

CONSULTATION PROPOSALS FOR AMENDMENT OF TECHNICAL BOOKLET GUIDANCE TO PART F (CONSERVATION OF FUEL AND POWER)

Response to Consultation

Three options are considered:

- **Option 1: do nothing**
- **Option 2: a 25% betterment of the current emission targets for all new dwellings and a 15% betterment for new buildings other than dwellings; and**
- **Option 3: a 40% betterment for new houses, and 25% for new flats and 15% for new buildings other than dwellings**

Date 19 December 2021



ABOUT NIFHA

The Northern Ireland Federation of Housing Associations, formed in 1977, is the representative body for Northern Ireland's 20 registered housing associations.

Our members are all not-for-profit organisations. Together, supported by the Department for Communities and the Housing Executive, they provide just under 56,000 social and affordable homes.

Housing associations access private finance to effectively double the number of homes they could build with government housing association grant alone.

Housing associations also deliver high quality care and support to help people stay as independent as possible.

Working in partnership with other organisations, they also invest millions each year in community services and facilities.

Our sector employs more than 3,200 people and manages housing assets worth £4.5 bn.

NIFHA welcomes the opportunity to comment on the Proposals for amendment of Technical Booklet Guidance to Part F (Conservation of fuel and power)

PART 1: SETTING THE CONTEXT

The Department of Finance (DoF) is consulting on the uplift to standards of Part F of the Building Regulations. The consultation proposals are intended as an interim step and to provide a more robust application of Regulation 43B (Nearly zero-energy requirements for new buildings).

This consultation sets out DoF proposals to uplift guidance on energy efficiency and carbon performance requirements for new buildings.

Three options are considered:

- Option 1: do nothing
- Option 2: a 25% betterment of the current emission targets for all new dwellings and a 15% betterment for new buildings other than dwellings; and
- Option 3: a 40% betterment for new houses, and 25% for new flats and 15% for new buildings other than dwellings

Option 2 and 3 also propose improved minimum standards for building fabric and encourage more air-tightness testing. Further proposals, to consider updated methodologies and software currently under consideration in other regions, are expected to follow in subsequent phases.

DoF is seeking comments and views of interested parties on the proposed changes. Your views will help to inform the development of final policy proposals prior to the DoF Minister bringing this forward for consideration by the NI Executive and assembly.

PART 2: CONSULTATION QUESTIONS

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, NIFHA agrees that it is sensible to prioritise the proposed amendments in Northern Ireland to Booklets F1 and F2.

The previous version of SAP for Northern Ireland was released in 2009 therefore an update is very much overdue. As we already behind where we should be, further delayed updates is wrong on a local level (as fuel poverty is endemic) and at a global level (as we have to play our part in reducing carbon emissions).

Prioritising the proposed amendments would bring Northern Ireland closer in line with current UK standards and would result in a smaller step to bring Northern Ireland in line with the rest of GB in the future.

Our preferred route would be for Northern Ireland to adopt the latest NCMs as soon as possible to ensure the latest carbon factors are used rather than rely on factors that are now over ten years old. However pragmatically solutions re catch up on software is a secondary point and cannot be a decider on this issue.

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 M3/(H.M2) AT 50PA; AND
- C) NEW U-VALUE LIMITS FOR BUILDING FABRIC?

Yes, it is agreed that additional manual checks of current software reports will be manageable to demonstrate compliance. HAs preferred route would be for the methodology, software, and outputs to be updated to reflect the changes however but agree that an interim measure is required until updated NCM's is fully available.

Manual checks will be manageable in practice but if compliance can be demonstrated using current (or future) UK SAP software 2012 this should be able to be accepted by Building Control.

Manual checks can work as long as there is appropriate training and communication in place across the industry to ensure standards are being applied and maintained consistently. A clear line of liability also needs to be applied in this respect should manual checking be wrong and who will ultimately be responsible?

However, surely there is alternative software available, which is more current that could be used to assess projects. Using SAP 2009 software seems pointless. England is using SAP 2012 with 2017 revisions, which could be used as an interim measure until new software is available. Are there no SAP calculation packages available from other countries?

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?

HAs are supportive of a revision to the regulations which is in line with the vision to create great homes. Unfortunately, the proposed timeline may be unworkable for HA core activities. Therefore, a proposed a timeline of 6 months after publication would be workable.

While Northern Ireland is lagging behind the rest of the UK and ROI, implementation should be brought forward bearing in mind the following:

- Social housing delivery is rolled out on a yearly basis (to meet the funding programmes) and associations need adequate notice to ensure that planning permissions tie in with deliveries on site.
- The proposal of implementation three months after publications could be as early as May 2022 which does not allow adequate time for HAs to adapt.

There are still unanswered questions such as:

1. Additional funding will be required to meet regulations
2. Concerns over NIEN applications regarding uptake of Solar PV and Heat Pumps required to meet the new regulations

If this direction requires wider cavities, then we may lose units of space on site. To lessen the possibilities of this occurring within the first roll out of the updated standards, six months would seem a better delivery expectation, as this gives our sector a better opportunity to make sure planning and funding deliveries are the same.

QUESTION 4: DO YOU AGREE THAT OPTION 1 SHOULD BE DISMISSED?

While being supportive of a regulation change due to the climate emergency and helping HAs tenants tackle poverty, a 'do nothing' proposal would not be beneficial to Northern Ireland and would be counterproductive. Therefore, we agree that option 1 should be dismissed.

QUESTION 5: DO YOU AGREE THAT THE ABOVE PROPOSALS PROVIDE AN APPROPRIATE INTERIM STEP, WHICH CAN BE IMPLEMENTED QUICKLY?

Yes, we would agree in part that the proposal is appropriate as an interim step and from a technical view is more than achievable as demonstrated in one of our members recent developments, Killynure Green Phase 2.

However, there are two concerns relating to this interim change and further interim changes:

1. Build Cost – HAs are yet to be informed of additional funding being made available by DoC to cover the extra requirements of this interim step and future steps.
2. Skills Shortage – In particular relating to PV and the lack of specialist contractors who can carry out this work.

Further clarification to installation standards regarding renewables and weather Microgeneration Certification Scheme (MCS) standards will be applied to Northern Ireland, again to bring us in line with the rest of GB.

NCM's software update and the length of time this will take to be implemented into Northern Ireland.

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?

Our preference is for Option 3 as this will bring Northern Ireland closer in line with the current UK standards and help to prepare the NI construction industry for additional improvements to the Standards as they are introduced.

At this stage HAs supports a “Fabric First Approach”, together with moderate air permeability reductions and without a heavy reliance on renewables, to meet the new standards

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, we agree it aligns with our understanding of the definition. This definition must however have upmost clarity to avoid gaming of the system e.g., describing single storey detached dwellings or maisonettes as flats to have an easier route to compliance.

QUESTION 8: DO YOU AGREE THAT THE PROPOSED DER REQUIREMENT FOR A 25% BETTERMENT OF THE TER SHOULD BE APPLIED TO FLATS?

Yes, we agree that a 25% betterment to the DER of flats is a sensible approach and is achievable.

However, we would like to urge caution regarding future uplifts to the DER of flats in relation to technical and regulatory challenges. From modelling a betterment greater than 25% will lead to either complex communal heating systems involving heat pumps and / or significant increase to buildings fabric which in some cases would make a development financially unjustified.

Regulatory change would need to be considered to remove block compliance around Communal PV systems, as adopted in the Republic of Ireland.

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?

Yes, we agree in part to the proposed figures in C.2 Appendix A.

While some costings have been covered other have been missed. As an example, an ASHP in a flat or dwelling have allowed, in comparison a direct replacement to a gas combi boiler. Other essential mechanical elements have been missed, such a Y-Plan heating systems instead of S-Plan heating system, additional plumbing requirement for a DHW cylinder instead of HW from a combi, Provision for heat pump base and condensate drain for an ASHP together with external flow and return pipework between the unit and the dwelling. Additional electrical elements have also been missed such as a up to a 32amp supply with associate cabling to the ASHP unit and a 32amp supply for the DHW cylinder immersion.

The costs are approximately £1,500 underestimated for an Apartment and £2,500 underestimated for a semidetached dwelling.

Heat pump cost options seem slightly low for Northern Ireland especially following Brexit with additional shipping costs; uplift of around 10% may be required and heat pump replacement would be more like 15 years maximum and not 20 years as quoted.

Regarding the incident rate and the proposed level of uptake, we feel this is fair and reasonable. Every effort should be made to reduce the use of fossil fuel appliances prior to the 2025 deadline.

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, we agree that consistency with the treatment of heat pumps across the UK is beneficial to ensure that heat pumps are appropriately accounted for in energy assessments and for a standardised approach across all UK nations, similar to a standards approach across all nation for gas.

We would also be supportive in making it a requirement in Technical Booklet Part F1 & F2 that the installation, commissioning, and handover must be completed by an MCS registered installer, similar to the requirements of a Gas Safe registered installer for gas heating systems. Adopting a Standard such as Microgeneration Certification Scheme (MCS) for installers will deliver quality installations and help to build consumer confidence regarding the introduction of new technologies.?

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?

Yes, Choice Housing has recently completed a new development, Killynure Green Phase 2 in Carryduff which has been constructed to a similar standard as proposed in the amendments to Technical Booklet Part F1.

The Association would welcome further dialog with the department on their experiences and associated build costs, and the main contact within Choice Housing is David McNeil.

email: david.mcneil@choice-housing.org

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, however we have no strong view on the requirement of buildings other than dwellings as HAs main activities relates to dwellings.

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, however we have no strong view as HAs main activities is domestic dwellings.

But this would support HAs view of alignment with the rest of the UK by adopting the CIBSE 2013 edition of the Non-Domestic Building Services Compliance Guide.

QUESTION 14: DO YOU AGREE THAT THE GUIDANCE REVISING THE LIMITING U-VALUES IS WORTHWHILE AND WORKABLE FOR INDUSTRY AND ENFORCEMENT?

Yes, we would strongly agree with revising and “retaining” of limiting U-values and will help to address building fabric application and usage in buildings.

As this approach has been used in the Republic of Ireland with the NzEB legislation, it demonstrates that it is both worthwhile and workable for industry and enforcement and continues to allow flexibility around design and construction.

A fabric first approach should be encouraged throughout all sectors as the use of technology as a way of achieving the new standards does not address fuel poverty nor is it globally responsible.

The use of adequate natural lighting is critical in the delivery of housing as generous levels of natural light are life affirming in a home. The use of large %s of glazing for architectural reasons needs to be delivered in such a way that a global responsibility for climate change is not negated by a design rationale that ignores a global responsibility re heating and cooling costs.

QUESTION 15: DO YOU AGREE THAT THE REVISIONS TO GUIDANCE ON THERMAL BRIDGING ARE A HELPFUL CLARIFICATION OF CURRENT PROCESSES?

Yes, we agree in part to the revision on guidance to the Thermal Bridging and moving away some the standards adopted in Table K. This keeps in line with the view of a “Fabric First Approach” with additional benefits to those exceeding the requirements.

However, HAs have some concerns over the implementation of this guidance and the specific skills shortage required to deliver it. Historically thermal bridging analysis has not been part of a SAP accessors report therefore additional training and most likely a competency scheme will be required to deliver it.

QUESTION 16: DO YOU AGREE WITH THE REMOVAL OF THE DEFAULT VALUES FOR AIR-PERMEABILITY OF 15 M3/(H.M2) CURRENTLY PERMITTED?

Yes, we strongly agree with the default value being removed as being sensible and achievable. In addition, we also support the removal or penalty otherwise for 10% sampling. This will lead to an increased quality standard in buildings.

All units should be tested for air-permeability to ensure that standards are uniform and poor practice does not play a role in diminishing efforts by associations to achieve NZeB post occupancy delivery.

QUESTION 17: DO YOU AGREE THAT THE OVERALL PROPOSED CHANGES ON FABRIC STANDARDS ARE HELPFUL TO SUPPORT A ‘FABRIC-FIRST’ APPROACH?

Yes, we strongly agree overall proposed changes to support a ‘fabric-first’ approach. This is the best approach to ensure Northern Ireland future proofs homes and buildings to be suitable for low carbon heating systems and new technology in addition to helping tackle fuel poverty, a main concern for HAs.

QUESTION 18: DO YOU AGREE THAT THE GUIDANCE ON NON-EXPORT CONNECTIONS IS HELPFUL?

No, we feel the guidance published to date is not clear nor helpful. As transitioning to the new standard is began it is evident that a form of renewable will be required to meet the compliance.

Our preference will be Solar PV due to the low capital cost, low cost of maintenance and low impact to the tenant in the event of operational issues.

Where an export connection is rejected by NIEN, which under current SAP2009 methodology is a penalty and a property will fail SAP compliance. Under current methodology PV can be replaced with a heat pump and additional fabric measures, however our assumption is that if NIEN rejects and export connection they will also reject a heat pump connection.

While the guidance refers to battery storage, regrettably current methodology does not account for this technology, and we would also like to highlight that this is also a new technology with long term practicality yet to be determined.

There is a “grey area” between the implementation of the new regulation and the introduction of a new methodology, which is still to be determined will be SAP 10. Compliance to the new regulations will no longer depending on Building Control, but NIEN who will be approving G98/G99 applications.

This further strengthens the response to Question 3, regarding an extension of six months before full implementing the regulations.

Clear guidance is critical as is coordination with the electricity infrastructure provider. We are aware that late consultation by NIE Networks with HAs consultants is not conducive to pre-tender clarity and have been in situations where PV panels are in place for 3 years before connections are viable. Solutions could be cited if exports are not available for infrastructure reasons e.g. batteries with no export facility could be given as an option (if technically viable – NIE Networks to advise).

One HAs consultant has provided the following narrative that relates to some recent deliveries:

“We have experience of numerous sites being prevented from exporting to the grid by NIE networks. Highlighting this problem to the UK administrations in relation to proposed SAP software coming forward is helpful. However, the draft guidance proposed about early engagement with NIE Networks on whether a PV connection is on an export or non-export basis is useless, as NIE Networks will not consider the implications of PV systems at the time of network connection application for a site and will only provide detailed information on the PV system connection after Terms and Conditions for the site have already been issued. This retrospective review process by NIE is unhelpful, is not a joined-up approach and should be reviewed.”

QUESTION 19: DO YOU HAVE ANY COMMENT ON OUR IMPACT ASSESSMENT AND ITS KEY ASSUMPTIONS?

At present we do not wish to provide comment of this question. As we don't have enough detailed knowledge to provide a response.

QUESTION 20: HAVE YOU ANY SUGGESTIONS OR OBSERVATIONS THAT YOU HAVE THAT DO NOT FIT INTO THE PRECEDING QUESTIONS?

1. Keep the methodology up-to-date and as close to reality as possible, ensuring that new technology and its implications are accounted for and reviewed on a regular basis.
2. Ensure and commit to changes to building regulations on a regular basis (i.e., every 2-3 years) ensuring carbon factors are reviewed at each regulation change and updated within the methodology.
3. Building Regulations need to be prepared to adopt new method of construction, evaluation, measurement, and technologies.
4. Review and evaluate whether measures proposed by other regions in reducing and closing the performance/compliance gap are beneficial.

We have additional comments on Heating, Ventilation, PV/ Battery Storage, EV Charging and Hydrogen that we think useful to offer in this context.

Heating

Capital cost of a heat pump unit is high in comparison to oil/ gas or hydrogen boilers. It has been discussed that heat pumps will come down in price once the manufacturing numbers increase. However, this has not been reflected in the air conditioning marketplace t over the last 20 to 30 years and the replacement cost of an external heat pump is 3 to 4 times the current cost of a gas fired combination boiler. The improved regulations are good for reducing carbon emissions but are we plunging the country into fuel poverty, especially as the main emphasis is on electric for heating and hot water; there is no mention of other low carbon technologies such as hydrogen boilers or bio-fuel boilers. There is no mention of noise associated with a heat pump unit or numbers of heat pump

units, surely there should be guidance of acceptable noise levels, distance from properties and boundaries or time constraints with lower noise levels expected overnight.

New build and existing housing stock, there needs to be more guidance for installing heat pumps in existing dwellings, maybe minimum heat loss through fabric first approach before they can be installed. Legislation required stopping heat pumps being installed as a direct replacement for oil or gas boilers without consideration of the existing heating system and building fabric.

Ventilation

There should be a greater emphasis on controlled mechanical ventilation with heat recovery (MVHR). Intermittent extract systems and continuous mechanical ventilation systems should be removed as acceptable options, they waste energy. MVHR systems are not easy to retrofit and should be installed within new housing stock moving forward as soon as possible.

PV, Battery Storage

Should there be a greater emphasis on including PV at a minimum performance output for each dwelling or development? Battery storage is an efficient way to harness PV generation and therefore SAP software calculation packages need to take account of PV with battery storage and not just PV installations.

EV Car Charging

There has been no mention throughout the consultation document of EV charging either in provision of EV charging stations (quantity and rating required) surely allowances should be made now for future provision for dwellings and developments.

Hydrogen

There has been no mention throughout the consultation document of hydrogen ready boilers; surely they should be included, why state heat pumps but make no mention of hydrogen boilers. Why prepare costs for just air source heat pumps but say nothing for uplift costs associated with hydrogen ready boilers. SAP software should be considering hydrogen ready boilers and electrical usage during the night for production of onsite hydrogen generation.”

MVHR

New homes must provide healthy environments in which to live.

New homes will essentially be airtight – how are the Building Control regulations, with links to relevant standards, protecting future health of our tenants by ensuring that there is enough fresh air in the homes to offer healthy environments.

Poor experiences of MVHR have led to questions such -Is the industry regulated ensuring installations are designed properly and installed by accredited installers to a standard that is stated in Building Regulations?

The experience was so poor that it signalled those improvements must be made as homeowners will disable systems that are not working properly resulting in unhealthy environments which inevitably lead to health problems / cost to NHS.

Embodied Carbon

The change in the Regulations is required to address climate change.

How is the embodied level of carbon in new builds being calculated and certified so that it too becomes a part of new build deliveries that minimise the amount of carbon being generated by the construction industry?

Submitted on behalf of NIFHA by:

Tracey Ellis

Policy and Practice Officer

tellis@nifha.org

[074 8962 1530](tel:07489621530)