

## The Building Regulations (Northern Ireland) 2012 (as amended)

### Consultation Proposals for amendment of Technical Booklet Guidance to Part F (Conservation of fuel and power)

The purpose of this consultation is to obtain comments and views of interested parties on proposals for changes to guidance to the Building Regulations with regard to NZEB.

Response submitted by

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**Question 1: Do you agree that it is sensible to prioritise the proposed amendments to Technical Booklets F1 and F2 guidance in advance of awaiting outcomes around the development of new UK NCMs, software and proposed building regulations uplifts?**

Yes

If no, please explain your reasoning.:

**Question 2: Do you agree that additional manual checks of current software reports will be manageable in practice to demonstrate compliance in relation to the new requirements for: a) the betterment of the TER; b) an air-tightness performance no greater than 10 m<sup>3</sup>/(h.m<sup>2</sup>) at 50Pa; and c) new U-value limits for building fabric (see paragraph. 5.59 on this below)?**

Yes

If no, please explain your reasoning and provide supporting evidence or alternative solutions on what alternative assessments should be introduced.

**Question 3: Do you agree that the new guidance should apply from three months of publication of the guidance and from as early in 2022 as practicable?**

Yes

If no, please explain your reasoning and provide evidence for an alternative timescale.:

Proposals for Amendment of Technical Booklets F1 and F2

**Question 4: Do you agree that Option 1 should be dismissed?**

Yes

If not, please provide the evidence and basis for why the current standards are appropriate and should be retained.:

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**Question 5: Do you agree that the above proposals provide an appropriate interim step, which can be implemented quickly?**

No

**If no, should they be more onerous or less onerous? Please explain your reasoning and provide supporting evidence for alternative suggestions, taking into account that further review is planned for 2022/23.**

Recognising that the proposals seek to follow the standards set elsewhere mainly in England and the Republic of Ireland and that these proposals are an interim step, there is no need to be more onerous than those envisaged for Option 3, however there are opportunities for including requirements for developments both on and off the natural gas grid. While Energy Saving Trust can understand the desire to go with what works and has been tested elsewhere, there is no reason why Northern Ireland cannot set its own path and be a leader in low carbon heating specifically adopting heat pumps as a priority. This is an especially important consideration given that the advice from the Committee on Climate change is that by 2025 at the latest “no new homes should connect to the gas grid” and “instead should have low carbon heating systems such as heat pumps and low-carbon heat networks” (see: <https://www.theccc.org.uk/publication/uk-housing-fit-for-the-future/>). The need to futureproof homes in terms of underfloor or low emission radiator heating systems must be a priority in the phased approach to improvement, as this increase’s efficiency of condensing boilers, provides an immediate energy saving, and if not included at this interim step will disadvantage those required to retrofit homes later. Findings in the above report outline savings £1,500 - £5,000 per home compared to later having to retrofit for low-carbon heat. The fact also that 90% of new build dwellings are accounted for by housing demonstrates the significant benefits this would bring.

**Question 6: Do you prefer Option 3 (40% betterment of the TER for houses, 25% for flats and 15% for new non-domestic buildings), or are the standards outlined in Option 2 (25% betterment of the TER for all dwellings and 15% for buildings other than dwellings) preferred?**

Preference is for Option 3

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If answering 'None of the above', please take into account and advise if proposals described here should be delayed or halted, in order to progress in line with your suggestions.

**Question 7: Do you agree that the definition of 'flat' in regulation 2 provides a sufficiently clear discrimination of the building types to enable the different betterment rates to be applied to houses (40%) and flats (25%)?**

Yes

If no, please explain your reasoning.

**Question 8: Do you agree that the proposed DER requirement for a 25% betterment of the TER should be applied to flats?**

Yes

If no, should they be more onerous or less onerous? Please explain your reasoning and provide supporting evidence for alternative suggestions, taking into account that further review is planned for 2022/23 and that other building regulation proposals are likely to impact some flats.:

Energy Saving Trust is clear that low and Zero Carbon heating should be utilised wherever possible and as soon as is reasonably practicable. The statement "we are suggesting that the 25% uplift can be straightforwardly achieved in 90% of flats using a balance of reasonable fabric, gas (or LPG) boiler and PV arrays" is understood in the context of this limited review; however again future proofing has not been considered and therefore leaves a considerable future upgrade cost.

**Question 9: Do you agree with the heat pump costing assumptions (see Annex A in the Regulatory Impact Assessment (RIA)), the 10% incident rate estimate for flats and the proposed level of uptake for heat pumps in houses, used in our modelling (see Annex C in RIA), appropriate?**

No

If no, please provide the basis for an alternative rationale, which should apply.:

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Energy Saving Trust would view the costing and incident rate assessments as being open to debate. It is noted that costing assumptions within the consultation state “Heat pump costs are based on limited local estimates only”. Costs will invariably change with increased uptake, application, the development of local supply chains and the level of renewable energy within the electricity network in Northern Ireland.

Within the England <https://www.gov.uk/government/consultations/the-future-buildings-standard> there is recognition that “From discussion with industry, we are aware that there are many homes off the gas grid that are already being constructed with heat pumps instead of using oil or LPG” Similar initiatives are being undertaken in the Republic of Ireland within the National retrofit scheme, and it remains to be seen what support mechanisms are put in place following the publication of the Northern Ireland Energy Strategy. Recent energy cost increases plus the fact that heat pumps can on their own meet the emission targets make them an attractive option for developers having network connectivity issues for Photovoltaics.

**Question 10: Do you agree that the Department should make any necessary adjustment to attend to replicating the treatment of heat pumps proposed under Part L revisions in England for non-domestic buildings?**

Yes

If no, how should the Department avoid overshooting England’s requirements in this regard?:

**Question 11: Do you have any data or modelling that would be useful in helping to assess the likely cost impacts on specific building types under the proposals?**

No

If yes, please provide a summary of the information and if/how the Department may contact you to engage further.

**Question 12: Do you support the overall proposals for buildings other than dwellings, including proposed BER requirement for a 15% betterment of the TER for new non-domestic NZEB buildings?**

Yes

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If no, should the proposals be more onerous or less onerous? Please explain your reasoning and provide supporting evidence for alternative suggestions, taking into account that further review is planned for 2022/23.

**Question 13: Do you agree that adopting the 2013 edition of the Non-Domestic Building Services Compliance Guide is worthwhile and would be at negligible cost to current practice?**

Yes

If no, please provide evidence to explain where this would be difficult or how cost assumptions should be revised.

**Question 14: Do you agree that the guidance revising the limiting U-values is worthwhile and workable for industry and enforcement?**

Yes

If no, please explain your reasoning.:

Glazing limitations are important in domestic buildings and the whole building assessment approach allows for design flexibility.

**Question 15: Do you agree that the revisions to guidance on thermal bridging are a helpful clarification of current processes?**

Yes

If no, please explain your reasoning.

**Question 16: Do you agree with the removal of the default values for air-permeability of 15 m<sup>3</sup>/(h.m<sup>2</sup>) currently permitted?**

Yes

If no, please explain your reasoning.

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**Question 17: Do you agree that the overall proposed changes on fabric standards are helpful to support a ‘fabric-first’ approach?**

Yes

If no, please explain your reasoning and what should be done, taking into account that any significant review may delay implementation.:

Energy Saving Trust supports a “fabric-first” approach.

**Question 18: Do you agree that the guidance on non-export connections is helpful?**

Yes

If no, please explain your reasoning.

### **Impact Assessments**

**Question 19: Do you have any comment on our impact assessment and its key assumptions?**

No

If yes, please explain your reasoning and suggest alternative calculations.

### **General suggestions and observations**

**Question 20: Have you any suggestions or observations that you have that do not fit into the preceding questions?**

Yes

**If yes, please provide them with this response.**

This consultation document points out that building regulations can play an important role in reducing emissions from the building sector and Energy Saving Trust would support energy efficiency as a key priority in alleviating fuel poverty, supporting resilience and providing ongoing energy security.

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There has been a lack of clarity in the policy environment regarding decarbonising heating. While new net zero and domestic heating strategies across the UK go some way to addressing this, there are still gaps in policy, particularly around the ongoing cost of electricity and the future of the gas network. It is however important to focus on future proofing housing ready for low carbon heat and net zero. This is an important consideration for the Building Regulations (Northern Ireland) Order 1979 (as amended) which states “the standards set can only be those which ‘can reasonably be expected to be attained’.

The Climate Change Committee has undertaken a considerable amount of research into this area, finding that: i) Building to ultra-high energy efficiency and a heat pump adds between 1 to 4 percent (<https://www.theccc.org.uk/publication/the-costs-and-benefits-of-tighter-standards-for-new-buildings-currie-brown-and-aecom/>) to build costs (depending on the build type), a cost will fall as supply chains adjust, delivers lifetime savings for occupants and avoids future retrofit costs.

In 2019, two of the UK’s largest housebuilders, Barratt and Persimmon testified (<https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/173009.htm#footnote-061>) to a Westminster select committee that they were confident of being able to bring down the additional cost of the proposed 2016 zero carbon homes standard quickly.

In practice, Exeter City Council, despite its small scale, has already found that it can build Passivhaus homes (homes that require almost no heating) on sites of 100+ units at no additional cost (see: <https://www.uk100.org/publications/power-shift>).

- ii) Retrofitting homes later will cost 4-5 times more than integrating these measures at the new build stage.
- iii) Electric heat pumps will result in lower lifetime costs for the occupant even where the increased upfront cost of the measure is passed through to house-buyers.

Northern Ireland has a high prevalence of oil heating (68 % of domestic sector), high rates of fuel poverty (22%), and abundant and increasing renewable energy resources (46.8 % contribution to power sector ), [https:// Electricity Consumption and Renewable Generation Statistics | Department for the Economy \(economy-ni.gov.uk\)](https://Electricity Consumption and Renewable Generation Statistics | Department for the Economy (economy-ni.gov.uk)). Off gas grid housing needs to be targeted specifically to ensure future proofing for the transition which is required.

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