



**Department for Business, Energy and Industrial Strategy
consultation**

Improving home energy performance through lenders

Submission from CIBSE

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THE RESPONDENT

The Chartered Institution of Building Services Engineers (CIBSE)

The Chartered Institution of Building Services Engineers, CIBSE, is the professional engineering institution that exists to 'support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information'

CIBSE members are engineers who design, install, operate, maintain and refurbish life safety and energy using systems installed in buildings. CIBSE is unusual amongst built environment professional bodies because it embraces design professionals and also installers and manufacturers and those who operate and maintain engineering systems in buildings, with an interest throughout the life cycle of buildings.

CIBSE has over 20,000 members, with around 75% operating in the UK and many of the remainder in the Gulf, Hong Kong and Australasia. CIBSE is the sixth largest professional engineering Institution, and along with the Institution of Structural Engineers is the largest dedicated to engineering in the built environment.

CIBSE publishes Guidance and Codes providing best practice advice and internationally recognised as authoritative. The CIBSE Knowledge Portal makes our Guidance available online to all CIBSE members, and is the leading systematic engineering resource for the building services sector. It is used regularly by our members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

CONSULTATION RESPONSE

EXECUTIVE SUMMARY

CIBSE very much support the intent to improve the energy and carbon performance of the existing housing stock, and to consider a range of instruments to do this including through financing. We therefore support the overall intent of this consultation, as well as the principles of disclosure and of exploring voluntary, and possibly mandatory, targets.

However, a fundamental limitation is the fact that this policy relies on Energy Performance Certificates (EPCs). CIBSE and many other organisations have at length and for a number of years explained the limitations of EPCs to drive improvements to the housing stock, in short:

- EPC ratings are a cost rating. At current energy prices, this means they favour gas over electricity. Until the EPC rating and the gas:electricity price ratios are addressed, there is therefore a real risk that lenders and homeowners chasing EPC improvements

will continue their reliance on fossil fuels, going counter to the heat decarbonisation agenda. This is very starkly evidenced in recent analysis by UCL of the recommendations from all EPC reports in England and Wales, showing that no single heat pump has been recommended across the whole stock – see Supporting Evidence #2.

- The EPC rating is called “energy efficiency” rating, which is misleading to consumers. There is evidence that even among relatively knowledgeable industry members and consumers, this is not always known. This is clearly an issue – see Supporting Evidence #1.
- There is a large body of evidence that while EPC ratings show some relation to energy use, the relation is weak (especially at the poorer ratings), there are huge variations in energy use within rating bands, and the scale of energy use improvements at the better end of the rating scale are nowhere near what is needed – see supporting evidence #3. This point has been made repeatedly, and it is clearly an issue for the delivery of energy efficiency and net zero carbon objectives. It is even more a problem in the context of this particular consultation, as homeowners could borrow on the basis of expected energy savings which would not materialise, putting them at financial risk. In turn, this could also affect lenders if this limits homeowners’ ability to repay. Furthermore, if there are many cases of borrowers taking on debt in the expectation of savings that are not achieved then the scheme is at risk of falling into disrepute and there is reputational risk for lenders and potentially for government. The Green Deal, for all its shortcomings, recognised this by including modifications to the standard SAP inputs used to create EPCs, through the use of the Occupancy Assessment, in order to provide more realistic estimates of energy savings and limit the risk to homeowners.

We are aware of the government’s proposed EPC Action Plan, however at the time of writing it is not clear to us whether this will include addressing the fundamental issues above, so that EPCs can provide a closer link to actual energy use and a trajectory in line with the heat decarbonisation agenda. **These points must be addressed before we can support the proposals in this consultation.** We have however (as of today) been invited to a stakeholder meeting with BEIS and MHCLG on the EPC Action Plan, and look forward to contributing to this.

The recent SAP/RdSAP 11 scoping report for BEIS, which CIBSE contributed to, makes recommendations which would address these points. We strongly recommend these should be considered before implementation of the proposed policy.

Additional points:

- The creation of Building Passports and the use of PAS 2030/5 should be encouraged throughout, not only in the case of external wall insulation. This will give homeowners

information on the works they can carry out now or further into the future, improve quality of the works and accountability of those who undertake them, increase the chance of delivering the intended improvements, and reduce the risk of unintended consequences to the health and comfort of residents and to the integrity of building fabric. However, as this consultation is about private finance (lenders and homeowners), we do not think it is the role of government to set requirements on the use of Trustmark, nor is it appropriate. Instead, we recommend much more encompassing measures which would cover the whole industry, such as implementing mandatory licensing of builders nationally for consumer protection.

- We have concerns about the proposed **league tables**: while the principle of encouraging improvements by creating visibility and “competition” among lenders may be sound, the current proposals seem to be to rank lenders according to the performance of the stock they lend to. This could discourage lending to the worse rated properties, precisely those which may benefit from funding for improvements. If such league tables are implemented, we recommend they should reflect improvements in energy and carbon performance supported by the lenders. In addition, and even if the EPC regime is improved to become a closer estimate of energy use, we strongly recommend reviewing options so that the league table would reward improvements evidenced by actual metered energy use (for example, this could be linked to the use of Trustmark and PAS 2030/5, and associated post-work evaluation requirements).

We have provided responses below to questions related to CIBSE’s area of expertise, but stress these must be read **on the assumption of an improved EPC regime addressing the comments above**.

RESPONSES TO CONSULTATION QUESTIONS

Question 1: Do you agree with the principle of all lenders publicly disclosing information on the energy performance of their portfolios?

Yes, with the crucial caveat that we do not think EPCs in their current form are the right tool for it. CIBSE and many other organisations have at length and for a number of years explained the limitations of EPCs to drive improvements to the housing stock, in short:

- EPC ratings are a cost rating. At current energy prices, this means they favour gas over electricity. Until the EPC rating and the gas:electricity price ratios are addressed, there is therefore a real risk that lenders and homeowners chasing EPC improvements will continue their reliance on fossil fuels, going counter to the heat decarbonisation agenda. This is very

starkly evidenced in recent analysis by UCL of the recommendations from all EPC reports in England and Wales, showing that no single heat pump has been recommended across the whole stock – see Supporting Evidence #2 – subject to UCL agreement.

- The EPC rating is called an “energy efficiency” rating, which is misleading to consumers. There is evidence that even among relatively knowledgeable industry members and consumers, this is not always known. This is clearly an issue – see Supporting Evidence #1 .
- There is a large body of evidence that while EPC ratings show some relation to energy use, the relation is weak (especially at the poorer ratings), there is huge variations in energy use within rating bands, and the scale of energy use improvements at the better end of the rating scale are nowhere near what is needed – see supporting evidence #3. This point has been made repeatedly, and it is clearly an issue for the delivery of energy efficiency and net zero carbon objectives. It is even more a problem in the context of this particular consultation, as homeowners could borrow on the basis of expected energy savings which would not materialise, putting them at financial risk. In turn, this could also affect lenders if this limits homeowners’ ability to repay, and the reputation of lenders and government if there are too many occurrences of homeowners being affected by under-delivery of energy improvements in real life. The Green Deal, for all its shortcomings, recognised this by including modifications to the standard SAP inputs used to create EPCs, through the use of the Occupancy Assessment, in order to provide more realistic predictions of energy savings and limit the risk to homeowners.

We are aware of the government’s proposed EPC action plan, however it is not clear from it, to our understanding, whether this will include addressing the fundamental issues above, so that EPCs can provide a closer link to actual energy use and a trajectory in line with the heat decarbonisation agenda. **These points must be addressed before we can support these proposals.** We have however (as of today) been invited to a stakeholder meeting with BEIS and MHCLG on the EPC Action Plan, and look forward to contributing to this.

The recent SAP/RdSAP 11 scoping report for BEIS, which CIBSE contributed to, makes recommendations which would address these points. We strongly recommend these should be considered before implementation of the proposed policy.

Question 2: Do you agree with the proposed EPC information lenders will be required to collect? If you disagree, please explain why.

Yes we agree. In addition, we recommend that the following should be collected, to improve the value of the information which is then disclosed to BEIS – see response to Question 3:

- EPC inputs (i.e. SAP/RdSAP inputs)
- EPC score before and after works, if the lending goes towards improvement works.

Question 3: Do you agree with the proposed disclosure information? If you think there is other information that would be useful to disclose that is not included in this proposal, or you do not agree with the proposal, please explain why.

Yes, but with some important additions and clarifications:

- This should reflect the evolution of performance in the portfolio, in order to encourage lending for improvements to performance rather than lending to the already- better end of the scale less in need for improvements. In addition, attention needs to be given to the large number of properties currently not required to have EPCs – we recommend this should be changed as noted in our response to the recent PRS consultation.
- In addition, and even if the EPC regime is improved to become a closer estimate of energy use, we strongly recommend reviewing options so that the league table would reward improvements evidenced by actual metered energy use (for example, this could be linked to the use of Trustmark and PAS 2030/5, and associated post-work evaluation requirements).
- We recommend BEIS consider inter-operability of the data disclosed with other databases and sources of information, such as NEED; for example, it would be extremely valuable, where lending goes towards improving EPC ratings, for the EPC inputs to be disclosed (not only the ratings), so that improvement measures (identified by before and after inputs) could be related to post-work performance, and to the value of “green” lending.

Question 4: Do you agree that the option to provide additional commentary alongside disclosures would be useful? If not, please explain why, including any alternative proposals.

Question 5: Do you agree with the proposal that all lenders, irrespective of market share, be required to publish energy performance data on their websites as well as on GOV.UK aligned to annual reporting deadlines? If not, please explain why.

Question 6: Do you agree with the proposal that government use the disclosure information to publish ‘league tables’ of lenders? If not, please explain why.

Yes and no: while the principle of encouraging improvements by creating visibility and “competition” among lenders may be sound, the current proposals seem to be to rank lenders according to the performance of the stock they lend to. This could discourage lending to the worse rated properties, precisely those which may benefit from funding for improvements. If such league tables are implemented, we recommend they should reflect improvements supported by the lenders.

Question 7: Do you agree that properties financed by a Buy-to-Let mortgage should be included in the scope of the policies proposed in this consultation? If not, please explain why, including any alternative suggestions.

Question 8: Do you agree with the proposed trajectory to mandatory disclosure? If not, please outline the reasons why.

Question 9: Do you agree with the proposal that disclosure information be subject to spot check audits proportional to the size of the lending portfolio? If not, please explain why, including any alternative proposals.

Yes. It is absolutely essential that there is proportionate checking.

Question 10: If applicable, is your organisation likely to sign up to a system of voluntary targets? If not, please outline the reasons why.

Question 11: Do you agree with our estimate that up to 80% of mortgaged stock would fall within scope during the target period? Please provide evidence where available.

Question 12: Do you agree the voluntary target should be set at a portfolio average of EPC Band C by 2030? If not, please outline the reason why.

Yes and no. A target and sense of direction are useful, but they must reflect improvements to the existing stock, not discourage lending to the properties most in need of improvement. See also our comments on league tables, in Question 6.

Our important caveats on EPC ratings as a suitable target also apply (see question 1).

Question 13: Do you think that a revised EPC should be required to demonstrate improvements in energy performance? If not, what alternatives should be explored?

Yes. Our important caveats on EPCs as a suitable indicator of energy performance also apply (see question 1).

Question 14: Do you agree that an assumed maximum spend for improvement works should be set at £10,000? If you do not agree, please specify what you believe would be the most appropriate level to set the threshold, providing evidence to support your views where possible.

No, for several important reasons:

- This penalises those who undertake significant whole building improvements as a single package, perhaps on purchase of a home
- This is very likely to discriminate against F & G rated homes i.e. those most in need of improvements.
- Why should government and lenders have a role in setting maximum lending or spend sums, as long as the usual checks on ability to repay apply?? Some homes will require more costly works due to their size and nature (e.g. heritage or space constraints), and some homeowners will be happy to bear these costs and/or to seek exemplar performance. This should not be discouraged.
- This misunderstands the way that many energy improvement works happen, namely as part of other home improvement works. This reduces the overall costs and disruption of the works, but it also means that it will often be difficult to differentiate “energy improvement” from “overall improvement” works, as many measures will contribute to both and be embedded within each other. These wider home works are very important triggers for energy improvement works, and we must make sure there are no measures which inadvertently reduce opportunities arising.

Question 15: Should spend from April 2021 onwards count towards the £10,000 assumed maximum spend on improvements? If you believe an alternative date would be more effective, please set out the reasons why.

Question 16: What actions could the government take to incentivise the lenders to sign up to a voluntary target? Please provide evidence to support your answer where possible.

Question 17: Do you agree government should consider the option of setting a mandatory improvement target, should insufficient progress be made under a voluntary scheme?

Probably, but in that case the reasons why that target is not delivered should first be analysed, as there may be reasons beyond the lenders' reach, such as availability of supply chains to deliver housing improvement works.

Question 18: Do you agree with our proposed approach to the penalty regime? If not, please explain why, including any alternative proposals.

Question 19: What public tools could be used to calculate forgone emissions savings so that lenders can assess their own liabilities?

These could be calculated with an improved EPC regime (see Question 1) and the Geen Book, which provides guidance on valuing the societal costs of carbon emissions and air quality (as our understanding of proposals for the Green Heat Network Fund).

Question 20: Do you agree that the money collected from penalties be used to fund energy performance improvements? Please provide evidence to support your answer.

Question 21: Do you think that only those lenders that are on a trajectory to meet their target should benefit from these funds?

Question 22: Do you agree that lenders below a certain value or size threshold should benefit from certain derogations to a mandatory target? If so, what form should these take and how can we avoid creating any policy loopholes?

Question 23: Do you agree with the proposed alternative option of a mandatory target of a portfolio average of EPC Band C by 2030 from the start of the policy? If you disagree, please explain why, highlighting any alternative target you think would be appropriate.

No. See Question 1 on limitations of EPCs, and Question 6 on the need to lend to currently poor-performing properties, and Question 17 on factors outside lenders' control which could prevent this target from being met e.g. retrofit supply chains.

Question 24: These policy proposals rely on the information provided by the EPC. Are there any impacts of data collection using EPCs that we have not considered? If so, how could these be managed effectively by lenders?

There are two important limitations:

- As noted previously, the fact that many properties are currently exempt from needing an EPC. This must be addressed, as also recommended in our response to the recent PRS consultation.
- Many EPCs are produced by RdSAP (not full SAP), which as its name implies uses a reduced data set. This would limit the data collected on important improvement measures such as airtightness.

Question 25: What are your views on the likely impacts of requiring an increase in the EPC coverage of portfolios on: a) lenders; b) consumers; and c) EPC assessors?

Question 26: How can we ensure the effective transition of data between lenders when consumers change mortgage providers?

Question 27: Are there any additional ways in which government or lenders could raise consumer awareness of their EPC data and how to improve the energy performance of their homes?

The main way would be to make EPC outputs a more reliable indicator of actual energy performance, and address the current misleading name of “energy efficiency rating” to what is a cost rating.

Question 28: Are there any ways in which lenders could help to encourage the installation of smart meters in the homes of those to whom they lend?

As noted in our recent response to the PRS consultation, and notwithstanding the potential benefits of smart meters to homeowners, a key benefit of smart meters is to support demand management by DNOs and energy suppliers. We would therefore strongly recommend that the installation of smart meters should mainly be supported by DNOs and energy suppliers, not lenders and homeowners. It should not be made a condition of energy efficiency lending.

Question 29: Should works carried out to comply with these policies require that mortgagors choose a TrustMark approved provider or installer?

As stated in other questions, CIBSE support the use of Trustmark alongside PAS 2030/5 in order to improve quality of the works, increase the chance of delivering the intended improvements, and reduce the risk of unintended consequences to the health and comfort of residents and to the integrity of building fabric.

However, government must be aware this will at the moment limit supply chains. Lenders must be made aware of this, and timescales and promises to homeowners must take this into account so that the scheme is used to support the development of supply chains, without undermining trust from lenders and homeowners in the government’s retrofit agenda (as is happening with the current issues with the Green Homes Grant).

In addition, and importantly, this consultation is about private finance and private homeowners, not public finance (e.g. public procurement and government grants) where we

do think government can and should play a role in supporting quality assurance schemes and skills development. In this context, instead of introducing such restrictions on lenders and homeowners, we recommend much more encompassing measures which would cover the whole industry, such as implementing mandatory licensing of builders nationally for consumer protection.

Question 30: We understand that there are mortgagors who will not be able to self-fund or borrow. Do you have any evidence that indicates what proportion of the mortgage market these mortgagors represent? Please provide as much detail as you can.

Question 31: Do you agree that those mortgagors unable to self-fund or borrow to make energy performance improvements should be exempt from inclusion in a lender's improvement target?

Question 32: How do you think exemptions on the basis of affordability should be assessed?

Question 33: What other methods of protecting fuel poor mortgagors should the government consider in designing its proposals? Please provide evidence to support your answer where possible.

Question 34: Do you support the idea of lenders recommending referrals to energy suppliers under a future ECO scheme?

Question 35: Are there any impacts on the protected groups that we have not considered?

Question 36: We wish to include leasehold properties in the scope of these proposals in order that their owners or tenants may benefit from energy improvement works. How do you think the government should act to ensure that leasehold properties with a mortgage are captured by these policies, while acknowledging the challenges that need to be overcome?

Question 37: How can we ensure that we protect groups such as first-time buyers from being disproportionately penalised?

Question 38: Are there other impacts these policies could have on mortgage processes that we have not considered? How do we ensure that intermediaries, such as brokers, have access to the information necessary to advise consumers?

Question 39: How can we ensure that our policies do not disincentivise lending to poor performing properties?

As already noted, this is an important concern, particularly in relation to proposals for league tables and a target EPC rating. Such measures should instead reflect improvements to the stock allowed through lending. See response to Question 6.

Question 40: How might these policies impact on house prices and households' ability to borrow in the market? What could the government do to mitigate any unintended impacts on households?

Question 41: How might these policies negatively or positively impact on competition and lenders' ability to operate in the housing and wider market? What could the government do to mitigate any negative impacts?

Question 42: What costs would compliance with these policies likely generate for lenders? Please provide an estimate of these costs where possible, including evidence to support your answer.

Question 43: Do you think a regulatory body should be responsible for the mandatory policies in this consultation? If so, what form do you think this body should take?

Question 44: Do you think that the government should introduce a requirement on lenders to check that privately rented properties comply with the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015?

Yes.

Question 45: Do you think it would be sensible for these proposals, for example annual disclosure of portfolio-wide EPC information, to be applied to smaller non-domestic buildings that require similar energy performance upgrades to homes?

Question 46: Should a fabric first approach be built into the preferred, voluntary, target option? If yes, how should such an approach best be implemented?

No. CIBSE very much support demand reduction and energy efficiency first, which means encouraging a fabric first approach wherever that is realistic and appropriate. However, in some cases non-fabric measures may be more appropriate to carry out first e.g. changing the heating system in case of a breakdown; e.g. installing roof insulation and PVs while roof repairs are carried out, but not other fabric works which may at the time be too disruptive or expensive and could be implemented later. On balance, we think that fabric improvements could be supported by other means including:

- using total energy use as basis of EPC ratings – as recommended in the SAP/RdSAP11 report referenced in question 1
- Improving the SAP methodology so that fabric measures are better accounted for and rewarded – again, as recommended in the SAP/RdSAP11 report referenced in question 1. Examples of fabric improvements which are not currently well addressed in SAP and/or RdSAP include:
 - o airtightness: this is not accounted for in RdSAP, the most common method to produce EPCs
 - o thermal bridging: default values can be used and are not penalising enough, which removes an incentive to reduce thermal bridging
 - o approximate window areas (as proportions of floor area) can be entered in RdSAP, rather than the actual ones; all of them are attributed a single set of performance characteristics, not allowing a mix of performance values (pre- and post- retrofit works), as is in practice the case in many existing homes.

- Default U-values have to be used in RdSAP, while in practice many homes, especially of traditional construction, have building elements of varying properties; measured U-values and/or a wider range of default values should be allowed, to make sure that potential energy savings are better represented.
- Encouraging the use of PAS 2030/5 – see response to Question 29.
- Avoiding carbon lock-ins, including regulatory requirements such that, when a fabric element is improved, it is done “once and for all” to the best possible “net zero compliant” standard. This should include Building Regulations minimum requirements, at least for the large proportion of energy improvement works which will be subject to Building Regulations.

Question 47: What are your views on how we could tighten standards to drive greater carbon savings? Do you have views on introducing a dual metric, an alternative carbon target, or any other suggestions?

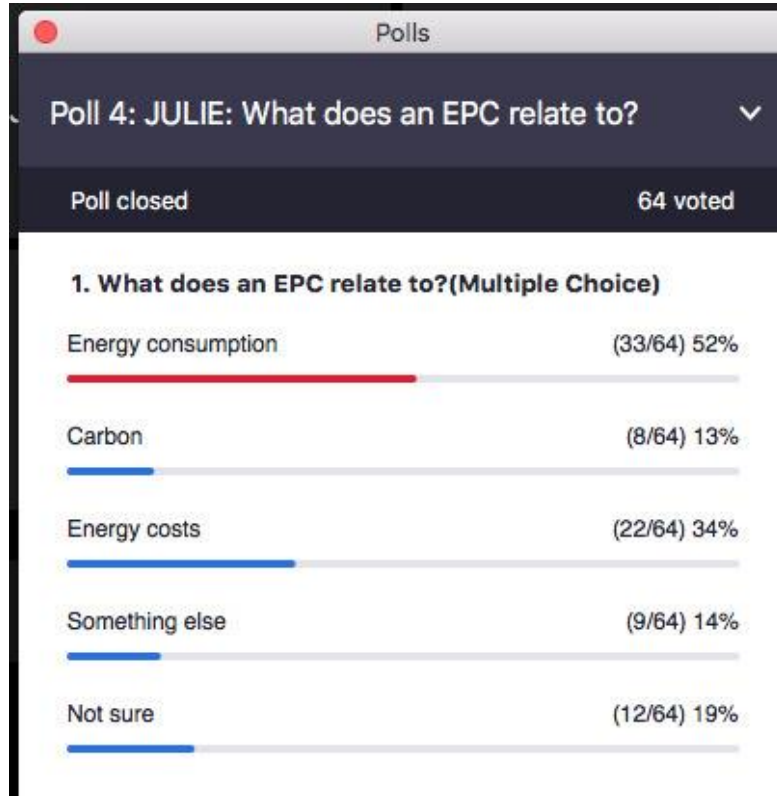
CIBSE, as part of the project team, have made a number of recommendations on this in the recent SAP/RdAP11 scoping report for BEIS, including changes to the SAP methodology itself, the metrics to be used, and the regulatory framework around SAP. We would very much welcome a discussion with BEIS about this.

APPENDICES: SUPPORTING EVIDENCE

SUPPORTING EVIDENCE #1

Poll carried out at the 2020 Carbon Coop AGM, showing wide misunderstanding of the EPC rating – this is very logical from respondents, since the rating is called “energy efficiency rating”.

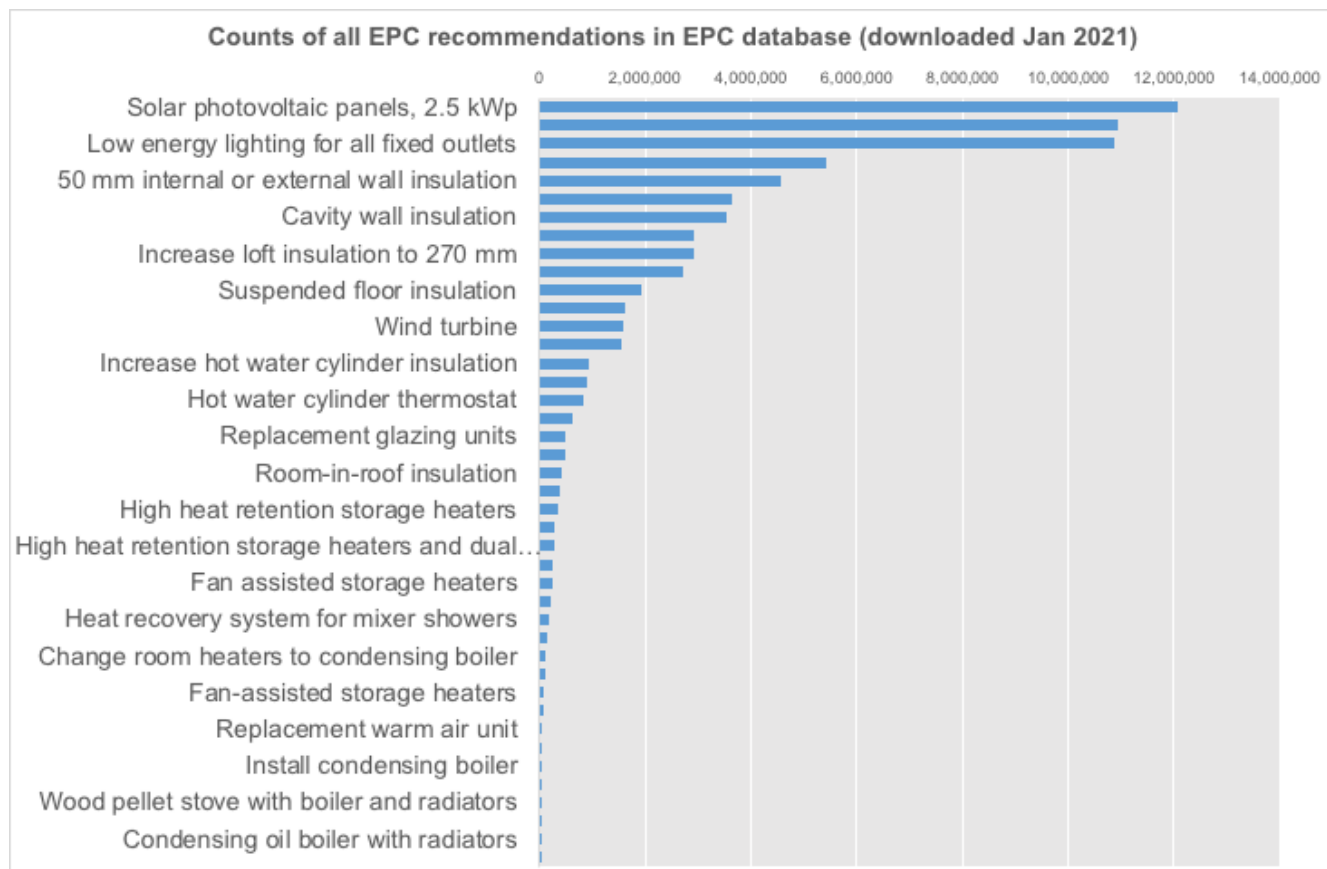
The sample of respondents was relatively small at 64 people, but please note it is a group of homeowners interested in energy, carbon, and home retrofit, and therefore better informed on these issues than average. Misunderstandings of EPC ratings could easily be even higher among the general population.



SUPPORTING EVIDENCE #2 – ANALYSIS BY UCL OF EPC RECOMMENDATIONS

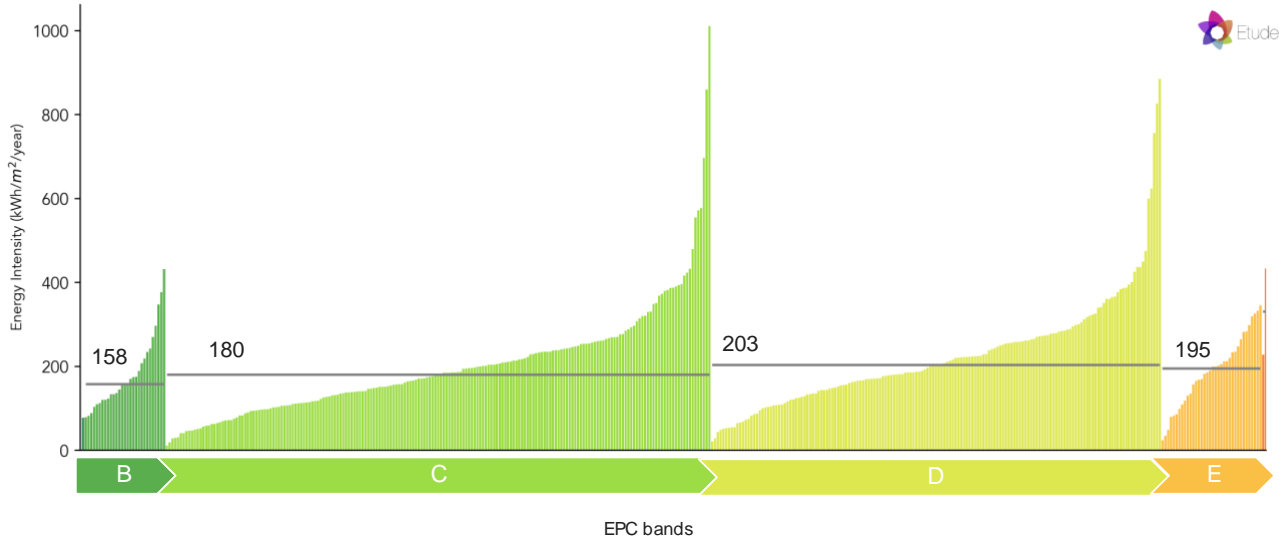
Analysis carried out and kindly provided by George Bennett, UCL, based on all EPCs in England and Wales.

The data was downloaded 6th January 2021. The collation of the recommendations includes all EPCs, which means multiple EPCs for some addresses. It also includes all recommendations per EPC. For both of those reasons the total of the recommendations is well over the number of properties existing.



SUPPORTING EVIDENCE #3 – ACTUAL ENERGY IN USE VS EPC RATINGS

The following graph illustrates the distribution of actual energy use from 420 dwellings in London, against the EPC band of the dwellings. It shows that improved EPC ratings are associated with some reduction in average energy use, but these reductions are far from sufficient to meet the Government’s objective of a 50% reduction by 2030. For example, there is only a 22% reduction in total average energy use intensity from D- to B-ratings. (Analysis and graph provided by Etude)



A larger study for BEIS by UCL, not yet published but carried out over more than 450,000 homes, shows similar findings (UCL, Analyses of metered energy use versus Energy Performance Certificates in Greater London contract TBC – TRN no. 1643/10/2018 to the UK Department for Business, Energy and Industrial Strategy, PI Ruyssevelt, P, 2019). For example:

- Gas use: there is a 37% reduction in mean electricity use from D to A, and 26% from D to B.
- Electricity use: there is a 21% reduction in mean electricity use from D to A, and 14% from D to B.
- The mean total energy use* in EPC band A is 161kWh/m²/yr i.e. over twice the estimated goal of 73kWh/m²/yr for new buildings to meet the 50% objective (Green Construction Board, Buildings Energy Mission 2030: Background Report to Recommendations from the UK Green Construction Board in response to the 2030 Newbuild Challenge, Etude and Julie Godefroy Sustainability, 2019).

* approximated as the sum of the means in gas and electricity uses.

END

Please do not hesitate to contact us for more information on this response.