

Energy Saving Trust's response to the Scottish Government's Scottish Building Regulations consultation: Proposed changes to Energy Standards, including ventilation, overheating and electric vehicle charging provision

Submitted on 29 October 2021

Part 2 – Energy, new buildings

Question 1 –

Do you support the extension of standard 6.1 to introduce an energy target in addition to the current emissions target? If yes, do you have a view on the metric applied – primary or delivered energy?

Yes, a primary energy target

Yes, a delivered energy target

No

Please provide a summary of the reason for your view below.

Yes, Energy Saving Trust supports the introduction of an energy target in addition to the current emissions target. As the consultation notes this will “support a more informed approach to design and to the delivery of buildings which have very low energy demand”.

On balance, we support the introduction of a delivered energy target as opposed to a primary energy target. This metric (i.e. delivered energy) aligns significantly better with the Scottish Government's stated policy intention to “focus on actions which are effective in *reducing energy demand and the delivered energy needed in a new building*” than that alternative proposed metric (i.e. primary energy).

Question 2 –

What level of uplift to the 2015 standard for new dwellings do you consider should be introduced as an outcome of this review?

Option 1: 'Improved' standard (32% emissions reduction)

Option 2: 'Advanced' standard (57% emissions reduction)

Another level of uplift

Please provide a summary of the reason for your view.

Energy Saving Trust thinks that Option 2 (57% emissions reduction) should be introduced as an outcome of this review. We recognise that this is an ambitious standard but believe that in the context of the climate emergency it is vital that the revised standards that emerge from this review of regulations result in new homes that are responsible for as few emissions as possible. Building new homes to the highest possible thermal efficiency standards with low carbon heating is a no regrets approach that can be achieved at minimal extra cost while preventing the need for costly and disruptive retrofit at a later stage.

Question 3 –

What level of uplift to the 2015 standard for new non-domestic buildings do you consider should be introduced as an outcome of this review?

Option 1: 'Medium' standard (16% emissions reduction)

Option 2: 'High' standard (25% emissions reduction)

Another level of uplift

Please provide a summary of the reason for your view.

Energy Saving Trust thinks that Option 2 (25% emissions reduction) should be introduced as an outcome of this review. It is vital that the revised standards that emerge from this review of regulations result in new non-domestic buildings that are responsible for as few emissions as possible.

Question 4 –

Do you have any comments or concerns on the values identified for the elements which make up the Domestic notional building specification for either option, e.g. in terms of their viability/level of challenge?

Yes

No

Question 5 –

Do you have any comments or concerns on the values identified for the elements which make up the Non-domestic notional building specification for either option, e.g. in terms of their viability/level of challenge?

Yes

No

If yes, please provide your comments.

Question 6 –

Do you have any comments on the simplified two-specification approach to defining the Domestic notional building from 2022?

Yes

No

If yes, please provide your comments.

Question 7 –

Do you have any comments on the simplified two-specification approach to defining the Non-domestic notional building from 2022?

Yes

No

If yes, please provide your comments.

Question 8 –

Do you have any comments on the proposal to separate and provide a more demand-based approach to assignment of domestic hot water heating within the Non-domestic notional building specification from 2022?

Yes

No

If yes, please provide your comments.

Question 9 –

Do you support this change in application of targets for supplied heat connections to new buildings, focussed on delivering a consistent high level of energy performance at a building level?

Yes

No

Please provide a summary of the reason for your view.

Energy Saving Trust supports that Scottish Governments aim *“to address the characteristics of supplied heat through separate regulatory mechanisms”* (i.e. not through Building Regulations) and for Building Regulations to *“focus on actions which can be delivered at a building level, at the point of construction...”*. We do not however have a specific view on the Scottish Government’s proposed approach to delivering this outcome.

Question 10 –

Do you agree with the principle set out, that the benefit from on-site generation within the compliance calculation should be limited by a practical assessment of the extent that generated energy can be used onsite?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust agrees with the principle set out, that benefit from on-site generation within the compliance calculation should be limited by a practical assessment of the extent that generated energy can be used onsite. Doing so will help to ensure that on-site generation isn’t used instead of reducing energy demand or instead of the installation of low(er) or zero carbon heating systems (i.e., that it isn’t used instead of taking action at the building level).

Are there any particular concerns you have over this approach, e.g. with regards particular technologies or solutions?

No.

Question 11 –

Do you agree with the proposal that new buildings where heat demand is met only by ‘zero direct emissions’ sources should be exempt from the need for a calculation to demonstrate compliance with the Target Emissions Rate?

Yes

No

Please provide a summary of the reason for your view.

No, we do not fully agree with the proposals that new buildings where heat demand is met only by 'zero direct emissions' sources should be exempt from the need for a calculation to demonstrate compliance with the Target Emissions Rate.

We have some concerns about developers installing heating systems with lower upfront costs (e.g. direct electric heating) but with higher running costs. This risks people living in new homes heated by direct electric heating having comparatively high energy bills. Heat pumps, for example, have higher upfront costs than other heating systems that have zero direct emissions (e.g. direct electric heating). However, they can provide significantly more efficient (and therefore cheaper) space and water heating than other heating systems that have zero direct emissions. Analysis for the CCC suggests that even where the cost is passed through by the developer, the lower running costs of heat pumps will deliver an overall saving for occupants. Direct electric heating also imposes higher system costs – using less efficient heating technologies (e.g., direct electric heating instead of a heat pump) means more need for energy generation in the system and also transmission reinforcement for a given amount of heat – and we think it is important to minimise these externalities.

Question 12 –

Do you support the need for new buildings to be designed to enable simple future adaptation to use of a zero direct emissions heat source where one is not initially installed on construction. And for information setting out the work necessary for such change to be provided to the building owner?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust supports the need for new buildings to be designed to enable simple future adaptation to use of a zero direct emissions heat source where one is not initially installed on construction. This will help to future proof new buildings in readiness for low carbon heating systems in the future. Not doing so would mean having to pay to retrofit today's new homes with additional measures in ten- or twenty-years' time in order to ensure national climate change targets are met. It is important to note that the cost of acting now – by designing new buildings to enable simple future adaptation to use of a zero-emissions heat source – will be cheaper than acting in the future (i.e. by retrofitting). The Climate Change Committee's (CCC) 2019 report 'UK housing: Fit for the future' highlights that making all new homes suitable for low-carbon heating through use

of appropriately sized radiators and low-temperature thermal stores can save £1,500 – £5,000 per home compared to later having to retrofit low-carbon heat from scratch.

For new buildings that are built in a heat network zone but not connected to the existing heat network (because it is not an effective solution of the building owner or the wider community) it will be important that these homes are ‘future proofed’ for future connection to ensure that, at the end of the lifetime of the heating system installed at the point of build, the building can easily and cheaply be connected to the existing heat network should the building owner decide that this was the best option for them. Such ‘future proofing’ requirements are already in place in other countries where heat networks are more prevalent.

We also support the Scottish Government proposal that *“the developer shall provide information detailing the process and work involved to deliver that adaptation, simply and without disruption beyond the immediate vicinity of the current heat source”*. We note that in some cases, there may be more than one option for certain buildings – for example a building in a heat network zone that is not already connected to the existing heat network could either opt to connect to the heat network or install a heat pump. It is therefore important that developers provide information about all of the options. We think that it would also be sensible for the information provided by developers to signpost building owners to additional sources of advice and support – in the case of homes this would be Home Energy Scotland. Doing so would ensure a joined-up approach and mean that people are adequately supported to transition their properties to zero direct emissions heating sources.

Do you have any comments on the level of information needed to support such action in practice or on the extent to which alterations other than those at, or very close to, the heat generator can be justified?

No.

Question 13 –

Do you support the retention of the current elemental approach to setting minimum standards for fabric performance in new dwellings, supported by the option to take an alternate approach via calculation of the total space heating demand for the dwelling (as described)?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust supports the retention of the current elemental approach to setting standards for fabric performance in new dwellings. The proposed approach will, as the consultation notes, result in a significant improvement in the fabric performance of new dwellings.

In the context of the proposed approach, if you have any comments on the maximum U-values proposed for elements of fabric, in relation to their level of challenge and achievability at a national level, please set them out below.

We have no comments on the maximum U-values proposed for elements of fabric, in relation to their level of challenge and achievability at a national level.

Question 14 –

Do you support the move to airtightness testing of all new dwellings, by registered members of an appropriate testing organisation?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust supports the move to airtightness testing of all new dwellings, by registered members of an appropriate testing organisation. As the consultation notes this will *“provide greater assurance that the infiltration rate actually achieved in the dwelling is a fair representation to that declared in the design stage”* and assist in closing the well known performance gap associated with heat loss through infiltration.

Question 15 –

Do you support the move to increased airtightness testing of all new non-domestic buildings, by registered members of an appropriate testing organisation?

Yes

No

Please provide a summary of the reason for your view.

Question 16 –

Do you support the adoption of CIBSE TM 23 as the basis for airtightness testing in Scotland?

Yes

No

Please provide a summary of the reason for your view.

No response.

Question 17 –

Do you support the introduction of the pulse test method of airtightness testing as a further means to testing and reporting on the performance of new buildings?

Yes

No

Yes, Energy Saving Trust supports the introduction of the pulse test method of airtightness testing as a “further” means to testing and reporting on the performance of new buildings. We do not believe it should be the sole method used. This is because any method of airtightness testing should be sensitive enough to test at 0.1 m³/m²/hr at 50Pa. Pulse methodology is not sensitive enough to do this and cannot provide a means of sustained pressurisation for leakage path diagnostic purposes. Ensuring effective identification and remediation of significant air tightness defects should remain one of the test's primary objectives.

Are there any particular benefits, risks or limitations you would seek to identify?

Question 18 –

Do you consider this amended provision provides an appropriate balance between:

- the requirement to improve building energy performance in new buildings;
- enabling the reuse of better performing modular elements; and
- enabling use of small units for short term use at short notice?

Yes

No

Please provide a summary of the reason for your view.

No response.

Question 19 –

We welcome any other comments you wish to make on the proposed changes to the setting of performance targets for new buildings or the application of other amended provisions within Section 6 (energy) which apply to the delivery of new buildings.

Where practical, please with a reference to any particular issue in the context of the Domestic or Non-domestic Handbook (or both if applicable) and cite any standard or revised guidance clause relevant to the topic.

No response.

Part 3 – Energy, all buildings

Question 20 –

Do you agree with the proposed introduction of the term ‘major renovation’ as defined above as an additional means of identifying when aspects of building regulations shall be applied to an existing building?

Yes

No

Please provide a summary of the reason for your view.

Energy Saving Trust agrees that there are compelling reasons to adopt the same definition of the term ‘major renovation’ as elsewhere in the UK as this will, as the consultation notes help *“to support simplicity of understanding and consistency in application”*.

However, we note that the proposed definition that “major renovation” means the renovation of a building where more than 25% of the surface of the building envelope undergoes renovation, may have more of an impact on smaller properties (i.e. more smaller properties than larger properties may be required to undertake work if this definition of major renovation is used). As a result, this may not necessarily be the most equitable of approaches.

While, for the purposes of this consultation, this definition will only have an impact on requirements for EV charging infrastructure we note that other Scottish Government consultations have suggested that major renovation could be a trigger point for future minimum standards for owner occupied homes. We think that it would be helpful to have data outlining how many buildings in Scotland undertook major renovations per year – using the definition in the consultation paper, and the potential impact that any regulatory impact at this trigger point could have. This data could be used, together with other data, to determine whether these actions taken together would deliver the necessary levels of improvement to ensure that relevant sectors contributes appropriately to emissions reductions targets.

Question 21 –

Do you support the improvement in maximum U-values for elements of building fabric for Domestic buildings, as set out above?

Yes

No

No response.

Please provide a summary of the reason for your view.

We would also welcome your views on the proposed simplification achieved by setting of a single set of values for all building work to new and existing buildings.

Energy Saving Trust supports the Scottish Government's proposal to set a single set of values for all building work to new and existing buildings.

Question 22 –

Do you support the improvement in maximum U-values for elements of building fabric for Domestic buildings, as set out above?

Yes

No

No response.

Please provide a summary of the reason for your view.

We would also welcome your views on the proposed simplification achieved by setting of a single set of values for all building work to new and existing buildings.

Question 23 –

Do you support the standardisation of values and approach for conversions, extensions and shell buildings, as set out above and in sections 3.2.2 and 3.2.3?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust supports the standardisation of values and approach for conversions, extensions and shell buildings as set out in the consultation. For conversions we note that the consultation suggests that work to introduce heating to a building or part of a building and conversions will be subject to the same limiting U-values detailed in elsewhere in the document subject to the application of an assessment of what is

'reasonably practicable'. While we agree that this is a sensible approach – it will be important that the definition of 'reasonably practicable' is such that the requirements apply to the majority of conversions.

Question 24 –

If you have a view on the preferred format for presentation of information on compliance of building services, what would be your preference?

Retain current separate Compliance Guides

Move Compliance Guides into Section 6 as an Annex

Re-integrate into guidance to the relevant standard

Other (please specify in summary box below)

Please provide a summary of the reason for your view.

No response.

Question 25 –

Do you support the continued alignment of minimum provisions for fixed building services at a UK level within the Domestic Building Services Compliance Guide?

Yes

No

Please provide a summary of the reason for your view.

In principle we support the continued alignment of minimum provisions for fixed building services at a UK level within the Domestic Building Services Compliance Guide. As the consultation notes doing so recognises *"that products are developed and made available at a UK level and the solutions deliverable by combining individual components across the UK administrations, supporting consistency of understanding and implementation of solutions where practicable"*.

Are there any issues you wish to raise in relation to the amended or retained specifications set out within the draft Guide?

Question 26 –

Do you support the continued alignment of minimum provisions for fixed building services at a UK level within the Non-domestic Building Services Compliance Guide?

Yes

No

Please provide a summary of the reason for your view.

No response.

Are there any issues you wish to raise in relation to the amended specifications set out within the draft Guide?

Question 27 –

Do you agree with the proposal that the option of installing a less efficient heat generator and compensating for this using heating efficiency credits in existing buildings should be withdrawn from the Non-domestic Building Services Compliance Guide?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust agrees with the proposal that the option of installing a less efficient heat generator and compensating for this using heating efficiency credits in existing buildings should be withdrawn from the Non-domestic Building Services Compliance Guide. We agree with the Scottish Government's view outlined in the consultation document that due to improvements in the energy efficiency of appliances over recent years *"the level at which standards are set for heat generators can be met in full"* and as such a trade off is no longer warranted.

Question 28 –

Do you agree with the proposal to limit distribution temperatures in wet central heating systems to support effective implementation of low and zero carbon heat solutions and optimise the efficiency of heat generation and use?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust agrees with the proposal to limit distribution temperatures in wet central heating systems to support effective implementation of low and zero carbon heat solutions and optimise the efficiency of heat generation and use. This is a sensible means of preparing for possible renewable heat sources in the future, saving the majority of residents money through efficiency today and keeping future retrofit costs lower than they would otherwise be.

Question 29 –

Do you agree with the proposed extension to the provision of self-regulating devices to include when replacing a heat generator?

Yes

No

Please provide a summary of the reason for your view.

Yes, Energy Saving Trust agrees with the proposed extension to the provision of self-regulating devices to include when replacing a heat generator. As the consultation notes *"this is an appropriate intervention point, enabling a cost-effective means to further improve the performance and controllability of a heating system"*.

Do you have any comment on issues of technical feasibility or determining when installation should be at a room/zone level?

Self-regulating devices should also be mandatory for community (district) heating systems. This is more important than for conventional heating as occupants without room-by-room control may need to open windows to 'dump heat' to avoid overheating. It is unclear if it is proposed to make them mandatory for community heating systems: we recommend this is clarified.

We also believe it would be helpful for the regulations to clearly define "primary" heating zone regulation devices (such as thermostatic boiler controls), and "secondary" regulation devices (such as thermostatic radiator valves), to highlight that these must not be installed in conflict with each other. We have heard from colleagues in industry in other parts of the UK that they regularly see these devices installed in conflict with one another in homes they have commissioned.

Question 30 –

Do you agree with the proposed introduction of a requirement for building automation control systems, of the type specified, in larger non-domestic buildings with systems with an effective rated output over 290kW

Yes

No

Please provide a summary of the reason for your view.

No response.

Question 31 –

We welcome any other comments you wish to make on the above topics and broader changes to the setting of minimum standards for all buildings.

Where practical, please with a reference to any particular issue in the context of the Domestic or Non-domestic Handbook (or both if applicable) and cite any standard or revised guidance clause relevant to the topic.

Part 4 – Ventilation

Question 32 –

Do you support the proposed revisions to the presentation of guidance on ventilation and the incorporation of the ‘domestic ventilation guide’ into the Technical Handbooks?

Yes

No

Please provide a summary of the reason for your view.

No response

Question 33 –

Do you agree with the revision of guidance to clarify the function of purge ventilation and increase provision to align with that applied elsewhere in the UK?

Yes

No

Please provide a summary of the reason for your view.

No response

Question 34 –

Do you support reference to a single option for continuous mechanical extract ventilation which can have centralised or decentralised fans, with the same design parameters being applied to the system in each case?

Yes

No

Please provide a summary of the reason for your view.

No response.

If you have any further views on the use of continuous mechanical extract to deliver effective ventilation in both low infiltration (3-5 m³) or higher infiltration (5 m³+) buildings, we would also welcome your comments.

Question 35 –

Do you support introduction of proposed guidance on default minimum size of background ventilator for continuous mechanical extract systems?

Yes

No

Please provide a summary of the reason for your view and on any specific concerns which may arise from the proposed level of background ventilation or its application in the design of systems.

No response.

Question 36 –

Should continuous mechanical extract systems be considered a viable solution in very low infiltration dwellings and, if so, under what circumstances?

Yes

No

Please provide a summary of the reason for your view.

No response

We would also like to hear your views on whether heat recovery should be mandated for packaged supply/extract systems

Question 37 –

Do you support the incorporating of this additional guidance into the Technical Handbooks?

Yes

No

We would be grateful for comment on the content of the proposed Annex and whether there are elements absent from guidance or which would be better presented within guidance to standard 3.14 itself.

No response

Question 38 –

Are there other elements of the commissioning of ventilation systems that you consider are both practical to implement and useful in providing additional assurance of performance in practice?

Yes

No

If yes, please provide a summary of the topics which should also be considered.

No response

Question 39 –

We welcome your thoughts on these or broader topics which would merit consideration as part of the planned review. Please set out your thoughts below, including citation of relevant supporting evidence, where relevant.

No response

Question 40 –

We welcome any other comments you wish to make on proposed changes to ventilation standards for domestic buildings.

Where practical, please with a reference to any particular issue in the context of the Domestic or Non-domestic Handbook (or both if applicable) and cite any standard or revised guidance clause relevant to the topic.

No response

Part 5 – Overheating risk in new dwellings and other new residential buildings

Question 41 –

Do you agree with the proposed introduction of a requirement to assess and mitigate summertime overheating risk in new homes and new non-domestic buildings offering similar accommodation?

Yes

No

Please provide a summary of the reason for your view.

We agree with the proposed introduction of a requirement to assess and mitigate summertime overheating risk in new homes and new non-domestic buildings offering

similar accommodation. As noted in the consultation document overheating in buildings is a key concern for the health and welfare of people across the UK. Introducing a requirement to assess and mitigate summertime overheating risk in new homes and new non-domestic buildings offering similar accommodation in Scotland will help to ensure the comfort and well-being of those living in new buildings and help to avoid costly retrofit at a later point in time.

If you consider that proposals should be extended to non-domestic buildings which provide other forms of residential accommodation (which are not 'self-contained residential units'), we welcome your views on such provisions, including if the same or an alternate approach to assessment is recommended?

We support the broader application of such an assessment to residential buildings where such self-contained living units are not provided and the building offers a managed living environment (e.g. buildings providing residential care for vulnerable persons). In many cases people living in these buildings (e.g. care homes) will be significantly more vulnerable to the impacts of overheating in the buildings in which they live than other groups and as such it is important that these buildings are not excluded from any future requirements in this area.

Question 42 –

Do you agree with the proposal that an initial assessment of dwelling characteristics should be undertaken to help inform design choices and the delivery of new homes which provide better thermal comfort in the summer months?

Yes

No

Please provide a summary of the reason for your view.

No response.

We would also seek the views of respondents on other sources of good practice guidance which have been implemented by developers and the outcome (no reports of significant summertime overheating) evidenced through feedback from residents.

Question 43 –

Are there circumstances where you consider specific characteristics of a dwelling should trigger a need for TM59 assessment rather than application of a simple elemental approach?

Yes

No

Please provide a summary of the reason for your view.

No response

Question 44 –

Recognising the level of risk identified in the published research paper, do you agree with the above proposals as a suitable means of mitigating summertime overheating in new homes through prescriptive actions?

Yes

No

Please provide a summary of the reason for your view.

No response.

Question 45 –

Do you consider that such an approach will provide adequate assurance that ventilation measures provided to mitigate summer overheating can be used safely and conveniently in practice?

Yes

No

Please provide a summary of the reason for your view.

No response.

Question 46 –

We welcome any other comments you wish to make on these proposal to introduce provisions to mitigate the risk of summer overheating new homes and new residential buildings.

No response.

Part 6 – Improving and Demonstrating Compliance

Question 47 –

Do you have any experience of successful design or construction quality assurance regimes which you consider may be useful to consider in the context of this 'Compliance Plan manual' work for section 6 (energy)?

Yes

No

If yes, please share any relevant information.

Question 48 –

Do you have any comments on the above themes and any other actions you consider would be useful in supporting improved compliance with requirements for energy and emission performance.

Yes

No

If yes, please provide a summary of your views.

See response to question 50 below.

Question 49 –

Are there particular aspect so building design and construction which you consider should be prioritised as part of the development of a detailed compliance manual for section 6 (energy)?

Yes

No

No view

If yes, please provide further details, including any evidence you are aware of that supports such emphasis.

Question 50 –

We welcome any other comments you wish to make on these topic of improving compliance of building work with the provisions within section 6 (energy) to better align designed and as-built performance.

Even if a home complies 100% with building regulations requirements there is still considerable scope for it not to perform as envisaged when designed, if the people living in it do use it as predicted by its designers (e.g. if they open their windows when the heating is on, don't use heating controls efficiently etc.). Ensuring that households understand how to operate their heating systems effectively will ensure that the environmental, comfort and fuel bill savings of the physical measures are maximised.

In this context we think there is considerable scope to improve the information provided at the point of entry to a new home about how the home is heated and how best to use the heating system. This could include the provision of user-friendly materials (in written (paper and on-line) and in video form). Those moving into new homes should also be able to access in-home face to face support with an expert who can talk and walk them through the use of their heating system. We think that further consideration should be given to setting requirements about the minimum levels/types of heating information provided at the point of home entry. The information provided should include reference to where people can go if they require any additional support with the use of their heating system (i.e. Home Energy Scotland).

For those moving into new homes heated via district/community heating the following information will be particularly important:

- Information on tariffs and pricing structures (including standing charges)
- Billing procedures
- Quality of service obligations
- Details of heat supply agreements including potential disconnection procedures/costs
- Complaints procedures
- Information about disconnection processes and costs
- Whether the operator of the heat network is a member of Heat Trust
- Whether heat network operators are licenced (subject to new regulations being in place)
- Householder information pack explaining how heat networks operate and any operational differences between heat networks and conventional heating (i.e. boilers being replaced by heat interface units) including details of where consumers can go for impartial advice.

They should also be reminded (that they will not be able to change supplier (except where there is a shared loop system in place where residents are able to choose their electricity supplier).

Part 7 – Electric Vehicle Charging Infrastructure

Question 51 –

What are your views on our policy goal to enable the installation of Electric Vehicle (EV) charge points and ducting infrastructure (to facilitate the future installation of EV charge points) for parking spaces in new residential and non-residential buildings parking?

Energy Saving Trust supports the Scottish Government's intention to facilitate the future installation of EV charge points in the car parks of residential and non-residential buildings as part of their commitment to the decarbonisation of transport in Scotland.

We note that this part of the consultation only relates to the installation of EV charge points in the car parks of residential and non-residential buildings and would welcome further information about plans for introducing a requirement for electric vehicle charge points to be installed in new homes with an associated car parking space (i.e., new homes with an associated car parking space that is not in a car park).

Question 52 –

What are your views on our preferred options for EV provision in new and existing buildings?:

We do not agree with the Scottish Government's preferred options for EV provision in **new residential buildings**.

Energy Saving Trust recognises the clear benefits and convenience of charging at home overnight (in this case in the car parks of new residential buildings) and agrees that building regulations should be updated to reflect the growing demand for charging infrastructure.

However, we think that building regulations should specify cabling, a suitable termination point for easier installation at a later date and the necessary grid capacity, for all new homes (including those with parking spaces in a shared car park), rather than the installation of chargepoints. This would mean that all new homes (with a shared car park) would be "chargepoint-ready" or "chargepoint enabled". This would be a compromise between installed chargepoints and just ducting/cable routes, which would be insufficient.

Providing cabling only for 7kW chargepoint would reduce the risk of new homeowners or tenants being dissatisfied with the installed chargepoints, which would undermine public confidence and therefore the policy objective.

Requiring cabling, a clear termination point, and appropriate metering would ensure that the chargepoint placement and power demand was taken into account at the design stage, improve visibility and reduce the cost and hassle of later retrofitting, while still providing households with a choice of equipment and supplier.

If developers install chargepoints, they are likely to select low-cost chargepoints and could potentially lock householders into a single supplier, if smart chargepoints without back office interoperability are chosen. This could create local monopolies and disincentive chargepoint operators to develop attractive, competitive customer propositions and tailored packages, for example including hardware, an energy tariff and electric vehicle.

While any chargepoints installed by developers are likely to be eventually used within the next decade as EV uptake grows, chargepoint technology and products are also advancing year-on-year. Households may therefore want the option to choose the best available chargepoint at the time that meets their budget and needs, with a warranty from the time they start using the chargepoint, rather than the one chosen by the developer.

If many chargepoints are not used for several years after installation or are replaced/upgraded, this will also generate large quantities of electronic waste. Numerous local authorities across the UK are now removing obsolete, first generation public charging infrastructure.

If the Scottish Government implements its policy proposal and requires all dwellings with a parking space in a car park of a residential building to have chargepoints, developers should be required wherever possible to offer the future occupiers a choice of at least 3 chargepoints from different suppliers (if smart capable), in the same way that other fixtures and fittings are agreed.

All options – ducting, cabling and chargepoints – are an improvement on the current situation of new car parks within residential buildings being built without any recognition of the very substantial changes already underway in the transition to EVs. However, we think consumer choice should be given greater weight in current proposals, especially with the move towards smart chargepoints.

Residential buildings undergoing major renovation

We believe that the Scottish Government should also consider the “chargepoint ready”/“chargepoint enabled” option for residential buildings undergoing major renovation.

We would also welcome more information about why the proposed ducting requirement only kicks in for buildings with >10 parking spaces

Non-residential buildings

We note that a number of local authorities in England (for example, Bristol City Council) have planning policies relating to EV infrastructure which are more ambitious than those proposed by the Scottish Government and as such we think there may be scope for greater ambition here.

Question 53 –

Do you agree with the Scottish Governments preferred options for the exemptions as set out in section 7.6.1?

Yes

No

If you disagree, please explain why?

Question 54 –

What are your views on how our preferred option relating to existing non-residential buildings with car parks with more than 20 spaces could be properly monitored and enforced, given that the Building (Scotland) Regulations will not apply?

This question is largely outside of our core area(s) of expertise. However, we would like to emphasise that whichever enforcement body is chosen, it must have sufficient capacity and resources to adequately carry out its duties and enforce the regulations.

Question 55 –

What are your views on the proposed provision for charge points for accessible parking spaces? Do you have examples of current best practice for the provision of charge points for accessible parking spaces?

No response.

Question 56 –

Do you have any other views that you wish to provide on the EV section of the consultation (e.g. the minimum standard of EV charge point or safety within the built environment)?

We think that the Scottish Government should also consider:

- The ability to update building regulations or ensure sufficient flexibility in wording to allow for the development of future technologies, such as smart charging, V2G, chargepoints with internal battery storage, or battery storage.
- Interoperability and implications of this for consumers/households should be actively considered, to avoid overly restricting consumer choice.
- The ability to enforce the building standards, and the current lack of knowledge regarding charging infrastructure within the housing and construction sector – more education will be required to ensure good design, equipment choices and installations.