on a heating system metric should be displayed on EPCs?

Disagree

A **carbon metric would provide a much clearer link to intended outcomes** than a heating system ranking. A carbon metric is easier to understand, and recommendations associated with it could easily include switching to low-carbon heat.

Providing a **ranking of different heating systems would introduce multiple risks:**

- A **barrier could be created to innovation** as new heating system solutions would need to navigate entry into the list.

- This metric could also encourage the cheapest solution to be taken to move up a rating, which might not lead to the best consumer outcomes, for example if direct electric heating held a higher rating than gas boilers.

It would also be difficult for this metric to reflect regional considerations and incorporate communal or district heating – as different specific systems would have different carbon intensities – each would need to be evaluated in their own right.

The efficiency of a heating system depends heavily on the system's design and operation. The same heat pump can work at different efficiencies, depending on the design of pipework, the size of radiators and the building's fabric efficiency. Therefore, the heating system metric may be misleading, with a risk of incentivizing quick but poorly designed systems, baking in high energy use. A carbon metric could overcome this issue, as it has more potential to be linked to real-world data, based on the actual operational efficiency of the system, therefore making it more accurate.

Our recommendation is for the carbon metric to be a headline metric, that this is used to set Net Zero targets, and to incentivse the transition to low-carbon heat.

5. What are your views on the design principles and the scope for a Heating System metric?

If a heating system metric was introduced the following considerations should be made:

- Safeguards to prevent lower cost fossil fuel heating being replaced with high-cost direct electric, particularly in the private rental sector and where there is a risk of fuel poverty.

- Regional and local grid capacity.

- Appropriateness of different heating systems with regard to fabric performance and use patterns.

- How new technologies enter into the system. The current Appendix Q and PCDB process within SAP creates a barrier to the uptake of innovation, this risk would need to be mitigated for the heating system metric.

- Minimum CoP (coefficient of performance) for heat pump installations, with a methodology for evidencing the achieved CoP.

A carbon metric would provide a more impartial and accurate measure of the carbon intensity of a building, and provide more opportunities for regional and bespoke solutions to the decarbonization of heat to be incorporated.

6. To what extent do you agree or disagree that information based on a smart readiness metric should be displayed on EPCs?

Strongly agree

7. What are your views on the definition, design principles and the scope for a smart readiness metric?

Although we strongly agree that a 'smart readiness' metric should be incorporated into EPCs**, this may not need to be a headline metric.** As an additional metric it could still be used to incentivize action, without overwhelming householders. More focus could be placed on this metric in regions where grid capacity is most limited, or the cost of grid upgrades are highest (such as in rural areas).

Energy Systems Catapult are conducting research into a 'Smart Building Rating' which could be used as the basis for this metric. A smart readiness metric would require the development of a robust framework, along with significant **communication and education efforts to ensure consumer preparedness.**

The **embodied carbon and ecological impacts** of the technology and materials associated with making a home 'smart ready' should be considered in the design of this metric. Neighborhood and shared energy systems should also be considered within the rating methodology.

This metric would also be useful for the finance sector, supporting banks to promote financing for future-ready buildings and identify properties that are aligned with energy efficiency goals.

8. To what extent do you agree or disagree that information from an energy use metric should be displayed on EPCs?

Strongly Agree

We would recommend that a building's energy use (kWh/yr), energy use intensity (kWh/m2/yr) and peak demand were provided within an advanced view in the EPC. A metric showing a building's energy use would be valuable to built environment professionals, and to provide alignment with the Net Zero Building Standard. This metric would provide the background information to calculate the cost and carbon metrics. This information is less useful to, and not generally understood by, householders, so may not need to be included within the householder view on an EPC. 80% of the 300 industry professionals we surveyed supported the inclusion of data on peak energy demand, believing it would contribute to energy grid management.

Energy use metrics are critical for assessing a property's efficiency and informing financing decisions. Displaying real, verifiable energy consumption data on EPCs — rather than estimates — would provide a trusted basis for stakeholders, including banks, to make informed decisions.

The ability **to track trends over time** would further support efficiency improvements and drive investment in sustainable housing, particularly through products like green mortgages. Verifiable data builds confidence and ensures accurate decisions on energy-efficient upgrades.

9. If an energy use metric is to be displayed on Energy Performance Certificates (EPCs), which type of energy use measurement should be used to calculate this metric?

Delivered energy

Delivered energy refers to the actual energy consumed by a building, reflecting real-world usage patterns. This is the most relevant measure for assessing a building's energy efficiency and provides the clearest insight into its actual environmental impact. In contrast, primary energy includes upstream energy losses during production and distribution, which, while useful for certain purposes, may not directly reflect a building's immediate performance or the actual energy savings from retrofits or efficient technologies.

Focusing on delivered energy enables more accurate energy performance assessments, facilitates clearer comparisons across buildings, and supports more targeted financial products, such as green mortgages or retrofit loans, which rely on real, measurable improvements in energy use.

Alignment with the metrics within the Net Zero Carbon Building standard should be ensured.

10. To what extent do you agree or disagree that information from a carbon based metric should be displayed on EPCs?

Strongly Agree

A carbon metric, with easy-to-understand rating system, should be introduced as a headline metric. We agree with the recommendation from NESTA that cost and carbon should be the two headline metrics on EPCs, and our industry engagement suggests that these should sit alongside secondary metrics on health, climate resilience and smart readiness, and 'advanced' metrics such as energy use intensity.

The carbon metric should be used to set and measure progress against Net Zero targets and incentivize the switch to low-carbon heating and hot water. This metric should be aligned with the Net Zero Carbon Building Standard, and **intuitive ratings** could be used, such as: Net Zero, Nearly Net Zero, Moderate Emissions and High Emissions, presented alongside an average annual CO2 footprint.

Interactivity within the EPC would allow householders to learn more about their home's carbon emissions - **householders should be able to click on the metric to receive further information on their heating system type and lower carbon alternatives.**

In the finance sector aligning lending portfolios with net-zero targets requires accurate carbon data on buildings. This is **crucial for green loans and ESG reporting**. A consistent and transparent methodology calculation of emissions based on energy use is required to ensure this metric is useful.

11. To what extent do you agree or disagree with incorporating smart metering technologies, like SMETERS, into the energy performance assessment framework for buildings?

Strongly Agree

Incorporating smart meter data within EPCs has the potential to help fulfill the government's objectives of making EPCs more accurate, reliable and trusted. There is a well-evidenced performance gap between predicted / modelled and real-world energy use data for buildings and incorporating the latter would therefore make the information with EPC much more useful.

The finance sector has concerns around the accuracy, reliability and comparability of EPCs. The inaccuracies in EPC data limit the ability of financial institutions to accurately fund properties. A lack of reliable data hinders the ability to provide appropriate financing and investment. Providing more accurate real-world data could therefore **unlock access to green finance, as outcomes from retrofits could be better evidenced.** Recording this data might also help identify areas with a high prevalence of home under-heating, and associated fuel poverty, for priority support.

The introduction of SMETER data needs to be balanced with keeping EPCs affordable and accessible, one method to do this would be to introduce EPCs with different 'confidence ratings' or 'levels.' High confidence rating EPCs, including real-world data, might have a higher cost, however, banks and building societies could require these to provide access to low-cost green finance, they could be a requirement of government grants, or they could be used to unlock guarantees of performance. Confidence ratings could be aligned with the PCAF Financed Emissions Standard data quality scores for mortgages, to provide banks with more reporting accuracy and certainty. EPCs currently have a PCAF data quality score of 3.

12. Do you have any views on key transition issues?

We acknowledge that change in EPCs will introduce added complexities for many stakeholders, however, **now is the time to bring in change**. Our 'State of the Nation Review' found that in England alone there are 11.8M homes below EPC C, and since 2013 2.17M retrofit measures have been delivered, with 725,000 of these just being boiler replacements. If we are to achieve the Government's target for the upgrade of homes, we need to quickly scale up the pace of retrofit. Change should be made now, as the curve to scale begins.

It will be important that **clear guidance** is provided for those with older EPCs, ensuring they are not unfairly disadvantaged while also incentivising improvements in energy performance. There will be a significant additional burden for local authorities, planning retrofit projects and delivering Net Zero targets, as they navigate a building stock with a mix of old and new EPCs. **Future schemes will need to be clearly designed for local authorities, and streamline eligibility for both types of EPC.**

The introduction of additional metrics provides both a risk and opportunity for scheme eligibility. If the requirements for eligibility were made more onerous, for example requiring meeting criteria for two or more different metrics (you must have a low cost rating AND a low fabric rating), those accessing schemes may be discouraged.

However, if additional metrics could be used as alternative ways of demonstrating eligibility, for example if a home has a low cost rating OR low fabric rating, this could provide added benefit, opening up schemes to more people who need support. Local Authorities have expressed to us a strong need for eligibility processes to be made simpler and/or more flexible. Metrics also need to be well understood, and quickly verifiable by Local Authorities and others applying for funding.

When EPCs and DECs are Required

13. What should be the validity period for Energy Performance Certificate (EPC) ratings?

5 years

14. To what extent do you agree or disagree with the approach for any changes to validity periods to only apply to new EPCs?

Disagree

Introducing a **two-year transition period** where existing validity periods are retained would provide a good balance between speeding up the improvements in accuracy and reliability of EPCs, while reducing disruption.

The validity period for Energy Performance Certificate (EPC) ratings should strike a balance between providing up-to-date, accurate information and ensuring that the process remains

efficient and cost-effective. Therefore, we have selected 5-years, however, **rather than simply reducing an EPC's validity period a better approach would be to introduce more 'trigger points' when EPCs need to be updated**, for example when certain building works are carried out. These works often require certification or building regulations approval, which could be linked to a requirement for a new EPC. There is a risk that more 'trigger points' for when an updated EPC is needed could disincentivize home upgrade work – if this makes the process more onerous.

However, **allowing dynamic update of an existing EPC** (rather than re-doing the whole calculation) could significantly reduce the time required to update the EPC, streamlining the process. This links to the government's proposals, covered by questions 31 and 32, on using existing EPC data. There is a risk that simply reducing the validity period on an EPC will reduce coverage, where there is no incentive or requirement to renew for most homeowners, building in dynamic update instead could help mitigate this risk.

It may also be worth considering giving lower EPC ratings shorter validity periods, for example EPCs for A-rated homes could be valid for 10 years, and for F-rated homes for 2 years. This would incentivise upgrade of the most poorly performing homes, while removing a burden for those who might not need to make upgrades. This would need to be considered in the context of equity and social justice, so as not to unequally burden those with lower incomes.

15. To what extent do you agree or disagree that a new EPC should be required when an existing one expires for private rented buildings?

Strongly Agree

Regular updates to EPCs ensure that the energy performance of properties is accurately reflected, particularly in the context of potential changes to the building's energy efficiency due to improvements or building work. This would **support better-informed decision-making** for both landlords and tenants and help ensure that private rented buildings meet the necessary energy performance standards. The requirement would help **empower tenants to apply for energy efficiency schemes or to take a greater interest in their energy bills during their whole tenancy, rather than just at the beginning.**

Additionally, this impacts the frequency of updated data available for rented properties, helping **banks ensure accurate risk assessments for buy-to-let loans or portfolio exposure to non-compliant buildings**.

However, the process should remain straightforward and cost-effective to avoid creating unnecessary burdens on landlords and tenants, especially for those in lower-income areas.

16. To what extent do you agree or disagree that the regulations should be amended so that a property must have a valid EPC before it is marketed for sale or rent?

Strongly Agree

The EPC market is mature enough to support this change, and this would allow buyers to make more informed decisions.

17. To what extent do you agree or disagree that houses in multiple occupation (HMOs) which don't already fall under the (Minimum Energy Efficiency Standards) MEES should do so when a room is rented out?

Strongly Agree

According to research by Future Climate **HMOs are more often in poor condition than other types of housing** in the same area. HMOs are often old, solid wall properties with low levels of insulation with some having expensive to run electric heating systems.

Requiring an EPC will provide transparency and choice for bill paying tenants. But more importantly will **allow government to extend Minimum Energy Efficiency Standards to the HMO sector.** This will bring standards up across the sector and protect tenants who don't have the purchasing power to rent alternative properties.

For landlords who pay the bills, requiring an EPC provides them with actionable advice on improvements to the property that could bring the bills down. Energy bills are a concern for landlords who pay them, with a landlord in our research promoting the use of smart, remotely controlled thermostats to control the heating in his HMO and keep costs down.

"I've got thermostats on the radiators but I don't know if someone is in there with an electric heater as well and I don't know they put the boiler on 24 degrees 24/7. The energy bills are very high so I thought if I put a smart thermostat in. I can control it" Patrick* 18 properties. *not his real name.

18. To what extent do you agree or disagree that there should be a transitional period of 24 months to allow HMO landlords to obtain a valid EPC and comply with MEES regulations?

Disagree

According to Local Authority Housing Statistics there are over 450,000 HMOs in England but as data is limited it is hard to say what the EPCs of these properties might be. Current MEES regulations state that properties can only be rented out if they meet a minimum of **EPC E** or are otherwise exempt. This may rise in the future, but is currently a **very achievable target with most homes already falling inside the window of compliance.** For reference, according to English Housing Survey data 97% of homes are an EPC E or above. We therefore suggest that landlords should be able to make the required changes within **12 months.**

19. To what extent do you agree or disagree with requiring short-term rental properties to have a valid EPC at the point of being let?

Strongly Agree

This change would increase the overall number of properties within an EPC, giving a **better overall picture of the state of energy efficiency across the country**, better informing policy. Considering the low cost and ease of procuring an EPC this will not introduce an excessive burden to those operating short-term lets. This change would also help policy makers assess the impact of, and potentially pave the way for, MEES regulation on these property types.

20. To what extent do you agree or disagree with requiring short-term rental properties to have a valid EPC irrespective of who is responsible for meeting the energy costs?

Strongly Agree

21. To what extent do you agree or disagree that we should remove the exemption for landlords from obtaining an EPC for buildings officially protected as part of a designated environment or because of their architectural or historical merit?

Agree

This change would have the positive impact of allowing tenants to understand the predicted energy consumption of a building, take informed decisions and plan accordingly. However, our network provided feedback that current EPC calculations underestimate the thermal capacity of traditional buildings, leading to inappropriate recommendations for upgrade.

We do also agree with the points made by Historic England:

"We support the aim of historic buildings having EPCs and ideally the eventual ability to remove associated exemptions. ***However, Historic England believes that exemptions should remain in***

place until the current tools for assessment (EPC and SAP), issues with quality control over works, and the lack of suitable standards and capacity and competence in the retrofit industry are satisfactorily addressed with respect to historic buildings and/or buildings of traditional construction. *The existing exemption wording has led to misunderstanding and test mechanisms are unclear, these would benefit from revision.*

As noted in the consultation, getting an Energy Assessment and the resultant Energy Report and Certificate are non-invasive and so do not 'alter the building's character' or cause harm to historic building fabric or occupants. However, ***EPCs in their current form might recommend measures that are inappropriate for historic buildings and/or buildings of traditional construction,*** *which risk causing detrimental impacts on significance and historic fabric and may negatively impact occupants' health and building performance."*

EPC and DEC data

31. To what extent do you agree or disagree that data gathered in previous EPC assessments should be available for use in future EPC calculations for a dwelling?

Strongly Agree

32. What are your views on the approach to using existing data, while balancing accuracy and practicality?

The use of existing validated data would enable the **more regular and dynamic update of EPCs**, as and when changes are made to a building. There are risks associated with the use of existing data, if it is poor quality or not validated, two methods to overcome this risk would be to: - Only allow data from existing EPCs to be used once reforms to improve their quality have come into effect. - Link EPCs with Digital Building Logbooks, to make the process more accurate and transparent. A **Digital Building Logbook** is a secure online tool, that brings together information on a building. Data is integrated, added and updated through a variety of sources. **Combining a DBL with and EPC could help validate build-ups and systems used to measure a building's performance.**

Managing EPC quality

34. Do you have suggestions for other actions which could be taken to improve the accuracy and quality of energy assessments, or to help identify fraud in EPC assessments?

Additional requirements could be put in place for validated build-ups, test data an in-use data to be included in an EPC assessment. This could be linked to a higher 'level' or 'confidence rating' EPC. **Integrating EPCs with Digital Building Logbooks would also provide the opportunity to transparently and clearly log and validate information on a building**, that is checked and updated over time. Increasing the transparency and access to assumptions made in EPC assessments would allow professionals and homeowners to better review an EPC, and spot issues or inaccuracies. We are aware of research that has identified a number of key inputs that can be used to 'game' an EPC – delivering an outcome preferred by someone procuring the assessment. Providing an open

and historical log of each of these inputs would help to identify quality issues and where potential gaming might have taken place.

The consultation describes how 2% of EPC lodgments are audited by schemes every 12 months. We suggest that assessors with non-compliance could be subject to a higher audit frequency, alongside penalties.

35. To what extent do you agree or disagree with these proposals to improve compliance?

Neither agree nor disagree

The consultation does not set out a clear and detailed proposal for improving EPC and MEES compliance, however, the suggested engagement with LWMAs, estates and letting agents, and the improved access to data are welcome.

In the Private Rental Sector enforcement of MEES regulations will be a significant factor determining the success of retrofit of rented homes. The introduction of a **'Private Rented Sector Database'**, as put forward as part of the Renters' Rights Bill would have multiple benefits to compliance: informing landlords of their duties and allowing enforcement bodies to more easily identify non-compliant properties. This database should be coordinated with the EPB database.

Responsibilities on enforcement of EPCs should be made clearer to the industry and the public, and adequate resourcing to those responsible for enforcement should be provided.

48. Please let us know if you have any comments on the impact assessment in general, including any evidence you have on the impact of these proposed reforms.

Energy Performance Certificates (EPCs) play a crucial role in retrofitting the UK's buildings: informing policy, finance and household decision making.

Since May 2024 the National Retrofit Hub has been conducting an in-depth exploration into how EPCs could be reformed to enable the local delivery of good quality retrofit at scale. We conducted cross-sectoral engagement to build a consensus on the change needed.

Our research included: an extensive literature review, 3 large workshops / webinars with attendance between 50-150 people at each, focused sessions with finance provides and local authorities, and an industry survey with over 300 responses. **This is a topic many retrofit stakeholders find important**, and engagement was high.

Results of our exploration, and our proposed roadmap for change can be found here: www.nationalretrofithub.org.uk/knowledge-hub/epc-reform