Draft Heat in Buildings Strategy

# Domestic EPC Reform Consultation

July 2021

Scottish Government
Riaghaltas na h-Alba
gov.scot

# Contents

# 1. Ministerial Foreword

**Reducing emissions from our homes and buildings is one of the most important things we can do to help end Scotland's contribution to climate change. Over the next 24 years we will transform Scotland's homes and workplaces so they are warmer, greener and more efficient.**

Earlier this year, we published our draft Heat in Buildings Strategy setting out our proposed actions to meet our climate change targets, whilst maximising economic opportunities, ensuring a just transition and addressing fuel poverty.

The draft Strategy outlines the steps we will take to reduce greenhouse gas emissions from Scotland's homes, workplaces and community buildings, and to ensure that we remove poor energy performance as a driver of fuel poverty. One of the main aspects of the draft Strategy considers how we can reduce the energy we use for heating our homes. Reducing our demand for energy and moving towards net zero emissions heating systems is critical in meeting Scotland's climate change targets.

In order to realise our climate ambitions and provide long-term certainty to home owners, landlords, owners of non-domestic premises and public sector buildings, we will introduce new regulations to set standards for zero emissions heating and energy efficiency, where it is within our legal competence, between 2023 and 2025. Setting standards through these regulations will require a robust assessment system and we propose to reform the current Energy Performance Certificate (EPC) to this end.

**Michael Matheson**

Cabinet Secretary for Net Zero, Energy and Transport

# 2. Introduction

## 2.1 Background

Energy efficiency measures alone will not reduce greenhouse gas emissions enough to meet our emissions reduction targets. Improving the energy efficiency of our buildings is an essential parallel action to heat decarbonisation and the rollout of zero emissions heating systems. Improving the energy efficiency of our homes will also reduce energy demand and therefore support households to reduce their energy costs and mitigate one of the four drivers of fuel poverty.

The UK Climate Change Committee (CCC) in its sixth Carbon Budget report (Dec 2020[1]) identified that high quality advice and information is critical for guiding householders' decisions to improve the energy performance of their home. Energy Performance Certificates (EPCs) are a useful source of basic comparable information. However, the CCC have acknowledged that there are extensive issues with using them as a basis upon which to set standards. These are mainly poor quality or low robustness; modelled data rather than actual energy performance; they do not incentivise or show benefits of decarbonising heat or include the savings possible from smart tariffs. In previous Energy Efficient Scotland consultations, stakeholders have echoed the need for a more effective EPC process.

We are committed to bringing forward a framework of regulatory standards to improve energy efficiency and achieve zero emissions in our buildings. The first stage in this process is to have information that is robust, reliable and informative.

## 2.2 What this consultation covers

Changing the EPC format and considering how we use it to regulate and encourage change towards net zero is a complex process. This consultation forms only the first part of that process.

**STAGE 1 – This consultation** - Consultation on the metrics in an EPC based on our commitments laid out in the draft Heat in Buildings Strategy.

**STAGE 2 – A tailored approach to achieving EPC C (equivalent) and zero emissions heating** The CCC, and our own Short Life Working Group recommended that reforms to EPCs should drive necessary change, and the draft Heat in Buildings Strategy (HBS) states "to be a useful tool for property owners, EPCs need to set out clear property level recommendations on the measures needed to reduce demand for energy and reduce emissions to zero." "It will be important that EPC recommendations are tailored and appropriate to the property, and are in line with the heat zoning set out in the area's Local Heat & Energy Efficiency Strategy".

[1] Sixth Carbon Budget - Climate Change Committee (theccc.org.uk)

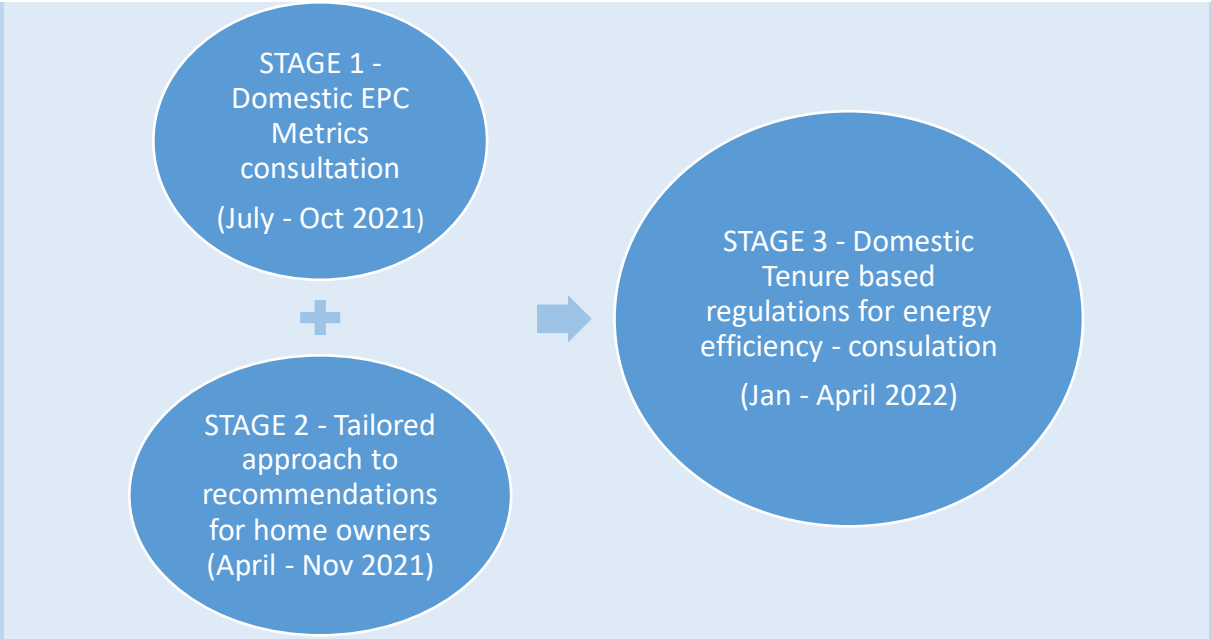



**Figure 1 Diagram showing the three stages in the process of reforming the domestic Energy Performance Certificates.**

This work will form the second stage – creating a process whereby property owners are provided with an accurate list of steps to allow them to meet standards set, achieving improved energy efficiency and seek to achieve zero emissions in their heating system. The steps must be actionable and correct from the outset and must set out a pathway to help property owners reach the standard set in regulations, and must be robust and appropriate to the property in question, going beyond the limitations of basic data collection on an assessment.

We will work with EPC assessor organisations to ensure any assessment can deliver a tailored and reliable set of steps which building owners would take to reach the regulatory standard.

**STAGE 3 - Consultation on tenure-based regulations**

In the draft HBS we laid out a timeline for consulting on tenure-based regulations in 2022. To allow this to happen we must have concluded stages 1 and 2 above. Consultation on regulations using the new metric as the basis of the standard. This will include consideration of how such regulations will impact on those who are or are at risk of becoming fuel poor.

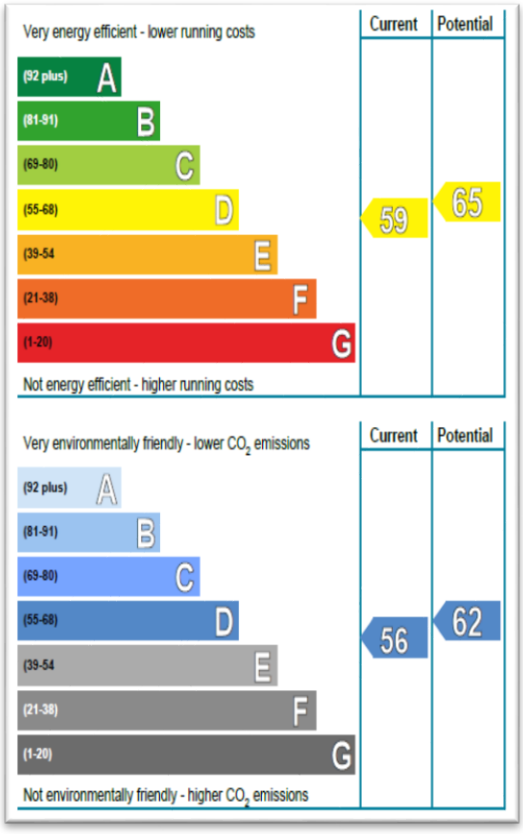
**What are Domestic Energy Performance Certificates?**

The original policy driver for the current system on EPCs was the European Union's (EU) Energy Performance in Buildings Directive 2002 (EPBD)[2] with its objective to promote the improvement of the energy performance of buildings across EU member states. This was transposed into Scottish statute via the Energy Performance of Buildings (Scotland) Regulations 2008[3].

Energy Performance Certificates (EPCs) provide information on how energy efficient your building is, and how it could be improved. Buildings are rated on a scale from A-G, with A being the most efficient. Information is also provided on measures which could be made to improve energy efficiency and an indication of the cost for each improvement. An EPC must be produced when a new building has been constructed; and when a building is to be sold or rented to a new tenant.

EPCs are valid for 10 years. They are based on information collected onsite by Domestic Energy Assessors, such as the size and layout of a building, how it has been constructed and the way it is insulated, heated, ventilated, and lighted. Since people use buildings in different ways, the calculation is based on standardised assumptions of occupancy and use.

**What do Domestic EPCs show?**




Domestic EPCs display an Energy Efficiency Rating (EER) and an Environmental Impact Rating (EIR). The EER is rated in terms of energy costs, while the EIR is rated in terms of carbon emissions. Domestic EPCs also have numerical ratings, with a higher number suggesting greater energy efficiency.

The numbered arrows show the current rating based on the existing energy performance of the property and the potential rating if the suggested improvements are implemented. An EPC also shows the Primary Energy Indicator which indicates the amount of energy used to produce one kilowatt of power for a household.

**This consultation proposes a change to the way information, already gathered as part of an EPC assessment, is displayed on the EPC - creating a new metric - which will help homeowners understand how much energy their property uses.**

[2] LexUriServ.do (europa.eu)
[3] The Energy Performance of Buildings (Scotland) Regulations 2008 (legislation.gov.uk)

This consultation is the first in a series of stages to improve the energy efficiency of domestic properties, to ensure properties are readied for the introduction of zero emissions heating systems and to ensure properties are warm and efficient to help mitigate the risk of fuel poverty. At this stage we are not asking for views on:

- the list of recommended measures and the way these are generated;
- the quality and accuracy of EPCs generated;
- how the EPC will be used to set standards in the future (by tenure);
- changes to the underlying EPC methodology (SAP, RdSAP) and how they are produced (e.g. assessor skills); non-domestic EPCs;
- the assessment of energy performance in non-domestic properties; and
- wider energy standards in building regulations.

We are also developing an appropriate scale for the new metric (see 4.5 – Energy Use Rating). As outlined in the draft HBS, the proposal for regulatory standards is to be set at EPC C equivalent, ensuring for energy efficiency, buildings will be as ambitious as the current EPC C.

# 3. Context

## 3.1 Climate Change Plan 2018-2032 update

In December 2020, we published our *Securing a green recovery on a path to net zero: climate change plan 2018-2032 update*[4] (CCPu). In it we committed to reduce emissions by 75% by 2030 (compared with 1990) and reach net zero by 2045. Currently, heat in buildings accounts for 23% of Scotland's greenhouse gas emissions. The transition to zero emissions heat will involve changing the type of heating used in over 2 million homes and 100,000 non-domestic buildings by 2045, moving to low/zero emissions systems such as heat pumps, heat networks and potentially hydrogen.

In drawing up the CCPu, we engaged closely with many stakeholders including advisory bodies, businesses and other organisations, and this engagement provided a number of key, cross-cutting themes, including the value of setting clear and accurate standards and targets (such as energy efficiency) to help people and organisations take action. The starting point for all of us as individuals, and across communities, should be to continue to invest in energy efficiency improvements and follow advice, and to reduce our electricity demand.

The proposals set out here are aimed at providing information which will help homeowners achieve these goals.

## 3.2 Climate Change Committee

The UK Climate Change Committee in its Sixth Carbon Budget report[5] emphasised the importance of high quality advice and information in helping householders make good decisions. The CCC recommends that any work to reform EPCs is designed to drive deployment of the necessary energy efficiency measures on a holistic basis, and does not hinder the use of low-carbon heating solutions.

## 3.3 Draft Heat in Buildings Strategy

As set out in our draft HBS[6] published in February 2021, we are revising our approach to energy efficiency and heat. We are proposing to develop a regulatory framework for energy efficiency and heat supply that will be based on a reformed assessment process using metrics from EPCs which will ensure standards meet both climate change and fuel poverty targets.

[4] Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update - gov.scot (www.gov.scot)
[5] Policies-for-the-Sixth-Carbon-Budget-and-Net-Zero.pdf (theccc.org.uk)
[6] Heat in buildings strategy - achieving net zero emissions: consultation - gov.scot (www.gov.scot)

**Table 1: Timeframe for Regulatory Framework as laid out in the draft HBS**

| | The Proposed Standard | Dates to lay regulations | Dates to meet the standards | Backstop dates for compliance |
|---|---|---|---|---|
| Private Rented Sector | To reach a level equivalent to **EPC D** for new tenancies | Autumn 2021 (not confirmed) | From April 2022 | 31 March 2025 for all tenancies |
| | To reach a level equivalent to **EPC C** for new tenancies | By 2025 | 2025-2027 | 2028 for all tenancies |
| | Zero Emissions Heating* | By 2025 | | 2045 |
| Owner Occupied Sector | To reach a level equivalent to EPC C | By 2025 | Triggers proposed between 2025-2034 | 2035 |
| | Zero Emissions Heating* | By 2025 | | 2045 |
| Social Housing | To reach EPC B | Standards reviewed in 2023 | 2024-2031 | 2032 |
| Multi tenure/Mixed use | To reach a level equivalent to EPC C | By 2025 | 2025-2044 | 2045 |
| | Zero Emissions Heating* | By 2025 | | 2045 |
| Non-Domestic Buildings | More challenging energy improvement targets to reduce demand for heat and ensure zero emissions heat supply to apply at trigger points | By 2025 | Triggers proposed between 2025-2044 | 2045 |

*within scope of devolved powers, install a zero emissions heating supply, such as electricity, heat network, or over time potentially 200% hydrogen

The draft HBS identifies the need for an EPC framework that helps dwelling owners understand:

- the measures required to improve the energy efficiency of their property in order to reduce the demand for heat;
- the changes required to have zero emissions a heating system; and
- the impact of these changes on running costs.

The draft HBS proposes reforming the existing EPC so that it includes three metrics as a basis for future standards:

- **a metric for energy efficiency** (which will act as a basis to recommend to dwelling owners the measures needed to reduce demand for heat, as appropriate to their building type and fabric; and will also show the measures needed to remove poor energy efficiency for fuel-poor households);
- **a metric for heating emissions** (which will act as a basis to recommend to dwelling owners the most appropriate form(s) of heating system to reduce emissions to zero,

as appropriate to their building type and fabric, and taking account of wider changes to heat supply in the area);

- **a metric for cost of heating** (which will inform dwelling owners and tenants of the impact of the energy efficiency and heating measures on their energy bills).

This consultation delivers on the first of these.

### 3.4 Fuel Poverty Strategy

The Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019[7] was passed by Parliament with unanimous support in June 2019 and received Royal Assent on 18 July 2019. It sets statutory targets for reducing fuel poverty, introduces a new definition which aligns fuel poverty more closely with relative income poverty and requires Scottish Ministers to produce a comprehensive strategy to show how they intend to meet the targets.

The statutory fuel poverty targets introduced by the Act require that by 2040 as far as reasonably possible no household in Scotland is in fuel poverty and in any event, no more than 5% of households are in fuel poverty; that no more than 1% of households are in extreme fuel poverty, and the median fuel poverty gap is reduced to £250 (adjusted for 2015 prices). These targets are to be achieved by each local authority as well as Scotland as a whole. There are also non-statutory interim targets for 2030 and 2035.

The draft Fuel Poverty Strategy[8] identified four drivers of fuel poverty, one of which is poor energy efficiency of the home. To remove poor energy efficiency as a driver of fuel poverty, the draft HBS commits to introducing new standards for all tenures, with higher standards for fuel poor households.

This consultation begins that journey, providing the basis for setting standards, and improving the information supplied to households on how to improve the energy efficiency of their property. It also supports our housing to 2040[9] vision of delivery of safe, good quality and affordable homes for everyone.

### 3.5 What you have told us and wider context

In December 2019, the consultation on Improving Energy Efficiency of Owner Occupied Homes[10], proposed the use of alternative metrics to the current cost-based Energy Efficiency Rating on the EPC citing the example where the rating can worsen for zero or low emissions heating systems. In that consultation document, we also set out draft interim proposals for a reformed Assessment/EPC process.

[7] Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019 (legislation.gov.uk)
[8] Draft Fuel Poverty Strategy for Scotland 2018 - gov.scot (www.gov.scot)
[9] Housing to 2040 - gov.scot (www.gov.scot)
[10] energy-efficient-scotland-improving-energy-efficiency-owner-occupied-homes.pdf

The feedback from that consultation was analysed and published in February 2021[11]. One of the cross cutting themes identified was the need for change in the EPC process, since many respondents raised concerns about its effectiveness and accuracy. Individuals and representatives of professional bodies were most concerned that it was not an appropriate measure of energy efficiency in homes. Some called for it to be revised while others felt that another mechanism entirely should be used.

On 22 June 2021, a report commissioned for the UK Government on making SAP & RdSAP 11 fit for Net Zero[12] was published. The report produced in conjunction with a number of stakeholders and industry experts, including input from the Scottish Government, set out 25 key recommendations based under 5 broad categories. The categories are:

- Alignment between SAP/RdSAP and its strategic objectives
- Improvements to the methodology
- Improvements to SAP/RdSAP and its ecosystem for Net Zero
- A better evaluation of energy use
- Support to decarbonise heat and electricity

The report sets out some of the key issues for net zero carbon and the strategic objectives of SAP. One issue which is relevant to this consultation was that the main metric currently used in policy to improve the housing stock is an energy cost metric and not an energy efficiency or carbon metric. At current SAP energy prices, this means that fossil fuels would still be encouraged by EPC ratings.

This is a criticism that the Climate Change Committee has also previously made in various reports, including its most recent 2021 Progress Report to Parliament where it recommends that governments must ensure that EPCs 'do not disincentivise low-carbon heat', and that they must 'implement improvements… including… Supporting delivery objectives across both energy efficiency and low-carbon heat, and valuing properly the benefits of low-carbon and flexible technologies'[13].

The UK Government commissioned report outlines that a significant improvement to the key metric in SAP/RdSAP would be to provide information on "energy use" (kWh/$m^2$/year), which the report views as the best indicator of energy efficiency. The report contains results of an online survey which received 337 responses. Of the respondents, 85% think energy use (kWh/$m^2$/yr) should be a key metric.

The report recommends under *the Improvements to SAP/RdSAP and its ecosystem for Net Zero* category – "New EPC Ratings from SAP/RdSAP to support Net Zero and fuel poverty objectives". These recommendations for an energy use indicator in kWh/$m^2$/year align with, and reinforce, the Scottish Government's own proposal in this consultation document for a new kWh/$m^2$/year energy efficiency metric.

[11] Energy Efficient Scotland - improving energy efficiency in owner-occupied homes: consultation analysis - gov.scot (www.gov.scot)
[12] The future of SAP calculations - Etude
[13] Progress-in-reducing-emissions-2021-Report-to-Parliament.pdf (theccc.org.uk).

This consultation brings forward proposals to begin the reform work identified as needed through the owner occupied consultation and CCC recommendations referred to above. It confirms our commitment to the ongoing use of EPCs as the basis against which standards will be set. It also makes clear that we do hear the concerns, and reforms are needed if we intend to use EPCs to improve energy efficiency and ultimately achieve zero emissions from heating.

# 4. Energy Performance Certificate Metrics

## 4.1 What are EPCs?

Dwelling owners are legally required, under the Energy Performance of Buildings (Scotland) Regulations 2008 to provide an Energy Performance Certificate[14] on construction, sale or rental of a building to a new tenant. These regulations transposed the original European Union's (EU) Energy Performance in Buildings Directive 2002 (EPBD) into Scottish statute and Scottish Government remains committed to our continued alignment of this European directive through the Continuity (Scotland) Act 2020.

The Energy Performance of Buildings (Scotland) Regulations 2008, established two types of EPC – one used for dwellings (domestic) and one for all other building types (non-domestic). The format for each and method of calculation is different for both and is established through these regulations.

This consultation focuses on domestic EPCs and does not include non-domestic EPCs.

The purpose of the EPC is to provide an indication of how energy efficient a building is, including the running costs associated with that, and to provide advice on how the energy efficiency of the building could be improved. On completion, they are valid for a period of 10 years.

Buildings are rated on a scale from A to G, with A being the most efficient and G the least efficient. Information is also provided on measures which could be made to improve the energy efficiency (the Recommendations Report), and an indication of cost and typical savings for each improvement over 3 years.

EPCs are lodged on the EPC register[15]website where single EPCs can be viewed via a public search facility.

The EPC assessment records specific information such as the dwelling type, floor area, construction type, insulation, heating, ventilation and lighting. It also provides a primary energy indicator which is the amount of energy used to produce one kilowatt of power for the household.

The calculation is based on standard assumptions of occupancy and use, and does not take into consideration variations in behaviour of occupants, or the state of repair of the property, and uses a UK-wide calculation methodology[16], managed and implemented by the UK Government with input from the devolved administrations. The EPC assessment process generates a set of suggested improvements and indicates what EPC score might be achieved if these improvements were cumulatively undertaken. This list of recommendations is advisory only and are generated as part of the calculation methodology and software tools used by the EPC assessor.

[14] Energy Performance Certificates: introduction - gov.scot (www.gov.scot)
[15] Home (scottishepcregister.org.uk)
[16] Standard Assessment Procedure (SAP 2012) | BRE Group

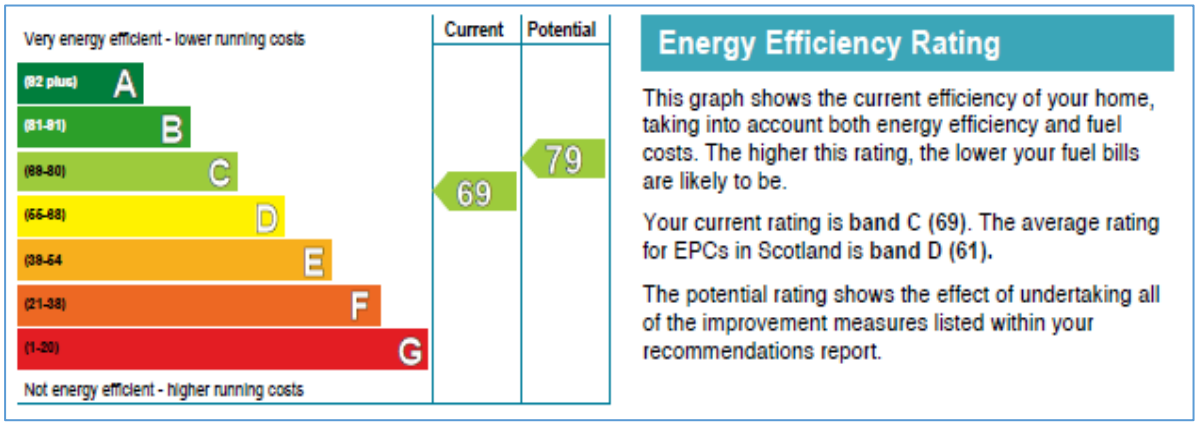
EPCs for existing dwellings are produced using Reduced Standard Assessment Procedure (RdSAP) – a simplified implementation of the Standard Assessment Procedure (SAP) methodology. RdSAP was developed by government for use in existing dwellings based on a site survey of the property, when the complete data set for a SAP calculation is not available. It consists of a system of data collection together with defaults and inference procedures, defined by the rules in Appendix S of the SAP methodology.

### 4.2 Information included on an EPC

EPCs display a variety of information to help householders understand the energy performance of their property. They are generated by underlying SAP/RdSAP methodology when a Domestic Energy Assessor (DEA) collects data on a dwelling as part of an assessment. We are not proposing to change SAP/RdSAP methodology or develop any new methodology through this consultation.

SAP/RdSAP is agreed on a UK-wide basis and would require agreement from the other 3 governments to change. We could change the methodology if we choose to, but this would require ongoing development and maintenance of the methodology as a divergent policy too. Rather, we suggest bringing focus to some of the other data gathered, thus presenting a greater range of information to benefit dwelling owners in understanding a range of factors related to energy performance and how improvements to a property influence these factors. The changes proposed remain in line with current EPBD requirements and how energy certification is delivered by EU Member States, reflecting Scottish Ministers' intent to retain alignment with EU provision where practicable.

### 4.3 Energy Efficiency Rating (EER)

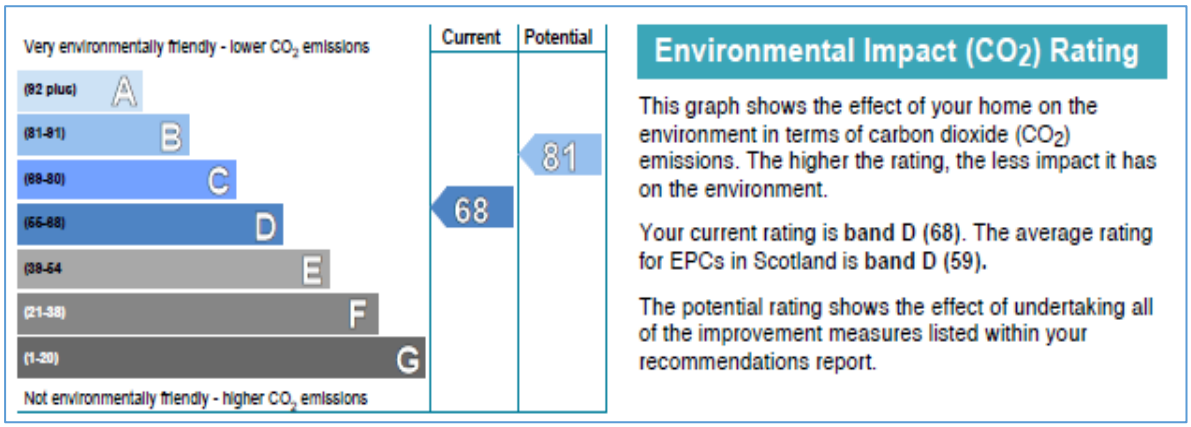



The Energy Efficiency Rating (EER) is the first rating to appear on the EPC. It is well-known and recognisable to most home owners and is required in adverts for sale or rental of properties. It combines information and data including fuel costs to display a band rating in the form of a graph. The graph gives a quick visual comparison of a property's performance similar to the energy labels which appear on home appliances. It provides comparable information on the current rating and the potential rating if recommended improvements were undertaken.

This metric is based on both delivered energy, expressed as kWh/$m^2$/yr, and fuel prices, to provide an energy efficiency rating of a property. Including fuel prices in the calculation for energy efficiency rating causes problems particularly in the cases where some fuels are very expensive and some fuels are considerably cheaper. For example with mains gas, the fuel price is significantly lower than electricity in the data underlying the EPC assessment. This means that mains gas heating systems may achieve a better EER than a zero emissions heating system in an equivalent building. As a result, installing a zero emissions system could lead to a worsening of the rating. As such, the current EPC framework is not compatible with incentivising the uptake of zero emissions heating.

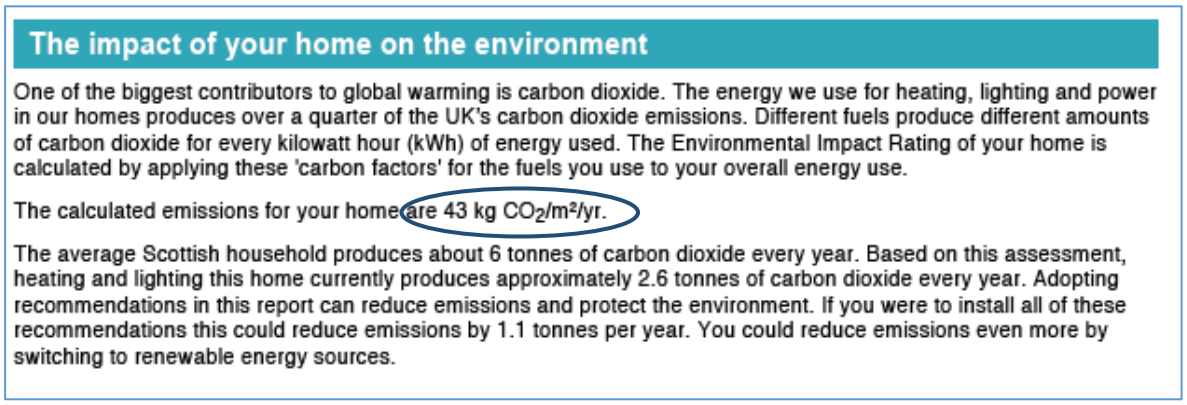
We propose to retain this metric on the revised EPC and clarify its use as an **Energy Cost Rating**. It will inform dwelling owners and tenants of the indicative impact of the recommended energy efficiency and heating measures on their energy bills. It can also be used to identify those homes where any increase in running costs resulting from moving to zero emissions system cannot be mitigated by improvements to building fabric and act as a signpost for potential government support in those cases.

### 4.4 Environmental Impact ($CO_2$) Rating (EIR)




The EIR rating is based on carbon emissions and is a measure of the home's impact on the environment in terms of carbon dioxide ($CO_2$) emissions (based on delivered energy kWh/$m^2$/yr and carbon dioxide emissions). The higher the rating the less impact it has on the environment. This rating is based on the performance of the building and its fixed services (such as heating and lighting). The certificate also lists the potential rating of the building if all the cost-effective measures were installed.

As with the EER, information is presented for both the current emissions and potential emissions impact if recommended measures are installed. Further information on the calculated emissions of the property is also set out, in terms of kg $CO_2$/$m^2$/year.




We propose to continue to use this metric to measure carbon emissions and clarify its use as a **Carbon Emissions Rating**. This metric will provide an understanding of the carbon emissions associated with heat supply to the dwelling. It can provide an indication for dwelling owners of how energy efficiency measures and heating systems can reduce emissions to zero.

### 4.5 The Proposal

The proposal is to retain the two metrics set out above and include a third, additional metric - Energy Use Rating (based on SAP Delivered Energy and expressed as kWh/m$^2$/yr[17]). The information required to calculate this rating is already gathered as part of the current EPC assessment and would not require any changes to the SAP calculation methodology. It would simply be expressed more clearly as a direct indicator for the property's current and potential energy demand.

We are proposing to create a new **Energy Use Rating** which would inform dwelling owners about the energy use of their property[18]. The new metric provides additional information for building owners to complement energy running costs and carbon emissions associated with their dwelling. The new Energy Use Rating can also assist with informed decision by displaying how energy efficiency measures and heating systems can reduce energy use –. Reducing the demand for heat can not only make homes cheaper to heat but prepare a home for zero or low emissions heating systems.

### 4.6 New EPC Format:

The proposed new format will therefore contain three metrics:

- Energy Use Rating
- Carbon Emissions Rating
- Energy Cost Rating

**Energy Use Rating**: Provides indicative energy use based on kWh/m$^2$/year. The energy use rating is a new metric on the EPC.

**Carbon Emissions Rating**: Provides calculated carbon dioxide emissions for a dwelling in kg $CO_2$/M$^2$/year. This metric is the current EPC EIR.

**Energy Cost Rating**: Provides indicative running costs expressed in pounds per year. This metric is the current EPC EER.

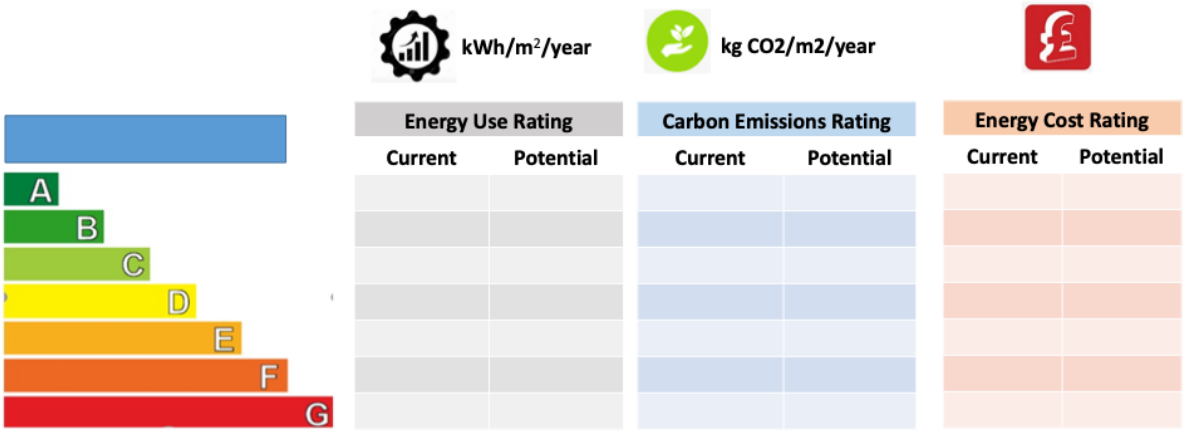



Figure 2: Indicative layout of the three metrics to appear on the reformed EPC certificate.

[17] Delivered energy also forms the basis of the current EPC EER & EIR ratings before cost and carbon emissions factors are applied.
[18] This includes space heating/cooling, water heating, ventilation and lighting, plus benefit from on-site energy generation technologies.

# 5. Other information on the EPC

The EPC contains information in addition to the metrics explained above. It is our proposal to retain this information, thus providing dwelling owners with the broadest level of detail and information on which to base decisions they might take to improve their property.

## 5.1 Recommended Measures

The EPC provides two lists of containing information on improvements which the homeowner might make to improve the energy and environmental performance of the property.

**Top actions you can take to save money and make your home more efficient**

| Recommended measures | Indicative cost | Typical savings over 3 years |
|---|---|---|
| 1 Internal or external wall insulation | £4,000 - £14,000 | £459.00 |
| 2 Condensing boiler | £2,200 - £3,000 | £180.00 |

| Recommended measures | | Indicative cost | Typical saving per year | Rating after improvement | |
|---|---|---|---|---|---|
| | | | | Energy | Environment |
| 1 | Internal or external wall insulation | £4,000 - £14,000 | £153 | C 76 | C 77 |
| 2 | Replace boiler with new condensing boiler | £2,200 - £3,000 | £60 | C 79 | B 81 |

These lists give a detailed breakdown of the recommended measures, indicative costs, typical savings over one year and three years and how much each measure could improve the property's energy efficiency rating.

The recommended measures are generated by SAP methodology on a cost-effective and fabric-first basis, and the savings and ratings figures are cumulative based on making the improvements in that order. The number of recommended measures will vary, depending on which ones are applicable to the property.

The measures recommendations generated by the EPC software are based on information collected by an EPC assessor during an assessment. These recommendations are suggestions to improve the energy efficiency of a property and change the heating where improvements can be made. In some cases, these recommendations may not be appropriate for the property and currently there is little scope for assessors to remove these recommendations or provide more appropriate recommendations.

Some recommendations can be suppressed, for example, wind turbines in urban areas, but assessors do not make judgements on measures that are technically feasible nor do they provide tailored recommendations for any specific purpose. This is problematic for achieving regulatory compliance and decarbonisation of heat where it is imperative that homeowners are provided with the correct recommendations and information in order to meet regulatory standards.

In early 2022, we will consult on developing a wider assessment process which will sit in parallel to the EPC assessment. This will provide a clear and actionable set of steps for homeowners in order to comply with regulatory standards as described in Stage 2 of section 2.2 done in a way which is appropriate for individual properties.

This wider tailored assessment process is in recognition of the known limitations of the recommendations report supplied in the EPC which is generated in line with the requirements of the European Performance of Buildings Directive and Scottish Energy Performance of Buildings Regulations.

### 5.2 Summary of the Energy performance related features

**Summary of the energy performance related features of this home**

This table sets out the results of the survey which lists the current energy-related features of this home. Each element is assessed by the national calculation methodology; 1 star = very poor (least efficient), 2 stars = poor, 3 stars = average, 4 stars = good and 5 stars = very good (most efficient). The assessment does not take into consideration the condition of an element and how well it is working. 'Assumed' means that the insulation could not be inspected and an assumption has been made in the methodology, based on age and type of construction.

| Element | Description | Energy Efficiency | Environmental |
|---|---|---|---|
| Walls | Sandstone or limestone, as built, no insulation (assumed) | ★★☆☆☆ | ★★☆☆☆ |
| | Solid brick, as built, no insulation (assumed) | ★★★☆☆ | ★★★☆☆ |
| Roof | (another dwelling above) | — | — |
| Floor | (another dwelling below) | — | — |
| Windows | Fully double glazed | ★★★☆☆ | ★★★☆☆ |
| Main heating | Boiler and radiators, mains gas | ★★★★☆ | ★★★★☆ |
| Main heating controls | Programmer, TRVs and bypass | ★★★☆☆ | ★★★☆☆ |
| Secondary heating | Room heaters, mains gas | — | — |
| Hot water | From main system | ★★★★☆ | ★★★★☆ |
| Lighting | Low energy lighting in all fixed outlets | ★★★★★ | ★★★★★ |

This table gives a detailed breakdown of each element of the property, with a description and an energy rating from one to five stars (with five being most efficient level of energy efficiency and environmental impact). The Star ratings are useful in understanding the energy efficiency and environmental impact of individual construction, heating and hot water systems, and lighting elements. This information is especially useful for comparing with other properties when you are looking to buy or rent.

The Star rating sets out the building elements and their associated energy efficiency and environmental rating (carbon emissions). These include both building fabric and building service elements. This potentially can be used to set a minimum energy efficiency standard for some of the fabric elements such as roof, windows or walls where it is not possible for a property to meet the EPC C standard ensuring a fabric first approach.

Retaining this allows property owners to make minimum level fabric energy improvements where it is not technically feasible or cost effective to achieve larger scale changes in an effort to meet regulated standards.

We are not consulting on using Star rating for minimum energy efficiency standards in this consultation. We will examine this in further detail during stage 2 of EPC reform.

### 5.3 Estimated energy costs of your home

**Estimated energy costs for this home**

| | Current energy costs | Potential energy costs | Potential future savings |
|---|---|---|---|
| Heating | £1,407 over 3 years | £831 over 3 years | You could save £636 over 3 years |
| Hot water | £348 over 3 years | £288 over 3 years | |
| Lighting | £132 over 3 years | £132 over 3 years | |
| Totals | £1,887 | £1,251 | |

These figures show how much the average household would spend in this property for heating, lighting and hot water. This excludes energy use for running appliances such as TVs, computers and cookers, and the benefits of any electricity generated by this home (for example, from photovoltaic panels). The potential savings in energy costs show the effect of undertaking all of the recommended measures listed below.

This table gives an estimate of the current and potential energy bills after improvements to the property. It is useful for consumers to understand an indicative value of energy running costs, as well as how much lower the running costs could be if the energy efficiency was improved.

These costs are just for heating, hot water and lighting. It does not include energy costs to run home appliances, such as the cost of running a fridge, oven or TV. However, the costs shown can help make comparisons between buildings, and between measures undertaken to improve efficiency or reduce emissions.

### 5.4 Your Home's Heat Demand

The EPC also presents information which may assist in applying for Renewable Heat Incentive (RHI) Payments[19], which encourages replacing existing heating systems with one that generates renewable heat, and where appropriate, includes loft insulation and cavity wall insulation.

**Your home's heat demand**

You could receive Renewable Heat Incentive (RHI) payments and help reduce carbon emissions by replacing your existing heating system with one that generates renewable heat and, where appropriate, having your loft insulated and cavity walls filled. The estimated energy required for space and water heating will form the basis of the payments. For more information go to www.energysavingtrust.org.uk/scotland/rhi.

| Heat demand | Existing dwelling | Impact of loft insulation | Impact of cavity wall insulation | Impact of solid wall insulation |
|---|---|---|---|---|
| Space heating (kWh per year) | 4,483 | N/A | N/A | (1,998) |
| Water heating (kWh per year) | 1,867 | | | |

A home's heat demand is presented for space heating and water heating in kWh per year. The potential impact on the demand figure if fabric insulation measures were installed is also presented where applicable.

[19] The RHI closes in March 2022 to be replaced with the Clean Heat Grant.

# 6. Consultation questions

1. Do you agree or disagree with the addition of the proposed Energy Use Rating? Please explain the reasons for your answer.

2. Do you agree or disagree with the name changes of the current EPC Energy Efficiency Rating & Environmental Impact Rating to Energy Cost Rating and Carbon Emissions Rating respectively? Please explain the reasons for your answer.

3. Do you agree or disagree that the proposed EPC format will better equip building owners and/or occupiers to make informed decisions about improvements and/or changes to the energy efficiency and heating systems of their building? Please explain the reasons for your answer.

4. Do you agree or disagree with retaining the information outlined in section 5? Please explain the reasons for your answer.

5. Do you think any additional information should be added to the EPC format? Please explain the reasons for your answer.

6. How do you think the metrics should be presented on the EPC? (More than one answer can be selected)

    - Graph (current EPC ratings)
    - Diagram
    - Sliding scale
    - Text only
    - Other format

    Please explain your choice(s).

7. Are there any other comments on the proposed EPC format you would like to add?

# 7. Responding to this Consultation

We are inviting responses to this consultation by 8 October 2021.

Please respond to this consultation using the Scottish Government's consultation hub, Citizen Space, online at https://consult.gov.scot/energy-and-climate-change-directorate/reforming-domestic-energy-performance-certificates. You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date of 8 October 2021.

If you are unable to respond using our consultation hub, please complete the Respondent Information Form on page 27 and send to:

Domestic Assessment and EPC Team
Scottish Government
5 Atlantic Quay
Glasgow
G2 8LU

**Handling your response**
If you respond using the consultation hub, you will be directed to the About You page before submitting your response. Please indicate how you wish your response to be handled and, in particular, whether you are content for your response to published. If you ask for your response not to be published, we will regard it as confidential, and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

If you are unable to respond via Citizen Space, please complete and return the Respondent Information Form included in this document.

To find out how we handle your personal data, please see our privacy policy: https://www.gov.scot/privacy/

**Next steps in the process**
Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public at http://consult.gov.scot. If you use the consultation hub to respond, you will receive a copy of your response via email.

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us. Responses will be published where we have been given permission to do so. An analysis report will also be made available.

**Comments and complaints**
If you have any comments about how this consultation exercise has been conducted, please send them to the contact address above or at EPCreform@gov.scot .

**Scottish Government consultation process**
Consultation is an essential part of the policymaking process. It gives us the opportunity to consider your opinion and expertise on a proposed area of work.

You can find all our consultations online: http://consult.gov.scot. Each consultation details the issues under consideration, as well as a way for you to give us your views, either online, by email or by post.

Responses will be analysed and used as part of the decision making process, along with a range of other available information and evidence. We will publish a report of this analysis for every consultation. Depending on the nature of the consultation exercise the responses received may:

- indicate the need for policy development or review
- inform the development of a particular policy
- help decisions to be made between alternative policy proposals
- be used to finalise legislation before it is implemented

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.

## 8. Respondent Information Form

**Please Note** this form **must** be completed and returned with your response.

To find out how we handle your personal data, please see our privacy policy: https://www.gov.scot/privacy/

Are you responding as an individual or an organisation?

☐ Individual

☐ Organisation

Full name or organisation's name

| |
|---|
| |

| | |
|---|---|
| Phone number | |
| Address | |
| Postcode | |
| Email | |

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

☐ Publish response with name

☐ Publish response only (without name)

☐ Do not publish response

**Information for organisations:**

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

☐ Yes

☐ No



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Any enquiries regarding this publication should be sent to us at

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