

Respondent Information Form

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Are you responding as an individual or an organisation?

- Individual
 Organisation

Full name or organisation's name

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

- Publish response with name
 Publish response only (without name)
 Do not publish response

Information for organisations:

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

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

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

- Yes
 No

Questionnaire

Section 2 - Identifying the components of an equivalent standard

Question 1

Do you broadly agree with the statements on what 'equivalent' should not mean, in delivery of amended building standards to address energy and environmental performance?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

We strongly believe that this review focuses strongly on two of its intents highlighted within the consultation document as follows:-

- Improvements to the setting of energy performance and ventilation standards for new buildings, leading to lower energy demand (and reduced running costs) and assurance of a healthy indoor environment.
- Improvements to the design and construction process to give greater assurance that compliance, and therefore the performance sought, is delivered in practice.

Question 2

Do you broadly agree with the statements on what 'equivalent' should require consideration of, in delivery of amended building standards to address energy and environmental performance?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

Where we broadly agree with the statements, we believe that the following are the most significant factors to which the consultation requires to address.

- Action to **increase assurance of outcome** should cover both design and construction phases as a single process with emphasis on competence, effective communication, risk management and reporting on activity throughout that process.
- The way we define and set out targets should **support considered and effective low-energy design**, where practicable.

This standard should reflect proposed changes in EPC reform and ensure that the methodologies align. This standard should ideally include the objectives around embodied carbon, toxic chemicals and indoor air quality and promote consideration of lower embodied carbon.

Section 3 - Proposed components of the standard – Design

Topic - Standard 6.1 and approved calculation methodology

Question 3

On the basis that HEM and SBEM are reviewed and shown to report representative outcomes, do you support the continued use of calculation tools which implement the UK methodologies?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered, including your experience of PHPP as a calculation tool.

SAP, together with beta HEM and SBEM, often produce results that do not accurately represent real-world performance. The same could be said of the Passivhaus Planning Package (PHPP) all of which can be reliable tools that supports design to ensure intended building performance and should remain an approved methodology until the Scottish version of HEM demonstrates equivalent accuracy in energy forecasts. A single method of compliance that can be implemented by the Technical Standards would be preferable and would support the drive to Net Zero.

Topic - Approach to defining overall building energy targets

Question 4

Do you support retention of the current approach and the setting of relative performance targets for new buildings through an approved calculation methodology?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

(NOTE: we have answered yes and no to this question)

We believe however that the current approach should be enhanced and of a higher standard to help Scotland meet its carbon emission targets, with far more stringent backstop values.

Absolute target methodology aligns not only with LETI Climate Emergency Design Guide, RIBA 2030 Climate Challenge guidance but also with the new UK Net Zero Carbon Building Standard (UKNZCBS)

Question 5

Do you agree with the proposal to retain delivered energy, covering only regulated energy use, as the main compliance metric for targets set under standard 6.1 (energy demand)?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

It is important not to include unregulated energy, as unregulated energy should not form part of a compliance strategy.

Question 6

Do you support further consideration of the introduction of a prescriptive space heating demand limit for new buildings through building regulations?

- Yes**
 No

If you answered 'Yes', please provide information on what form of prescription you would support and the potential benefits and/or risks this may create.

A prescriptive limit on space heating demand is vital for driving higher energy efficiency standards in new and existing buildings.

Question 7

Do you support the move to application of regional climate data within the approved calculation methodologies and their application within compliance targets?

- Yes**
 No

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

We strongly agree in the application of regional climate data within the approved calculation methodologies as this will enhance building performance and resilience in incorporating local climate data for precise heat load calculations and compliance targets, tailor heating needs and cooling strategies to regional conditions, and optimize summer comfort.

Topic - Building fabric standards

Question 8

Do you currently deliver new buildings that exceed 'backstop' values for fabric performance set under standard 6.2 or those used to define the notional building in guidance to standard 6.1?

- Yes
 No

If you answered 'Yes', please provide information on the solutions you apply, any challenges experienced and your views on wider application of such solutions.

We have no comment to make.

Question 9

Do you have any particular views on limiting fabric infiltration through the building standards?

- Yes
 No

If you answered 'Yes', please provide your views and any supporting information on the benefits and risks arising from greater prescription on this topic.

"Mandating" mechanical ventilation by imposing very low fabric infiltration metrics could lead to unintended consequences of low indoor air quality and associated health issues from such factors as dampness, cold, and condensation.

We strongly advocate for limiting fabric infiltration, particularly by establishing a low mandatory target that would require the use of a mechanical ventilation system like MVHR. While the ventilation strategy for new homes should comply with set regulations, designers should have the flexibility to consider all available ventilation options.

Topic - Ventilation and occupant comfort

Question 10

Do you have any particular views on the means by which effective ventilation of new buildings is best achieved?

- Yes
 No

If you answered 'Yes', please provide your views and any supporting information on the benefits and risks identified in the delivery of your projects.

We have no comment to make.

Question 11

Specifically for new homes should further guidance be given on MVHR, generally, and through the Technical Handbooks?

- Yes
 No

If you answered 'Yes', please describe what approach to this work you consider would be most appropriate in driving forward informed, good practice on both energy and ventilation performance.

Some homes will automatically provide very low fabric infiltration rates and will necessitate the use of mechanical ventilation such as MVHR therefore in our opinion further guidance would be beneficial even if the MVHR is not a mandatory requirement due to an extremely low fabric infiltration metric being imposed.

It is important that the standard where a MVHR system is designed, installed and commissioned to the standards that a greater emphasis requires to be placed on ensuring that the end user of the dwelling is provided with the necessary information on the operation of such systems as highlighted in our response to Question 9 and unintended consequences of low indoor air quality.

Question 12

Are there areas of newbuild design and specification you would wish to highlight as potential risks to occupant comfort that should be better addressed through the building standards?

- Yes**
 No

If you answered 'Yes', please provide examples of the issues encountered and, where available, the solutions employed to address the problem.

Safeguarding interest of the occupants is of utmost importance. Overheating risks need to be calculated to long-term predictions to ensure resilience and prolong life of buildings.

Topic - Alternative means of compliance

Question 13

Do you consider that Passivhaus Certification offers a feasible alternative means of compliance with standard 6.1 (energy demand)?

- Yes**
 No

Please provide information on why you agree, or disagree and on the extents to which this alternative might be usefully applied in practice.

We are not in favour of proscribing Passivhaus as an integral part of the Technical Standards however, assessors such as Certifiers of design may take into account the results when considering compliance with 6.1.

Topic - Summary of proposals

Question 14

Are there any other comments or observations you wish to make on the proposed components of the review which relate to building design?

- Yes**
 No

If you answered 'Yes', please provide your further comments or observations. Additional supporting information may also be provided by attaching a separate document to your response.

We have no comment to make.

Section 4 - Proposed components of the standard - Compliance

Topic - Principles of an evidence-led approach to compliance

Question 15

Do you currently apply an in-house or third party compliance management process to your projects which specifically addresses energy and environmental project elements?

- Yes
 No

If you answered 'Yes', please provide information summarising your approach and the key benefits you derive from its application in practice.

We have no comment to make.

Question 16

From your experience of delivering very low energy buildings, what are the most common risks identified at an early design stage and how are they managed most effectively?

We have no comment to make.

Question 17

Do you consider there are practical limits to effective risk management at design stage alone and can you give examples of where management of risk is more effective at a later (construction) stage?

We have no comment to make.

Question 18

Do you currently apply a particular approach to the recording of project information during construction that can demonstrate, to a third party, that work complies with energy-related aspects of building regulations?

- Yes
 No

If you answered 'Yes', please provide information summarising your approach and the key benefits you derive from its application in practice.

We have no comment to make.

Question 19

Do you currently compile and report summary information on the completed building as part of a handover record of project information that goes beyond what is currently required by building regulations?

- Yes
 No

If you answered 'Yes', please provide information summarising your approach and the key benefits you derive from its application in practice.

We have no comment to make.

Question 20

Do you have experience of implementing methods to effectively de-risk the very low energy building aspects of design and construction and provide assurance that the compliant solutions are properly considered and delivered as intended?

- Yes
 No

If you answered 'Yes', please provide information summarising your experience.

We have no comment to make.

Topic - Intent to develop guidance/application in practice

Question 21

Do you consider the proposals set out present a reasonable summary of why there is a need for improvement in compliance processes to deliver very low energy buildings?

- Yes
 No

Please provide information on why you agree, where you disagree and on any drivers for improvement you consider particularly important.

The proposals provide a reasonable summary of the factors driving improvements in the compliance process and are essential to ensure that all buildings are constructed according to the approved design. Absolute target, quality control, adequate calculation methodologies are the key elements to be met by this standard and will help ensure that all homes are designed and built to very high standards.

Question 22

Do you consider the proposed scope of application and recommended actions are appropriate to address the effective delivery of very low energy buildings?

Yes

No

Please provide information on why you agree, where you disagree and on what other actions may be useful in driving compliance.

We have no further comment to make.

Question 23

Do you support the application of provisions from an early (pre-warrant) design stage through to completion and handover of the building?

Yes

No

Please provide information on points in the process you consider there may be a need for particular emphasis on action to manage the risk of failures in compliance.

This should be available irrespective of any regulatory changes.

Question 24

Do you have any views on the key areas where the verification process should focus, to be effective in responding to an enhanced compliance reporting regime?

Yes

No

If you answered 'Yes', please provide your views.

We have no comment to make.

Question 25

Do the recommendations presented adequately describe action to affect the key roles and responsibilities of those who contribute to building compliance?

Yes

No

Please provide information on anything else you consider to be relevant to the actions of such parties.

Section 5 - Call for information on current standards

Topic - February 2023 design specifications

Question 26

Are you currently designing buildings to the February 2023 standards and have confirmed specifications which are at a stage that have been or will be used in a building warrant application, that you would be happy to share with us?

Yes

No

If you answered 'Yes', please send calculation output sheets which detail your building specification(s) to buildingstandards@gov.scot with the subject title 'Call for evidence – February 2023 design specification'.

As a professional institute, we have several members who are currently designing to the 2023 standards. We will request that this information be forwarded to you.

Topic - the current approach to target setting and overheating risk

Question 27

With regards to the current approach to target setting and overheating risk, do you have experience related to either of these two issues you consider useful to inform review of the current published guidance or this review of current energy and environmental standards?

Yes

No

If you answered 'Yes', please provide information summarising your experience..

There is insufficient data at this stage to provide an answer to this.

Topic - newbuild heat network connections

Question 28

Have you undertaken any projects under the post-2023 energy standards which considered connection to a new or existing heat network, both district heat networks and communal heating systems?

Yes

No

If you answered 'Yes', please share any information you consider influenced the outcome of those projects, with reference to the type of system (district or communal) and the impact of current energy targets in particular.

If you answered 'No', please confirm the reason for not considering a heat network solution.

We have no comment to make.

Question 29

Do you have experience of issues affecting development which you consider have arisen from application of current energy and environmental standards set under building regulations?

Yes

No

If you answered 'Yes', please provide information summarising your experience.

There is insufficient data at this stage to provide an answer to this.

Section 6 - Proposed delivery programme

Question 30

Do you agree with the proposal to mandate the standard in 2028, introducing changes initially as a voluntary standard from 2026?

Yes

No

Not sure

Please provide information on why you agree or disagree or if you consider other actions need to be considered.

There are too many external influences to be able to make an informed decision right now.

End of questions