Non-Domestic Private Rented Sector Minimum Energy Efficiency Standards: Trajectory to 2030

Consultation Response

Administrative Details:

Name:	Dr Hywel Davies
Position:	Technical Director
Name of organisation (if applicable):	Chartered Institution of Building Services Engineers
Address:	222, Balham High Road, London, SW12 9BS
Email address:	hdavies@cibse.org
Telephone number:	07590 047086

The views expressed in this response are an official response to the Consultation by the Chartered Institution of Building Services Engineers

The Chartered Institution of Building Services Engineers is the professional body 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 the engineers who design, install, operate, maintain and refurbish the energy using systems installed in buildings, including homes. They are trained in the assessment of heat loss from building fabric and the design of energy using systems for the provision of heating and hot water, lighting, ventilation and cooling and small power distribution in homes. Many CIBSE members work in the public sector in general and in higher education in particular.

CIBSE has over 20,000 members, of whom around 75% operate in the UK and many of the remainder in the Gulf, Hong Kong and Australasia. Many are actively involved in the energy management of commercial buildings for larger businesses, and so this consultation is highly relevant to us and to our members.

As an Institution CIBSE publishes Guidance and Codes which provide best practice advice and are 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. Over the last twentyone months it has been accessed over 200,000 times, and 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.

NOTE: CIBSE is a registered charity with a responsibility to serve the public interest by the provision of first class information for public benefit, and this consultation response has been developed with that purpose. This response is the sole contribution of the Institution to the consultation exercise. CIBSE owns a subsidiary company, CIBSE Certification Ltd. This is a UKAS acccredited certification business, which under UKAS rules is required to operate impartially and separately from CIBSE. It has submitted a separate response along with other members of the 'Property Energy Professionals Association' (PEPA), which is a trade body that exists to promote the interests of energy assessor schemes. That submission has been made independently by the energy certification business for its own commercial purposes and not on behalf of the parent charity. CIBSE's views are solely as set out below.

Basis of the response

This response incorporates contributions from a number of CIBSE members, including members of the Energy Performance Group and Building Simulation Group of the Institution.

Due to the process of co-ordinating a collective response on behalf of an Institution of some 20,000 members it is not feasible for us to use the online tool, as the response needs to be shared with the various interested parties and a full copy retained for publication on the Institution's website and circulation to relevant groups. If the online tool provides a facility for doing this it is not at all clear how that facility is used, and so this approach has been taken.

There are also a number of significant issues which it is important to raise in relation to the consultation, which are not covered by the consultation questions but which merit additional responses. These are set out in the following paragraphs in the introductory remarks section.

Executive summary

CIBSE **supports the introduction of a trajectory** to give clarity to business and supply chains.

We also support the desire for that trajectory and target to be ambitious, as ambition in scale and speed is what is required in order for the UK to meet its net zero carbon target. However, we have concerns around 2 aspects: 1) there is a need to refine the EPC methodlogy to better express potential asset performance, now and with future grid decarbonisation; 2) EPC ratings bear little relation to actual in-use performance: the porposed policy **must** be accompanied by regulations and incentives for actual in-use performance:

- While 2030 may be a reasonable target date for the whole of the non-domestic building stock to be captured, there should be **incentives for earlier action** in order to save energy and carbon earlier, to help build expertise and supply chains and avoid long inaction and last minute calls for exemptions. For example, larger businesses could be required or incentivised to do so at first rental or sale, and for other businesses, a detailed and meaningful recommendation report (e.g. "building passport") could be required at first rental or sale setting out the steps required to reach EPC B and, ultimately, zero carbon.
- In addition, there must be incentives for energy management, as the most cost effective way to reduce energy consumtion, bills, and carbon emissions, and to avoid investment into oversized or overly complex plant and equiment (which also skew the payback assessment): the baseline must be right before works are carried out.
- A review of the **EPC methodology** is needed as it does not sufficiently incentivise energy efficiency and carbon savings measures. While EPCs aim to indicate potential asset performance, and the main objection to their use is their poor link to actual performance (see point further down), there is also a need to improve how they relate to potential asset performance. For example, one of the concerns is that in modern buildings, particularly those which are mechanically ventilated, SBEM tends to significantly under-estimate heating requirements, which skews the appraisal of potential performance, potential improvements, and payback of energy efficiency measures. Another concern is that it poorly reflects performance of older buildings of traditional construction, and leads to recommended measures which can have detrimental effects on the building's performance, fabric conditions, and air quality. There is an opportunity to carry out this **review of SBEM at the same time as the expected review of Part L for new and existing non-domestic buildings** – indeed, it would make sense to do both together, to ensure alignment of the regulatory landscape. **We strongly recommend this**.
- We acknowledge this consultation is on the private-rented sector, however we recommend the **public sector leads by example** and sets an accelerated trajectory for its own stock, both as landlord and tenant, in order to help develop supply chains and expertise, and to give confidence to industry about the government's commitment. This should also have benefits in reducing long-term public expendture on energy bills, and improving comfort and productivity.

- The lack of correlation between EPC ratings and **actual in-use energy performance** is well-documented. This means there is no guarantee the proposed policy would deliver the targeted energy and carbon savings. We strongly urge, alongside this policy, to introduce requirements for disclosure of actual in-use performance, and ultimately for compliance with minimum targets. There is a growing industry consensus on this, supported by substantial evidence: in particular, please refer to the recent joint statement coordinated by the Building Performance Network on this issue and signed by the CIBSE, the RIBA, and the UK-Green Building Council, among others: https://building-performance.network/advocacy/building-performance-joint-position-statement .

1. Introductory Remarks

The Institution is pleased to respond to the consultation paper on the proposals to set out a clear trajectory for minimum energy efficiency standards in the private rented non domestic sector. The UK is now committed, under the goals of the Paris Agreement and by the UK Climate Change Act to move towards a net zero-carbon energy system by 2050. This requires radical action in the buildings sector to reduce energy use and carbon emissions.

Whilst it is important to acknowledge the improvements in the intensity of energy use in the past three decades, it is equally important to recognise the scale of the challenge set by the recently adopted net-zero carbon target for 2050, particularly in the existing building stock. A net zero emissions scenario can only be delivered by combining reductions in energy use, particularly at times of peak demand, with switching to the use of decarbonised fuels. This in turn requires a significant change in focus to address real energy demand in the existing stock.

Low-carbon energy supply is likely to be dominated by variable renewable sources, such as solar and wind. This will, in turn, increase the challenge of balancing supply and demand across all sectors. Balancing more variable supply and demand will be assisted by more flexible demand, to which the non-domestic building sector could make a major contribution.

Managing energy demand, particularly at times of peak use, is also essential to minimise the need to invest in additional marginal generation capacity. A fuller understanding of the benefits of investments in managing demand rather than in additional capacity is essential to support energy demand management, and in turn to underpin the longer term energy demand trajectory of the non domestic buildings stock. This is another reason to focus on the energy efficiency of the non-domestic stock.

Whilst the development of the MEES trajectory over the coming decade is important, it does therefore need to be set within the wider context of decarbonising energy use in buildings and to consider both technical and social and behavioural challenges of energy demand reduction.

1.1 Existing background material

It is also worth noting that the development of the Minimum Energy Efficiency Standards was supported by an extensive and detailed study led by the British Property Federation in 2012/13. The full report was published and made available to the then policy team at the Department of Energy and Climate Change, who were participants in the working group. It is available in the government archive at

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335766/non_domestic_minimum_building_energy_performance_standards_working_group.pdf

Some of the conclusions of the report remain valid today, and in particular in relation to the question on enforcement (see our response to Q12).

1.2 Non-domestic Building Energy Policy

The Centre for Research into Energy Demand Solutions CREDS is a research centre established by UKRI in 2018 with a vision to make the UK a leader in understanding the changes in energy demand needed for the transition to a secure and affordable, low carbon energy system.

In 2019 it published its first major report, "Shifting the focus: energy demand in a net-zero carbon UK" provides much useful material and many relevant references, which it is hoped are already well known to BEIS. The report can be accessed online at https://www.creds.ac.uk/publications/shifting-the-focus-energy-demand-in-a-net-zero-carbon-uk/

The full reference is Eyre, N and Killip, G. (eds). 2019. Shifting the focus: energy demand in a net-zero carbon UK. Centre for Research into Energy Demand Solutions. Oxford, UK. ISBN: 978-1-913299-00-2.

Chapter 2 of the report focuses on reducing energy demand in buildings in particular, with a long list of relevant references. It also contains several recommendations which merit emphasis in this response, as they are directed towards government policy around energy in buildings.

In particular, it recommends that HMT, BEIS, MHCLG and the devolved administrations should develop an overall policy framework for the building sector that unifies the existing fragmented, stop-start policy approach and provides a clear signal of Government ambition and intent in the medium and long-term that will deliver the buildings element of future carbon budgets. **If business is to invest in delivering this long-term strategy and develop new models it needs long-term Government commitment (***emphasis added)***.** In this case, we think it is of particular importance that this policy should be linked with developments in building regulations reviews, including a review of SBEM so it can better reflect and incentivise energy performance.

It has previously been noted by the National Audit Office and Committee on Climate Change that there is a history of policy changes in relation to energy efficiency which have seriously undermined market and investor confidence that government has a longer term policy. It is therefore very welcome that government is consulting on the trajectory to 2030 for non-domestic buildings. However, this needs to be supported by confidence building measures, such as a commitment to genuine enforcement of the PRS energy efficiency regulations, coupled with meaningful consequences for those who do not comply. It also requires related energy efficiency policy to be developed in support of MEES.

A significant way in which government should build confidence in the policy, as well as developing industry expertise and supply chains, would be to lead by example and apply the policy to public sector buildings, both as landlord and tenant.

1.3 Reform of Building Regulations and Legislation

The CREDS report also calls on BEIS and MHCLG to "ensure that the implementation of the Hackitt Review addresses the energy efficiency performance gap on the evolution of and compliance with buildings standards and in the development of skills, standards, procedures and capacity within the building industry sector."

A wide range of industry participants wrote to the Committee on Climate Change on 11th September calling for building performance, including energy efficiency, to be addressed in the

development of building safety cases and the wider implementation of "Building a Safer Future". For the full letter see here: https://building-performance.network/wp-content/uploads/2019/10/BPN-letter-to-the-Committee-on-Climate-Change.pdf. Whilst fire and structural safety address acute and immediate safety concerns, and failure is likely to be immediate, can be catastrophic, and has the potential to cause significant and immediate loss of life, it is becoming clear that in the longer term buildings that overheat and are poorly ventilated cause long term chronic health and safety issues which may well result in premature deaths on a significant scale.

With the response to Dame Judith Hackitt's review promising the most extensive review of building safety in a generation or more, it is essential that the new regime also addresses the longer term health and wellbeing of building occupants, and the need for energy efficiency to be seen as being an important component of the building regulations which needs to be complied with just as much as other parts.

1.4 Focus in real energy consumption and emissions

There is growing industry consensus that actual in-use performance should be subject to regulatory requirements. In particular, please refer to the recent joint statement coordinated by the Building Performance Network on this issue and signed by the CIBSE, the RIBA, and the UK-Green Building Council, among others: https://building-performance.network/advocacy/building-performance-joint-position-statement . Similarly, the CREDS report "Shifting the focus" also calls on BEIS and MHCLG to "broaden overall policy on to the actual, real-world 'as-built' energy performance of buildings. Shifting to a performance-based culture will allow tenants and householders to choose energy efficient buildings and enable the market to accelerate their uptake".

The Building Performance Network, a collaboration between CIBSE and the Sustainable Development Foundation, recently published a call supported by around 100 organisations and individuals for greater disclosure of building energy use, see https://building-performance.network/advocacy/building-performance-joint-position-statement.

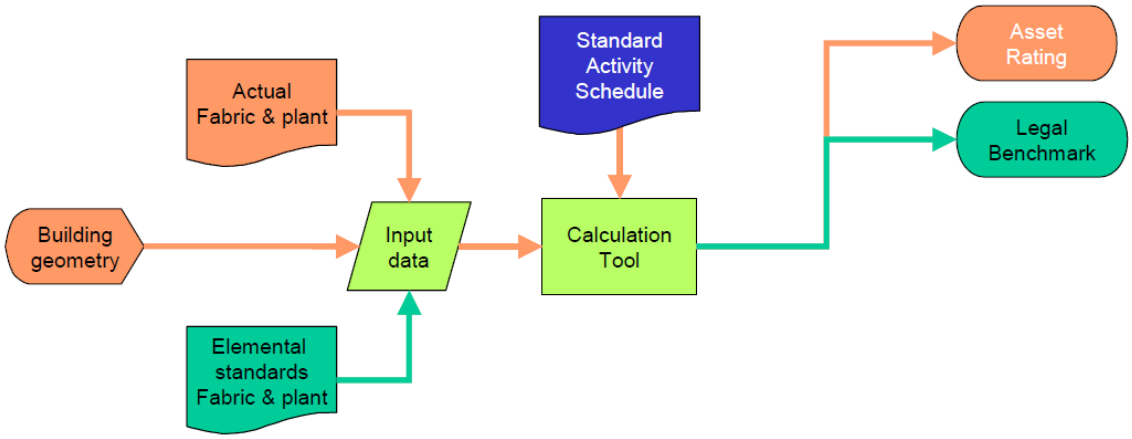
Whilst EPCs provide an indication of the efficiency potential of a building and can inform tenants about the relative efficiency of alternative options when they are looking to rent space, they are based on theoretical occupancy scenarios and are only as good as the calculations on which they rely, and do not address the actual emissions of that tenant once they are in occupation. Comments on the calculation are included below at the relevant questions. However, without a mechanism for the measurement and disclosure of energy use in non-domestic buildings, and gradually the introduction of actual in-use performance requirements, profligate energy use will continue to go unnoticed and unchallenged. The commitment by BEIS to consult on this issue is welcome, and CIBSE and others look forward to supporting BEIS in developing the proposals.

1.5 Clear future modelling and calculation methods to allow long term investment decisions

Finally, the CREDS report calls on BEIS to "produce credible roadmaps for new and existing buildings on the deployment of emerging technologies such as heat pumps, district heating and solid wall insulation, identifying sectors to be used to reduce costs and build supply-chain capacity, for example heat pumps installed in properties off the gas grid".

This consultation is a welcome start in the development of such a framework, but much more is needed. In particular, there is a significant question around the overall target of the proposed trajectory. It is being suggested that all non domestic buildings being let in 2030 should achieve an EPC of "B" or better. In principle this is a clear future target. However, calculation of the rating involves the use of the Simplified Building Energy Model, SBEM; two of the key determinants of the rating are the setting of a reference building, and the carbon factor for various fuels. The diagram below summarises the methodology for calculating the building asset rating, on which the EPC letter grade is based.

The actual building is compared to a reference building which uses elemental standards of fabric and plant. The Asset Rating is on a scale of 0-150 (or more for the very worst buildings). A score of 50 or better is a B (25 or better is an A).



The definition of the reference building has a fundamental impact on the rating of the actual building. It follows that if an Asset Rating is calculated today, using the current reference building, then when that EPC is renewed in 10 years time when the 2030 trajectory comes into force, if the reference building is significantly different, then the asset rating may well have changed. In other words, an owner might refurbish a non domestic building today to achieve a B rating, only to find that in ten years time it no longer achieves a B grade.

Furthermore, carbon factors are changing rapidly at present, and so it is possible that a building currently calculated to be B-rated to be at risk of failing to achieve a B rating in the future. This could be disastrous for confidence in the EPC rating and therefore in the overall policy.

Another related point is that the current setting of the EPC reference building is to have gas as heating fuel; due to decreasing carbon factors for electricity, by comparison this would not sufficiently incentivise electrically-heated to reduce energy demand. This needs to be addressed.

A critical question is what does the 2030 reference building look like? Can an investor today instruct professionals to give a clear indication of what a B rated non domestic building could look like in 2030 with the degree of certainty needed to justify the investment required to deliver that B rated building?

This leads to a fundamental question about the role of the Asset Rating and the calculation approach. The Asset Rating was originally designed to serve two purposes – to align with the

Part L compliance calculation for new non domestic buildings, and to provide asset ratings of existing buildings, in both cases using carbon dioxide emissions as the key driver for the rating.

As we move into an era in which the energy and carbon performance of the existing stock needs to be measured and managed much more effectively, is the assumption that the same asset rating approach and methodology as was developed in 2003 in support of the then newly adopted Energy Performance of Buildings Directive (EPBD) still appropriate?

At the very least, a serious review of the methodology, along with the expected carbon factor trajectory, is required. This could involve modifying the current approach, using a reference building. Another approach, which may seem radical but which ultimately may well be the easiest and most effective, would be to move to a simpler rating scale based on absolute metrics (e.g. kgCO2/m2/yr). Rating performance by comparison with a reference building has its advantages but also has loopholes and can detract from the fundamental objectives: reducing energy consumption and carbon emissions.

It is also important to realise that the current Asset Rating approach is closely linked to compliance with aspects of Part L of the Building Regulations, and is therefore a cross-departmental issue. There is some discussion amongst experts in this area about whether the current approach is fit for 2030, or even for 2025, and whether there is a need to review the calculation approach and the relevant metrics for the future. For this reason, we are also advocating a serious review of the current approach, including notional building, under Building Regulations Part L.

For further discussion of these issues please see the CIBSE Position Statement on Part L which is supplied with this response.

The Better Buildings Partnership has done extensive work on adapting the National Australian Building Environment Rating Scheme (NABERS) for use in the UK. This involves detailed work on building modelling and calculation procedures which should inform the discussion about future rating methodology and tools. This discussion probably needs to be extended to a wider group of participants.

Again, there is a need for a clear forward trajectory on the notional building and on SBEM or any alternative calculation approach to underpin development of the MEES forward trajectory.

1.6 A digital data driven built environment

There is an explosion in the development of digital tools and data analysis for the built environment. What is currently lacking is a clear strategy for co-ordinating the various official datasets and studies and for working with other sources of data about the national building stock. MEES has the potential to form a key part of that strategy, developing a clear dataset for the non domestic rental stock. However, it will not address public buildings or owner occupied buildings. This needs a wider policy discussion which should inform the development of the MEES policy trajectory in the future.

2. Consultation question responses

Question 1: Do you have any evidence which can improve the Government's understanding of energy use in the non-domestic building stock?

This question is very difficult to answer, as it requires a knowledge of what evidence BEIS already holds and how well it understands it. It also implies that there is a high level of comunication and knowledge sharing within and between departments. Important sources we would highlight include:

- As noted in the introductory remarks, the recent report on "Shifting the focus" of policy to consider energy demand provides much useful material and many relevant references, which it is hoped are already well known to BEIS. The report can be accessed online at https://www.creds.ac.uk/publications/shifting-the-focus-energy-demand-in-a-net-zero-carbon-uk/. The full reference is Eyre, N and Killip, G. (eds). 2019. Shifting the focus: energy demand in a net-zero carbon UK. Centre for Research into Energy Demand Solutions. Oxford, UK. ISBN: 978-1-913299-00-2 The reference list on pages 31 and 32 at least provide a good starting point – a number of these are references to BEIS documents. The link to the NABERS website provides access to a very wide range of tools and data on the effectiveness of the scheme in Australia.
- The British Property Federation report on MEES cited in the introduction is also an important reference. It is available in the government archive at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335766/non_domestic_minimum_building_energy_performance_standards_working_group.pdf
- CIBSE, in collaboration with UCL, recently updated their energy benchmarks, which are now available online: https://www.cibse.org/knowledge/energy-benchmarking-tool-beta-version . This is largely based on available Display Energy Certificates (i.e. from public buildings), as well as other sources for some sectors (e.g. schools).
- The Better Building Partnership (BBP) Real Estate Environmental Benchmark can provide information on current actual usage in a significant number of commercial buildings.
- We would also recommend contacting the Sustainable Development Foundation, who recently carried out a review of available energy consumption databases (and found over 100!).

However, there is currently a lack of publically available, coordinated and reliable real life energy use across the non-domestic building stock. Unfortunately previous proposals to introduce Display Energy Certificates across the whole non domestic stock were abandoned almost a decade ago due to lobbying from certain interest groups. We acknowledge and welcome the announcement by BEIS to consult on such a roll out later this year; once again, the best evidence to inform future policy will be provided by the rolling out of DECs to all building types and owners/occupiers. This will provide a much clearer understanding of all energy use across the non domestic stock.

Question 2: It has now been over a year since the minimum energy efficiency standards for the non-domestic private rented sector were introduced. What have been the positives and areas for improvement of their introduction?

The introduction of MEES has had a great impact on the accuracy of all new EPCs. Significant financial consequences now hang on the outcome, and so a rapid box and "slap-dash, box-ticking manner" has been replaced by a more rigorous approach. This has been evident for some time, since the intention to introduce MEES was first announced in 2012, and investors could see the potential impact of EPC ratings on property values. This shows the value of a longer term trajectory.

A reported unintended consequence of MEES has been an increase in costs and large carbon emissions associated with some landlords reporting having to install a single light fitting and panel heater just to get the "E" rating – only for the incoming tenant to remove them as they are not suitable for the new occupier's fit out.

There have been reports of delays to leases being agreed due to long discussions relating to improving the EPC rating, and whether a draft EPC is acceptable for completing a lease.

There has been a rush to install the cheapest, measures to obtain an E rating, often with high carbon intensity over the whole-life of the measure in order to ensure that an "E" is attained. This is having the unintended consequence of increasing overall carbon emissions associated with the supply chain. It highlights the introductory comment about the need to look at the calculation tool to ensure that it is not driving unintended or perverse outcomes.

Question 3: Do you agree that 2030 is the appropriate date to set the future trajectory? Does this allow a long enough lead in time for landlords and businesses to plan effectively, as well as providing the energy efficiency market with medium to long-term certainty of demand?

Setting a clear trajectory to 2030 is important, although it needs to be set with a view to the longer term 2050 net zero carbon target.

Support for the 2030 trajectory needs to be subject to the concerns raised in the introduction about carbon factors and what a 2030 B rating actually looks like.

There is a risk with such a long period that only the larger investors in rental property will engage with the policy initially and meet the deadlines comfortably. The rest will leave it to the last minute and then complain that they don't have enough time. The ESOS experience, in both phases, provides evidence of this behaviour.

This is why CIBSE advocates clear incentives for early adoption – not just exhortation and encouragement. Whether this is achieved through tax incentives or through other means needs further discussion, but we believe that there should be a longer term incentive scheme to support the trajectory. I**ncentives for earlier action** woud help save energy and carbon earlier, build expertise and supply chains and avoid long inaction and last minute calls for exemptions. For example, larger businesses could be required or incentivised to do so at first rental or sale, AND for other businesses, a detailed and meaningful recommendation report (e.g. "building passport") could be required at first rental or sale setting out the steps required to reach EPC B and, ultimately, zero carbon.

The policy also needs to be developed with a view to 2050 and not just to 2030. Once 2030 is reached, then the next phase of the drive to net-zero needs to be in place, and indeed if some early adopters are encouraged to lead the way beyond the 2030 target before 2030 that would be an excellent policy outcome.

It may be appropriate to review the Section 63 regime in Scotland under their climate change legislation. Until EPC B (or C) is achieved, landlords could be expected to make simple energy management information, ideally in the form of DECs, available for their tenants to motivate better use of energy using systems. This may motivate earlier upgrading to avoid having to do it, and it may even encourage monitoring of operational energy data on an ongoing basis when the benefits are realised. This could be delivered through the proposed disclosure scheme on which government has indicated that it will consult later this year, and we would be willing to contribute to early discussions on this aspect of the policy.

Question 4: To what extent do you think an EPC B trajectory provides sufficient certainty of demand to encourage suppliers in the energy efficiency market to grow, scale and innovate?

This is also subject to the concerns raised in the introduction about carbon factors and what a 2030 B rating actually looks like,

Question 5: What do you think are the opportunities and challenges of the Government's preferred 2030 EPC B trajectory?

There are a number of challenges to be addressed in successfully delivering this policy.

As originally noted in the BPF paper on the development of the PRS minimum energy efficiency rules, the first challenge is to ensure that those buildings that require an EPC have them. This is discussed further in response to Q12 below.

Please see the remarks in the executive summary and introduction s on the challenges related to the carbon factor trajectory and the EPC methodology itself.

A further challenge is dealing with the real contractual transactions related to any tenancy or lease. In the UK there is a general practice of tenants fitting-out leased spaces. The nature of the fit out works affects the rating of the space, but to lease the space an EPC is required prior to fit out. CIBSE has seen the responses from the Better Buildings Parternship, British Property Federation and Shoosmiths, which address this issue in more depth and with more direct day to day experience with investors, clients and developers. CIBSE supports the comments made in these submissions, as we agree that there is a significant challenge around this issue. More guidance should be provided on how to address these situations e.g. allowing temporary EPCs for the lease, based on tenant fit-out specifications, followed by the requirement for a final EPC to be lodged at completion of the fit-out.

"Gaming" of the payback calculation. It will be easy to get a "fail" for the payback test. For example, if a heating/lighting/cooling solution is oversized it will increase the capital cost with

no associated increase in saving, so it is possible to keep oversizing until the test is failed. In addition, cost effectiveness should evolve – see our response to Question 7.

Question 6: We estimate an EPC C trajectory will only bring 42% of the non-domestic PRS building stock into scope of the regulation. Are there any alternative approaches that could complement an EPC C trajectory that would guarantee the necessary action across the remaining stock to drive clean growth and deliver sufficient energy and carbon reductions?
We do not advocate this trajectory:

- First, the scale and speed of change required to meet the UK's net zero carbon target lead clearly to the most ambitious realistic target;
- Second, addressing less than half of the targeted building stock is not the most effective use of regulation.

In addition, meeting the requirement for a particular EPC rating, whether B or C, is only the start to reducing carbon emissions, as theoretical ratings such as EPCs show little correlation with actual energy consumption and carbon emissions. This is well-documented and has been discussed at length in previous responses to MHCLG, DECC & BEIS, and is one reason why the forthcoming consultation on assessment and disclosure of actual energy use is so important, and why CIBSE ultimately advocate for regulations to cover actual in-use performance: see details in our introduction section.

Question 7: Can you identify any issues regarding the current administration of the seven-year payback test which could be improved to support the goals that a tightened regulatory trajectory to 2030 aims to deliver?
The software tool used to produce EPCs, iSBEM or its commercial derivatives, are compliance tools and not design software, and do not optimise design solutions. As noted in answer to question 5, they allow gaming of the payback test through, for example, oversizing. SBEM is also not intended to provide investment grade advice.

An important concern with SBEM, which affects paybacks, is that in modern buildings, particularly those which are mechanically ventilated, SBEM tends to significantly under-estimate heating requirements; this not only skews the appraisal of potential performance, but also the appraisal of potential improvements, and therefore the estimated payback of energy efficiency measures (i.e. as heating demand is under-estimated, the potential for further improvements is estimated to be very low, which makes payback looks unduly long).

Another concern is that SBEM poorly reflects performance of older buildings of traditional construction, and leads to recommended measures which can have detrimental effects on the building's performance, fabric conditions, and air quality. This would clearly, in the long-term, NOT reflect actual costs and burden on the building owner.

There is an opportunity to carry out this **review of SBEM at the same time as the expected review of non-domestic Part L for new and existing buildings** – indeed, it would make sense to do both together, to ensure alignment of the regulatory landscape. **We strongly recommend this**.

A further anomaly with the seven year payback test is that, when undertaking work that is regulated by building regulations, a 15 year payback applies, as described in Approved Document L2B. So where a building requires refurbishment work in order to meet the 2030 EPC B target, Part L applies a 15 year payback, whilst MEES applies a seven year payback. It is not at all clear how that is going to work. There will also be a very perverse outcome in which, if the building is not already B rated, then any work which meets the 7 year payback will be required by MEES, but for Part L compliance a 15 year payback will apply. The potential to create legal confusion and difficulty for SMEs, whether landlords or clients, seems considerable. It may therefore be worth considering using the same 15 year payback test used by ADL2B.

The requirement for three quotes as the basis for exemption is considered by some to be an over-simplification, possibly based on the domestic situation. However, in the non-domestic situation, particularly for larger buildings or when innovative solutions are being considered, the first step is for design solutions to be considered. Until there is an agreed design there is nothing to quote against. There may therefore be a significant cost attached to gaining an exemption. For larger developers there may be an argument that they should be expected to go to some effort to establish that they do not need to undertake works. However, for SMEs this may be a significant burden, and may require further consideration.

Furthermore, given the relatively long timescale of this policy, cost effectiveness should evolve (indeed, if this policy works, products and supply chains will develop and the measures should become more cost effective). If an exemption is obtained based on failing a 7 or a 15 year payback test, what period of time is allowed before the payback needs to be retested? Taking LED lighting technology as an example, as a new product it was initially very expensive as manufacturers were recovering their development costs. Paybacks were typically over 10 years. Now, it has become so cheap that paybacks are often less than a year. So, an improvement that fails the test in 2021 might pass it in 2024 or 2027 etc. There should be clarity on the requirements to reassess exemptions. We would for example recommend that, if payback is used as a get-out clause, this should be reviewed after no more than 5 years, and by 2029 at the latest, for compliance by 2030 of as many properties as possible.

Question 8: Would a single backstop date in 2030 or phased milestones to 2030 be the more effective method for implementing the trajectory options? Does it depend on the trajectory option? If a single backstop were favoured by the Government, what type of financial and non-financial incentives could encourage landlords to install measures earlier than the 2030 deadline?

The 2030 trajectory is a staging post to 2050 net zero buildings. It will be challenging enough to deliver the 2030 trajectory without adding further intermediate steps. There is already a huge task to be undertaken to bring all non-domestic rented buildings up to the EPC B standard by 2030. It does not need to be made any more complicated or onerous.

This does not mean that differences in the technical and financial feasiblity of achieving this should not be recognised. In particular, the policy needs to be developed hand-in-hand with the UK's low-carbon heat strategy, including financial support for properties such as those which attract low rental rates and where investment may therefore be challenging (e.g. properties in

rural locations, as opposed to highly sought after city centres), and buildings of traditional construction where technical options may be more limited. There may also need to be further consideration of the treatment of listed buildings.

Question 9: Are there any reasons why any of the current exemptions will be less effective under a tightened trajectory?
Unless there is meaningful enforcement the exemptions will not be a significant issue. Only when enforcement is taken seriously will the exemption regime become relevant and better understood in practice.

Question 10: Are there any ways in which the market can overcome situations where the tenant has fit-out requirements and is willing to fund the improvement of the building at the start of the tenancy?
No response.

Question 11: Are there any unique challenges that the tightened trajectory will pose to SMEs or any individual sector? How could the sector look to overcome that challenge?

See our response to Question 8 giving some examples of challenging types of properties (e.g. buildings in rural locations, buildings of traditional construction), which overall are often likely to be occupied by SMEs.

Question 12: At this stage we welcome views on how the Government could most effectively improve enforcement of minimum energy efficiency standards under an EPC B or C by 2030 trajectory.
Chapter 8 of the BPF report (quoted in our introduction section) addressed enforcement. It raised questions about the level of compliance with the Energy Performance of Buildings Regulations and the EPC requirements of the building regulations, and provided some evidence about levels of compliance at that time. Subsequent enquiries through parliamentary written questions have not indicated a significant upturn in levels of enforcement activity.

Appendix A of this response includes the written answers to questions about compliance with the MEES regulations, which suggest that there is very little evidence of any enforcement activity.

CIBSE is by no means alone in these concerns. The Environmental Industries Commission (EIC) has expressed its very strong concerns about the lack of enforcement of EPC policies and the threat this poses to undermine further progress on MEES. The EIC published a paper (http://eic-uk.co.uk/wp-content/uploads/2018/08/Improving-non-domestic-energy-efficiency-after-Brexit-8.18.pdf) which includes extensive evidence of poor enforcement and proposals for addressing this.

The current enforcement body is Trading Standards. Departments. There is concern that that this is not the most effective route. Trading Standards Departments They have many areas of responsibility over a range of topics, including consumer protection and product safety, which they are expected to prioritise.

In contrast, the Environment Agency have been more proactive in enforcement of the ESOS Regulations, and there must be lessons to be learned from their approach.

Also, with EPB Regulations falling to Trading Standards to enforce, EPCs on new buildings to Building Control, and ESOS to the Environment Agency there is a wide spread of enforcement responsibilities which may benefit from being more streamlined.

Question 13: As illustrative examples, do the costs, bill savings and private payback periods that our modelling assumes for these building types approximate your experience?
We suggest that the responses from the Better Buildings Partnership and Shoosmiths address this in useful detail and we support their observations.

Question 14: The table lists the costs and benefits we have identified as a result of the proposals. Are there any impacts relevant to your sector or organisation/business (e.g. SME, Civil society organisations) that are missing? If so, can you provide us with any supporting evidence?
We struggle to understand some of the costs and benefit calculations in the consultation and the impact assessment. It is not at all clear where these have come from, and we struggle to offer more significant comment.

Question 15: We understand that there are natural void periods when leasing a property, due to finding a tenant and refurbishing a building. Is there any evidence to suggests the proposals are likely to increase void periods and by how long? Please provide as much detail as you can.
No response.

Question 16: Under both trajectory options, landlords of buildings below EPC B or C will be required to invest money upfront to improve the energy efficiency of their building. If you are a landlord, what are the key factors that would determine the pass-on cost to the tenant, and the length of time under which you would seek a return on your investment? We anticipate key factors could include: investment cost, bill savings delivered by the measure, payback period of the measure, lifetime of the measure, maintenance costs and market forces. If you are not a landlord, we also welcome any evidence you could provide.
No response.

Question 17: Is there a possibility that under certain types of lease arrangements (for example green leases) the costs of improvements might be shared between landlords and tenants?
No response.

Appendix A

Questions on the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015

Written Answer on 24th October 2019

Anneliese Dodds Shadow Minister (Treasury)

To ask the Secretary of State for Business, Energy and Industrial Strategy, what sanctions her Department has introduced for landlords that do not lift their properties out of (a) G and (b) F energy ratings after receiving funding from the Minimum Energy Efficiency Standard.

Kwasi Kwarteng The Minister of State, Department for Business, Energy and Industrial Strategy

The Energy Efficiency (Private Rented Property)(England and Wales) Regulations 2015 require that, since April 2018, domestic and non-domestic private landlords ensure their properties have an energy efficiency rating of at least an E at the point at which they issue a new tenancy, or renew or extend an existing one.

While landlords are free to explore third-party funding options, such as local authority grants, no specific funding is available to help them meet their legal obligations, and landlords are expected to draw on their own funds to finance improvements, subject to a number of cost-effectiveness tests. The regulations set separate cost-effectiveness test for landlords of domestic and non-domestic property.

The regulations give enforcement powers to local authorities in respect of the domestic provisions, and to local weights and measures authorities in respect of the non-domestic provisions. Enforcement authorities have a range of penalty options for tacking non-compliance, up to and including the issuing of financial penalties. For domestic property, financial penalties are capped at £5,000 per breach; for non-domestic property, financial penalties are capped at £150,000 per breach.

Written Answer on 26th October 2018

David Drew Shadow Minister (Environment, Food and Rural Affairs)

To ask the Secretary of State for Business, Energy and Industrial Strategy, how many exemptions have been granted to landlords with off-gas grid properties using either (a) heating oil and (b) liquefied petroleum gas under Regulation 25 of the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015.

Claire Perry The Minister of State, Department for Business, Energy and Industrial Strategy, Minister of State (Business, Energy and Industrial Strategy) (Energy and Clean Growth)

Landlords of EPC F or G rated domestic privately rented properties may register an exemption under Regulation 25 if they have made all the relevant energy efficiency improvements available for their property and it remains below E, or if there are no relevant energy efficiency improvements that can be made. The gas-grid status is not a relevant factor in whether a property qualifies for this exemption.

To the end of September, 2,194 exemptions have been registered under Regulation 25. A proportion of these may relate to off-gas grid properties, but this information is not required from the landlord when registering an exemption.

Written Answer on 9th November 2017

Caroline Lucas Co-Leader of the Green Party

To ask the Secretary of State for Communities and Local Government, what assessment he has made of the trends in the level of compliance with Article 13 of the energy performance of buildings directive.

Alok Sharma Minister of State (Communities and Local Government)

Data on Energy Performance Certificates required under Article 13 of the Energy Performance of Buildings Directive to be displayed for buildings occupied by public authorities can be found at: https://www.gov.uk/government/statistical-data-sets/live-tables-on-energy-performance-of-buildings-certificates (Table DEC1). Energy Performance Certificate data for non-domestic buildings over 500m2 can be found at: https://epc.opendatacommunities.org/. However, the Government does not routinely hold or collect data to identify buildings that are frequently visited by the public.

Compliance with Energy Performance Certificate requirements is checked by trading standards' bodies. My Department has sought information on the number of enforcement notices issued by trading standards' bodies and will provide advice in due course.