



# WHAT IS NEEDED FROM EPC REFORM TO ENABLE RETROFIT AT SCALE?

RECOMMENDATIONS FROM THE INDUSTRY  
LITERATURE REVIEW  
STAKEHOLDER WORKSHOP INSIGHTS  
NEXT STEPS



The National Retrofit Hub work on EPC reform is sponsored by:





Energy Performance Certificates (EPCs) play a crucial role in retrofitting the UK's buildings: informing policy, finance and household decision making. The National Retrofit Hub is exploring how EPCs could be reformed to enable the local delivery of good quality retrofit at scale. Our methodology for this work is to understand what recommendations from the industry are already on the table, explore how these might work together, and to seek insights from our network and across the retrofit sector.

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## Introduction

Energy Performance Certificates (EPCs) play a crucial role in retrofitting the UK's buildings: they form the basis of national policy on performance upgrades, serve as the primary way for residents to learn about their building's performance, and influence finance and investment through their ratings.

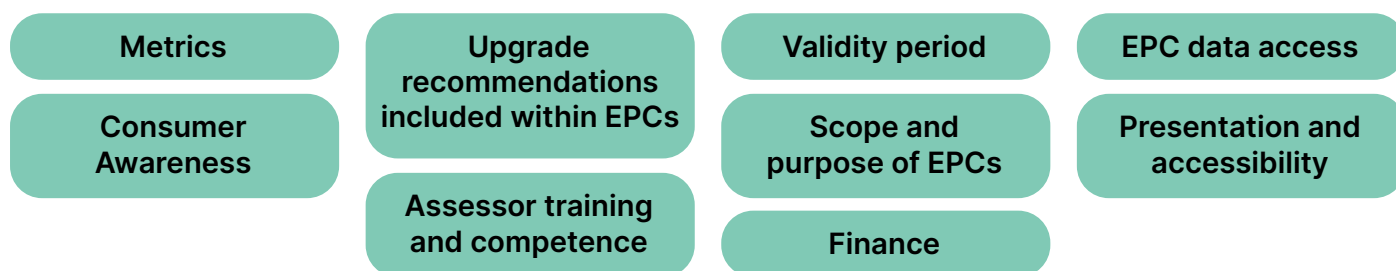
EPCs enable stakeholders to assess the performance of a building stock, and have the potential to be effective engagement and decision-making devices. However, many organisations have highlighted issues with EPCs, and made recommendations for reform. These reforms could lead to better policy making, more effective finance, higher levels of engagement, and ultimately, the effective improvement and decarbonisation of our buildings.

## Literature Review

The National Retrofit Hub and Bankers for Net Zero have conducted a literature review of the recommendations for EPC reform that already exist in the industry. These sources of information can be viewed on our website [here](#). For each, we have provided our own summary and highlighted key areas of focus. This resource is provided so that our community can understand the scope of the discussion, and recommendations already on the table.

Papers advocating for EPC reform have been published by organisations including: The CCC, Which?, Historic England, Energy Systems Catapult, BRE, UCL, BEUC, Santander, Oak North, UK Finance, PCAF and Natwest. The Scottish government consulted on EPC reform in 2023, and is making progress towards implementing recommendations. In England and Wales, there is an EPC Action plan that government departments are actively progressing.

Key themes that occur within recommendations for reform include:



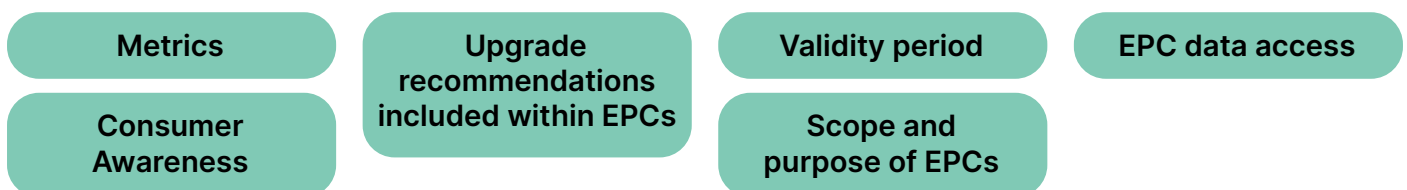


## Stakeholder Workshop

On 20th May, the National Retrofit Hub held an online workshop, bringing together members of our Working Group 1: Warm, Healthy, Net Zero Homes and Working Group 2: Supply Chain Products and Solutions, plus other interested members of our network. There were 100 attendees at the meeting, with representatives who held the following types of roles within the retrofit sector:

- Consultants, designers and retrofit coordinators
- Project managers
- Planning consultants and officers
- Researchers and academics
- Policy makers / advisors
- Social housing providers and estates managers
- Energy modellers
- Technical specialists and standards authors
- Lecturers and training providers

Andrew Parkin of the Property Energy Assessors Association (PEPA) gave the audience an overview of the EPC process, and changes to date. We then presented the audience with a summary of existing recommendations, based on the literature review, and gathered their feedback through a mentimeter survey, and via comments in the zoom chat. We discussed the following themes:



## Insights

### Metrics

Currently, the headline metric within EPCs is the 'Energy Efficiency Rating', which is based on predicted energy cost per square meter per year. An 'Environmental Impact Rating' is provided alongside this, based on the GHG emissions per square meter per year. Issues associated with current metrics include:

- Metrics are confusing, eg: Energy Efficiency Rating is actually a measure of energy cost rather than efficiency.
- EER incentivises cheaper gas over more expensive, but lower carbon, electricity.
- Current metrics are poorly suited to informing government policy, as they do not incentivise the optimum changes to homes that enable low carbon heating, such as fabric upgrades.
- The 1 to 100 scale is opaque and does not relate to actual units of energy.
- EPC ratings cannot be easily compared with real-world energy use, and ratings do not include all energy consumed within a dwelling.



Most published recommendations from the industry are for a series of metrics to be included within EPCs, some examples include:

- **Fabric Rating** - Space heat demand intensity in kWh/m<sup>2</sup>/yr. (The CCC)
- **Cost Rating** - similar to the current EER, energy cost intensity in £/m<sup>2</sup>/yr. (The CCC)
- **Heating System Type** - the system type within a defined hierarchy. (The CCC)
- **Energy** – Total energy use intensity in kWh/m<sup>2</sup>/yr (The CCC)
- **Climate Impact Metric** - the emissions associated with the energy use. (ESC)
- **Heat Pump Readiness Indicator** – based on building fabric, heat distribution system and local climate. (BEUC)
- **Smart Energy Metric** - the home's capacity to use energy flexibly, considering batteries, controls and PVs. (BRE)

Participants at our workshop felt that the fabric rating was the most important metric for consumers, followed by the total Energy Use Intensity (EUI), cost, and climate impact metrics. The fabric rating is the only metric not influenced by behaviour. When considering retrofit stakeholders, participants once again thought that the fabric rating was most important, followed by the total EUI, and the heating system type. Some participants suggested that government targets and policy should be used to inform what metrics are used, for example, if the target is reducing fuel poverty, then cost is an effective metric. It was acknowledged that consumers and designers / consultants might need very different things from an EPC.

We also asked participants what the best 'headline metric' would be, most participants thought that this should be either the total EUI, or that there should be no headline metric. One participant suggested creating 'top trumps' from a range of metrics, and another suggested they could be like a food label, where you can choose which balance of metrics you consider. Counterbalancing this, other participants felt that EPCs should be kept as simple as possible, as they represent just the first step before retrofit assessment.

Many participants also felt that in-use performance data should be included within an EPC, in order to more accurately understand current energy use, potential improvements associated with retrofit, and to evidence improved performance. This data would need to be corrected for occupancy / use patterns and anonymised, to make it useful at aggregate level.

## Upgrade recommendations included within EPCs

Currently, some basic and high-level recommendations are provided within an EPC, on how a householder might improve the performance of their home. Issues highlighted on these recommendations include:

- Costs estimated are often inaccurate and misleading.
- The performance gap between predicted and actual energy uses mean that, when EPCs are used to assess energy savings, results can often be unreliable.
- Maintenance is not mentioned within EPC recommendations but plays an important role in improving the performance of traditional buildings.
- Recommendations are not presented in the context of a whole-house approach.
- Health and wellbeing are not considered.

Improvements to the recommendations, suggested by the industry, include:

- Include repair & maintenance (Historic England).



- More accurate costs? (Historic England).
- Align recommendations with decarbonisation goals (BRE).
- Include signposting to expert advice (ESC).
- Incorporate insights from Local Area Energy Plans (ESC).
- Rather than recommendations, provide more information on the existing building and its impact, with options (ESC).
- Include better information on the potential effects of energy efficiency measures on ventilation, damp, and overheating, as well as the suitability of recommendations for older properties or those in conservation areas (EPC Action Plan).

We asked workshop participants if EPCs should include improvement recommendations. Opinion was largely split between those who thought recommendations should be included and improved, and others who would prefer recommendations to be removed and included within a comprehensive retrofit plan.

Participants also had the following ideas to improve recommendations:

- Link recommendations to different outcomes.
- Include the 'bounce-back effect' when predicting energy and cost savings.
- Include risk bandings for different building types.
- Make holistic and allow for phasing / suggested pathways.
- Make more realistic for flats and leasehold homes.
- Include ventilation and other health / indoor air quality improvements.
- Include overheating mitigation.
- Give outline recommendations with signposts for where to go to receive more information, and the expertise needed.
- Include embodied carbon considerations.
- Link to building types / archetypes.
- Include an uncertainty range for costs.
- Make recommendations more specific to the property with more advanced modelling.
- Model improvements over 10 years to include weather variations.
- Use dynamic modelling to generate recommendations.
- Ensure recommendations include terrace passageways.

Many others thought that recommendations should be removed from EPCs, the data behind EPCs made more available, and for the EPC certificate to encourage householders to have full retrofit assessments produced, with recommendations bespoke to the home.

## Validity period

EPCs are currently valid for 10 years and 40% of homes do not have an EPC. Many reports advocate for shortening the validity period to 5 years, some suggest that there should be opportunities to dynamically update EPCs, and others highlight the need to support all householders to access an EPC.

Our workshop participants suggested that, rather than simply shortening the validity period to 5 years, that more 'trigger points' and opportunities for dynamic update of EPCs could be included. For example, anytime work is conducted, or a building transaction takes place, an update could occur. Participants were also keen for metrics for costs and carbon emissions to be updated dynamically with current market values.



## EPC data access

Some reports advocate for making EPC data more accessible to the retrofit industry, landlords, homeowners and service providers. The government is working on plans to open access to EPC data, as part of its EPC action plan.

Workshop participants stated that they could benefit from access to EPC data in the following ways:

- Quality control, to see patterns and anomalies.
- Research on retrofit.
- Providing comparison against measured data.
- Input into retrofit assessments to create efficiencies and provide better early-stage advice.
- Better customer engagement.
- Monitoring success of local and national retrofit programmes.
- Insights on impact on property valuation.
- Building smarter recommendation models.
- Improving quality of inputs by providing transparency to homeowners.
- Better transparency on assumptions.
- Understand the possibility of heat networks locally.
- Monitoring change.

Uses for EPC data were both found for individual homes, and at an aggregate and anonymised scale. It was noted that the input data for EPCs would need to be improved in accuracy before it became reliable. Some suggested that this enhanced EPC data could be accessed by a digital building logbook, where the householder is placed in control of how the data is accessed.

## Consumer Awareness

A survey by Santander showed that 58% of consumers did not know what an EPC was. Consumer awareness would be useful for the following linked reasons:



Workshop participants generally felt that the EPC could potentially play a big role in incentivising retrofit, but other ways of driving consumer awareness of retrofit are needed.



We asked workshop participants for their suggestions to improve consumer awareness of EPCs, these included:

- Improve accuracy and reliability to develop trust.
- Clarity on what the metrics mean.
- Public campaigns, TV storyline or social media posts.
- Making Stamp Duty Land Tax, or council tax EPC dependant.
- Continuing to improve MEES (Minimum energy efficiency standards).
- Issuing an EPC when any changes are made to a home.
- Early-years education.
- More connections with green finance, and preferential mortgage rates.
- Provide more links to health and wellbeing.
- More awareness at point of sale / purchase / letting.
- Zoopla / Rightmove to include a search by EPC filter.
- Plain English label rather than acronym.

## Scope and purpose of EPCs

EPCs are currently used by: National governments to set and measure progress against policy; academic researchers to understand the energy efficiency of the UK's building stock; local governments and the retrofit industry to target support and plan programmes; and homeowners, renters, landlords and service providers to access advice and information on buildings. Some think that the scope of EPCs could be expanded, for example: to set carbon performance requirements for buildings linked to the UK's carbon budgets (ESC).

Our workshop participants reflected on what EPCs could potentially be useful for, ideas included:

- Helping people understand the performance of their homes in the context of others, and what they should expect.
- Stock modelling and as a database – for policy makers, researchers etc.
- Help with property valuation linked to home performance.
- Tool for starting retrofit assessments and plans.
- Signposting to local organisations and services.
- Links to performance guarantees and heat as a service.
- Setting out a home's journey to net zero, health and climate resilience.
- Driving climate-positive lending.
- Starting point for / input into a digital building logbook.
- Help inform house buying decisions, thereby incentivising performance upgrades.
- Linking to incentives and preferential lending rates.
- Encouraging people to think about their homes in the context of their health and the environment.

There was some suggested different 'levels' of EPC could be produced, based on the amount and quality of data, however many participants felt there was risk of confusion associated with this approach. One alternative would be for EPCs to sit alongside more detailed information contained within digital building logbooks, which would assist in decision making. More information on logbooks, and their potential to enable retrofit at scale can be found [here](#).



## Next Steps

Our engagement on EPC reform will continue, and our plan for subsequent work includes:

- Collaborating with Bankers 4 Net Zero to understand what the finance industry needs from EPC reform to enable effective retrofit and green finance for homes and other buildings.
- Collaborating with our working group 6: Driving Uptake participants, including Which? And Citizens Advice, to understand what householders need from EPC reform to make these documents more useful to them.
- Coalescing insights from these three distinct audiences, finding complimentary recommendations, and identifying areas where there is a tension between what different stakeholders may need.
- Conducting a wider survey with members of all stakeholder groups to gather feedback on these insights and give time for new ideas.
- Publish resources on our findings, which bring together views from across and beyond the sector, expand awareness of the conversation with industry and government departments, and help facilitate further discussion.

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