FREQUENTLY ASKED QUESTIONS

Following publication of new Technical Booklet guidance to Part F (Conservation of fuel and power) of the Building Regulations (Northern Ireland) 2012 (as amended).

1. When will these changes apply?

The new Technical Booklets provide updated guidance applicable to plans applications from 30 June 2022.

The changes principally apply when a new building is being erected and to certain large extensions (see paragraph 3.12 of Technical Booklet F2).

For work arising from applications made prior to 30 June 2022, reference should be made to the previous editions of the Technical Booklets (amended in 2014) and consideration given to relevant Information Notes published by the Department.

2. Is there new software associated with the uplift?

There is no new software associated with this particular uplift, which is intended as an interim step while new software and details of uplifts coming through in other administrations are considered by the Department.

Instead, manual checks for improved performance requirements should be applied (see paragraph 2.1 of the relevant Technical Booklet and below for further detail).

3. What new manual checks are required?

Manual checks are required to demonstrate the following;

Check 1: Betterment of the previous Target Emissions Rate (TER).

Check 2: Compliance with improved limiting U-values and, in the case of dwellings, a glazing area assessment.

Check 3: Compliance with revised air-tightness testing guidance; and

Check 4: Where on site renewables are used – confirmation of the nature of the grid connection (export / non-export). In the case of non-export connection a report should be provided.

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Paragraph 2.1 provides full details on the manual checks required in both Technical Booklet F1 for dwellings and in Technical Booklet F2 for buildings other than dwellings.

4. What impact will these changes have on the carbon dioxide Emissions Rate for new buildings?

The new guidance requires new buildings to better the Target carbon dioxide Emissions Rate (TER) by at least —

- 40% in the case of new houses;
- 25% in the case of new flats; and
- 15% for buildings other than dwellings.

Some easement of the 15% improvement for buildings other than dwellings is available where space heating to the non-domestic building is provided by a heat pump (see below).

Actual emissions benefits may be less than these levels as the current software does not reflect updated carbon factors for fuels and recent decarbonisation of the electrical grid.

5. I am using a heat pump for space heating in a building other than a dwelling. How does this impact on my requirement to better the TER by at least 15%?

Where the space heating in a building other than a dwelling is provided by a heat pump, a pro-rata reduction in the 15% betterment factor may be applied. Full details can be found at paragraph 2.62 in Technical Booklet F2 for buildings other than dwellings.

Where a mix of fuels is used in the building, the percentage contribution from heat pumps to the space heating should be readily obtainable from the software read-outs. This should be used to calculate the pro-rata reduction applicable.

6. What changes have been made to fabric standards for new buildings?

The new guidance sets improved U-value limits for elements of new buildings. For dwellings, it also sets an assumed limit of openings for windows, doors and rooflights.

A whole building area-weighted U-value assessment provides an alternative approach and permits a limited degree of trade-off provided the U-values deliver an equivalent overall performance to the standard limiting values and any glazing assessment. Applicants taking this approach should provide the district council with the necessary table of areas, U-values and whole building assessment calculations.

Relevant details can be found at paragraphs 2.41 to 2.46 in Technical Booklet F1 for dwellings and paragraphs 2.55 to 2.58 in Technical Booklet F2 for buildings other than dwellings.

7. What changes are being made to air tightness assessments?

The guidance has been amended to encourage air tightness testing in most circumstances.

The option not to test some buildings and accept a default air tightness value of 15 $m^3/(h.m^2)$ at 50Pa, has been removed. This means that the maximum value that should appear on new building assessments should not be greater than 10 $m^3/(h.m^2)$ at 50 Pa.

Sample testing on sites with multiple dwellings is still possible, subject to the addition of 2.0 $m^3/(h.m^2)$ at 50Pa for untested dwellings of a similar type (see paragraph 2.24 of Technical Booklet F1).

8. What changes are being made to thermal bridge assessments?

The guidance on thermal bridge assessments has been clarified to align with current practice. Designers are encouraged to assign Ψ-values (psi) to each junction based upon a range of options that are set out in the guidance, although an overall 'Y-value' assignment also remains as an option.

More information can be found at paragraphs 2.62 to 2.67 in Technical Booklet F1 for dwellings and paragraphs 2.78 to 2.83 in Technical Booklet F2 for buildings other than dwellings.

Thermal bridging design and construction is likely to be increasingly relevant and designers and builders are encouraged to focus on the improvements this can provide.

9. Will I be required to install renewables?

There is no new, explicit requirement for on-site renewables, but the betterment of emissions requirements are likely to mean that designers increasingly turn to renewable technology as a more cost-effective route to compliance. Early engagement with NIE Networks is encouraged to help ensure viability of such proposals.

The improved limiting U-values are intended to limit over-reliance on this approach at the expense of building fabric measures.

10. I am unable to secure an export connection for on-site renewables generating electricity. Does that affect my ability to comply with this guidance?

No. The current software will assume that the full generation capacity of any renewable generation technology is being used and the reduced performance due to the inability to export will not be taken into account.

In these circumstances it is possible that, over time, the electrical profile of the building may develop (for example with the roll out of additional electric vehicle charging points) or a future export connection may become viable. Consideration should also be given to options such as appropriate sizing or provision of battery storage capacity or other diverter technologies, in order to maximise the beneficial use in practice and minimize the likely performance gap. A report should be provided to the district council on the proposed system at design/plans application stage and again on completion outlining the considerations investigated and any steps taken to limit the likely performance gap in the system. The building owner should also be informed on these details and the extent of any likely performance gap in the system as a result of the non-export.

Further details can be found at paragraphs 2.20 to 2.22 in Technical Booklet F1 for dwellings and from paragraphs 2.37 to 2.39 in Technical Booklet F2 for buildings other than dwellings.