
Consultation Analysis: Energy Efficient Scotland: Making our homes and buildings warmer, greener and more efficient

Analysis of responses to the public consultation exercise



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Executive Summary

This summary presents the main findings from the analysis of responses to the consultation on Energy Efficient Scotland: Making our homes and buildings warmer, greener and more efficient.

The main focus of this consultation was on proposals for setting long-term domestic energy efficiency standards for homes in the private rented and owner occupied sectors. It also sought views on standards for non-domestic buildings, use of Energy Performance Certificate (EPC) data, and on potential legislative changes.

The consultation opened on 2 May 2018 and closed on 27 July 2018. It asked 32 questions. In total 130 responses were received, of which 94 were from groups or organisations and 36 from individual members of the public.

All homes must reach at least an EPC Energy Efficiency Rating Band C by 2040, where technically feasible and cost-effective

Some respondents made a broad statement of support for the proposals or agreed the value of setting long-term targets, although approval was frequently accompanied by a caveat that the date specified should be earlier than 2040.

Various concerns were raised with aspects of the current EPC system. These included that some properties may be unable to achieve Band C, for example as a result of their traditional construction type, rural location, or being off-gas grid.

Situations where a lower standard is acceptable

A substantial majority of respondents thought there should be situations where a lower standard is acceptable. The most frequently cited were: hard-to-treat buildings; listed buildings; when measures are not cost-effective; in mixed tenure buildings; in remote or island locations; and where measures are not technically feasible.

The small number of respondents who did not agree argued that an EPC C rating is deliverable for most properties and that new technologies will also assist.

Situations where a longer period for improvement is allowed

A majority of respondents thought there should be situations where a longer period for improvement is allowed. Frequently cited examples included: where improvements are very expensive or unaffordable; where other repairs to the building fabric are also required; where there are limited supply chains; where consent or financial contributions from multiple owners are required; and where occupants (often tenants) find the required work too disruptive or to have health impacts, or when work would be better carried out when properties become vacant.

Among respondents who did not agree with extensions being given, the most frequent reason was that the proposed time scales are already long enough.

Definition of a cost-effective measure is that it should payback over its lifetime

Some respondents who commented argued that more information is required about who would make decisions and on the payback calculation. There were calls for the definition of 'cost-effective' to be clarified.

With respect to the private rented sector, it was argued that the concept of payback does not apply in the same way, as the landlord makes the investment but the tenant benefits from reduced energy bills. It was thought that rents are likely to rise.

Air quality and the Long-Term Domestic Standard (LTDS)

Some respondents agreed that air quality is an important issue which the Scottish Government is right to consider in relation to the LTDS. While acknowledging the importance of good ventilation, a small number of respondents also pointed to the role of occupier behaviour in creating some of the problems with dampness and mould.

Taking account of changes to the underlying methodology and to fuel price data

It was acknowledged that EPC methodology or data needs to be updated, including to reflect the advent of new technologies. A process for fast tracking new innovations was proposed.

There were mixed views on the possibility of employing conversion tables to correct for variations in EPC methodology over time.

Proposal that all Private Rented Sector (PRS) properties meet EPC Band C by 2030

There was widespread agreement with the proposal that all PRS properties should achieve EPC Band C by 2030. Setting out a long-term trajectory and/or a staged approach were also supported.

Among respondents who disagreed with the proposal, the most frequent argument was that the policy is not realistic, particularly with respect to traditional or hard-to-treat properties, those in rural areas, or those that are off-gas grid.

Proposal for an initial period of encouraging action for owner occupiers

Comments from those who agreed with the proposal included that it is a reasonable or positive approach, or that it allows time to develop regulatory mechanisms.

Respondents who did not agree tended to take one of two positions: that the policy represents government interference in a matter of personal choice, or that there is no evidence that a further period of encouragement will be effective.

Information that would be useful for householders for owner occupiers

Comments tended to focus on access to practical information on appropriate improvement options, their cost and likely savings, funding opportunities, and finding reliable or approved contractors.

Provision of advice online, by telephone, face-to-face, or in the home were all proposed, as was the need for advice to be simple, user friendly and tailored to vulnerable households where appropriate.

Proposal to follow the initial period with mandating action for owner occupiers

Respondents who expressed a clear view that the Scottish Government should not follow a period of encouragement with mandating action tended to argue that this is interference in a matter of personal choice, or that incentives are required instead.

Among respondents who supported the proposal, the most frequently made points were that mandatory action will be needed to achieve targets and that householders will need to know what the sanctions for non-compliance will be.

Proposal that 2030 is the right point to start mandating action to achieve EPC Energy Efficiency Rating Band C

Among respondents who agreed that 2030 is appropriate, comments included that this gives enough time for raising awareness. Some respondents added caveats, such as the need for appropriate exceptions and grant funding to be available.

Some respondents, predominantly individuals, argued that there should be no mandatory action at all, particularly in relation to the owner occupied sector.

Proposal for owner occupied properties to be subject to penalties for non-compliance

Among respondents who thought owner occupied properties should be subject to penalties for non-compliance, arguments included that a voluntary system alone is unlikely to be effective.

Respondents who did not consider a penalty for non-compliance to be advisable or acceptable argued that the policy compromises freedom of choice, is not possible or practical to achieve in some cases, or may have adverse effects on the housing market.

Requiring all types of accommodation to meet the LTDS over time

Some respondents thought that all types of accommodation should meet the LTDS, including because of the importance of combating fuel poverty.

Among those who commented specifically on park or mobile homes there were mixed views. The majority of those commenting argued that agricultural tenancies, Houses in Multiple Occupation and holiday lets should be covered by the LTDS.

Proposal that all homes with fuel poor households are to reach EPC Energy Efficiency Rating Band C by 2030, where technically feasible and cost-effective

Some respondents who agreed with the proposal, or who agreed in principle, highlighted the importance of removing poor energy efficiency as a driver for fuel poverty or noted associated potential benefits such as improved health outcomes.

The complexity of fuel poverty was highlighted, and the Scottish Government was advised to link energy efficiency to other strategies relating to tackling fuel poverty.

Proposal that all homes with fuel poor households are to reach EPC Energy Efficiency Rating Band B by 2040, where technically feasible, cost-effective and possible within limits affordable to the public purse

Respondents who agreed with the ambition commented on the value of setting out a long-term trajectory, including that it may be most cost-effective to improve to a higher standard in one go.

Points made by respondents who did not agree included that the proposed standard may be too ambitious or unattainable unless publicly funded.

What the Energy Efficient Scotland Assessment Short Life Working Group (SLWG) should also consider

Suggested topics for the SLWG to consider included: alignment with other policy initiatives and broader housing needs; definitions of 'technical and feasible' and 'cost-effective'; and guidance on how cost-effectiveness will be measured. There was also a focus on consumer protection.

Whether the Long-Term Domestic Standard should be enforced at a local or national level

Reasons given for enforcement at a local level included the importance of local knowledge, the relevant information already held by Local Authorities, and possible synergies with other Local Authority functions.

Points in favour of enforcement at national level included that this would facilitate a uniform or consistent approach or that Local Authorities do not have the resources or capacity to enforce the policy.

Specific building characteristics to be included in research to ensure that future improvement targets reflect the diverse nature of our non-domestic building stock

A majority of respondents thought that specific building characteristics should be accounted for in research. Issues were raised about the importance of considering the design, purpose or use of a building. It was suggested that any research would need to consider the occupancy of a building and occupant behaviours.

The way calculated energy use from building assessments are is presented and/or benchmarked

Views on assessing energy performance against a notional building specification were mixed, with some supporting the approach, including because it could enable more accurate and better aligned assessments for different types of buildings. Others raised concerns, including that varying conditions across different parts of Scotland need to be taken into account.

Proposed planned work to review improvement targets

Some respondents noted their support for the review of improvement targets. It was hoped that the review will help in setting realistic targets, providing predictions for future energy savings and producing data on real energy savings. It was suggested the review should cover the scope, impact and resource implications of targets.

Proposals for phasing the regulations from 2020

Some respondents supported the proposals for phasing of regulations from 2020. Further comments included that the approach allows time to secure funding for improvements and for markets and supply chains to develop. An alternative proposal was harmonisation of dates for both non-domestic and domestic property.

Should advice and support to invest in the energy efficiency of industrial or manufacturing buildings align with wider advice and support on how to reduce energy consumed for productive processes

A majority thought advice and support should be aligned with wider advice and support on how to reduce energy consumed for productive processes. In terms of the range of advice and support needed, comments included that many manufacturing and industrial processes require very specialist expertise to assess cost-effective energy efficiency improvements.

What more could the Scottish Government could do to encourage the public sector to accelerate energy efficiency across their building stock

The issue of capital funding and resourcing Local Authorities to drive acceleration on energy efficiency improvements in the non-domestic public buildings stock was raised frequently, including with a proposal for grant funding to Local Authorities.

What more the Scottish Government could do to encourage the public sector to accelerate heat decarbonisation across their building stock

General comments included that fabric improvements should precede decarbonisation of heating. Respondents also identified issues which, if addressed, could help accelerate heat decarbonisation - for example, encouraging more private sector businesses to connect to district heat networks.

Additional data to help building owners in the delivery of the Energy Efficient Scotland Programme

Some respondents focused on the provision of information, advice and guidance, including on the range of energy efficiency measures available and installation and running costs. The importance of independent expert advice was highlighted, as was the need for advice to be tailored to the building.

Additional data that would be helpful to others in the delivery of the Energy Efficient Scotland Programme

Some respondents noted that it would be helpful if private businesses had access to more of the data collected. Suggestions about the type of information it would be helpful to hold in a central database included: up-to-date EPC data; and an indication of a 2040 Band C exception (if exceptions are adopted).

Particular types of resources or tools that would be useful

Comments frequently focused on interactive online tools. Advantages of this type of approach included that it would allow owners to benchmark performance of their own building with other similar buildings. Case studies to help owners understand the benefits of different improvement solutions were proposed.

Specific comments or observations on the future use of the data that is gathered from energy assessments

It was suggested that more could be done to monitor and enforce standards of practice in energy assessment to support the collection of more accurate data. There were also calls for more end-user friendly presentation of data.

The implementation and enforcement of existing legislation relating to energy efficiency and heating of buildings in Scotland

General comments included that without a robust quality and standards framework, there is a risk that the Energy Efficient Scotland Programme will not deliver the outcomes the Scottish Government is hoping for.

There was a concern that new legislation will place more responsibility for implementation and enforcement on to Local Authorities and, as at previous questions, the resource implications for Local Authorities were highlighted.

Changes needed (if any) to this existing legislation

Areas of legislation or regulation to which respondents thought changes might be required were refurbishment or extension of existing buildings, and quality standards for the thermal retrofit industry. More broadly, it was felt that Local Authorities will need direct legislative mandates to develop and implement Local Heat and Energy Efficiency Strategies (LHEES).

Other elements of the programme that may require new or amended legislation to enable the Energy Efficient Scotland Programme to operate

Comments were that there should be a statutory framework for Energy Efficient Scotland, including targets and scrutiny provisions. The need to integrate with other relevant policy developments was highlighted, with reference to the new fuel poverty targets and the strategic fit with Local Housing Strategies and LHEES.

Organisation(s) responsible for delivering any new legal requirements

Most frequently, respondents thought that the Scottish Government and Local Authorities together should be responsible for delivering any new legal requirements. Other respondents thought an independent body should be responsible for enforcement.

Introduction

Background

This report presents analysis of responses to the Energy Efficient Scotland Consultation: Making our homes and buildings warmer, greener and more efficient.

Energy Efficient Scotland brings together work to improve the energy efficiency of Scotland's buildings under a programme that will run until 2040, previous consultations having identified a consensus that long-term standards are essential to allow property owners to plan for the future. The vision that, by 2040, homes and buildings will be warmer, greener and more efficient supports the Climate Change Plan, the Energy Strategy, and also Scottish Government action to reduce fuel poverty.

The main focus of this consultation was on proposals for setting long-term domestic energy efficiency standards for homes in the private rented and owner occupied sectors. It also sought views on standards for non-domestic buildings, use of Energy Performance Certificate (EPC) data, and on potential legislative changes that may be required.

The consultation opened on 2 May 2018 and closed on 27 July 2018. The consultation paper is available at: <https://consult.gov.scot/better-homes-division/energy-efficient-scotland/>.

Partner consultation

In parallel with the Energy Efficient Scotland consultation, the Scottish Government also ran a consultation on the Energy Efficiency Standard for Social Housing post-2020 (ESSH2). This consultation sought views on proposals for new milestones for the Energy Efficiency Standard for Social Housing.

The ESSH2 consultation paper is available at: https://consult.gov.scot/better-homes-division/social-housing-post-2020/user_uploads/00534991.pdf.

Profile of respondents

In total 130 responses were received to the Energy Efficient Scotland consultation, of which 94 were from groups or organisations and 36 from individual members of the public. The majority of responses were received through the Scottish Government's Citizen Space consultation hub. Where consent has been given to publish the response it may be found at https://consult.gov.scot/better-homes-division/energy-efficient-scotland/consultation/published_select_respondent.

Respondents were asked to identify whether they were responding as an individual or on behalf of a group or organisation. Organisational respondents have been allocated to one of ten categories by the analysis team. A breakdown of the number of responses received by respondent type is set out in Table 1 below and a full list of organisational respondents can be found in Annex 1.

Table 1: Respondents by type

Type of respondent	Number
Organisations:	
Academic	3
Building component manufacturers or services	13
Energy related private sector	17
Housing Association	1
Local Authority	22
Other	2
Private landlord or property management	8
Professional or representative body	12
Public sector or body – other	4
SG delivery agent	2
Third sector	10
Organisations	94
Individuals	36
All respondents	130

Analysis and reporting

In total there were 32 questions, of which four had a multiple-choice element that has been analysed quantitatively. The remainder were open questions.

The remainder of this report presents a question-by-question analysis of the comments made. A small number of respondents did not make their submission on the consultation questionnaire but submitted their comments in a statement-style format. This content was analysed qualitatively under the most directly relevant consultation question.

As with any public consultation exercise, it should be noted that those responding generally have a particular interest in the subject area. However, the views they express cannot necessarily be seen as representative of wider public opinion.

A list of acronyms used in the report is provided at Annex 2.

Improving our homes

The section of the consultation paper entitled ‘Improving our homes’ explains that, as set out in the Route Map, the Scottish Government proposes setting a Long-Term Standard for energy efficiency in the domestic sector, to be met by 2040. This will be a minimum of EPC rating of Band C for the domestic sector as a whole, although some tenures will be asked to achieve an earlier and/or higher energy efficiency rating. Specifically:

- Social landlords will be set a target of maximising the number of social-rented homes that meet EPC Band B by 2032. This standard is covered by a separate consultation¹ and is not addressed directly in this report.
- For the private rented sector (PRS), a target of properties achieving a rating of EPC Band C or better by 2030 is proposed. Current standards for the PRS - a minimum of EPC Band E by the end of March 2022 and then Band D by the end of March 2025 - were consulted on in 2017.²
- For owner occupied properties the target is to maximise the number of homes achieving EPC Band C by 2030, and that this rating should be achieved by 2040 at latest.

Additionally, a target for fuel poor households, regardless of tenure, of improvement to EPC Band C by 2030 and Band B by 2040 is proposed.

All homes must reach at least an EPC Energy Efficiency Rating Band C by 2040, where technically feasible and cost-effective

Question 1 - What are your views on our proposal for owner occupied and private rented properties to achieve the Long-Term Domestic Standard EPC Energy Efficiency Rating Band C by 2040 at the latest?

Some respondents, from a broad range of respondent types, made a general statement of support for the proposals or agreed the value of setting long-term targets. However, approval of the principles was frequently accompanied by caveats, primarily that the date specified should be earlier than 2040. Again, this was raised by a broad range of respondent types.

Among alternative suggestions, the most frequent position was that 2030 would be a more appropriate date, a view more commonly held by Third sector and Scottish Government delivery agent respondents. A motion passed in the Scottish Parliament on 10 May 2018 stating that ‘where feasibly possible the target date for

¹ The consultation on the Energy Efficiency Standard for Social Housing post-2020 (EESH2) is available at <https://consult.gov.scot/better-homes-division/social-housing-post-2020/>.

² The consultation on Energy Efficiency and Condition Standards in Private Rented Housing is available at <https://consult.gov.scot/better-homes-division/energy-efficiency-programme/>.

all homes to achieve an EPC Band C rating should be 2030 not 2040³ was referenced.

Different combinations of EPC ratings, dates and tenures were also proposed, in each case by one or a small number of respondents, including a minimum of:

- Band C by 2025 for PRS properties.
- Band C by 2032 for all homes.
- Band C by 2035 for owner occupied properties.
- Band C by 2035 for all homes.
- Band B by 2035 for all homes.
- Band B by 2040 for all homes.

It was argued that problems may be created by having different standards for different tenures - for example, when seeking to improve efficiency in multi-tenure blocks.

The need for additional milestones or interim targets was also proposed, in order to ensure progress is on track or to incentivise early action.

Absence of details on how many households the Scottish Government expects to lift out of fuel poverty by improving homes to EPC Band C was noted, as was lack of any indication of how the proposals might be implemented, monitored or enforced.

Respondents who described the proposals as ambitious or challenging came from a broad range of respondent types and were often amongst those highlighting the need to provide property owners with grant funding or other incentives if targets are to be achieved. The need to ensure that advice and support are made available was also noted, and that this should be both impartial and specific.

Some respondents who expressed concerns regarding the proposals felt they were unrealistic or potentially too ambitious. Private landlord or property management respondents more frequently made this point.

Whilst this is an admirable target we do not view this as feasible... it is our opinion that it would be unrealistic to expect existing dwellings, especially much older ones, to achieve this target.

Private landlord or property management respondent

Instances cited where Band C might be unrealistic were older buildings of traditional/stone-built construction, including tenements, and in rural areas. It was also noted that the Scottish Government has changed the position set out in the 2017 consultation on Energy Efficiency and Condition Standards in Private Rented Housing with regard to raising the standard beyond Band D.

³ A record of the debate is available at:

http://www.parliament.scot/parliamentarybusiness/report.aspx?r=11519&mode=html#job_104557

The median cost of £3,500 quoted in the consultation paper as the Scottish Government's estimate of the expenditure needed to bring a private sector property to Band C was queried, particularly with respect to older properties, and to rural and island areas where installation costs may attract an additional premium. Whether an impact assessment for islands had been carried out was questioned. Experience from England of higher costs required to achieve only Band E energy efficiency ratings was also cited. The degree to which even £3,500 can be considered affordable to households on low incomes or in fuel poverty was queried.

Potential gaps in supply chains in some areas were noted.

Respondents from a broad range of respondent types raised concerns regarding aspects of the current EPC system. These were that:

- Some properties may be unable to achieve Band C, for example as a result of their traditional construction type, rural location, or being off-gas grid.
- Some of the improvement measures recommended by the EPC might have a negative effect on building performance were they to be installed, for example by reducing ventilation and encouraging dampness.
- The EPC score relies on too many assumptions, and assessments have been inconsistent.
- The state of repair of the property is not considered.
- Actual energy consumption is not reflected, and occupier behaviour should be tackled as well as improving the fabric of buildings.

It was suggested that although they may never achieve Band C using present EPC methodology, many traditional buildings provide habitable homes. It was argued both that these homes should not be put out of use, and that their value may be adversely affected if potential purchasers are concerned over future liabilities. An impact assessment on the housing market was proposed. It was also argued that future changes in EPC methodology may mean that requirements to achieve a Band C rating in 2040 will be very different to those at present.

The methodology of the EPC system is discussed further at Question 6, but concerns regarding EPCs were also a theme in responses at other questions. Two respondents cited the need to ensure that:

... any work and expense is based on accurate EPCs in which the consumer has confidence...

Professional or representative body respondent and
Private landlord or property management respondent

The importance of setting out what is covered by 'technically feasible and cost-effective' was noted, and it was argued that this should be defined as soon as possible rather than in 2020. The importance of a regulatory system having the flexibility and exceptions available to limit the standard to that which is technically

feasible and cost-effective was also noted. What is meant by 'able to pay' was also seen as unclear and it was felt that a definition is urgently required.⁴

Finally, several respondents - primarily Individuals - expressed general opposition to the idea of any mandatory standards or enforcement action in relation to owner occupied property, a theme which also ran through several of their responses at later questions:

Not the job of the state. We are talking private property.

Individual respondent

It was argued that there should be wider discussion about such a level of state intervention.

Exceptions to the proposed Programme Long-Term Domestic standard (private rented and owner occupied homes)

While Question 1 asked for respondent's views on setting a Long-Term Domestic Standard (LTDS) of EPC C by 2040 at the latest, Questions 2 and 3 sought views on whether there should be circumstances in which lower standards or longer times are acceptable. Both questions had a closed, multiple choice element, followed by an opportunity to comment.

Question 2 - Do you think we should allow for situations where a lower standard is acceptable?

Responses to Question 2 by respondent type are set out in Table 2 overleaf.

⁴ The Scottish Government now uses the term 'self-funding' households rather than 'able to pay'.

Table 2: Question 2 - Responses by type of respondent.

	Yes	No	Don't know	Not answered	Total
Organisations:					
Academic	2	1			3
Building component manufacturers/services	6	2	2	3	13
Energy related private sector	10		1	6	17
Housing Association				1	1
Local Authority	20			2	22
Other		1		1	2
Private landlord or property management	8				8
Professional or representative body	9		1	2	12
Public sector or body - other	2		1	1	4
SG delivery agent	2				2
Third sector	8			2	10
Total organisations	67	4	5	18	94
Individuals	28	5		3	36
All respondents	95	9	5	21	130

A substantial majority of respondents who answered the question thought there should be situations where a lower energy efficiency standard is acceptable.

The analysis below is divided broadly according to the respondent's answer at the closed element of the question. Points made by respondents who selected 'do not know' or who did not answer the closed element are included where most appropriate.

Yes, there should be situations where a lower standard is acceptable

Some of those who thought a lower standard should be acceptable made points concerning perceived flaws in the current EPC system. These were that the EPC rating does not reflect the real performance of traditional buildings, does not take account of fittings such as shutters or heavy curtains, and does not reflect actual energy consumption which is also affected by choices made by occupants. The disadvantage to properties that are off-gas grid was also observed, as was a risk that some recommended measures may cause harm to traditional buildings. EPC ratings are discussed further at Question 6. These concerns were voiced by respondents from a broad range of respondent types.

Specific circumstances

Examples of specific circumstances in which acceptance of lower standards might be necessary were given by most respondents. The most frequently cited are set out below and, in each case, were highlighted by respondents from a broad range of respondent types.

- For hard-to-treat buildings – typically older, traditionally-constructed properties that may be unable to achieve EPC Band C in a cost-effective manner. While some respondents made points relating to high costs and technical difficulties in improving such properties, it was also argued that there should be a move towards amending the Tolerable Standard to support the removal of properties that cannot be improved to an acceptable minimum standard from the housing stock.
- For listed buildings and buildings in conservation areas or where planning permission is required. Although the importance of balancing possible savings against preserving the character of traditional buildings was noted, so too was consideration of Listed Building legislation and a more pragmatic approach regarding use of modern materials to ensure listed buildings can be improved. Work to establish how heritage buildings can meet as high energy performance standards as possible was also proposed.
- Where the recommended measures are not cost-effective or not affordable. While some respondents cited cost to achieve Band C as a reason for an exception to be given, there were also arguments against exceptions on grounds of affordability, identifying the need for financial assistance to be provided instead. It was highlighted that homeowners who cannot afford improvements may seek an exception rather than seek support, and that they must be made aware of the help available.
- In situations where permission or financial contributions from multiple owners/tenures are required and a consensus may be hard to achieve, particularly where there is no factoring agreement. The need for further work to establish how lower standards might be applied to flats was noted. However, one Local Authority respondent pointed out that in their region, a significant proportion of households in fuel poverty live in privately rented tenement flats, often in mixed tenure buildings, and that there was a need to ensure vulnerable groups do not fall through the net.
- For remote, rural or island locations where properties are often of traditional construction type and off-gas grid, and installation costs are high. It was also argued that higher costs associated with work in rural areas should be factored into funding arrangements, and that consideration for island communities would be appropriate in the light of the Islands (Scotland) Act 2018.
- Where measures are not technically feasible.

In addition, small numbers of respondents suggested the need for lower standards to be acceptable where:

- There are issues related to local infrastructure. An example given was low water pressure making installation of a combination boiler inappropriate.
- Other targeted reductions (such as LED lighting or heating system optimisation) are possible.
- Electricity is used for heating if there is no practical alternative.

- The proposed measures may be harmful to air quality or to the health and wellbeing of the occupier.
- Measures such as wind turbines are inappropriate for the landscape.
- Owner occupiers do not wish to improve their property.

More generically, acceptance of lower standards in situations similar to those permitted in the social sector under EESSH was proposed.

Aspects of any exception procedure

Although in favour of at least one circumstance where a lower standard should be allowed, several respondents also identified limits or controls that they would like to see imposed, including that there should be:

- A limited number of exceptions. Third sector respondents were amongst those raising this issue.
- A clear, transparent, standardised approach with appropriate guidance provided.
- A requirement to produce evidence in support of an application for a lower standard to be applied.
- Regular reviews or temporary, time-limited exceptions as development of new technologies may mean that the reason for an exception being granted no longer applies.
- Robust policing or effective enforcement, including competent experts to investigate and adequate resources to manage the process.

Any use of exemptions must be robustly policed, so that avoidance of the standard is only possible where genuine reasons exist.

Professional or representative body respondent

It was also argued that properties should be improved as far as possible and not given complete exemptions. Specifically, it was suggested that a lesson could be learned from implementation of Minimum Energy Efficiency Standards in England and Wales.

Other issues raised

A small number of respondents thought that relaxation of energy efficiency standards in some situations might be linked to the decarbonising of energy sources, with one proposal that a lower rating (or a later date) might be permitted where the heat source is low carbon. It was also noted that at national level, overall energy efficiency savings required to meet 2050 decarbonisation targets will depend on the pathway for electricity generation in the Energy Strategy, and also that the Scottish Government will need to understand where any shortfalls in energy savings in the domestic sector can be made up elsewhere in the economy.

Potential effects on the rental property market were suggested, including that failure to allow lower standards for some traditionally built properties may result in these

being removed from the rental market, reducing the size of the market or leading to higher rents as landlords seek to recoup investment.

The risk of damage to public perception of the Programme by problems associated with retrofitting was also highlighted, for example issues associated with cavity wall insulation. The importance of adequate training of installers was noted, both to avoid negative consequences associated with poor installation and also to help with the promotion of retrofit to households.

It was cautioned that care should be taken to ensure that granting exceptions does not result in lower standards being considered acceptable across whole areas of rural Scotland, while funding flows elsewhere. Further, since the properties affected are likely to be those where improvements would have greatest benefit for both the occupier and the environment, it was suggested that work to identify whether other support could be put in place will be important. An example given was provision of a personalised home energy advisory service to help occupants understand how their behaviour affects energy use.

No, there should not be situations where a lower standard is acceptable

A small number of respondents from a range of respondent types argued that:

- An EPC band C rating is deliverable for all but a few properties and, as new technologies reach the market, still higher standards may be possible.
- A property being harder to improve is not a reason to leave households living with a poor standard of energy efficiency:

If the aspiration is to bring all households to a basic standard of EPC C, then no one should be left behind simply because they reside in a property that is rented or is harder to improve.

Other respondent

- Action in retro fitting buildings has been slow and allowing lower standards will not support meeting targets.

Since landlords are running a business, it was argued they should be required to meet minimum standards, or that there could be a cap on rental costs for properties where a lower minimum energy standard has been allowed.

Question 3 - Do you think we should allow for situations where a longer period for improvement is allowed?

Responses to Question 3 by respondent type are set out in Table 3 below.

Table 3: Question 3 - Responses by type of respondent.

	Yes	No	Don't know	Not answered	Total
Organisations:					
Academic	2	1			3
Building component manufacturers/services	3	4	2	4	13
Energy related private sector	8	2	2	5	17
Housing Association				1	1
Local Authority	18	1	1	2	22
Other	1			1	2
Private landlord or property management	7		1		8
Professional or representative body	7	1	1	3	12
Public sector or body - other	2		1	1	4
SG delivery agent	2				2
Third sector	6	2		2	10
Total organisations	56	11	8	19	94
Individuals	24	6	3	3	36
All respondents	80	17	11	22	130

A majority of respondents who answered the question thought there should be situations where a longer period for improvement is allowed. Building component manufacturers or services respondents were the only group in which a majority who answered the question did not agree.

As at the previous question, analysis below is divided broadly according to the respondent's answer at the closed element of the question, with points made by respondents who did not know or who did not answer the closed element included where most appropriate.

Yes, there should be situations where a longer period for improvement is allowed

A small number of respondents who agreed that there should be situations where a longer period is allowed thought that extensions would be preferable to accepting a lower energy efficiency standard. Others, largely Individual respondents, reiterated a view that standards should not be imposed upon the owner occupied sector at all or that the EPC system is not currently fit for purpose. The need for more detailed information on resources and interim targets to be provided was also identified.

Specific circumstances

Examples of specific circumstances in which extensions might be necessary or appropriate were often given. The most frequently cited were:

- Where improvements are very expensive, not cost-effective, where the owner cannot afford the recommended measures or where improvements are more affordable when costs are spread over a longer period. Local Authority and Individual respondents more frequently made this suggestion. However, it was also suggested that lower income households should seek support to make improvements rather than avoid taking action.
- For older, traditionally-constructed or poorly performing properties where complex, technical or expensive measures are needed.
- For listed buildings, buildings in conservation areas or where planning permission is required.
- When other repairs to the building fabric are also required or are needed before energy efficiency measures can be installed:

There is no point in installing energy efficiency improvements if the property has a leaky roof or damp issues from concrete pointing.

Local Authority respondent

- Where there are limited supply chains or where specialists on traditional buildings are required. Potential bottlenecks and inflated costs before compliance dates were also suggested.
- In situations where consent or financial contributions from multiple owners are required. However, the need for further policy or legislation to allow resolution of such problems was also highlighted.
- For remote, rural or island locations where properties are often of traditional construction type and off-gas grid, supply chains are limited, and installation costs are high.
- Where the occupants (often tenants) find the required work too disruptive or to have health impacts, or when work would be better carried out when properties become vacant.

Some of the works required to improve the energy efficiency of properties can be extremely disruptive... Dispensation should be made so as to reduce disturbance and disruption for tenants.

Private landlord or property management respondent

- Where major projects, including planned area based schemes such as district heating, will bring significant benefits.

Small numbers of respondents noted the need for extensions where:

- Suggested measures are not technically feasible or cost-effective.
- Works (such as installation of exterior wall insulation) are weather dependent.
- Protected species (such as bats) are present.

- Gaining access to a rented property is problematic.
- Grant funding is not available.
- New technologies may become available, potentially allowing a move directly to a higher standard. However, it was also argued that since technological advances follow requirements, extensions will reduce urgency and divert resources away from innovation.

Other ideas, each raised by only one or a small number of respondents, were extensions in areas relying on tourism, in regeneration areas and for park homes. More general ideas were that an extension should be considered where a chartered surveyor confirms that installation of proposed measures would devalue a property, or that, for uniformity across sectors, the same reasons for a property to be exempt from EESSH should be applied to owner occupied and private rented properties.

With respect to the PRS in particular, the importance for new regulations to be compatible with the new Private Housing (Tenancies) (Scotland) Act 2016 was highlighted. It was also noted that proposed abeyances were included in the 2017 consultation on Energy Efficiency and Condition Standards in Private Rented Housing⁵ but that these have yet to be published, resulting in uncertainty and concern for some property owners.

Aspects of any extension procedure

Although in favour of at least one circumstance where more time should be allowed, several respondents also suggested limits or controls that they would like to see imposed.

Academic and Local Authority respondents were amongst those arguing that the number of situations meriting extensions should be limited and be the exception rather than the rule, and that they should be clearly defined and consistently applied, with creation of loop holes avoided. Other suggestions were the need for the procedure for seeking an extension to be free, simple and quick, and for a generic 'reasonable excuse' provision, accompanied by guidance on specific situations which are not considered as reasonable excuses.

A requirement to investigate requested extensions or to provide evidence was proposed by a small number of respondents, as was the need for qualified assessors to make decisions regarding extensions, and that verification by Local Authorities might be appropriate for some criteria. Agreement of an alternative pathway to achieve compliance was also suggested, as was evidence that owners are developing strategies to reach the levels for more challenging 2050 targets.

With respect to the duration of any extensions, both limited times and regular reviews were seen as important to establish whether new technologies or funding streams have become available in the interim.

⁵ The consultation on Energy Efficiency and Condition Standards in Private Rented Housing is available at <https://consult.gov.scot/better-homes-division/energy-efficiency-programme/>.

With respect to enforcement, a small number of respondents argued that sale or rental of properties that do not meet required standards could be prevented, but also that a rigid approach to enforcement should be avoided where there has been progress towards compliance and there are plans to complete outstanding works. In tenements and shared properties, it was argued that any enforcement action should be directed at those owners responsible for the delays rather than all owners in the building. A subsidy to tenants of a property with an exception or abeyance was also suggested:

... there should be consideration of whether there should be some kind of subsidy ... such as reducing council tax rates for properties that can't meet the standard, to even the playing field for those tenants.

Third sector respondent

Issues associated with enforcement are discussed further at Question 10.

Other issues raised

It was thought that care should be taken to ensure that granting of extensions does not result in improvements being delayed across whole areas of rural Scotland, while funding flows elsewhere. Further, since the properties affected are likely to be those where improvements would have greatest benefit for both the occupier and the environment, it was suggested that work to identify whether other support could be put in place will be important. A Health Inequalities Impact Assessment to determine the health impact of allowing a longer period for compliance was also proposed, to inform actions the Scottish Government could take to mitigate impacts identified.

No, there should not be situations where a longer period for improvement is allowed

Amongst respondents who did not agree with extensions being given, the most frequently given reason was that the proposed time scales are already long enough. Third sector and Individual respondents were amongst those taking this view. Arguments were that if exceptions are available there should be no additional requirement for extensions, or that granting extensions weakens the Scottish Government's message:

Allowing for longer periods, in addition to exemptions/reduced standards, risks creating confusion and weakening the message 'all homes to EPC C'.

Building component manufacturers or services respondent

In fact, several of these respondents did cite a small number of circumstances when extensions might be necessary, although that these should be only in exceptional circumstances or if a clear case for a significantly improved outcome can be made.

Respondents also pointed to the potential benefits of carrying out all the improvements to move a property to a good EPC rating in one go, rather than adopting an incremental approach that may be less cost-effective or necessitate more episodes of disruption. With respect to disruption to households, experience

from Scotland's Energy Efficiency Programme⁶ (SEEP) Phase 1 pilots was quoted, including findings that tailoring improvement measures according to the capacity of a household to cope with disruption (for example, avoiding internal wall insulation) resulted in higher uptake of measures.

Finally at Question 3, both respondents who agreed with extensions, and those who did not, pointed to the importance of communicating any new standards to property owners to raise awareness.

Technically feasible and cost-effective

Question 4 - We are proposing that the definition of a cost-effective measure is that it should payback over its lifetime. What are your views on this definition?

Some respondents, from a broad range of respondent types, expressed general agreement with the definition, commenting that it is reasonable, fair or offers a sensible approach. Others, again from a broad range of respondent types and including a number of Individual respondents, noted specific questions, concerns or reservations, while some took a rather more negative view including that the idea of payback over a lifetime is flawed, or that the policy should not be imposed unless the Scottish Government pays for improvement measures.

Defining the 'lifetime'

Some respondents who commented on the concept of the lifetime of a measure argued that this is too vague or subjective, or that more information is required including who would make such decisions and detail on the payback calculation to be used. It was questioned whether the payback would be theoretical or measured, and whether it would be tailored to an individual building. The importance of producing a clear, reliable definition was highlighted, and also that because the lifetime of a measure may vary according to weather conditions, criteria should not be the same across the country. Other points raised, in each case by one respondent, were:

- Lifetime may be dependent on both level of use and maintenance.
- The lifetime of some newer technologies is unknown as they have not yet been installed for such a period.
- Some measures may be obsolete before they wear out.

The view that a lifetime is too long, or may be longer than property owners will accept was expressed, with alternative proposals - each made by only a very small number of respondents - that the appropriate payback period should instead be:

- 2 years.
- 3 years.

⁶ Scotland's Energy Efficiency Programme (SEEP) has now been developed further as Energy Efficient Scotland.

- 5 years.
- 10 years.

Other ideas were that the payback period should be: determined by the length of the guarantee provided with the efficiency measure or that it should be no longer than the guarantee period; that it should be a set period proportionate to the initial expenditure; that there should be a cap of 25 years; that for improvement to a building, it should refer to the fabric of the building itself; or that a measure should *at least* payback over its lifetime. A threshold limit, relative to property value was also proposed, as was a cost cap of £3,000. It was also noted that the proposal of cost-effectiveness over a lifetime represents a move away from the idea of a cost cap as discussed in the 2017 consultation on Energy Efficiency and Condition Standards in Private Rented Housing.

A further suggestion was that the definition does not provide an incentive to make early improvements, but rather to wait, in the hope that better or cheaper alternatives will become available.

Defining what is ‘cost-effective’

Some respondents felt that the definition of ‘cost-effective’ needs clarification, including how cost-effectiveness will be determined and by whom. Respondents also reported personal experience of suppliers making exaggerated claims about potential savings, or argued for the need for a source of accurate data, independent of manufacturers. It was observed that while the definition needs to be clear and well understood, it should also be sufficiently flexible to allow for different circumstances.

Experience from the Green Deal that anticipated energy savings are not always realised was also cited, along with an associated concern that some homeowners could be left in financial difficulties. Transparency, and consumer understanding of what ‘payback’ means, were regarded as essential, as well as a rule that benefits should not be transferable to third parties to assist with payment for improvements. A risk that promoting cost-efficiency in energy efficiency measures could be counter to public safety was also noted:

Some energy efficiency measures, particularly SWI, [solid wall insulation] can be executed at a low cost using combustible materials...

Building component manufacturers or services respondent

Other points on what cost-effective will mean in practice, each raised by only one or a small number of respondents, were querying which costs would be included or suggesting whole-life costing as a more suitable approach. Some respondents highlighted specific items that could be considered such as the cost of surveys and obtaining necessary permissions; installation costs; ancillary costs such as redecorating; maintenance or servicing charges; and interest on any loans. It was also noted that owners might face additional repair costs before an efficiency measure can be installed.

Variations in the cost of measures in different locations, typically in rural areas, were highlighted by a small number of respondents. Since rural and island premiums are not allowed for by EPC costings it was argued that this will have an impact on what is cost-effective. Similar points were made with respect to homes that are off-gas grid, and it was argued that payback periods must be specific to a property.

There was a view that variations in energy costs make it difficult to predict what is cost-effective over the longer term, and also that changes in the relative costs of energy from different sources could impact the payback period of some measures. The need for a mechanism to allow updating of the calculation to reflect changes in both energy prices and the cost of measures was suggested.

Other points raised with respect to cost-effectiveness, each by one or a small number of respondents were:

- Effective communication will be required to explain the definition to the public, for example by using case studies.
- There is a risk of excluding renewable technologies, which may cost more than conventional ones and may not pay for themselves over their lifetime, and also a risk of excluding new technologies that become available during the long payback periods associated with older measures.
- Actual energy use will make a significant difference to the payback period. For example, a household using a lot of energy because elderly occupants are at home all day will recoup investment much more quickly than a lone worker who is out all day and uses little energy to heat their home.
- Rather than reducing money spent on energy after making improvements, occupants may use the same amount of energy to make their homes warmer, meaning the measure would not be cost-effective according to the definition. Providing householders with support to realise energy savings was suggested as necessary if the definition is to be achieved.

The importance of impacts on household comfort as well as financial saving was highlighted, including by a small number of Third sector respondents, and it was argued that some measures (such as double glazing) may not payback in terms of energy savings, but do provide increased comfort for householders:

...if the home is warmer and uses less energy, which will in turn reduce carbon emissions, then this should be incentive enough. Making financial savings ... should be seen as just a bonus.

Energy related private sector respondent

Although not quantifiable as cost-effective to individual households, a small number of respondents made a case for including wider public benefits in the calculation of what is cost-effective. Reduced carbon emissions, reduced pollution and improved air quality, better health and wellbeing, and alleviating fuel poverty were all cited as valuable outcomes that are potentially overlooked by the proposed approach. Questions were raised about the implications for energy efficiency, climate change,

and fuel poverty targets if a significant number of properties cannot reach Band C using cost-effective measures.

Affordability and financial assistance

Some respondents observed that the proposed definition makes no link to household income, and could mean a high, possibly unaffordable outlay for owners. It was argued that both easily accessible grants or loans will be needed to encourage installation, and also that there is evidence to suggest grants and tax incentives are likely to be more attractive to homeowners than are loans. A link to council Schemes of Assistance was also proposed.

Long payback periods

Third sector respondents were among those who raised issues with respect to expensive measures with a long payback period, such as solid wall insulation. Points made included that the proposed approach could result in properties with solid walls being excluded, even though fuel poverty occurs disproportionately in such homes. It was argued that the Scottish Government could help by providing longer-term loan funding than is presently available.

Where owners plan to sell before costs will be recouped, it was suggested that their willingness to install measures which payback over a long period may be affected, and that they may instead select lower cost measures that are not the most suitable or cost-effective for a property in the long term. Highlighting the short-term advantages of measures with a long payback period was seen as important to encourage their uptake. Potential benefits such as higher sale prices were proposed, although other respondents argued that costs associated with energy efficiency measures are not currently recouped when a property is sold.

Potential consequences in the PRS

With respect to the PRS it was noted that the concept of payback does not apply in the same way, as the landlord makes the investment but the tenant benefits from reduced energy bills. It was reported that rents are likely to rise as landlords seek to recoup their costs. Private landlord or property management respondents were amongst those who made this comment.

The only way for landlords to secure a return on the costs of the capital expenditure is through increased rents – so rent rises are a natural consequence of this approach.

Professional or representative body respondent

With respect to regulated tenancies, where a rent officer and not the landlord controls the rent, it was argued that required spending should be discounted in proportion to any discounted rent level. In other circumstances it was suggested that the Scottish Government should monitor the situation to ensure that tenants are not penalised through higher rents that are not off-set by energy savings.

Air quality and the Long-Term Domestic Standard

As the consultation paper notes, indoor air quality is a key health issue but may be adversely affected by some improvements in energy efficiency. Proper use of energy and ventilation systems will help ensure air exchange rates meet recommended levels, and advice for households, including tenants in rented properties, will be vital to successful outcomes. The EESSH2 consultation proposes that the Scottish Government and social landlords work together at the earliest opportunity to collect and analyse data on air quality, with a no detriment air quality requirement to be included in EESSH2 from 2025.

Question 5 - What are your views on the issue of air quality in relation to the Long-Term Domestic Standard?

Some respondents, from a broad range of respondent types, agreed that air quality is an important issue which the Scottish Government is right to consider in relation to the LTDS. While the contribution of energy efficiency measures to poor air quality was acknowledged, it was also felt that this is outweighed by the benefits of a warmer home to good health. It was noted that similar issues are being addressed at UK level as part of development of the new PAS 2035, and it was recommended that any standard introduced in Scotland should align with PAS 2035. Attention was also drawn to related work by Defra and by the Fuel Poverty Working Group.

Other general comments were that data gathered under proposals in the EESSH2 consultation should be used to inform Energy Efficient Scotland policy across all tenures, but also that private sector housing stock may be very different in some respects. Further research and data collection across a range of building types and tenures were proposed, including by a small number of professional or representative body respondents.

Although monitoring of air quality was supported, practical issues were also raised including who would conduct tests and how they would be paid for. Suggestions were monitoring a sample of properties that have received a measure, and that tests should be carried out both before and after improvement works. A Local Authority respondent described a pilot study being developed to collect air quality data for both new and existing housing stock.

Problems identified

Lack of ventilation

It was observed that making homes airtight to save heat causes moisture from various sources to be retained within a property, potentially leading to dampness, mould growth, and harm to both human health and the fabric of the building. Sealed chimneys and UPVC double glazing were highlighted as reducing ventilation, while occupants taking more showers was also raised as contributing to excess moisture. It was argued that problems caused by poor ventilation may increase with the interventions required to reach higher efficiency ratings:

The dangers associated with this are likely to be greater where the most significant interventions are made to a building, and therefore will increase with introduction of requirements to reach EPC Band C.

Public sector or body – other respondent

Insulation

Insulation fitted to traditional buildings that were designed to breathe was often cited as a cause of condensation, including by a small number of Private landlord or property management and Local Authority respondents. Loft insulation with foil-backed materials was also identified as causing condensation problems for roof timbers.

Other factors affecting air quality

Other factors cited as contributing to poor indoor air quality were wood burning stoves with poor combustion conditions, contaminated wood, and coal fired boilers. The potential for outdoor air pollution in built-up areas to affect the indoor environment was also raised. Diesel/petrol vehicles and use of biomass/solid fuel sources were cited as particular problems, while the benefits of renewable energy were highlighted.

Problems associated with overheating and excess heat in summer were also cited, as were the potential harm caused by: work during the installation process; gases given off by building materials; radon; secondary smoking; and excessively dry air from heat pumps.

Occupant behaviour

While acknowledging the importance of good ventilation, a small number of respondents pointed to the role of occupier behaviour in creating some of the problems with dampness and mould, for example by blocking or closing vents.

Solutions proposed

Some respondents highlighted the need for a more holistic approach to avoid adverse outcomes.

Good design and standards

The importance of good design of retrofit measures was regarded as key to ensuring adequate ventilation. A small number of Third sector respondents were amongst those highlighting this issue. Specific proposals were that designs for insulation schemes should incorporate arrangements for ventilation, and it was noted that, for new build, designers are required to develop ventilation strategies to maintain constant air exchange. Setting and enforcing standards for domestic ventilation were suggested to be important, and that all schemes that will change either the mode or the rate of ventilation should be assessed by an appropriately qualified inspector.

Setting standards with respect to air quality was seen as providing manufacturers with a commercial incentive to develop solutions that can meet both energy efficiency and air quality requirements, potentially mitigating the need for improved ventilation.

Accredited advisors for traditional buildings were also proposed as a means to ensure appropriate design in such properties, as was the possibility that a lower standard of energy efficiency might be acceptable for particular types of property where retro-fitting of insulation could have adverse effects.

Technical approaches

Mechanical Ventilation with Heat Recovery (MVHR) was identified as a potential solution where passive ventilation is inadequate, including by a small number of Local Authority and Third sector respondents. However, issues associated with reliability, costs of routine servicing and maintenance and additional energy use were also noted, as was the need for occupants to be trained in their use. The need for improved MVHR systems was suggested.

Use of air-to-air heat pumps was seen as offering benefits in reducing moisture levels within a property, and also as improving air quality for properties where external pollution is an issue. Moisture extraction by dehumidifiers was also reported to be effective and energy efficient.

Financial support

Provision of funding for installation of ventilation measures where needed as part of a retrofit scheme was proposed.

Advice to households was considered to be essential by respondents from a broad range of respondent types:

It is essential that insulation schemes incorporate design and measures for good ventilation at the same time, along with advice for households so they understand how to use new technologies and maximise their benefit.

SG delivery agent respondent

Suggestions were that such advice could be delivered by energy assessors or by installers, that it should be free, tailored and face-to-face, or accessible and available in several formats. The importance of those involved in delivering building retrofit being trained to provide information and formally required to do so was also highlighted. Home Energy Scotland was identified as well-placed to link advice on achieving good indoor air quality to advice on heating systems and insulation.

Provision of advice on heating and ventilation systems to new tenants at the start of their lease was also proposed, although it was acknowledged it may be difficult to ensure the advice is followed.

Using EPCs for the Long-Term Domestic Standard

The consultation paper explains that EPC rating of a property is affected by its energy efficiency, the type of heating system in place, and the cost of fuel. As a result, it can change over time as the underlying methodology is refined to take account of the latest knowledge, and also by changes to the fuel price data used in the calculation. Views were sought on how best to take account of potential future changes to EPC ratings driven by changing methodology and fuel price data.

Question 6 - The EPC Rating of a property can be affected by changes to the underlying methodology and to fuel price data. How do you suggest that the Programme takes account of this in setting the Long-Term Domestic Standard?

Some respondents, including Energy related private sector, Local Authority and Individual respondents, referred to their concerns regarding the accuracy or consistency of EPC ratings. These issues have been outlined at other questions and are also discussed at Question 16, so are not repeated here beyond two general points: firstly, that a number of respondents argued for EPC methodology to be revised before the policy is implemented; and secondly, that the assessment process needed to reflect actual energy use and occupant lifestyle.

It was acknowledged that EPC methodology or data needs to be updated, for example to reflect the advent of new technologies, with suggestions including that the existing process is slow and expensive, and that new products have not been credited in assessments because they have not been added to the database. A process for fast tracking new innovations was proposed, and that in the absence of a quicker process for updates, a system similar to that proposed in the ESSH2 consultation should be adopted. However, it was also argued that consumers should not be penalised because a technology in which they have invested is superseded during its working lifetime.

It was suggested that how to take account of changes in EPC methodology could be an element of the Scottish Government's commissioned research into issues surrounding the EPC process, but also that since the EPC process is commercially owned⁷, there may be limited opportunity to influence its development. Further points were that EPC methodology has already been revised several times in recent years with suggestions that it would be helpful if definitions could be fixed for an agreed period or that the elements which can be fixed until 2040 could be explored.

When methodology is to be changed it was requested that this should be communicated clearly and at the earliest opportunity, and that properties approaching the end of an EPC's validity might be granted an extension if assessment criteria are to change. However, it was also felt that communication of a forthcoming change in methodology could lead to a rush to make improvements before a perceived higher standard was implemented.

Two issues were identified as consequences of changes in EPC data and methodology:

- A property might change EPC Band and, potentially, drop below the required standard for compliance, solely because of changes in EPC methodology or fuel prices while a certificate is still valid.

⁷ In fact, the EPC methodology is 'owned' by the UK Government. It is implemented via third party software with the exception of the basic iSBEM ND tool which is UKG owned.

- It is difficult to compare EPCs of different ages or to monitor progress towards targets accurately.

Changes to EPC scores while a certificate is valid

With respect to the implications of a property changing EPC Band, it was suggested that compliance should be based on the most recent EPC assessment and should not be affected by changes to methodology or data while a certificate is valid. Respondents from a broad range of respondent types expressed this view.

We should be acutely aware of the goalposts being moved – or even the perception of it.

Local Authority respondent

When a new EPC was required, the owner should be required to comply with the standard in place at that time. Third sector respondents were amongst those who made this suggestion.

It was also argued that early adopters who achieve Band C will benefit from the improved energy efficiency of their home, even if the assessment has to be revisited in the future. Reducing the 10-year EPC period was also proposed.⁸

Comparing EPC scores

There were mixed views on the possibility of employing conversion tables, as used in the social housing sector, to correct variations in EPC methodology over time. Similar small numbers of respondents stated that:

- Conversion tables could be used and do not need to be complicated, although accessible guidance on their use would be needed. Local Authority respondents were amongst those who took this position.
- Conversion tables are too complex or confusing and should not be used for private landlords and owner occupiers. Third sector respondents were amongst those who took this position.

The importance that EPCs can be compared, including before and after improvements was noted, with proposals for a scaling methodology to allow comparison and also that a realignment exercise will be needed when methodology changes.

For an individual property it was suggested that consideration be given to publishing all EPCs prepared, rather than just the most recent version, to show the progression of improvements.

Updating or modelling EPC scores

A view was expressed that technology already exists to make the EPC much more interactive than is presently the case. It was proposed that EPCs stored electronically could be updated automatically when improvements are made rather

⁸ The Energy Performance of Buildings Regulations 2008 set a 10-year validity for EPCs.

than requiring owners to pay for a new assessment, or that an online 'ready reckoner' could allow owners to check what the current rating for their property would be. Third sector respondents were amongst those who suggested the latter proposal.

Changes in fuels price data

With respect to variations caused by fuel prices, small numbers of respondents suggested that price data should be removed from the calculation altogether but also that if price data were removed, EPCs prior to the change would be less useful for comparison purposes. The need for the most up-to-date fuel price data to be used to ensure that the measures installed are able to achieve the predicted savings was also argued, and that fuel price data affects consumer choices regarding heating system replacement.

While it was noted that current methodology does involve adjustment to account for changes in fuel prices, it was acknowledged that this works more effectively for some fuel types than others:

The existing home RdSAP methodology has already by its reliance on the full SAP methodology a mechanism within it which corrects for fuel price fluctuations within the calculation of the EPC rating. Fuel factors only affect the rating on each full revision of SAP, and this is corrected within the model by application of a post calculation adjustment to the initial SAP score. This adjustment tracks the price of energy across all domestic energy types, however as mains gas is the predominant type, the adjustment tends to work well for mains gas properties and less so for other fuel types.

Third sector respondent

A more comprehensive adjustment was called for:

...we would like to see a wider and more comprehensive post calculation adjustment to the raw SAP score, with a fuel factor over time being calculated for each specific main fuel type and applied only where that fuel is present. If this cannot be achieved, then we need to push for different thresholds depending upon the fuel type, much as is already applied under the Energy Efficiency Standard for Social Housing.

Third sector respondent

Other suggestions were that:

- Fuel price data should be regional.
- The price for natural gas could be used in all cases to avoid disadvantaging those properties that are off-gas grid or that other utility bills should also be included.
- An additional rating could aggregate estimated energy costs cross-referenced against national and local average income data.
- A fuel price cap could be calculated and fixed for a period of 2-3 years to keep figures more consistent.

Private Rented Sector (PRS)

The consultation paper notes the Scottish Government's intention to bring forward regulations requiring PRS properties to have an EPC Band E rating at change of tenancy from 1 April 2020 and that this will be required for all PRS properties by 31 March 2022. From 1 April 2022 a Band D rating would be required at change of tenancy and for all properties by March 2025. In order to provide certainty for landlords to plan improvements and make use of the support on offer, it is now proposed that PRS properties should reach the Long-Term Domestic Standard of EPC Band C by 2030.

Question 7 - What are your views on the proposal that all PRS properties meet EPC Energy Efficiency Rating Band C by 2030?

There was widespread agreement or agreement in principle with the proposal that all PRS properties should achieve EPC Band C by 2030. This came from across a broad range of respondent types. The setting out of a long-term trajectory and/or a staged approach was also supported, including by a small number of Third sector respondents.

Points made in favour of the proposed approach were that landlords will have the option to move to the higher standard in a single step if it is cost-effective to do so:

We agree that setting out the trajectory in required standards to 2030 is important to allow landlords to plan improvements in advance and decide the most cost-effective route to achieve the 2030 standard over time. Indeed, in many cases it will be more cost-effective and less disruptive for landlords to achieve a higher standard in one intervention, rather than in stages.

Third sector respondent

Other advantages identified as arising from making improvements in a single step were: less disruption for landlords and tenants, less enforcement activity for Local Authorities, reduced emissions, earlier alleviation of fuel poverty, and earlier parity with the social sector.

A small number of respondents qualified their approval as being subject to required improvements being technically feasible and cost-effective, or to appropriate exceptions being in place, with particular difficulties in meeting the standard for traditional properties in rural areas acknowledged. A small number of others commented that they would prefer a shorter or a longer timeframe, or would prefer to see closer alignment between sectors. Concerns whether the EPC system is the best method for implementing energy efficiency policy were also raised.

The need to raise awareness of the policy, among both landlords and tenants was highlighted, along with need to provide landlords with advice, support and financial incentives.

While it was noted that the PRS is subject to existing regulations and is easier to police than the owner occupied sector, a number of points were made with respect

to the importance of enforcement of the policy. A lack of clarity as to who will oversee compliance was noted and concerns were raised regarding the significant resource issues involved in enforcement. These issues were raised predominantly by Local Authority respondents.

Specific ideas were that rather than change of tenancy, landlord registration or re-registration might be a better trigger point for compliance, although it was also argued that the existing landlord register is not comprehensive, limiting its effectiveness as a tool for raising awareness among landlords.

Risks of unintended consequences were also highlighted, most frequently by Local Authority respondents. Issues included that landlords may withdraw from the sector or convert rental properties into holiday homes. Adopting common energy efficiency standards across all property types was seen as protecting against conversion into holiday homes to avoid compliance. The risk of rent increases was also noted, and that increases might be disproportionate to any energy savings realised by tenants as a result of improvement measures. The need to carry out an impact assessment or to monitor rent increases was suggested.

Particular challenges relating to flats and to multi-tenure blocks were also noted, with a suggestion that the Scottish Government should focus attention on this property type. It was argued that there is an important role for building-level action in meeting energy efficiency standards.

Other points raised were that:

- There may be an argument for directing resources at new build, or that Build to Rent could support both housing needs and energy efficiency requirements.
- The consultation paper does not provide details of any cost cap. It was suggested that any cap should be set at £5,000.

Private landlord or property management and Individual respondents were amongst those who disagreed with the proposal. The most frequent argument was that the policy is not, or may not be realistic, particularly with respect to traditional or hard-to-treat properties, those in rural areas, or those that are off-gas grid. It was also suggested that the EPC system is not reliable, that it is not fair to place such onerous obligations on landlords based on an unreliable assessment method, and that it would be better to target financial incentives to landlords with the least efficient properties.

Reductions in the size of the private rental market were predicted, including that landlords will be deterred from investing, and the possibility that some property might be converted to holiday homes. Potential adverse effects on the wider property market were also noted, as was the likelihood of rent inflation, resulting from both attempts to recoup landlord investment and from reduced availability in the sector.

There may be a switch from fuel poverty to rent poverty...

Local Authority respondent

Other potential consequences identified by respondents:

- A risk of inappropriate or damaging interventions, including adverse aesthetic outcomes and poor indoor air quality.
- The need for many exceptions.

For a landlord seeking to comply, potential problems were suggested such as the existence of many flats within the PRS leading to difficulties related to mixed tenure, and also situations where a tenant refuses access. The Scottish Government was asked to ensure that any new regulations imposed on the PRS are compatible with the new Private Housing (Tenancies) (Scotland) Act 2016.

It was also argued that energy efficiency in the PRS will improve naturally over time without government targets, and that the standard required should be the same as for the owner occupied sector. Difficulties and costs associated with a mandatory scheme were also highlighted.

Owner Occupiers: encouraging action

The consultation paper notes the Scottish Government's view that, for the owner occupied sector, the first 10 years of the Energy Efficient Scotland Programme should be based on enabling and encouraging action, including through building existing support schemes such as the Home Energy Efficiency Programmes for Scotland (HEEPS), and through information on energy efficiency being provided at key trigger points. Whether there should be mandating action after 2030 would also be considered.

Question 8 - What are your views on our proposal for an initial period of encouraging action?

Some respondents, from a broad range of respondent types, agreed with the proposal or agreed in principle. Their comments were that this is a good idea and a reasonable or positive approach, and that it allows time to develop regulatory mechanisms or to carry out reviews around air quality. It was also suggested that there is potential to deliver the required improvements without mandatory action, and that a signal of intent to regulate will be a stronger driver for action than encouragement measures alone.

Respondents who did not agree, who included Academic, Local Authority, Third sector and Individual respondents, tended to take one of two positions:

- The policy represents government interference in a matter of personal choice, is not practical or cost-effective for some properties, or is based on a flawed assessment system. This was a particular issue for Individual respondents.

- Much time has already been spent encouraging action, that the proposal implies ‘business as usual’, or that there is no evidence that a further period of encouragement will be effective. A requirement for earlier mandating action, a clear timeframe for mandating action, or a clear statement of whether there will be mandating action were also recommended. (Further comments on mandating action made at Question 8 are considered at Question 10.)

Irrespective of their overall viewpoints, some respondents identified similar issues as being central to the success of the policy, most frequently highlighting the importance of raising awareness among homeowners and the need to provide sufficiently attractive incentives.

Communication with homeowners

Communication of the policy to homeowners, raising awareness and promoting the value of energy efficiency improvements were all regarded as important in encouraging action, as was the need for a consistent message to be sent throughout the encouragement period. Use of case studies and demonstrations to illustrate the benefits of new technologies was proposed.

While it was argued that owner buy-in will be critical to the success of the policy, potential difficulties in encouraging behavioural change were noted and a recent review of evidence on policy effectiveness with respect to encouraging households to retrofit was cited⁹. It was noted that many householders choose to invest in other home improvements rather than energy efficiency measures, and it was argued that rather than focusing on the need to meet climate change targets, there should be an emphasis on other benefits to homeowners:

The consumer, and consumer acceptance of energy efficiency measures, need to be at the heart of the encouragement to action... Success may depend upon the ownership of an energy-efficient home becoming an ‘aspirational’ social norm, with consumer motivation being driven neither by purely financial factors, nor purely environmental ones.

Third sector respondent

Upskilling local tradespeople was regarded as helping energy efficiency measures to be seen as part of other home improvements. Several respondents suggested that householders should also be made aware that there will be regulation in due course.

The Scottish Government, Local Authorities, Home Energy Scotland, and Citizens Advice Scotland were all argued to have a role in promoting the Energy Efficient Scotland policy. Using community organisations to engage with those who may be hard to reach was also proposed, as was the potential role of contractors already working at a property in advocating additional energy saving measures. A need to target vulnerable communities to ensure that the policy is presented as clearly as

⁹ See <https://www.climatechange.org.uk/research/projects/private-household-investment-in-home-energy-retrofit-reviewing-the-evidence-and-designing-effective-public-policy/>

possible was noted, as was avoiding further irritation of home owners by cold callers.

Providing incentives

The need for meaningful incentives to encourage homeowners was frequently highlighted - some respondents thought that greater resources than those presently available will be required. These respondents came from across a broad range of respondent types.

This is carrot and stick question. If you provide the carrots, no problem. If it is going to be all stick, that is a different matter.

Individual respondent

It was also argued that lessons should be learned from the low uptake rates of some previous schemes, which were reported to be too complicated or to offer poor incentives. If incentives provided do not prove sufficient in encouraging early action, it was felt that supply chains may come under pressure towards the end of the period, with a likely outcome of increased costs to owners.

Desirable features identified for incentive schemes were that they should be simple, flexible and easy to understand, and that they should be piloted before being rolled out. Providing a headline offer to coincide with the launch of Energy Efficient Scotland was seen as being helpful in capturing public attention, and also ensuring that early adopters do not miss out on incentives that become available later on.

The need to try new approaches was also seen as important and the Self-funding pilots¹⁰ were referenced. Incentives proposed, in each case by a small number of respondents, were: loans; grants; subsidies; variations in Land and Buildings Transaction Tax (LBTT); variations in Council Tax; and conditional mortgages or green mortgages.

Comments specifically on the subject of loans included that they should be interest-free and not means tested, but that even interest-free loans may be of no use to some households if they are only paid after work is carried out. It was also suggested that councils could support schemes such as iChoosr's bulk purchase discount to reduce costs.

Other points with reference to incentives were that issues of disrepair should be included, and that fuel poor households should receive the greatest levels of help.

Providing practical support and independent advice

In addition to financial assistance or incentives, owners were seen as needing both support and advice. Those highlighting this issue included a small number of Third sector respondents. While it was noted that one-to-one home visits have proved effective in encouraging improvements and increased provision of face-to-face advice was advocated, it was also felt that this could be an extremely resource-intensive approach on the scale needed.

¹⁰ Pilot projects originally described as 'Able to Pay' are now described as 'Self-funding'.

Other aspects seen as important in helping homeowners, in each case raised by only one or a small number of respondents, were that:

- Information needs to be clear and easy to find.
- Adaptation of the advice service provided by Home Energy Scotland for the 'self-funding' market was recommended.
- Consumer protection advice is needed – for example a clear, single point of reference to allow homeowners to check claims made by businesses with respect to the availability of grants.
- A guarantee of independent supervision and testing of work done by private contractors could provide reassurance.

Length of the period for encouraging action

Some respondents commented on the length of the proposed encouragement period, suggesting that progress of voluntary action should be reviewed on a regular basis to determine whether more support or greater regulation is needed. Third sector respondents more frequently made this point.

Ten years was seen as too long by a small number of respondents, both because the message may be lost over such a long period, and also since too little time will be left ahead of the 2040 target if voluntary action is not effective. Alternative proposals were that the period for encouraging action should be either shorter or evidence-based, or that a rate of progress below which regulation is likely to be necessary should be set, and that this should determine the point at which regulation is introduced.

Setting out a clear timeframe was also seen as providing certainty for the supply chain and a signal to the housing market that higher energy performance should be reflected in property values.

Question 9 - What information would be useful for householders to be able to access on how to achieve EPC Energy Efficiency Rating Band C before 2030?

Comments were made by respondents from a broad range of respondent types and tended to focus on access to practical information relating to:

- The available or appropriate options for a property, individually or in combination.
- The cost of improvements and likely savings or benefits. The need for realistic rather than indicative costs was highlighted.
- The funding opportunities available and how to access funding.
- Finding reliable or approved or assessors, and a simple process for obtaining quotes.

It was also argued, however, that householders should know about: the Energy Efficient Scotland Route Map and why it is important; the EPC process and ratings;

the energy efficiency standards that will be required and by when they must be achieved; the Scottish Government's commitment to regulate; and the consequences of non-compliance. It was also thought that rather than emphasising the need to achieve Band C it might be better to highlight other benefits.

A requirement for significant awareness-raising and marketing activities, including messages tailored to specific audiences was suggested. The need to learn from failings of the Green Deal programme, attributed to advertising based solely on financial savings, was also highlighted. Undertaking research on what motivates householders to install energy efficient solutions was suggested, and factors identified as influential in the evaluation of Energy Efficient Scotland Phase 1 pilots¹¹ were noted, such as improved aesthetics and warmth, perception of good value for money, and support through the installation process. Energy Efficient Scotland Self-funding pilot projects were also identified as a potential source of guidance.

Respondents also reiterated previously raised issues concerning the EPC assessment process, highlighted the importance of definitions of technically feasible or cost-effective, or argued for credit to be given to measures not currently included.

Sources of advice or information

A small number of respondents observed that advice should be independent or impartial, and that it should be free. Other recommendations were that advice or information could be obtained from:

- The Energy Saving Trust (EST) or Home Energy Scotland. This was the most frequently made suggestion.
- Local Authority services.
- Energy assessors.
- Qualified installers.
- An EPC for the property.

While the EPC for a property was frequently seen as the main source of information required, it was acknowledged that this requires a property to have an up-to-date EPC, which at present it may not, unless related to a sale. Encouraging or requiring homeowners to have a current EPC and to update it after making improvements was suggested, with free EPCs, or at least one free EPC to act as a benchmark, also proposed.

Other comments about EPCs were that: the format should be reviewed to provide additional or more accessible information; recommended options could be presented in a more helpful order; that information of the value of repair and maintenance could be included; or that a signpost to Home Energy Scotland could

¹¹ The Energy Efficient Scotland Phase 1 Pilots final evaluation report is available on the Scottish Government website.

be added. Current work on the nature of EPCs being carried out by the Department for Business, Energy & Industrial Strategy was referenced.

Accountability for the quality of advice provided was also suggested to be important, and it was observed that a great deal of money can be at stake for an owner who follows the advice provided but then does not realise the predicted improvement in the EPC rating. It was argued that there needs to be a form of redress when things go wrong.

How advice is provided

Suggestions, each from one or a small number of respondents, included: provision of advice online, by telephone, face-to-face, or in the home at a time suitable to the household. The need for advice to be simple and user friendly was also noted, and it was proposed that, for vulnerable households, a handholding model such as Care and Repair would be appropriate. Other ideas were:

- A single place to get information – such as a Home Energy Scotland ‘one stop shop,’ or an information hub, as proposed by the review of Each Home Counts.
- An energy modelling software package or ‘ready reckoner’ to allow householders to model the effect of different measures or combinations of measures, including going beyond Band C. A small number of Third sector respondents made this suggestion.
- A smartphone app, to improve accessibility.
- Development of a visual tool to take users on a journey around their home to consider what measures could be installed.

Nature of advice

The need for advice to be tailored or specific to a property was suggested by a small number of respondents, as was helping to plan a number of improvements over a period of time in the form of a ‘Building Renovation Passport’. It was also proposed that such a retrofit road map might be included in the EPC.

Illustration of what is possible using case studies and examples of real work, carried out on a range of different property types, was requested by a small but diverse group of respondents. It was also noted that case studies that provide an honest account of both the positive and negative experiences of other householders may help to overcome reluctance to install measures, such as internal wall insulation, that may be perceived as too disruptive. The need for specific guidance or support for owners of traditional or historic properties and tenement flats was argued and, with respect to flats, that it would be useful to illustrate the beneficial effects of building-level action.

It was also seen as important to provide information on what to expect in terms of quality of renovation work in order to build confidence in the energy efficiency market.

Ensuring that householders have access to information on the benefits of all the different technologies that are available was also suggested, as was the value of providing advice and information at key intervention points, such as the breakdown of a boiler.

Owner Occupiers: mandatory action

Question 10 - What are your views on our proposal to follow this initial period with mandating action?

Individual and Private landlord or property management respondents were amongst those expressing a clear view that the Scottish Government should not follow a period of encouragement with mandating action, which was seen as interference in a matter of personal choice. It was argued that incentives are required instead:

Incentivisation such as through taxation and green mortgages would encourage upgrades without mandatory action.

Private landlord or property management respondent

Amongst the range of respondents who supported the proposal, the most frequently made points were that:

- Mandatory action might, or will, be needed to achieve targets. Energy related private sector, Local Authority and Building component manufacturers or services respondents were amongst those who made this suggestion.
- The consultation paper is too vague. In order to encourage them to take action, householders need to know that mandating action will be introduced and what the sanctions for non-compliance will be. Otherwise it was felt there will be a tendency to put off making energy efficiency improvements. Local Authority and Third sector respondents were amongst those who made these points.
- 2030 may be too late to impose mandating action if targets are to be met. Local Authority respondents were amongst those who raised this issue.
- There must be provision to ensure that householders who are unable to afford improvements are not penalised. Local Authority and Third sector respondents were amongst those making this point. In a connected point it was recommended that in addition to those on low incomes, additional support for other vulnerable groups should be considered, and that a Health Inequalities Impact Assessment should be carried out to explore any differential impacts of the proposed plans.

Other points raised by one or a small number of respondents, and irrespective of any position taken on whether mandating action is appropriate or not, were that this may be difficult to achieve, not only in practical terms around implementation, but also in terms of gaining and maintaining public support. Application of nudge theory was proposed:

In order to make this effective, it may be beneficial to draw on behavioural insights such as 'nudge' principles. For example, if after 2030 the majority of home owners have invested in their homes to improve energy efficiency ratings, the focus of communications would be on highlighting the exception and encouraging home owners to conform.

Local Authority respondent

The legality of mandating action was also questioned and issues concerning liability for consequent failures of building fabric were raised. The possibilities of adverse effects on the housing, mortgage, and letting markets were suggested, including some homeowners being put at risk of negative equity. The independence of the EPC assessment process was argued to be essential to ensure there is no potential for the accuracy of assessments to be influenced.

It was also observed that there would need to be exceptions for hard-to-treat properties that cannot achieve a Band C rating and that specific consideration for tenements might be appropriate. Mixed tenure blocks were reported as likely to present challenges if some owners are reluctant to participate.

Enforcement

Although the intention to consult further on an enforcement method was welcomed, a small number of primarily Local Authority respondents questioned where responsibility for enforcement might lie, particularly in relation to the possible role of Local Authorities.

While several respondents agreed that the point of sale would be an appropriate trigger point for enforcement, it was also felt that this will be slow. Renovations and extensions were also suggested to present potential triggers, and it was noted that minimum performance standards could be applied to parts of a building such as windows or doors.

Question 11 - What are your views on our proposal that 2030 is the right point to start mandating action to achieve EPC Energy Efficiency Rating Band C?

Respondents at Question 11 were relatively evenly divided between:

- Agreeing that 2030 is, or may be, the right time to start mandating action. Local Authority and Individual respondents were amongst those taking this view.
- Agreeing the principle, but not the date proposed. Third sector, Local Authority, Energy related private sector and Individual respondents were amongst those of this view.
- Disagreeing with mandating action. The majority of those taking this view were Individual and Private landlord or property management respondents.

2030 may be the right date

Among respondents who agreed that 2030 is appropriate, comments were that this gives enough time for action to be taken with respect to raising awareness and encouraging action and for owners to improve their properties. Some respondents added caveats, including an expectation that appropriate exceptions would be in place, that sufficient information and support including grant funding would be available, and that progress during the encouragement phase should be monitored.

2030 is not the right date

Most of the respondents who thought that 2030 is not the right date to start mandating action argued that it is too late. This frequently accompanied views expressed at Question 1 – namely that 2040 is too late as a target date to achieve EPC Band C and that the whole project to improve energy efficiency should be compressed into a shorter time frame. Specific ideas were:

- A shorter encouragement phase, then mandating action from 2025 or 2027.
- Mandatory requirements at point of sale from 2025.

Other points made at Question 11 were that if few home owners act on a voluntary basis during the encouragement period, too much work will be left to do at the end, with resource implications within supply chains and potentially higher costs for owners. Current improvements were argued to be running at a rate below that required. It was suggested that in the absence of mandating action, most homeowners will put off investment, particularly if it is not required before they plan to sell a property, while early mandating action can shape the property market:

*Many owners will not respond unless there is the stick of penalties
as well as the carrot of support...*

Local Authority respondent

*... regulation is essential as it will shape the market so property
values reflect energy performance.*

Third sector respondent

The importance of raising awareness and encouraging early action, both for home owners and in development of the supply chain were raised, as were the setting of milestones and monitoring progress. In the event of insufficient progress, it was argued that the date for mandating action should be brought forward or that the point at which action is mandated would be better determined by the rate of progress being made, rather than by setting a specific date at all. It was also thought that engagement and incentive programmes should be reviewed in the event of insufficient progress.

Other proposed actions, each suggested by one or a small number of respondents, were:

- Research to model the uptake of measures under a variety of scenarios.

- An assessment of the impacts of the proposals on those households most in need of improvement.
- The early development of regulations, making it possible to foreshadow regulation and encourage voluntary action in advance.

In contrast to the view that 2030 is too late to start mandating action, a small number of respondents thought it is too soon. It was argued that this does not give owners a reasonable time to prepare, particularly since the UK Government has yet to provide guidance on gas decarbonisation.

There should be no mandating action/ Band C is too high

Some respondents, predominantly Individuals, argued that there should be no mandatory action at all, often making clear their comments related particularly to the owner occupied sector. Reasons given were that the rating proposed is unrealistic or unachievable in certain circumstances, that the EPC system is not satisfactory, and that mandatory action may have a detrimental impact on the property market. Instead it was argued that the approach taken should involve only encouragement and support for voluntary action.

Most people want to live in an energy efficient property and will take action if they can afford to do so, but it is an infringement on personal choice to penalise those who do not want to or cannot afford to upgrade their own homes.

Private landlord or property management respondent

Other perspectives and ideas

Some respondents did not take a clear position on the suitability of 2030 as a date at which to start mandating action, but made points relating to: the efficiency standard to be set; the methodology of the current EPC system; the need to determine the level of support available before mandating action; or the need for regular reviews to assess progress and to determine whether a mandatory phase is needed at all. It was also noted, however, that not every home has an EPC, so producing a baseline may not be straightforward.

There were other propositions to which no specific date was attached, which were put forward by one or a small number of respondents:

- Mandatory action should be only when the market is ready to support delivery.
- Mandatory action should be at the point of sale or rent.
- Attachment of an advisory note to the EPC of a property for sale highlighting the measures that would be required to bring the property up to any higher rating necessary.

Question 12 - What are your views on our proposal for owner occupied properties to be subject to penalties for non-compliance?

The consultation paper notes that, if the Scottish Government does mandate that owner occupiers improve their properties, this is likely to be accompanied by financial penalties for non-compliance. Detail of how standards would be required and enforced would be subject to further consultation ahead of their introduction.

Some respondents, including Local Authority, Third sector, Energy related private sector, Building component manufacturers or services and Individual respondents, thought that owner occupied properties should be subject to penalties for non-compliance, making arguments that a voluntary system alone is unlikely to be effective and that some form of deterrent will be required to encourage action.

Without penalties the process will not succeed. We hope that over the course of the next 20 years, very few people will fall foul of them; but without sanctions, there will be much less incentive to go early.

Energy related private sector respondent

A smaller number of respondents, including Individual and Private landlord or property management respondents, did not consider a penalty for non-compliance to be advisable or acceptable. They argued that the policy compromises freedom of choice, is not possible or practical in some cases or may have adverse effects on the housing market. For example:

It would also discourage people from buying property, particularly at the lower end of the market, if they fear the additional costs that this could bring. That could make it harder for people to get on the housing ladder and lead to greater competition for renting instead...

Professional or representative body respondent

Other respondents observed that they were unable to comment without more detail on the nature of enforcement or penalties proposed, or suggested that the proposal requires further careful consideration. It was also argued that the public may not support a punitive system.

Other comments on the possible use of penalties were:

- It would be preferable to achieve the desired outcomes using encouragement and incentives.
- Any penalties should be financial not criminal. Third sector respondents tended to make this observation.
- Penalties must be fair, reasonable and appropriate, but also need to be large enough that people will not just choose to pay a fine.

The need to consider mitigating circumstances before applying any penalty was also highlighted, with respondents emphasising the need to protect vulnerable or fuel poor households, but also to consider the situation of owners who are not able

to pay and who may not be able to access grant schemes. Other situations seen as requiring flexibility were mixed tenure buildings where common works may be blocked, and properties requiring technical exceptions. Establishment of an independent regulatory and appeals process to ensure that an assessor's recommendations for a property are suitable, was seen as essential if penalties are to be applied.

The difficulty or cost of enforcing penalties was also highlighted, as was the need to provide adequate resources for administration, and the potential scale of enforcement that could be required. There were queries with regard to who would be expected to enforce penalties and suggestions that suitable powers to enforce would be required. Clarification of how enforcement action fits with a homeowner's legal ownership rights was also called for. Local Authority respondents were particularly likely to raise one or more of these issues.

Regulating at the point of sale and using the conveyancing process to facilitate compliance was seen as minimising the need for penalties, and avoiding a situation where a household that cannot afford to comply is subject to a financial penalty. If a property was sold with an EPC rating below the standard required, it was argued this would be reflected in the price, and the buyer would then need to make the necessary improvements. The rate of LBTT was also advocated as a tool for encouraging compliance – with proposals including a variable LBTT rate according to the EPC banding of a property, or that a buyer could claim a LBTT rebate based on energy efficiency measures installed over a fixed period of ownership.

It was also noted that it would be possible to prevent registration of change of ownership until compliance is achieved. With respect to properties that do not come to the sale or rental market, it was thought that enforcement orders might be considered.

Another proposal on trigger points was use of consequential improvements, with enforcement by means of building warrant procedures, although it was acknowledged that this would affect only a small percentage of properties.

Ideas about how a penalty might be applied were more limited than ideas on how it might be avoided, but included:

- Variation in council tax according to energy rating. As an alternative to raising council tax on homes that do not comply, reducing council tax for energy efficient homes was identified as having potential to increase the value of a property, outweighing the cost of improvements.
- A penalty equivalent to a percentage of a property's rateable value.

Homes outside of the existing mandatory EPC process

The consultation paper notes that some types of homes are currently outside of the existing mandatory EPC process – upon which it is proposed that the LTDS will be based. This includes mobile or park homes, agricultural homes such as agricultural tenancies and crofts, Houses in Multiple Occupation (HMOs) and holiday lets.

Question 13 - What are your views on requiring all types of accommodation to meet the Long-Term Domestic Standard over time?

Please explain your answer, giving examples of accommodation you think should / should not be required to meet the Long-Term Domestic Standard if relevant.

Some respondents, from across a broad range of respondent types, commented that all types of accommodation should meet the LTDS, highlighting the importance of combating fuel poverty, meeting carbon emissions targets, or noting that the accommodation types currently excluded may house some of most vulnerable groups in society. The value of consistency across sectors and the fluid relationship between sectors were also referenced.

Other respondents suggested qualifications, to the effect that the standard should apply to a principal home, sole residence or permanent residence, or to a property with solid foundations or serviced by utilities. A need to define or exclude temporary accommodation was also identified, and that the standard might apply only to domestic property that is inhabited for minimum period within a year. The need for exceptions was also noted. This range of issues was raised across respondent types.

Alternative views, each expressed by one or a small number of respondents were: while there should be consistency, this should not be based on the EPC system or should not require achieving a Band C rating; that there should be no blanket standard and properties should be approached on a more pragmatic, case-by-case basis; and that there should not be any mandatory requirement to meet energy efficiency standards.

Additional suggestions were the need further research and analysis, and that a national feasibility study should be carried out.

Mobile or park homes

Among those who commented specifically on park homes or mobile homes there were mixed views, both that this type of property should be included and that it should not. Energy related private sector, Local Authority and Individual respondents were amongst those thinking they should be included. Other Local Authority respondents were amongst those who thought they should not.

Technical difficulties or challenges and the likely need for exceptions were all suggested, as was a separate energy rating scale for park homes or a

concentration on enforcement of energy efficiency standards for new or replacement homes.

Other comments were that static caravans that are not designated as park homes should be included, as their occupants cannot currently access any funding for heating or insulation, and also that energy prices on park home sites are typically higher because supplies are charged at commercial rather than domestic rates.

Agricultural tenancies

The majority of those who commented specifically on agricultural tenancies, including Local Authority and Third sector respondents, argued that these should be covered by the LTDS, in part because many households inhabiting such properties live on low incomes or are fuel poor. Extension of the Repairing Standard to agricultural tenancies was also recommended.

However, there was also opposition to inclusion of agricultural tenancies, or a view that a tailored approach will be required since there is no residential rent for the farmhouse, and repairing obligations are often the responsibility of the tenant. A small number of Private landlord or property management and Professional or representative body respondents were amongst those with this view. It was suggested that if faced with being forced to pay for energy efficiency improvements with no means of recouping costs, some landlords will choose to sell farmhouses or rent them out separately. It was proposed that improvement work should be carried out by the tenant, and that it should be valued at the end of the tenancy. Alternatively, it was suggested that improvement should be carried out only if a mutually acceptable rent increase can be agreed.

With respect to rented crofts, it was felt that due to the security of tenure, croft and smallholding houses should be considered as owner occupied houses for the purposes of energy efficiency improvements.

Houses in Multiple Occupation

A very substantial majority of those who commented on HMOs, including those from a broad range of respondent types, argued that these should be covered by the LTDS, reasoning that such buildings are typically occupied by young people or people on low incomes who have little power to demand improvements. It was also noted that the standard for HMOs makes no reference to a property being warm or affordable to heat. Suggestions were that HMOs should be required to display an annually updated EPC as a condition of their licence, but also that some improvements would not be technically feasible or cost-effective.

Holiday lets

A majority of respondents who commented on holiday lets or short-term rentals argued that these should be included, primarily because failure to do so would give owners an opportunity to avoid regulatory standards applying to the remainder of the PRS. Local Authority, Third sector and Individual respondents were amongst those with this view.

...if holiday homes are not required to meet energy efficiency standards, then there is the opportunity for landlords to designate their properties as holiday lets – leading to no energy efficiency improvements.

Local Authority respondent

Other reasons given were that properties can quickly be transferred between holiday lets and long-term rental, and that since the owner generally pays utilities bills for holiday properties, there is no incentive for occupants to conserve energy.

Those respondents who did not think holiday lets should be required to meet the LTDS included Private landlord or property management and Professional or representative body respondents. They argued that energy efficiency is not a matter of primary concern to most holiday makers:

There does not appear to be any need for holiday homes to be included... There is a plentiful supply and choice for holidaymakers to choose more energy efficient accommodation if that is their preference. The very nature of such stays is predominantly short-term reducing the need for such properties to meet high energy efficiency standards.

Private landlord or property management respondent

Other respondents commented that holiday lets may only be used on a seasonal basis or gave examples of many non-standard properties such as wigwams, chalets, cabins or caravans that may be found in this sector. It was also argued that to subject holiday lets to the Repairing Standard or the LTDS will be both impractical and damaging to tourism, and that exemptions from compliance with EPC requirements should be granted, as in other EU countries.

Higher targets for Fuel Poor Homes

Finally in this section, the consultation paper asks two questions on proposals specifically concerning fuel poor households.

On 27 June 2018, the Scottish Government published a Draft Fuel Poverty Strategy to accompany the Fuel Poverty (Target, Definition & Strategy) (Scotland) Bill. Based on the principles of fairness and equality, the Draft Strategy sets out a new approach proposing working across government to tackle all four drivers of fuel poverty: incomes, energy prices, the energy efficiency of homes, and behaviours in the home. It recognises the need to ensure this work aligns with other strategies to tackle poverty, reduce child poverty, improve health outcomes and make Scotland a fairer country. As part of this approach is the ambition to remove poor energy efficiency as a driver of fuel poverty – the Energy Efficient Scotland Programme is the mechanism through which this ambition will be achieved.

The consultation notes that, due to the depth of fuel poverty experienced by some households, reaching EPC Band C by 2040 will not be enough to lift them out of fuel poverty and that more ambitious targets are needed. The proposal is therefore that all homes with fuel poor households should achieve band C by 2030, where technically feasible and cost-effective, and Band B by 2040. Since reaching Band B

will require significant intervention, at this stage it is not thought appropriate to make such ambitious targets mandatory across the entire residential building stock. However, the target will act as a guide for national and area based fuel poverty programmes that will operate throughout the lifetime of the Energy Efficient Scotland programme, building on existing schemes in operation. In practice this will mean maximising the level of improvement possible, whilst remaining affordable for the public purse.

Question 14: Please provide your views on our proposal that all homes with fuel poor households are to reach EPC Energy Efficiency Rating Band C by 2030, where technically feasible and cost-effective?

Some respondents who indicated general agreement with the proposal, or who agreed in principle, highlighted the importance of removing poor energy efficiency as a driver for fuel poverty or noted associated potential benefits such as improved health outcomes. These respondents came from a broad range of respondent types and included a number of Individual respondents in particular.

There were also suggestions that a more ambitious, generally earlier, target would be welcome; and that the target should apply to all on low incomes, not just those in fuel poverty. Given other proposals for standards in the PRS and social sectors, it was observed that this provision would apply to the owner occupied sector, but also that it might help with delivery of EESSH targets in mixed tenure areas. A small number of Local Authority and Third sector respondents were amongst those who raised this issue.

While a small number of respondents noted their approval as conditional on the caveat of 'technically feasible and cost-effective', it was also felt that while 'technically feasible' should be defined narrowly, 'cost-effective' should be as interpreted as flexibly as possible to ensure as many households as possible are helped.

Some respondents who did not agree with the proposal reiterated views on flaws in EPC methodology or on the principle of setting energy efficiency standards at all. It was also felt that the target may be undeliverable, would be difficult to monitor, and that rather than attempting to target fuel poor households, the Scottish Government should adopt more ambitious targets overall. Local Authority respondents were among those who argued that instead of setting specific targets for energy efficiency in fuel poor households, it would be preferable to have a single standard for residential property and to provide additional financial support to fuel poor households.

Identification or targeting of households in fuel poverty

A small number of Local Authority respondents were amongst those questioning how fuel poor households would be identified. It was also noted that whether or not a household is in fuel poverty will change over time according to personal circumstances, and a question posed about how long a household would need to be fuel poor before qualifying for assistance. The need for an effective system for

collecting and sharing data to identify fuel poor households was also seen as being of fundamental importance.

It was suggested that signposting and partnership working by key stakeholders, such as Local Authorities, health organisations and appropriate charities, supports identification of fuel poor households including those who might not be identified through other channels. However, it was also observed that fuel poor households may have no interest in self-identifying unless grants are available.

It was noted that recent changes to the definition of fuel poverty¹² require more detailed personal financial information to be gathered, but it was also thought that proxies will still be needed when seeking to identify fuel poor households. Examples were: low ranking in the Scottish Index of Multiple Deprivation, low council tax band, or being in receipt of certain benefits. Although proxies are used to identify area based schemes, it was suggested this will be more difficult if funding is targeted solely at fuel poor households.

The complexity of fuel poverty and the importance of other drivers such as income, fuel cost, and life style choices were highlighted, and the Scottish Government was advised to link energy efficiency to other strategies relating to tackling drivers of fuel poverty. The importance of providing advice to occupants on how changing their behaviour can save energy was also highlighted.

A small number of Local Authority respondents were among those who argued that given the mobility of fuel poor households, the energy efficiency of a building should be the focus rather than the financial position of a particular household.

How improvements would be financed

There were queries regarding any intention to subject fuel poor owner occupied households to mandatory regulation, with respondents arguing that this would be inappropriate. How the target will work in practice if not mandatory was considered unclear.

Some respondents raised issues associated with financing of the required improvements, for example that significant funding will be required. Continuation and expansion of existing funding streams such as the HEEPS: Area Based Scheme and Warmer Homes Scotland were suggested, as was the potential of the Energy Company Obligation (ECO) programme. It was also suggested there should be no cap per household to allow a whole-house approach to be adopted. There was a call for support and encouragement to private landlords and homeowners to take advantage of area based schemes.

Rural communities

Specific issues were raised with respect to alleviation of fuel poverty in rural areas, for example that additional support may be required. It was reported that fuel poor

¹² The Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill incorporates a new definition of fuel poverty. A guide to the Bill and the proposed definition may be found at <https://beta.gov.scot/publications/guide-fuel-poverty-target-definition-strategy-scotland-bill-2018/pages/1/>

rural households may be hidden under the new definition of fuel poverty, and that many fuel poor households in rural areas are living in hard-to-treat properties that are off-gas grid. There was a view that these properties would not be cost-effective to upgrade, and so these fuel poor households would not be helped by the proposed measures. A more general need to consider an approach for properties built before 1919 was also identified.

Question 15 - Please provide your views on our proposal that all homes with fuel poor households are to reach EPC Energy Efficiency Rating Band B by 2040, where technically feasible, cost-effective and possible within limits affordable to the public purse?

Views expressed at Question 15 tended to reflect those at Question 14, and a number of respondents simply referenced their previous answer.

Some respondents agreed with the ambition that all homes with fuel poor households should reach Band B by 2040 or agreed in principle. These respondents came from a broad range of respondent types, with Energy related private sector, Local Authority, Third sector and Individual respondents having a particular presence.

Comments noted the value of setting out a long-term trajectory, and that it may be most cost-effective to improve to EPC B in one go. It was also suggested that the proposed approach is pragmatic, and the target is challenging but in line with fuel poverty and climate change objectives.

Setting a clear long-term trajectory is essential. By setting out the band B target, Government should encourage households to undertake works to bring their home up to band B in one go rather than incurring incremental changes which could in the long term prove costlier.

Building component manufacturers or services respondent

A small number of respondents expressed views that the target could be more ambitious in terms of the date, the energy efficiency level achieved, or the types of household covered. For example:

The sooner the better. We had hoped that a more ambitious target which improved the circumstances for the people of Scotland living in energy inefficient homes would be proposed. Winters can be very cold in Scotland and in [our] experience it is often the most vulnerable people who are living in the most energy inefficient homes.

Third sector respondent

Respondents who did not agree with the proposal also came from a broad range of respondent types with Individual respondents again having a notable presence. Comments were that the proposed standard may be too ambitious or unattainable, or should not apply to the owner occupied sector, unless completely funded from

the public purse. Overall, the balance of opinion was that fewer respondents disagreed than agreed.

Cost of achieving EPC Band B

A small number of respondents argued that EPC B is a very high standard that will require significant funding. The potential need for installation of renewable technologies was identified, although it was also thought that while improving an EPC score, such technologies may have limited benefit for the occupants of a property. Technical feasibility and legal issues were also identified as potential difficulties, particularly with respect to properties with areas held in common ownership, as were current restrictions on the grant to landlords owning more than one property.

The investment required to achieve a Band B rating, and whether this necessarily represents the best value for money, was questioned, with suggestions that there are other ways to address fuel poverty which may have a greater impact. A cost benefit analysis was proposed. In particular it was argued that there is little difference between a high Band C and low Band B in terms of running costs, carbon emissions or comfort for the household, and that a better strategy might be to get all properties to Band C before targeting Band B for fuel poor households.

Given the required level of investment to achieve Band B it was agreed that it this should not be a statutory target.

It was also argued, as at the previous question, that the energy efficiency of a building should be the focus of attention rather than the financial position of the household, and that there is a risk that after significant investment to bring a property to a high standard, the fuel poor household may wish to move. For fuel poor tenants, it was felt that a lack of EPC B compliant properties might limit their choice.

Other issues raised

Other points raised at Question 15 were:

- It is important that the Band B efficiency requirement is applied to new build homes to avoid the need for upgrades in the future.
- Fuel poor households may not be welcome as PRS tenants if a prospective landlord anticipates an additional requirement to upgrade as a consequence.
- The wording of Question 15 incorporates significant get-out clauses, and the 'within limits affordable to the public purse' needs to be explained and defined.

The role of assessment to support the domestic energy efficiency standards

In paragraphs 46-50, the consultation paper explains a proposal to set up a Short Life Working Group (SLWG) which will consider research commissioned by the Scottish Government in response to concerns raised previously regarding the use of EPC methodology to set improvement targets under the Energy Efficient Scotland Programme. The group will also move forward with development of additional assessment requirements and formulating how an Energy Efficient Scotland assessment will be delivered.

Question 16 - In addition to what we have set out in paras 46 - 50, what should the Energy Efficient Scotland Assessment Short Life Working Group also consider? Please explain your answer.

Several respondents welcomed the establishment of the SLWG, while others commented on its membership or noted that they would like to be involved. Other general remarks were that respondents were content with the group's current remit, that it would be helpful to see the current remit¹³, or that they had little to contribute until the research commissioned by the Scottish Government is available.

There were a large number of ideas for additional things the SLWG could consider, and the list below is not comprehensive. Suggestions, each made by one or a small number of respondents included:

- Alignment of Energy Efficient Scotland with related policy initiatives and with broader housing needs.
- The role that building level assessments could play in supporting energy efficiency standards.
- The risk of legal challenge.
- Definitions of 'technical and feasible' and 'cost-effective' and guidance on how the cost-effectiveness of a measure will be measured.
- Measurement and management of indoor air quality.
- A focus on the accuracy of advice given by installers.
- Consumer protection - a mechanism to provide redress for householders in the event of poor assessments, advice or workmanship. The recommendations of the Each Home Counts Review were highlighted.
- Consumer research on understanding of EPCs and what people want from them. The need to appreciate the position of homeowners and why they may struggle to meet required standards was seen as an important step.

¹³ Although limited details regarding the remit are included in the consultation paper, one respondent referred to information concerning the remit presented at an Energy Efficient Scotland consultation workshop.

- Expand the focus of the Route Map to include a behavioural change programme.
- The role of low carbon heat including low carbon district heat networks. Solar power and micro hydro were also highlighted.
- An annual target retrofit rate for a renewables-compatible building stock by 2050.

It was also thought that the time it will take for a policy linked to triggers such as change of ownership or tenancy to deliver the desired goals should be considered.

There were relatively few comments clearly specific to the new additional assessment proposed, but suggestions were that the SLWG should:

- Set up a framework for monitoring and evaluation of the new process.
- Develop the technical and quality assurance aspects of the scheme. For example, issues around fire safety or product/system certification. Consideration of the impact of product substitution was also proposed.
- Ensure recommended retrofit measures are compatible with each other and with the existing structure. Work at UK level to develop a new PAS 2035 standard to ensure a greater focus on the whole house and the interplay between measures was noted, with a proposal that the SLWG should have a similar focus.
- Consider how social and welfare benefits from different interventions can be captured.

It was also argued that the SLWG should be free to develop a single assessment if that proved a better alternative to the two assessments currently proposed, and that such an assessment should be both comprehensive and evidence-based.

Other respondents focused their comments on aspects of the current EPC system that they would like to see changed or made points on delivery, including the training of assessors.

Comments on the EPC assessment

Several respondents expressed views that the EPC assessment needs to be more accurate or consistent, and that it does not reflect the actual energy efficiency of many properties. It was argued that the suitability of the current SAP and RdSAP methodologies should be considered and their limitations better understood. However, it was also argued that in the event of a change to RdSAP methodology, an impact assessment should be carried out to identify situations where owners may be disadvantaged and to develop approaches to moderate that impact.

Since the EPC rating is becoming a regulatory tool, the importance of ratings being trustworthy was emphasised. Proposed changes, each suggested by one or a small number of respondents, focused on the need to:

- Include an occupancy assessment to reflect how householders use energy.

- Make the underlying heating regime and assumed energy costs clear on the EPC to allow households to understand how their choices affect the estimated usage and savings. Modelling more than one standard regime was also seen as reflecting differences in households.
- Incorporate real life information on actual energy usage, such as smart meter consumption data, information on boiler efficiency, heating controls and local weather.
- Improve the quality of the data used to underpin the EPC system and update changes more quickly.
- Improve the accuracy of both installation cost estimates and the potential future savings associated with recommended efficiency measures. Provide real examples.
- Reduce the number of assumptions made during the assessment process.
- Include consideration of repair and maintenance.
- Produce recommendations specific to the property.
- Reconsider costs in rural and island areas, to incorporate rural premiums.
- Consider future heating options with the expectation that choices will be more complex, and that factors such as outside space may be more important.

With respect to different building types and locations it was thought that the SLWG should consider the approach to assessment of:

- Hard-to-treat, traditionally constructed buildings.
- System-built structures, timber frame buildings, other buildings of non-standard construction and rooms in roofs.
- Flatted tenement property with common parts.
- Listed buildings.
- Rural homes.

Working with groups with an interest in different building types and locations was suggested, with research by the Sustainable Traditional Buildings Alliance and treatment techniques piloted by Historic Scotland both referenced.

Training of assessors

Some respondents, including Academic, Local Authority, Public sector or body – other, and Third sector respondents, highlighted the importance of assessors having appropriate skills and training, with a recommendation that experience from early stages of implementation should be fed back into training. Accreditation for assessors was also seen as important, and separation of assessment and sales functions was proposed to avoid any perceptions of a conflict of interest.

Tighter quality control for EPC production was also identified as necessary, particularly where the assessor has freedom to use different approaches resulting in different rating outcomes. Rooms in roofs were offered as an example of this:

There are some features such as room in roof which [an assessor] has freedom to model very differently, taking either a standard default approach or a more accurate approach. There needs to be a consistent approach ... requiring more accurate measurement of different features...

Local Authority respondent

A requirement for additional training on traditional buildings and system-built properties was highlighted, as was the need for assessors who are not heating engineers to receive additional training on emerging technologies.

An appeals mechanism for correcting errors in EPC reports was suggested, and that this would be facilitated by inclusion in the report of all the data entries made by the assessor, so errors can be challenged. The need to encourage householders to keep records to demonstrate work done was highlighted.

The importance of ensuring that enough assessors are available, especially before backstop dates and in remote or island locations was highlighted. A fixed fee for the assessment cost was also proposed.

The EPC report

In an effort to improve understanding of the EPC report and recommendations it was argued that the report might be streamlined and also that plain English should be used. An approach where more practical mixes of measures are illustrated was proposed, and also that additional information such as signposting to Home Energy Scotland, funding schemes and installers should be provided.

A move towards digital EPCs was recommended. Introduction of a building passport and a roadmap to meeting the long-term standard was also advocated, with a suggestion that this could allow access to building data online and allow for more targeted advice to be directly accessible for homeowners. The possibility that an online EPC or linked property information might be updated automatically, without a further survey, after an approved measure is installed was also raised.

Installers and supply chains

The need to ensure the necessary skills and capacity to install the required energy efficiency measures, especially in rural areas, was highlighted by a small number of respondents. Proposals for further work were training students in developing technologies, supporting local communities to develop sustainable capacity, and making it easier for skilled local tradesmen to be involved in delivery programmes. However, to avoid giving opportunities to rogue or unqualified traders, accreditation for workmanship was advised, as was providing a list of approved providers, including customer reviews of accredited companies and providing independent quality assurance.

Funding

With respect to grants, loans or other incentives, comments were that a single scheme would be easier for homeowners to understand and that affordability issues will need to be considered, in particular where multiple measures are needed at the

same time. Past experience of difficulties in encouraging installation of measures, even when fully grant funded, was noted and linked to a view that there may be resistance to the take-up of any loans offered.

Replacement of annual funding rounds with a three-year rolling programme was also proposed, which would have benefits for homeowners and also limit the amount of staff time taken up with evaluating more frequent rounds of bids.

Engagement

The importance of engaging with homeowners to optimise voluntary uptake of energy efficiency measures was highlighted, and that any promotional materials should be both clear and visual. Other suggestions were an online advice tool, and the availability of telephone support from technical advisors.

Compliance and enforcement of the Long-Term Domestic Standard

The consultation paper notes that while the Scottish Housing Regulator is responsible for monitoring social landlords' compliance with EESSH, the 2017 consultation on Energy Efficiency and Condition Standards in Private Rented Housing proposed that Local Authorities may be the appropriate body for enforcing the minimum standards in this sector, though it was noted that there would be resource implications to this. A future consultation on the detail of how mandatory action would work in the owner occupied sector would include proposals on where responsibility for enforcement would sit.

Question 17 - What are your views on whether the Long-Term Domestic Standard should be enforced at a local or national level? Please explain your answer.

Reasons given for enforcement at a local level were the importance of local knowledge, for example with respect to supply chains, the relevant information already held by Local Authorities, and possible synergies with other Local Authority functions. This was raised by respondents from a broad range of respondent types.

It was also felt that Local Authority enforcement could provide a common approach across different tenures or could provide for faster action than possible at a national level. However, the need to address resource issues was frequently highlighted as being essential, with co-operation between authorities or pooling resources also recommended. Again, these issues were raised by respondents from a broad range of respondent types.

Suggestions about where responsibility for enforcement might sit at a local level were Building Control or Trading Standards. Third sector respondents were amongst those who made this suggestion. With respect to a trigger at the point of sale, it was proposed that the conveyancing process, estate agents and banks could be involved in monitoring compliance.

With specific reference to the PRS, inclusion of energy efficiency requirements within the Repairing Standard and enforcement through the Housing and Property Chamber of the First Tier Tribunal was recommended, as was using the landlord registration process.

Although advocating local enforcement, several respondents also pointed to the need for a national standard or framework, support, guidance, oversight or quality assurance. Other suggestions were a 'data warehouse' recording properties that have received measures, and that support will be required to develop an appropriate database:

National support is required for developing and maintaining a database of sufficiently detailed and accurate building information. This will be critical for monitoring progress towards the long-term domestic standard.

Academic respondent

It was also argued that a body set up to oversee Energy Efficient Scotland should support compliance with the standard.

Fewer respondents made points in favour of enforcement at national level, with respondents ranging in profile. Comments included that a national approach would facilitate uniformity or consistency, and that Local Authorities do not have the resources or capacity to enforce the policy. Local Authority respondents tended to raise this latter point. If a national approach were to be adopted, it was recommended that it should recognise local factors or that local guidance should be produced.

Other points were: the consultation paper does not present enough information on an approach to enforcement to allow an informed view on the relative merits of this being local or national; and that the respondent had no clear view beyond the need to ensure that resources are made available or that the policy is enforced. Finally, a number of respondents, including Individual respondents in particular, reiterated their opposition to mandating energy efficiency standards, and hence to any enforcement at all.

Non-Domestic Sector Overview

The consultation paper sets out the Scottish Government's intention to build on current regulations for non-domestic buildings with a phased expansion over 20 years, so that all buildings are covered by the regulations by 2040. The Scottish Government also proposes that the current triggers should be reviewed to provide a level of assessment and improvement activity that can be spread out over the period of the Energy Efficient Scotland Programme.

The consultation paper suggests that setting one standard that would apply to all buildings may not offer the most practical and equitable approach to improvement because of the wide variety of building types and purposes in the non-domestic sector. The Scottish Government's proposal is to move towards a benchmarking system where the performance of a building is assessed against a 'notional building' specification to identify 'what good looks like' for that building. The intention is to investigate the extent to which this specification may have to vary, in response to important building characteristics (such as type and construction).

The number of respondents answering questions on the non-domestic sector was lower than for the domestic sector, both in terms of those answering the closed question and those who made further comments.

Question 18 - Are there specific building characteristics you consider should be included in research to ensure that future improvement targets reflect the diverse nature of our non-domestic building stock?

Responses to Question 18 by respondent type are set out in Table 4 below.

Table 4: Question 18 - Responses by type of respondent.

	Yes	No	Don't know	Not answered	Total
Organisations:					
Academic	3				3
Building component manufacturers/services	6		3	4	13
Energy related private sector	7		2	8	17
Housing Association				1	1
Local Authority	17		2	3	22
Other			1	1	2
Private landlord or property management	2		2	4	8
Professional or representative body	4		1	7	12
Public sector or body – other	2		1	1	4
SG delivery agent			1	1	2
Third sector			2	8	10
Total organisations	41		15	38	94
Individuals	9	3	14	10	36
All respondents	50	3	29	48	130

A majority of respondents thought that there were specific building characteristics that should be included in research to ensure that future improvement targets reflect non-domestic stock diversity. Organisational respondents were more likely to take this view than individual respondents.

A small number of respondents confirmed the view that a 'one size fits all' approach to benchmarking would not be appropriate.

The small number of respondents who supported the inclusion of building characteristics in research did so with the qualification that given the diversity of the non-domestic building stock and its use, building characteristics alone would be insufficient to inform the research. They cited other factors that should be included such as the purpose, type and extent of occupancy of the building and its actual energy use. Some other respondents, including a number of Local Authority and Individual respondents, appeared to see such factors as coming within the definition of building characteristics.

The issue is related to building categories rather than characteristics i.e. buildings can be categorised as public, commercial, retail, industrial etc. The characteristics of the building will reflect the way they were designed.

Private landlord or property management respondent

The analysis presented below presents each of the main issues raised by respondents in turn.

Age and historic value of buildings

Some respondents, from across a broad range of respondent types, commented on the age, listing or historic value of a building and that a building's listing and architectural value, along with the requirements of being in a conservation area should be taken into account. It was noted that these could affect or limit the extent of improvements that can be made.

Other comments, in each case made by a small number of respondents, focused on the energy efficiency of listed, older or hard-to-treat buildings and were that improvement costs can be higher depending on construction type, or that older buildings may be less likely to be connected to national gas grids. It was thought that research should focus on identifying pragmatic, viable and affordable solutions for older, listed and historic buildings, including those which have been added to in the past and are of mixed age. Other comments were that:

- Older buildings may become unlettable or face demolition if it is not financially viable to improve them to the specified standard, and that this could have an adverse effect on the character of some areas.
- Producing benchmarks and standard methods of treatment could help reduce improvement costs.

Design, purpose and use

Some respondents, including a number of Local Authority respondents, raised issues about the importance of considering the design, purpose or use of a building. It was noted that similar types of buildings, such as warehouses, can be put to different types of use. It was also noted that some buildings, such as schools and libraries, can be multi-functional and that these variations can produce different patterns of energy consumption and can affect the types of improvements that may be appropriate. Specifically, it was noted that energy use will reflect the operating hours.

Other issues that respondents thought any research should cover, in each case raised by one or a small number of respondents, were:

- The categorisation of non-domestic buildings by sector, use or location.
- Treatment of multi-function buildings, for example a building that comprises both office accommodation and warehousing, in respect of energy performance assessment and improvement targets.
- The potential future use of a building.

- Understanding benchmarks and what can or cannot be achieved across the sector.

An alternative view was that attempting classification could prove costly and largely fruitless, and the focus should be on energy consumption per square metre.

Occupancy and occupant behaviours

Some respondents, including a number of Local Authority respondents, argued that any research needs to consider the occupancy of a building or occupant behaviours. Further comments were that not only the current, but also the potential future uses of buildings should be considered. It was reported that specific operations or behaviours, such as high energy-use lab work, use of refrigeration equipment, or illuminating external areas for night operations, can only explain energy use at a point in time. It was suggested that a building with a poor EPC rating can produce good Display Energy Certificate (DEC) performance.

Other issues which respondents wanted to be considered, in each case highlighted by one or a small number of respondents, were:

- Frequency of use, including whether there are seasonal variations in that use.
- That some buildings, such as castles or museums, may be only partly occupied or heated.
- Density of use, both overall and within parts of buildings.

Physical characteristics and attributes

A small number of respondents, including Local Authority respondents, commented on the varied nature of construction in the non-domestic stock, its diverse characteristics, and the need for this variety to be considered as part of future research. Specific proposals were that the following should be considered:

- Construction type, method and materials, including whether a tenement building is of solid wall construction.
- The ability of construction materials to handle moisture and their vulnerability to decay.
- The presence of asbestos.
- Building size, form and shape, site position and orientation.
- Geographical position within the country.
- Thermal mass of the building and the potential for improvement.
- Ability of buildings to harness passive energy, solar gain and solar shading.
- Heating, including heating controls and fuel type.
- Hot water systems.
- Ventilation, including ventilation controls, and cooling.
- Lighting, including lighting controls.

- Openings and performance of glazing.
- Local availability of different fuels.

Other comments were that the research should consider the potential for harnessing energy or heat to benefit district heating, and also that there should be a focus on the least energy efficient and most widely used construction types in order to maximise net improvement in efficiency and to reduce energy consumption and emissions.

Other issues to be covered by research

There was a range of other issues that one or a small number of respondents wished to be considered. These were:

- Affordability issues, including for buildings at the low value end of the non-domestic stock with rents currently reflecting that value. There could be particular issues for charities and social enterprises.
- Cost-effectiveness, including taking the anticipated operational life of a building into account.
- Technological change, including how technology is impacting on energy use and demand within buildings, and how understanding of conditions suited to particular low carbon and energy efficiency technologies can be improved.
- The impact of building maintenance on energy efficiency and consumption.

Other comments were that research will need to engage with large businesses operating sites across the UK, and also with those dealing in internationally-traded property portfolios.

Question 19 - What are your views on the way calculated energy use from building assessments are presented and/or benchmarked?

As for Question 18, some respondents stressed the need for methods of assessing and benchmarking energy use to reflect the diversity of non-domestic buildings. This was highlighted by a broad range of respondent types.

Views on assessing energy performance against a notional building specification were mixed, with a small number supporting the approach because it could enable more accurate and better aligned assessments for different types of buildings. A small number of others raised concerns, such as the need to recognise different conditions, not only between Scotland and other parts of the UK, but also across Scotland:

To allow effective comparison of different types of buildings, energy benchmarks must be updated regularly. This should be carried out at a national level to ensure the information is relevant. Benchmarks for the whole of the UK do not take into account the increased requirement for heating in Scottish properties and can skew resultant energy ratings.

Local Authority respondent

Other issues raised, in each case by one respondent:

- Certain construction types and methods may be unfairly treated, and some locations and local climates may not be catered for adequately.
- Limited access to certain fuel types may not be taken into sufficient account.
- Improvement recommendations that are not sufficiently tailored to a property may be unachievable.
- Improvement recommendations may not include the most up-to-date technology.
- More onerous benchmarking standards and any required improvements would not add commercial value.

As at previous questions, some respondents made specific references to EPCs, such as that they model energy use while actual energy consumption is more useful for assessment and benchmarking. This was referred to by a broad range of respondents. Further comments were:

- EPCs do not account for occupant behaviours and variations in use. It was argued that specific energy consuming processes within buildings should be sub-metered.
- EPCs lack a balance between carbon weighting and actual energy use and do not reflect true carbon gains achieved by switching entirely to renewable electricity sources.

One or a small number of respondents suggested changes required:

- There should be access to the full calculations behind an EPC rating.
- Consideration should be given to introducing a minimum energy efficiency standard based on the EPC, similar that that in England and Wales.
- The validity period for EPCs should be reduced and a new assessment required when changes to a building would impact on its EPC rating.
- EPC reports should take a less generic approach around low-carbon technologies, including reflecting current costs.
- EPC recommendations should encourage more multi-measure improvements which reduce potential future retrofit costs.

Alternatively, it was suggested that EPCs may provide an uncomplicated route for future benchmarking of non-domestic buildings, including because they allow for the concept of notional buildings.

The work on benchmarking non-domestic buildings being undertaken through the Scottish Energy Officer Network (SEON) was highlighted, and it was felt that this work could help inform development of a future approach to benchmarking. This was raised by a small number of Local Authority respondents in particular. Other proposals were that one of the following approaches could be considered:

- The Leadership in Energy and Environmental Design approach used in the USA.
- The Building Research Establishment Environmental Assessment Method.
- The Energy Assessment and Reporting Methodology (TM22) from the Chartered Institution of Building Services Engineers.

It was also proposed that any future benchmarking approaches should be piloted.

Some respondents, including a small number of Local Authority respondents, supported the use of DEC's for non-domestic buildings, including because they capture actual energy use through metered energy consumption and avoid the limitations of the standard assumptions. In terms of the frequency with which DEC's could be produced, proposals were either annually in all cases, or annually for the largest buildings, but only every five years for other buildings. However, it was also felt that the costs associated with annual updates should be taken into consideration. In terms of the DEC's themselves, it was recommended that they should:

- Support a range of policy objectives, for example reducing CO₂ and supporting skills development and employment in supply chains.
- Capture data on surplus heat and recognise any renewable energy generation.
- Be available to view online.

Finally, a small number of respondents argued that energy suppliers should be obliged to prepare annual energy consumption data to assist national benchmarking, rather than rely on building owners collecting this information.

Question 20 - What are your views on the proposed planned work to review improvement targets?

Some respondents, from across a broad range of respondent types, expressed their support for the review of improvement targets, noting the Scottish Government's proposals for the review. It was hoped that the review will help in setting realistic targets, providing predictions for future energy savings, and producing data on real energy savings:

Benchmarking against actual building performance including accounting for usage profiles will improve confidence in the overall approach to the delivery of energy efficiency works and help to predict and achieve more realistic energy savings, rather than using less specific modelling which has led to failed expectations not being met in some cases.

Local Authority respondent

There were a range of suggestions about topics or issues that any review should cover, focusing on the scope, impact and resource implications of targets. Other issues that one or a small number of respondents wished to be considered were:

- Funding and support for businesses to meet the new standard. One proposal was for backstop dates set according to the level of support to be provided.
- A simplified regime, aligned with existing EPC requirements, for buildings that are smaller than 100m².
- Involving building owners and occupiers in the development of any incentives and penalties.

In terms of any targets themselves, comments were that they should be technically feasible and cost-effective, and should reflect the individual circumstances of the building. Specifically, it was noted that fire stations account for around 2% of publicly owned buildings and should have a unique benchmark which would help maximise savings.

Other comments about targets, in each case raised by one respondent:

- Given the future Streamlined Energy and Carbon Reporting requirements and proposed introduction of energy intensity metrics, targets should be consistent with UK legislation.
- Targets should be kept under review to take account of advances in technology.
- Targets should be reviewed in the mid-2020s, including looking at the performance of low carbon heat supply and building fabric improvements.

In terms of the overall approach:

- Some forms of exception may still be required, including for any residual stock of hard-to-improve buildings. Specifically, it was thought that linking being able to defer improvements to evidence of annually adjusted consumption should be considered.
- Policies should reward organisations that invest in decarbonising their energy supply.
- Building owners must be given sufficient time to incorporate compliance with targets into their capital investment cycles.

Question 21 - What are your views on our proposals for phasing the regulations from 2020?

Some respondents, from across a broad range of respondent types, gave their support to the proposals for the phasing of regulations from 2020. Further comments were that the approach allows time to secure funding for improvements and for markets and supply chains to develop. It was also noted that the timescales are in line with those for Local Heat and Energy Efficiency Strategies (LHEES).

Although offering broad support, respondents highlighted issues that they wished to see addressed or changes they were looking for. A number of these related to timescales:

- As part of the phasing, interim targets could be set to help drive developments in the supply chain and reduce the likelihood of slippage against the long-term target. This was a frequently raised issue and came from a broad range of respondents. It was also suggested that phasing of regulations from 2020 should spread demand on the supply chain and provide sufficient time for it to gear up.
- Final timescales and backstop dates must allow sufficient time for businesses to plan for and reach compliance, and there must be sufficient information and support for those that need it.
- More clarity is required on the phasing and timelines.

Comments about alternative timescales were that harmonising long-term efficiency target dates at 2040 for both non-domestic and domestic property would provide consistency, and could be helpful when dealing with blocks of mixed domestic and non-domestic stock. Other proposals, in each case raised by one or a small number of respondents, were:

- A 2019 start date to coincide with EPC renewals for some larger buildings, or that those EPCs should be extended until plans are finalised.
- Running a wide-scale information programme aimed at all business types and phasing regulation from 2025.
- Requiring all buildings to reach the long-term standard before 2040 with early notice of backstop dates.

In terms of building characteristics that respondents wished to be taken into account:

- Buildings over 1000m² should be given more time in the phasing of regulations. More generally, there was support for phasing based on floor size.
- That larger buildings should be easier to assess and upgrade and could offer the greatest savings. There was also a comment that larger buildings are usually owned by larger companies with the resources to carry out and monitor energy efficiency measures. It was felt that addressing the largest first would give owners of smaller properties more time to prepare.
- Increasing the targets for new build could reduce the need for future retrofit.

Other issues that respondents wanted to highlight were that:

- The views of industry representatives need to be considered.
- The experiences of other countries should be looked at.
- Robust monitoring and effective enforcement will be required if timescales are to be met.
- Local Authorities already face staffing and funding challenges and the staffing and other resource implications need to be considered.

Not all respondents agreed with the proposals. Some, including a small number of individual respondents, suggested they were unrealistic or that further detail was required.

The Programme for industrial users of energy

The consultation paper notes the Scottish Government's belief that initiatives to support investment in the energy efficiency of buildings should be aligned and joined-up, where possible, with advice and support to reduce energy consumed on sites as a whole. In collaboration with industrial representatives, work is being carried out to align measures to invest in the energy efficiency of existing operations with the Energy Efficient Scotland Programme.

Question 22 - Should advice and support to invest in the energy efficiency of industrial or manufacturing buildings align with wider advice and support on how to reduce energy consumed for productive processes?

Responses to Question 22 by respondent type are set out in Table 5 below.

Table 5: Question 22 - Responses by type of respondent.

	Yes	No	Don't know	Not answered	Total
Organisations:					
Academic			3		3
Building component manufacturers/services	5		3	5	13
Energy related private sector	4		2	11	17
Housing Association				1	1
Local Authority	14		5	3	22
Other			1	1	2
Private landlord or property management	1	1	2	4	8
Professional or representative body	2		1	9	12
Public sector or body – other	1		1	2	4
SG delivery agent			1	1	2
Third sector	1			9	10
Total organisations	28	1	19	46	94
Individuals	14	1	10	11	36
All respondents	42	2	29	57	130

A majority of respondents who answered the question thought advice and support to invest in the energy efficiency of industrial or manufacturing buildings should be aligned with wider advice and support on how to reduce energy consumed for productive processes.

Respondents identified a range of benefits that could stem from aligning advice and support to invest in the energy efficiency of industrial or manufacturing buildings

with wider advice and support on how to reduce energy consumed for productive processes. Suggestions for the approach, raised by one or a small number of respondents:

- Encourage energy efficiency, reduced energy use and emissions, and allow businesses to make cost savings. This was raised by Local Authority respondents in particular.
- Assist with identifying where surplus heat or energy could be captured, including to support district heating schemes. This was also raised by Local Authority respondents in particular.
- Present government with an opportunity to facilitate knowledge exchange between sectors and to highlight examples of innovation.
- Allow joint consideration of building clusters and efficiency technologies.

Other comments focused on areas of existing practice that could be built on, or types of organisations that could play a role. Points raised:

- LHEES pilot projects could assist in aligning advice and support and testing how the approach could work in practice.
- Some Local Authorities already collaborate with partners to assist local businesses in accessing a variety of expertise and financial support.
- Universities should be given a greater role.

In terms of the range of advice and support needed, comments from one or a small number of respondents were:

- Many manufacturing and industrial processes require very specialist expertise to assess cost-effective energy reduction and emission reductions improvements. This is different from the expertise for assessing and advising on improvements to buildings.
- It may be necessary to involve several different advisers in an assessment. This could be challenging and impact on cost-effectiveness.
- Alternatively, it would be possible to provide aligned advice and support to manufacturing and industrial enterprises through a single source.

Respondents also identified topics about which information would be required or welcomed. These were: information on planned extensions to lower carbon gas infrastructure in Scotland, energy performance contracting, and the contribution digitalisation can make.

Small numbers of respondents also highlighted issues for consideration if taking the proposal forward, such as:

- The approach should be based on evidence gathered at national level so that advice and support can be delivered consistently across the country.

- The focus should be on providing information on timescales and dates rather than aligning areas of advice.
- Consideration should be given to whether combined asset portfolios of non-domestic buildings situated at a single location would provide sufficient scale to allow packages of bespoke support and advice, with such packages forming part of future LHEES.
- Priority should be given to efficiency improvements to buildings to ensure they contribute to the Energy Efficient Scotland Programme as early as possible.

Other comments focused on additional or alternative areas of work to be addressed:

- At the local level all policies and strategies should consider energy efficiency.
- An energy saving campaign to motivate energy efficiency actions and improvement by businesses is required.
- Communities should be able to obtain details of their collective energy use and generation.

In terms of types of support, comments were that there should be no financial support or investment through Energy Efficient Scotland for profit-making processes, and that energy audits should be free for Small and Medium-sized Enterprises.

Only a small number of respondents who disagreed went on to make a further comment, with points raised that businesses will access any advice they need themselves and that alignment could impact on operating costs for businesses in Scotland.

Public Sector Buildings

The consultation paper notes that the public sector is already an exemplar when it comes to energy efficiency and low carbon infrastructure. In addition to providing support to procure energy efficiency retrofit work, the Scottish Government is working to establish an accurate non-domestic baseline on energy efficiency and, as part of that, will look to gather information on the energy efficiency of stock across the public sector.

Question 23 - What more could the Scottish Government do to encourage the public sector to accelerate energy efficiency across their building stock?

General comments were that the public sector should be an exemplar for progress on energy efficiency, including supporting public sector targets going beyond EU requirements. Specifically, it was argued that LHEES can be utilised to support energy efficiency improvement in the public sector non-domestic stock.

Funding, resourcing and procuring improvements to public sector buildings

The issue of capital funding and resourcing for Local Authorities to drive acceleration of energy efficiency improvements in the non-domestic public buildings stock was raised frequently and by a broad range of respondents. There was specific reference to grant funding to Local Authorities.

In terms of approaches that work well or should be expanded, ideas were: the Central Energy Efficiency Fund; Low Carbon Infrastructure Transition Programme; Salix loans; and the Non-Domestic Energy Efficiency (NDEE) Framework for procuring energy efficiency services.

However, respondents also pointed to changes they would like to see and which they thought could help accelerate energy efficiency improvements across the public sector. These were each raised by one or a small number of respondents:

- Combining current funding streams and programmes.
- Providing assistance to facilitate match funding.
- Making access to, and the application process for, funding easier and less resource intensive.
- Encouraging a shared approach to procurement across the public sector.
- Increasing the availability of interest free funding.
- Increasing the use of ring-fenced revolving investment funds across the public sector.
- Providing Local Authorities with revenue funding to cover staff resources for overseeing implementation of projects and for staffing energy teams.

Specific proposals regarding new approaches which could be considered:

- Broadening the eligibility for Salix loans and increasing payback periods.
- Making loans to Local Authorities from the Public Works Loan Board or on terms that mirror the Board's rates.

Targets, regulation, incentives and sanctions

Some respondents, from across a broad range of respondent types, thought that the public sector needs to be given clear targets to help accelerate progress, commenting that there should be mandatory improvement targets for the public non-domestic stock.

...we think this is a missed opportunity. The energy performance of public sector buildings is directly in the control of the Government. If other sectors, including the domestic sector, will have a mandatory requirement – at the very least, we think the public sector should also be mandated to act too.

Building component manufacturers or services respondent

Specific proposals as to how any approach should work, in each case put forward by a small number of respondents, were:

- Rewarding the best performing organisations and/or introducing sanctions for poor performers. A specific idea was that reductions in energy consumption by public sector organisations could be rewarded through a full or partial refund of the Climate Change Levy on their gas and electricity invoices.
- Publicising annual performance and progress targets, placing organisations in bandings according to energy efficiency. Also, publishing performance league tables.
- Introducing DEC's for all public sector buildings.

Skills, learning and information sharing

The benefits of supporting knowledge exchange, skills development, and increasing the awareness of public sector organisations and their staff were highlighted by a small number of respondents, with specific actions such as:

- The Scottish Government running an awareness raising campaign providing information on national and international good practice. Specifically, raising awareness and understanding of NDEE and Salix.
- Supporting best practice learning networks.
- Setting up a dedicated information centre.
- Developing a public sector organisation 'energy map' highlighting opportunities for joint-working, for example on district heating schemes.
- Supporting apprenticeship schemes to build capacity in the energy efficiency services sector and for upskilling current assessors and training new assessors.

Question 24 - What more could the Scottish Government do to encourage the public sector to accelerate heat decarbonisation across their building stock?

Some of the comments submitted at this question raised similar themes to those presented at Question 23. The analysis presented here covers new issues raised at this question.

General comments were that fabric improvements should precede decarbonisation of heating. One or a small number of respondents also identified issues which, if addressed, could help accelerate heat decarbonisation:

- Supply issues need to be tackled. It was suggested that consideration be given to the availability of low carbon energy sources across the country, including the cost-effectiveness of extending gas supply networks to enable more connections to new lower carbon supplies.
- More private sector businesses need to be encouraged to connect to district heat networks.

- New public offices should not have air conditioning.
- How public sector buildings can act as anchor loads to enable new heat networks should be considered.
- There should be more engagement with supply side stakeholders in developing any policy.
- The carbon impact of other activities associated with buildings such as car parking and links to public transport should be taken into account.

It was also reported that current gas prices can make progressing decarbonisation of gas-heated sites difficult to justify financially.

Proposals for how the public sector could be encouraged or supported to accelerate heat decarbonisation often focused on funding:

- Providing ‘feasibility to finish’ technical and design assistance and guidance. Local Authority respondents more frequently highlighted this need.
- Providing help to meet capital costs of district heating schemes, and subsidies related to installation of low carbon technologies.
- The NDEE framework offering longer payback, including through whole-life loan funding or grants.
- Extending one-year draw down periods for grant funding on schemes.
- Reducing EST district heating loan scheme interest rates.
- Continuing or expanding feed-in tariffs and the Renewable Heat Incentive.
- Creating a national energy company charged with assisting with delivery, maintenance and operation of low carbon heat schemes.
- Introducing a carbon tax.

There was also a call for the Scottish Government to discuss reduced VAT rates for Combined Heat and Power schemes with the UK Government and to consider further exceptions for non-domestic business rates.

Other comments focused on encouraging learning and innovation and were that the Scottish Government should support a programme of demonstration projects on how public sector buildings can act as hubs, feeding excess energy into local heat networks.

The Programme and use of EPC data (Domestic and Non-domestic)

Use of data to support building owners and public bodies

The consultation paper notes that the Scottish Government plans to improve the way data is gathered and presented, both to support building owners in undertaking improvements and also in monitoring and enforcement of regulations. The intention is that better use of available information will improve understanding of how buildings can be improved simply and effectively.

Question 25 - What additional data would help building owners in the delivery of the Energy Efficient Scotland Programme? How would this be used?

Respondents cross referenced between Questions 25 to 28. To avoid duplication, comments have been covered at the most appropriate of the questions in the section.

Advice, guidance and information

Some respondents identified topics that should be covered in information, advice and guidance:

- The range of energy efficiency measures available, including those suitable for a building of the type they own.
- Installation and running costs, maintenance and benefits of any measures implemented.
- What is involved in installing particular measures.
- Grants, loans and approved installers for funded works.
- Other accredited and competent installers. This was raised by a small number of Local Authority respondents.

Providing owners with access to case studies and signposting initiatives, such as the EST Green Homes Network, was also proposed.

In terms of the delivery of information and advice, the importance of independent expert advice was highlighted, as was the need for advice to be tailored to the building, and in the case of non-domestic buildings, to their use.

Online information or information packs in a range of formats and including links to energy advice schemes were called for.

Assessment and improvements

Providing data that explains the detailed inputs, assumptions and calculations used to arrive at an EPC rating for a property was proposed:

Provision of a detailed itemised point-by-point calculation to support the rating. At present the ratings have zero credibility and the calculation process is kept secret.

Individual respondent

It was also suggested that better information on the calculated relative performances and financial savings offered by each recommended improvement would assist building owners to choose options which would deliver the biggest energy savings and would assist with budgeting and planning for improvements.

Specific ideas, in each case raised by one only respondent, were:

- Splitting information in the EPC between heat and other energy, providing more information on energy demands relating to cooling.
- Providing anticipated retrofit costs for meeting the 2040 target.
- Improving the building type and construction information on non-domestic EPCs to permit easier comparison of buildings.

Other suggestions

Other suggestions about additional data that would be helpful to building owners in the delivery of Energy Efficient Scotland, in each case raised by one or a small number of respondents:

- **Building passports and roadmaps** - introducing 'building passports' or 'renovation roadmaps' to help owners see the pathway to reaching targets. Expanding the online information held on buildings, provided that owners agree, was also proposed. Third sector and Energy related private sector respondents made these suggestions.
- **Wider stock or supply mapping** – it was suggested that mapping hard-to-heat homes and providing owners with data about the efficiency of different housing stock could be helpful. A map indicating all the alternative fuel, heat and power supplies and networks in an area was also proposed.
- **Before and after comparisons** - it was proposed that comparisons could help owners of similar type properties decide on works to their own property, but also that the approach could help in assessing the ongoing effectiveness of EPC assessments and improvement recommendations.
- **Smart meter data** – the information becoming available through smart meters was seen as useful, and it was argued that energy use readings can help motivate changes in behaviour around energy use and assist in identifying suitable retrofit options. Third sector respondents more frequently raised this issue.
- **Whole building level data for tenements** - a small number of Third sector or Scottish Government delivery agent respondents saw whole-building information as important to delivering the most cost-effective approach to energy efficiency improvements for tenement buildings.

An awareness-raising campaign around the Energy Efficient Scotland Programme covering both domestic and non-domestic should also be undertaken.

Question 26 - What additional data would be helpful to others in the delivery of the Energy Efficient Scotland Programme? How would this be used?

Advantages of making data available

A small number of respondents noted that it would be helpful if private businesses, such as energy efficiency measure installers and energy providers, had access to more of the data than is currently collected. In particular, access to up-to-date EPCs and to more of the detailed data behind an EPC was requested:

Data sharing is a great opportunity for stakeholders to help target support for fuel poor households and should ultimately help the Scottish Government deliver its ambitious Energy Efficient Scotland Programme.

Energy related private sector respondent

Other reasons given, in each case by one or a small number of respondents, were that it would:

- Allow installers to provide tailored advice for consumers.
- Reduce the need to re-measure and re-assess items that have already been assessed.
- Support the evaluation of proposals such as ‘allowable solutions’ or solutions to support communities meet local energy targets.

It was reported that new powers contained in the Digital Economy Act 2017 could enable the sharing of data to support the tackling of fuel poverty. Other comments were that building owners could be asked to agree to being contacted by third parties at the point of assessment.

Although the focus tended to be on making information available to the private sector, it was also argued that Home Energy Scotland advisors should be able to access data with the customer’s permission.

Property-based data

In addition to more general comments about improving or developing databases holding information on properties, bringing existing databases together into a single central property data base was proposed. Further comments, in each case by one or a small number of respondents, were:

- The Home Analytics data published by EST Scotland brings together several data sets in one online location and is extremely useful (with the caveat that some data cleansing may be required).
- A new resource could be created with the amalgamation of existing data sets. Data held by the National Energy Efficiency Data (NEED) Framework could contribute to a central property database.

Suggestions about the type of information it would be helpful to hold in a central database were primarily raised by an Energy related private sector respondent and were:

- Up-to-date EPC data.
- Indication of a 2040 Band C exception (if exceptions are adopted).
- Listed building status/conservation area status.
- Distance to the nearest gas main.
- Building Warrants, refurbishment and improvements works undertaken.
- Presence of micro-renewables.
- Up-to-date fuel poverty support eligibility and ECO eligibility.
- Contact details for the property.
- Local climate or weather data.

Another perspective, raised by a Local Authority respondent, was that easy access to multiple data sets should help comparison between Local Authority areas and assist in developing LHEES and setting baseline positions.

Other issues

Often reflecting points raised at Question 24, other issues raised are set out in turn.

Providing access to energy use and smart meter data. Further comments were that annual energy consumption data linked to property characteristics would support national monitoring against future targets, and could help improve accuracy in the Scotland Heat Map and the development of LHEES. Also, that it would help assessors customise performance improvement interventions. Local Authority respondents were amongst those commenting.

It was also argued that utility companies sharing data on prepayment meter locations and cases of 'self-disconnection' with Local Authorities could assist in tackling fuel poverty.

Location data and mapping. It was felt that mapping of EPCs would be helpful in highlighting areas or clusters of buildings with low energy efficiency and would assist Local Authorities to develop detailed local maps to underpin targeted programmes and investment linked to the LHEES.

Other comments, in each case raised by one respondent:

- A fuel poverty map based on the new definition of fuel poverty would help Advice organisations target fuel poverty alleviation campaigns.
- Data on privately-owned non-traditional house types and locations would be helpful as would data on buildings currently reliant on high carbon fuels.
- More detailed local information from Distribution Network Operators in their Heat Maps could better assist Local Authorities to scope and plan projects,

particularly in respect of renewable generation and district heating schemes delivering combined heat and power.

- Data on heat, electricity and surplus energy generated by industrial or production processes in non-domestic buildings could enhance current Heat Maps and identify opportunities for collaboration around utilisation of renewables and district heating.

Question 27 - We will investigate the benefit in providing new online resources or tools to support building owners to access and use data to help them improve their properties. What particular types of resources or tools would you find useful and why?

In terms of the type of resource respondents were looking for, comments often focused on some form of interactive online tool. (Ideas of a similar nature were put forward at earlier questions, particularly at Question 9.) Advantages of this type of approach, in each case highlighted by a small number of respondents, were that it would allow owners to benchmark the performance of their own building with other similar buildings and would offer owners of buildings without an EPC a way of estimating what their property might achieve. Third sector respondents made this latter point.

Specific ideas as to what any tool should do:

- Show how possible changes to the building would affect its EPC rating. Specifically, it should track any changes to a building over time and map a path to reaching EPC ratings.
- Generate cost-effectiveness information on proposed energy efficiency measures based on real use data. Local Authority respondents more frequently raised this issue.
- Enable owners to understand which low carbon heating options might be appropriate for their property and give feedback on the likely feasibility of any possible measure.
- Offer a whole-building assessment for owners in tenements.
- Enable the user to request quotes, including from those operating locally to them.

Topics that respondents wanted to see covered in any online resources were:

- Details for suitably qualified and accredited assessors or installers. This was the most-frequently suggested topic and came from a broad range of respondents.
- Grants and financial assistance that may be available.
- The importance of maintaining the building fabric.
- How energy consumption in non-domestic buildings can be managed.

- How the EPC rating of non-traditional house types can be improved and ventilation of traditionally built properties.
- Case studies to help owners understand the benefits of and what is involved in different improvement solutions for different building types. Building component manufacturers or services respondents were amongst those who made this suggestion.

It was also recommended that if building renovation passports or roadmaps are introduced, any online tools should take this into account.

In terms of what any online resources should look like:

- Be easy to access and use, including being available through a smartphone app. Local Authority respondents more frequently raised this issue.
- Present comprehensive information but signpost onwards where necessary.
- Provide supporting information about how to interpret any data provided.

However, it was also felt that the views and preferences of potential users should be gathered on the design and content of any online tools. A review of existing online tools, websites and linked services relating to energy advice was proposed. These were interactive tools about health and social care, the Each Home Counts website, and the way online access to EPC information is provided by the UK Government.

It was also thought that as many owners now receive electronic copies of their EPCs, these documents should have embedded links to independent advice services and specialist advice for particular building types, such as Historic Environment Scotland.

Although generally supportive of the online approach, respondents did raise some concerns or highlight certain issues:

- There remains a need for access to independent advice around implementing energy efficiency measures. This was the most frequently raised concern and came from a broad range of respondents.
- Interventions for non-domestic buildings require a higher level and range of technical expertise and an interactive online tool may not be appropriate. However, providing information and links to expert advice could be useful.
- The needs of owners without access to the internet must also be taken into account when developing resources.

Question 28 - In addition to the above, we welcome any specific comments or observations you may have on the future use of the data that is gathered from energy assessments.

Comments at Question 28 tended to address issues already covered in the analysis presented at earlier questions. Some respondents, including Academic, Energy related private sector, Local Authority and Private landlord or property management respondents, raised concerns about the accuracy of EPC data and a methodology that relies on assumptions and modelling. It was argued that more could be done to monitor and enforce standards of practice in energy assessment to support the collection of more accurate data.

Other comments frequently focused on improved access to property assessment and/or energy use data. These concerns were raised by a broad range of respondents. Reasons given for wanting more data to be made available in future were that it would:

- Support improvements to assessment approaches, including through the use of accurate energy use data.
- Enable better targeting of resources, improvement action and information.
- Support a better understanding of the overall condition of stock across the country, including overall progress against Energy Efficient Scotland targets, and also identify any variations in progress based on area or build type.
- Help with the evaluation of different improvement measures. In particular, using data from improvement project failures to learn lessons.
- Support expansion of the green mortgage market.
- Enable stakeholders to contribute more productively and creatively to further discussions on the programme.

There was concern that historical data on a property which could aid more accurate future assessments may be lost when a new assessment is recorded, and it was recommended that historical assessment data should be kept. There were also calls to change the way data is presented currently to a more end-user friendly format.

Although there was an appetite for more data to be made available, the need for adequate data protection for owners and customers was highlighted. It was also cautioned that the sharing of data should not leave people open to poor sales practices.

Potential legislative change to support the Programme

The consultation paper acknowledges that for a programme as ambitious as Energy Efficient Scotland, it will be necessary to review existing legislation and to consider what new powers or duties may be needed. As a minimum, the Scottish Government is considering the need for legislation to create a statutory duty for Local Authorities to develop Local Heat & Energy Efficiency Strategies (LHEES) and for regulation of district heating. The consultation paper also notes that the target of removing poor energy efficiency as a driver of fuel poverty will be achieved via the Energy Efficient Scotland Programme but that a Fuel Poverty Bill, due to be introduced to Parliament in June 2018, will set out the new statutory target: to eradicate fuel poverty by 2040.

Existing legislation and further legislative provision

There is already a wide range of legislation which gives powers and duties to the Scottish Government, Local Authorities and energy suppliers to improve the energy efficiency of buildings, and reduce emissions associated with their energy and heat supply. The Scottish Government would like stakeholders to comment on whether any changes are needed to existing legislation relating to energy efficiency. Views are also sought on areas where there may be need for further provision.

Question 29 - What are your views on the implementation and enforcement of existing legislation relating to energy efficiency and heating of buildings in Scotland?

Enforcement

There was a call from an Academic and a Local Authority respondent for clarity as to how energy efficiency standards will be enforced and penalised.

It was reported that there has been a low level of enforcement activity to date, and that any legislation needs to be enforced and checked to ensure compliance. Specifically, it was argued that existing legislation also needs to be systematically enforced through a unitary system, with independent assessors.

Standards framework and accreditation

General comments, in each case raised by a small number of respondents, were that without a robust quality and standards framework in place there is a risk that the Energy Efficient Scotland Programme will not deliver the outcomes the Scottish Government is hoping for. A review of how the Planning system should be revised to facilitate the transition to near zero carbon buildings was recommended by a Scottish Government delivery agent and a small number of Third sector respondents.

Other issues raised, in each case by one or a small number of respondents, were that the Scottish Government should ensure that:

- The standards framework it puts in place to underpin its Energy Efficient Scotland Programme is consistent with that of the rest of the UK. This was raised by Energy related private sector respondents.
- Consumer protections are to the fore. This was raised by a Building component manufacturers or services respondent.

Points raised specifically about Building Regulations or Standards were that they should be made more stringent and robust. It was also argued that consideration should be given to the potential to improve the operation of buildings and establish a degree of accountability for buildings reaching their aspired design efficiency. These issues were raised by a small number of Local Authority respondents.

Suggestions as to parts of the Building or Planning Regulations which require particular attention, in each case made by a small number of respondents:

- That they apply to existing properties and new builds. It was suggested that consideration should be given to applying standards at the point of a major refurbishment.
- Part L of the Building Standards in relation to condensing boilers.

Other comments were that planning consent powers to force companies to provide waste heat to existing networks would be welcomed.

There was specific reference to the Each Home Counts Review and a suggestion that there is still much work to be done before consumers and the industry can have full confidence in the accreditation framework.

It was also noted that the Repairing Standard for the private rented sector will need to be updated.

Resource implications

There was a concern, raised by a small number of Local Authority respondents, that new legislation will place more responsibility for implementation and enforcement on to Local Authorities and, as at previous questions, the resource implications for Local Authorities were highlighted.

Specifically, it was argued that a statutory duty to develop LHEES would have both a resource and financial impact on Local Authorities and that this approach will only be successful with Scottish Government consultant assistance and suitable funding streams or grants.

One suggestion was that a resource impact assessment for the Scottish Government, Local Authorities and other relevant stakeholders should be carried out. Other proposals were that energy efficiency funding should be ring-fenced or that an approach similar to the previous Green Deal initiative should be taken.

More generally, it was noted that energy efficiency is a National Infrastructure Priority and that adequate resourcing is required to ensure the implementation and enforcement of existing legislation.

EPCs

As at previous questions, concerns were raised about the accuracy of EPC assessments, and about how they cover some building types, including traditional buildings. This concern was raised by a small number of Private landlord or property management respondents. Other comments were that current approaches to enforcement lack robustness.

Other ways to support implementation

Other issues raised, in each case raised by one or a small number of respondents:

- The Scottish Government must have oversight of LHEES to ensure the strategies are aligned with national as well as local policy objectives.
- A key enabling factor will be how Local Authorities are supported and enabled to work with the energy distribution networks as well as energy suppliers. It was suggested that revisiting provisions of the Scotland Act 2016, sections 58 and 59, in terms of developing a Scottish approach to energy company obligations, may be appropriate once further details are known regarding the future of the gas network.
- Considering issues around tenements and common or shared property. There was a specific proposal that there should be a requirement for management arrangements to be in place to initiate, co-ordinate and implement retrofit projects.
- An extensive and ongoing awareness-raising campaign will be required.
- It would be beneficial to launch Energy Efficient Scotland with concise guides to current legislation for the different property sectors. These guides should be made available to members of the supply chain involved in delivering retrofit.

Finally, an alternative perspective was that existing powers should be sufficient, or that no further legislation is required.

Question 30 - What changes may be needed (if any) to this existing legislation to ensure that the Scottish Government, Local Authorities, and any other relevant bodies or persons, have the powers and duties necessary to support the Energy Efficient Scotland Programme?

Comments at Question 30 sometimes referred back to comments at the previous question or covered themes already set out above.

Legislative or regulatory changes

In particular, and as above, there was reference to issues which could be addressed by changes to regulations or legislation. Each was raised by one or a small number of respondents:

- Developers currently only consider their own building project in relation to heating, resulting in stand-alone plant without considering buildings in the surrounding area.

- How hydraulic balancing¹⁴ can be introduced.
- Local Authorities can enforce right to repair but not improvements such as insulation and other energy efficiency measures. To support the Energy Efficient Scotland Programme, it would be helpful if legislation could also give a right to improvement.

Other areas of legislation or regulation to which one or a small number of respondents thought changes might be required or should be made were:

- New legislation for refurbishment or extension of existing buildings whereby the refurbished/extended building has to meet certain EPC ratings on completion.
- Changes to electricity supply legislation.
- The implementation of the Boiler Plus regulations. Also, mandating of Stored Flue Gas Heat Recovery where applicable.
- Enforcement of Ecodesign regulations once they become law.
- Requiring cost of occupation data on sale and rental agreements, including standardised fuel costs and, in due course, any on-going energy [in]efficiency related charges, such as variable Local Authority taxes.
- Developing and enforcing quality standards to support the development of a high quality thermal retrofit industry.
- Referencing energy efficiency and low-carbon heating in national planning guidelines such as the forthcoming National Planning Framework.

Suggestions as how any changes required could be taken forward, in each case raised by a Local Authority respondent, included:

- For private rented homes, an extension of the Repairing Standard.
- Looking at the Tolerable Standard, including to ensure that homes that cannot be improved to meet a minimum energy efficiency standard are removed from the stock.
- Using the Scheme of Assistance in relation to the provision of information, advice and practical assistance and, in some cases, financial assistance to home owners, private landlords and private tenants. It was noted that this could require changes to the Housing (Scotland) Act 2006 to ensure that energy efficiency is a key focus of the Scheme of Assistance.

More broadly, it was felt that Local Authorities will need direct legislative mandates to develop and implement LHEES.

¹⁴ Hydraulic balancing is the process of optimising the distribution of water in a building's hydronic heating or cooling system by equalising the system pressure, so it provides the intended indoor climate at optimum energy efficiency and minimal operating cost.

It was also suggested that legislative changes may be required to establish where responsibility for potential building failures lies if works to improve energy efficiency becomes mandatory.

Finally, it was thought that consolidation of existing legislation would be beneficial.

Overall approach to delivery

A small number of respondents commented on the wider policy or political environment which would be needed if positive change is to be achieved. Comments were that consistent and prominent political support will be critical to the effectiveness of Energy Efficient Scotland. Other views about how Energy Efficient Scotland can be delivered, raised primarily by Local Authority respondents:

- Not bringing in new legislation to either implement or enforce the policy may result in making the Energy Efficient Scotland Programme voluntary and will reduce its scope and efficacy.
- A clear policy framework with set targets must be developed.
- Delivery bodies should be assigned to each target and the scope of what they are responsible for delivering should be made clear.
- A robust process should be set out by the Scottish Government to ensure consistency between Local Authorities in matters of compliance monitoring and equitable data collection.
- Better private/public sector collaboration is required. This should be Local Authority led to ensure LHEES strategy can be successful.

Question 31 - What other elements of the programme may require new or amended legislation to enable the Energy Efficient Scotland Programme to operate?

Respondents highlighted a range of areas in which new or amended legislation may be required or highlighted policy-related areas they wished to see addressed. The themes raised often reflected issues raised at earlier questions and are set out in turn below.

Energy Efficient Scotland Programme: a small number of respondents commented that there should be a statutory framework for Energy Efficient Scotland including targets and scrutiny provisions.

Further comments were that new legislation should make clear whose responsibility it is to achieve Energy Efficient Scotland objectives.

Integration with other relevant policy developments: comments, in each case raised by one or a small number of respondents, were that:

- The new fuel poverty targets must be central to the work undertaken in Energy Efficient Scotland. One suggestion was that the Scottish Government should introduce legislation to provide a statutory foundation for the new fuel

poverty target and strategy to deliver the Energy Efficient Scotland Programme.

- Given the importance of improving energy efficiency standards across tenures, the strategic fit with Local Housing Strategies (LHSs) should be formally recognised, with alignment across the Route Map, LHEES Guidance and revised LHS Guidance, to accord with the Housing (Scotland) Act 2001.
- The policy should be integrated with EESSH and LHEES. It was also suggested that there should be a duty for Local Authorities to produce LHEES.

Other points raised about the LHEES were that:

- It will be important for Local Authorities to set out how they intend to quality-assure the installations taking place, including how it will be verified that the work has been done as intended and in a safe manner.
- Local Authorities should also be clear in the LHEES about the order in which works will be done, and should make sure that the fabric of the building is properly insulated before, or at least alongside, new low carbon heat sources.

Financial incentives: It was suggested that the success of Energy Efficient Scotland will rely on the deployment of a range of financial and fiscal incentives to encourage the uptake of energy efficiency and low-carbon heat improvements. This was raised by a small number of Third sector respondents. They also suggested that the design of incentive schemes should be based on an evaluation of experience to-date of loans, cashbacks, and grants administered by EST on behalf of the Scottish Government. A review after 12 months of any incentives introduced was also proposed.

Suggestions as to other actions or options which could be considered were:

- Reviewing existing legislation relating to tax incentives for energy efficient properties.
- Introducing tax breaks for landlords who invest in the energy efficiency measures to their properties before the target date.
- Linking council tax to EPC ratings. Specifically, considering enhancing the council tax rebate provisions in the Climate Change (Scotland) Act 2009 and/or using the Land and Buildings Transaction Tax (Scotland) Act 2013 to reward action to improve energy performance in buildings.
- Making sure any funding available is easy to access.

Regulations: A small number of respondents suggested that planning and building regulations, along with condition standards, will need to be revisited and revised. It was also suggested that an extension of district heating regulations would be required.

Further comments were:

- There should be provisions laying out timeframes for the review of building regulations.
- Changes to building standards should reflect developments around passive houses.
- There should be a focus on ensuring that new homes do not need retrofitting during the Energy Efficient Scotland Programme period. It was suggested that the Scottish Government should actively encourage and promote the use of PAS 2030 and PAS 2035 for the retrofit process and require it as a condition of funding, where funding is provided.
- Planning regulations should be amended to make the use of renewables easier.
- There should be a requirement for developers to build district heating infrastructure into their sites.

Other comments: there needs to be a robust approval scheme for businesses involved in the provision of energy efficiency schemes. An appeals process for EPCs was also proposed.

It was suggested that the law governing tenements in Scotland will need to be reformed to make energy upgrades easier, and that the Scottish Government should undertake a detailed investigation to determine what reforms are required.

Question 32 - Which organisation(s) should be responsible for delivering any new legal requirements?

Most frequently, respondents thought that the Scottish Government and Local Authorities together should be responsible for delivering any new legal requirements. This issue was raised by a broad range of respondents.

When referencing the Scottish Government, a small number of respondents referred directly to the Building Standards Division. References to Local Authority services were to Building Standards or Control, Planning, and Housing and Trading Standards.

Further comments about the Scottish Government and Local Authorities having responsibility were that:

- Organisations, and particularly Local Authorities, will need to be properly resourced and supported to deliver and enforce any new requirements. Both those who thought the Scottish Government and Local Authorities should be responsible, as well as those who thought Local Authorities only should be responsible, highlighted this issue.
- Local Authorities should have a key role in enforcement of any target, and that local delivery and enforcement will be crucial to ensuring all communities across Scotland benefit.
- There should also be parliamentary oversight.

Other suggestions, in each case raised by a small number of respondents, were that Local Authorities should be responsible. As above, there were references to a range of Local Authority services such as legal services, building control, planning, trading standards, environmental health, and housing. It was noted that under the Building (Scotland) Act, Building Control would be responsible for enforcement. A small number of respondents also noted that Local Authorities answer to the Scottish Government and that the Scottish Government should be responsible for reporting on Energy Efficient Scotland targets.

Other respondents, including a small number of Third sector respondents, thought an independent body should be responsible for enforcement. Further comments were that a formal, accountable co-ordinating body could ensure concentrated expertise, drive and leadership over the Programme timeframe. It was also argued that this way forward could help ensure a consistent and well-resourced approach.

There was also reference to a statutory role for a new 'National Delivery Mechanism', as proposed and outlined in the recent Scottish Government consultation: 'Scotland's Energy Efficiency Programme: Second Consultation on Local Heat & Energy Efficiency Strategies, and Regulation of District and Communal Heating' (November 2017). It was proposed that the body would report to Ministers and the Parliament against the Energy Efficient Scotland Route Map and statutory targets.

Further comments from the small number of respondents who thought that the Scottish Government alone should be responsible, were that they should be held accountable and that this approach would help ensure that the necessary funding is made available. There were also occasional references to a range of other organisations including: Trading Standards Scotland, Citizens Advice Scotland, and public bodies with large estates such as the NHS, Housing Associations, and OFGEM.

Annex 1 - Organisations responding to the consultation

Respondent	Group type
2050 Climate Group	Third sector
Aberdeen City Council	Local Authority
Aberdeenshire Council	Local Authority
ALLenergy	Third sector
Angus Council	Local Authority
Architecture & Design Scotland	Professional or representative body
Argyll and Bute Council Housing Services	Local Authority
Argyll and Bute Council Energy Forum	Local Authority
Association for the Conservation of Energy	Professional or representative body
Association of Local Authority Chief Housing Officers	Local Authority
British Blind & Shutter Association	Building component manufacturers or services
Built Environment Forum Scotland (BEFS)	Professional or representative body
Calor Gas LTD	Energy related private sector
Canetis Technologies Ltd	Building component manufacturers or services
Central Association of Agricultural Valuers and Scottish Agricultural Arbiters and Valuers Association	Professional or representative body
Changeworks	SG delivery agent
Chartered Institute of Housing Scotland	Professional or representative body
Comhairle Nan Eilean Siar (Western Islands Council) - Housing Services	Local Authority
Consumer Futures Unit, Citizens Advice Scotland	Third sector
Convention of Scottish Local Authorities	Local Authority
Davidson & Robertson	Private landlord or property management
Dupplin Trust 2000	Private landlord or property management
E.ON	Energy related private sector
East Lothian Council	Local Authority
EDF Energy	Energy related private sector
Elmhurst Energy Systems Limited	Energy related private sector

Respondent	Group type
Energiesprong UK	Building component manufacturers or services
Energy Action Scotland	Third sector
Energy Agency	Third sector
Energy Policy Effectiveness Research Team, School of Social and Political Science, University of Edinburgh	Academic
Energy Saving Trust	SG delivery agent
Energy UK	Energy related private sector
Existing Homes Alliance Scotland	Third sector
Falkirk Council	Local Authority
Farm Energy Consulting Ltd	Energy related private sector
Federation of Petroleum Suppliers (FPS) Limited	Energy related private sector
Glasgow City Council	Local Authority
Glass and Glazing Federation	Building component manufacturers or services
Heat and the City team, School of Social and Political Science, University of Edinburgh	Academic
Highland Council	Local Authority
Historic Environment Scotland	Public sector or body - other
Historic Houses Scotland	Professional or representative body
Homes for Scotland	Professional or representative body
Institute of Historic Building Conservation (Scotland Branch)	Professional or representative body
Kingspan	Building component manufacturers or services
Mineral Products Association	Building component manufacturers or services
Mineral Wool Insulation Manufacturers Associations	Building component manufacturers or services
Moray Council	Local Authority
NHS Health Scotland	Public sector or body - other
NHS Scotland – Energy Manager Health Facilities Scotland	Public sector or body - other
NIBE Energy Systems Limited	Building component manufacturers or services

Respondent	Group type
North Ayrshire Council	Local Authority
North Lanarkshire Council	Local Authority
Npower	Energy related private sector
Perth & Kinross Council	Local Authority
R H Gladstone and co	Private landlord or property management
ROCKWOOL UK	Building component manufacturers or services
Savills (UK) Limited	Private landlord or property management
Scottish and Southern Electricity Network	Energy related private sector
Scottish Association of Landlords	Private landlord or property management
Scottish Borders Council	Local Authority
Scottish Energy Officer's Network (SEON)	Local Authority
Scottish Fire and Rescue Service	Public sector or body - other
Scottish Futures Trust	Other
Scottish Gas Network	Energy related private sector
Scottish Land and Estates	Private landlord or property management
Scottish Property Federation	Professional or representative body
Scottish Renewables	Energy related private sector
ScottishPower	Energy related private sector
SFHA	Housing Association
Shelter Scotland	Third sector
South Lanarkshire Council	Local Authority
South Seeds	Third sector
SSE	Energy related private sector
Stove Industry Alliance (SIA)	Building component manufacturers or services
Stroma Certification Ltd	Energy related private sector
Sustainable Energy Association	Energy related private sector
Tarmac	Building component manufacturers or services
THAW Orkney	Third sector
The Association for Decentralised Energy	Energy related private sector

Respondent	Group type
The Association of Scotland's Self-Caterers	Professional or representative body
The City of Edinburgh Council - Officer Response	Local Authority
The Energy Poverty Research initiative	Academic
The National Trust for Scotland	Private landlord or property management
The Scotch Whisky Association	Professional or representative body
The Solar Trade Association	Building component manufacturers or services
The Viessmann Group	Building component manufacturers or services
Tighean Innse Gall	Third sector
Trading Standards Scotland	Other
UK Finance	Professional or representative body
UKLPG	Energy related private sector
Weslo Property Management	Private landlord or property management
West Dunbartonshire Council	Local Authority
West Lothian Council	Local Authority

Annex 2 - List of acronyms used

DEC	Display Energy Certificate
Defra	Department for the Environment, Food and Rural Affairs
EESSH	Energy Efficiency Standard for Social Housing
EESSH2	Energy Efficiency Standard for Social Housing post-2020
EPC	Energy Performance Certificate
EST	Energy Saving Trust
HEEPS	Home Energy Efficiency Programme Scotland
HMO	House in Multiple Occupation
LBTT	Land and Buildings Transaction Tax
LHEES	Local Heat and Energy Efficiency Strategies
LHS	Local Housing Strategy
LTDS	Long-Term Domestic Standard
MVHR	Mechanical Ventilation with Heat Recovery
NEED	National Energy Efficiency Data
NDEE	Non-Domestic Energy Efficiency
PAS	Publicly Available Specification
PRS	Private Rented Sector
RdSAP	Reduced Data Standard Assessment Procedure
SAP	Standard Assessment Procedure
SEEP	Scotland's Energy Efficiency Programme
SLWG	Short Life Working Group



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