

Heat in Buildings: Energy Performance Certificate (EPC) Reform

PEPA

31 October 2023

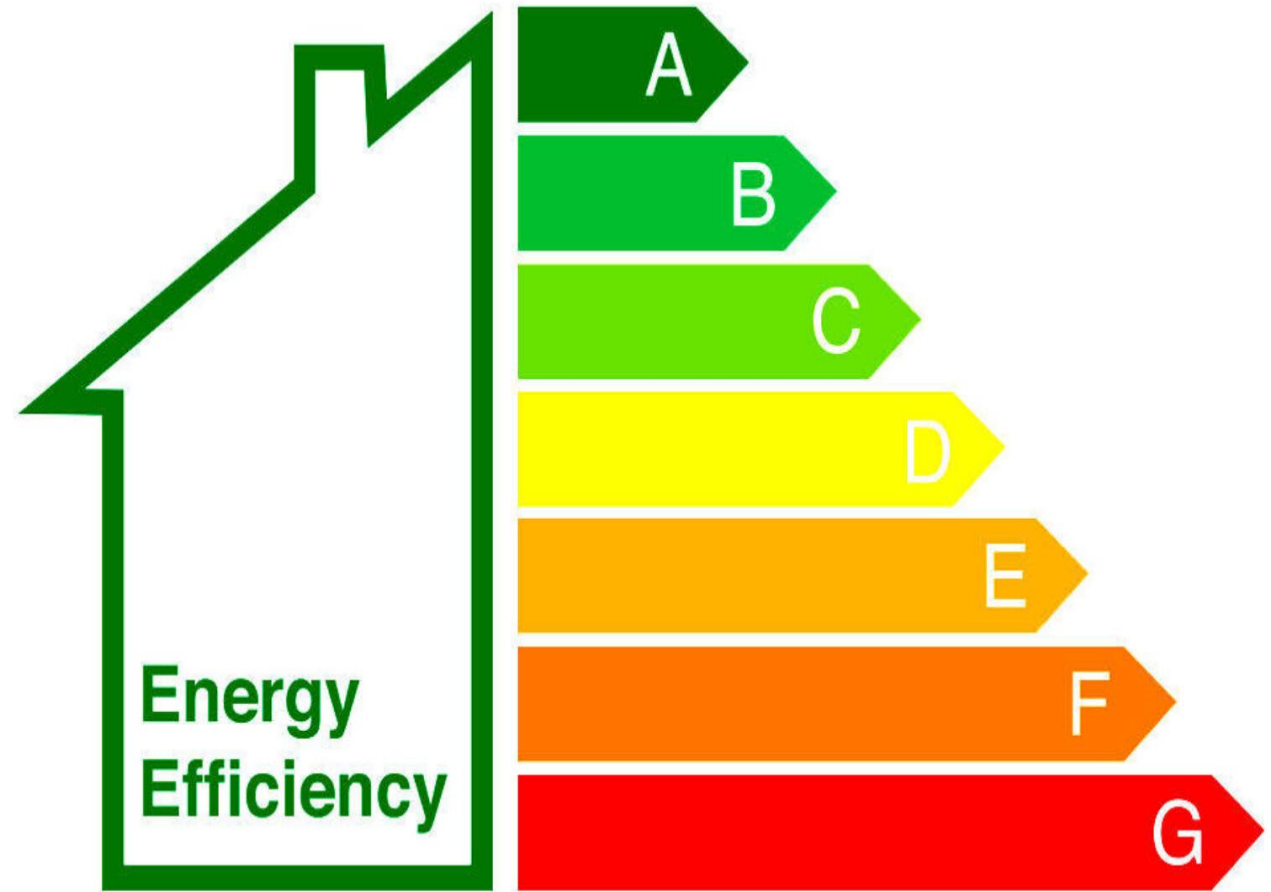


Scottish Government
Riaghaltas na h-Alba
gov.scot



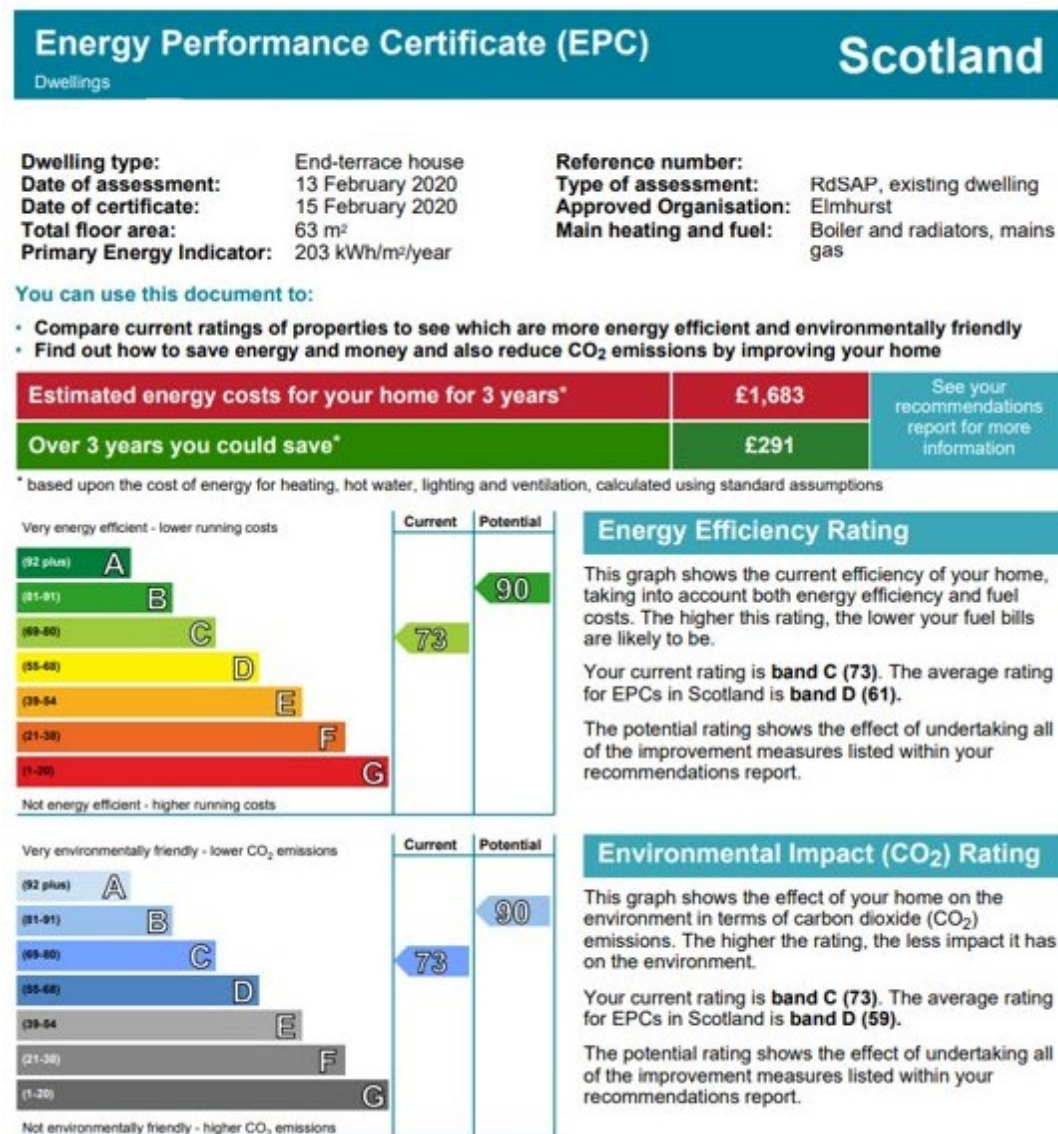
Agenda

- Introductions & Purpose
- Context for Reforms
- Proposals
 - Metrics Discussion:
 - Fabric
 - Heat
 - Audit and Assurance
- Summary / Discussion



Background – Domestic EPCs

- EPCs provide basic information on how energy efficient a dwelling is.
- Our domestic EPCs currently report and rate modelled standardised running costs, and emissions intensity (including electricity grid carbon factors). Primary energy also reported, but not explained or given rating.
- Domestic EPCs also provide (mostly) automated 'recommendations'



Context to Reforms – Heat in Buildings Strategy

- Our 2021 Heat in Buildings (HiBs) Strategy talked about plans to regulate heat and energy efficiency standards in Scotland's home and other buildings.
- EPC reform intended to support HiBs, but main purpose is to provide more appropriate, better and plain useful information, responding to CCC recommendations. The CCC has said “metrics currently used for domestic EPC ratings are not well suited to this task. In their current form they can incentivise sub-optimal outcomes and create a misleading picture of the progress being made”.
- Proposals in this consultation are a first step – we know there is more work to do and we are now in a position to do it.



Scottish Government
Riaghaltas na h-Alba
gov.scot



Introduction – the issues

- Following feedback and engagement with stakeholders, we think there are four key areas that need to be addressed as part of EPC reform:
 - Purpose – required on sale or let, but what is the relevance of an EPC to people?
 - Metrics – EPCs don't give the right information to support net zero – Climate Change Committee.
 - Public Credibility – misrepresentation as “not worth paper they're written on” (but for what purpose?)
 - Utility – vast amount of data collected, more generated through SAP/SBEM. What is useful to show to different users to help them make decisions?



Purpose

- Being clear about the purpose of the EPC is key to ensuring it is used appropriately. Much of the criticism levelled at EPCs is because it is being used for inappropriate purposes.
- Our consultation set out proposals to clarify on the EPC and guidance:
 - The role of EPC ratings e.g., “over/under ‘estimating’ energy use”
 - Purpose of a standardised assessment – although difficult to communicate result may not be ‘right’ for a particular individual.
 - Role of recommendations – not a specialist survey, but a useful first step to help people become aware of and evaluate possible options, before signposting to next steps or funding.
 - Nature of a non-intrusive assessment – balance between robust assessment and cost/complexity/disruption.
- Our consultation set out to develop the role of the EPC as a key piece of information, but not one document to solve all issues (e.g., predict an individual’s consumption, provide bespoke recommendations).
- We think that focusing on the strengths of the EPC, rather than trying to include other possible uses, will help the EPC play an important role in supporting us to reach net zero.



Proposals – Useful Metrics

- A key aim of EPC reform work is for EPCs to provide a more holistic view of energy efficiency.
- The current combination of metrics and indications does not do this appropriately (cost, carbon primary energy).
- We have proposed a revised set based on recommendations from our statutory advisors.
- We are looking at how metrics could be presented in a clear way to people – so people understand the message that the EPC is sending about their home.

SG Proposal	
Fabric Efficiency Rating	Energy required to be supplied by heating system (A-G, 1-100, based on kWh/m ² /yr)
Heating System Type	Heating system type (emissions and efficiency)
Cost Rating	Energy cost rating (A-G, 1-100 based on £/m ² /yr)
Energy Use Indicator	Total energy use intensity (kWh/m ² /yr)
Emissions Rating	Total emissions intensity (kgCO ₂ e/m ² /yr)



Metrics Proposals – Fabric Efficiency Rating

- In line with Climate Change Committee advice, we think a metric that clearly shows the performance of the building's fabric (i.e., insulation level) would be a useful indicator.
- This metric would isolate the fabric from the influence of heating and hot water system efficiency and fuel cost, to give a 'pure' picture of the building fabric.
- We developed a metric with BRE for consultation, and are considering approaches to scaling this metric – i.e., distributing the stock across bands A – G.
- One option under consideration is to base the bands on benchmarks e.g.:
 - A – PassivHaus or equivalent standard
 - B – Good retrofit / typical new build
 - C – Equivalent to current EPC C (40% of stock C or above) – 120 kWh/m²/yr
 - D-G – worsening performance
- We are also reviewing the recast EU Energy Performance of Buildings Directive proposals for EPC band distribution.



Metrics Discussion – Heating System

- Alongside the Fabric Efficiency Rating we have proposed a Heating System classification.
- The consultation includes a simplistic proposal. We are considering how more detailed efficiency information could be provided alongside emissions information, while still providing a clear message to users.
- We intend to consider how information is presented as part of our user centred redesign work.

Type	Examples
High efficiency zero direct emission heating system	Heat pump
Zero direct emissions plus (systems with features to improve efficiency)	Modern electric storage heaters Heat network
Zero direct emissions	Direct electric heating Hydrogen
Heating system with direct emissions	Gas boilers / hybrid heat pumps Biomass heating



Non-Domestic Metrics

- Scottish non-domestic EPCs use a different headline metric across the UK. A comparison figure is also provided.
- This is currently based on absolute direct + indirect kgCO₂e/m²/yr – it is not compared to a reference building.
- Our consultation proposed a set of new metrics:

Metric	Units	Meaning
Energy Rating	A-G	Modelled total emissions relative to a reference building
Direct Emissions	kg CO ₂ e/ m ² /yr	Modelled direct emissions (from within curtilage)
Energy Use	kWh/ m ² /yr	Modelled energy use

Energy Performance Certificate

Non-Domestic buildings and buildings other than dwellings

Scotland

ST ANDREW'S HOUSE, 2-6 REGENT ROAD, CALTON HILL, EDINBURGH EH1 3DG

Date of assessment: 24 August 2020
Date of certificate: 21 October 2021
Total conditioned area: 21655.1m²
Primary energy indicator: 252 kWh/m²/yr

Reference Number: 0410-6530-1202-0228-5006
Building type: Office/Workshop
Assessment Software: EPCgen, v5.6.b.0
Approved Organisation: Sterling

Building Energy Performance Rating

Excellent

A+

Net Zero Carbon or better

(0-15)

A

(16-30)

B

(31-45)

C

(46-60)

D

(61-80)

E

(81-100)

F

(100+)

G

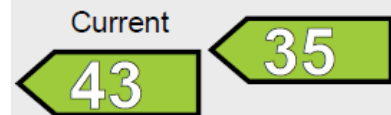
Very Poor

Approximate Energy Use:

132 kWh per m² per year

Approximate Carbon Dioxide Emissions:

42.63 kgCO₂ per m² per year



Scottish Government
Riaghaltas na h-Alba
gov.scot

- We want to ensure people have confidence in the EPC system. This means raising standards:
 - Supporting good practice and professional development
 - Countering perception of a 'race to the bottom'
- To do this we're reviewing the Scottish quality assurance framework that underpins EPCs.
- We are considering a range of prior recommendations to develop a more robust quality assurance framework:
 - Targeted audit based on triggers
 - Ombudsman / regulator as a dispute escalation route
 - Review skills and qualification requirements for accreditation
 - Review Continuity Professional Development (CPD) requirements
- We think ensuring EPCs are credible is an important step but are mindful of the impact on assessors. We want to do this in partnership with accreditation schemes and assessors.



Proposals – Engagement and Use of Data

- We want to ensure that data collected through EPC assessments can be used in an appropriate and effective way to support the move to net zero.
- Since 2018, we have publicly shared data from the EPC register. We know that this data is useful to researchers and industry, but the current arrangements for sharing could be improved.
- To address this, we have:
 - Proposed to move to a live API service to share EPC data. We are interested in views on how useful this would be for potential users.
 - Proposed expanding access to historic EPC data, to improve transparency and better allow analysis of the dataset (for example for trends).
 - Commissioned research exploring possible role of meter data to supplement modelled ratings.
- Beyond data, we are also whether a redesigned EPC form provides opportunities for users to engage with their EPC data – e.g., are there aspects that could be tweaked to provide useful information (such as heating patterns, or fuel / improvement costs)
- We want to ensure the EPC plays a strong role in helping signpost people to possible next steps, such as retrofit advice or funding.



Summary

- Context – consultation focus is on EPC reform and not on Heat in Buildings regulation – separate consultation will follow later this year.
- This EPC consultation builds on previous consultations and recommendations of working groups, interrupted by Covid – we are now taking forward these actions.
- We propose that the EPC is clarified as:
 - A non-intrusive, standardised, assessment of the building.
 - A first step in signposting next steps and providing indicative information.
- Current cost and carbon metrics are not sufficient for EPCs to support net zero – need to recognise different things now as per CCC advice.
- Proposed 'headline' Domestic metrics: Cost, Fabric, Heating system type, Clearly note identified insulation; 'secondary' metrics: Energy Use, Total Emissions.
- Move to web-based EPC.
- Update Operating Framework and review quality assurance, audit and consumer redress.
- Review of smart meter data and occupancy assessments.



Scottish Government
Riaghaltas na h-Alba
gov.scot

