

Introduction to the new SBEMie version 5.7a

1 Background

The Non-Domestic Energy Assessment Procedure (NEAP) is the methodology for demonstrating compliance with aspects of Part L of the Building Regulations and publishing Building Energy Ratings.

The Building Energy Rating may differ from those generated in previous versions of the software, depending on individual projects, due to the change to the calculation methodology including the change to an absolute value scale and primary energy factor for Grid Supplied Electricity. The changes are detailed below.

2 Implementation Dates

The ability to publish BERs using the SBEMie Version 5.6a software will be removed on 21 May 2026.

The ability to publish BERs using the SBEMie Version 5.7a software will be added on 25 May 2026. Only BERs created in SBEM v5.7 will be accepted by NDNAS after this changeover.

In accordance with transitional arrangements, older factors may still be used to generate draft Part L reports in NEAP using the software version prior to the one including the update. A copy of the NEAP software prior to the update should be maintained in a separate folder on the user's PC for this purpose.

BER assessors may produce a Part L report based on the currently published factors or on the primary energy factors that applied at the date of application for planning permission. For example, depending on the date of application for planning permission, version 5.6a may still be used to produce a Part L report.

The primary responsibility for compliance with the requirements of the Building Regulations rests with the designers, builders and owners of buildings. Interpretation of the legislation is, ultimately, a matter for the Courts and implementation of the Building Control system is a matter for the local Building Control Authority.

3 Key changes from SBEM 5.6a to SBEMie 5.7a

User Interface updates

- Inclusion of a numerical field to enter the solar PV battery capacity
- Inclusion of External Signals check box
- Inclusion of Renovations check box
- Inclusion of a numerical field to enter GWP (Global warming potential)
- Changes to building types – grouping and splitting
 - Hospital and Nursing home to be split into two building types
 - Stand-Alone Utility Blocks to removed
 - Law Courts and Car Parks to feed into Offices
 - All school types feed in Schools
- Updates to results tab due to the removal of notional building
- New graphics rating sub tab in result tab

Calculation updates

- Move from a ratio based to fixed value assessment
 - The notional building is no longer required and BER is determined by fixed thresholds
 - Fixed values for each thresholds introduced
 - Existing approach to remain for NZEB/Part L/Compliance assessments
- Exclude the total energy demand and area associated in “Zones without HVAC system” in the BER assessment only.
 - Existing approach to remain for NZEB/Part L/Compliance assessments
 - Renewable energy will be calculated for the entire building, and an entire building kWh/m² y value will be applied to the “Zones with HVAC system” energy demand value
- Implemented ZEB & ZEB renovation thresholds, including the ZEB criteria checks
- ZEB Checks
 - Meet the energy and carbon thresholds outlined for ZEB/A0
 - The building has no on-site fossil fuels
 - The building has a capacity to react to external signals
 - RER_CN is great that 60%
 - The building is NZEB/Part L compliant
- ZEB_reno Checks
 - Meet the energy and carbon thresholds outlined for ZEB_renovate
 - The building has no on-site fossil fuels
 - The building has a capacity to react to external signals
 - RER_CN is great that 60%
 - Must have undergone or be undergoing renovations
- RER_CN Calculation
 - Duplicated the existing RER calculation and include 60% of grid supplied electricity in the numerator.
- Updated onsite renewable calculation to separate renewables used on site from those exported to the grid
 - Implemented PV self-usage calculation including solar factors and battery factors
 - Implemented wind and CHP self-usage calculation with fixed self-usage factors
 - Self-consumed electricity will have a PEF = PEF of grid supplied electricity; export electric will have a PEF = 1.0
 - Self-consumed electricity will have a PEF = CEF of grid supplied electricity; export electric will have a CEF = CEF of grid supplied electricity/ PEF of grid supplied electricity
- Changes to building types – grouping and splitting
 - Hospitals and Nursing homes are split into two building types
 - Stand-Alone Utility Blocks removed
 - Law Courts and Car Parks feed into Offices
 - All school types feed into Schools
- Updated weather file
- Updated the PEF and CEF of electricity to 1.5 and 0.1685
- Updated CEF values for all other fuels as per values issued to BRE

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Reporting Updates

- New graphic and pdf for BER certificate
- Update to existing items in XML
- Addition of new items in the XML

Database Updates

- Laundry (Retail) DHW set to 0
- General Assembly Changing DHW reduced to 60 l/m2

For all instances of Changing rooms, information text is added to all building types.

“For areas which can be used to for changing, but which do not contain showers, such as a cloak room/locker room, use the Generic Office Space”.

4 Previous key changes from SBEMie 5.5h to SBEMie 5.6a

SBEMie, the Simplified Building Energy Model for Ireland, is the freely available software for NEAP developed by BRE. Version 5.6a of SBEMie has the following changes from version 5.5h of the software:

- Change in Primary Energy Factor for grid supplied electricity
- Change in Carbon Factor for grid supplied electricity

5 File Conversions for iSBEMie

It is possible to convert files created in previous versions of the iSBEMie software.

Section 8 of the iSEEMie User Guide “How to use iSBEMie (1) Basics” describes the conversion procedure in detail.

Due to the nature of the changes introduced in the new version some fields may not be refreshed automatically. Therefore, it is essential to do the following:

- Click through all the zones in the Geometry form
- Click through all the envelope elements in the Geometry form
- Click through all the HVAC systems in the Building Services form
- Click through all the sub tabs in the Building Services form > Zones tab

Note: It is only possible to convert from earlier versions of software to later versions of software. Care must be taken to retain versions of nct files generated using earlier software if required for building regulation compliance checks. It is not possible to convert an iSBEMie Version 5.7a nct file back to an earlier version.

iSBEMie file conversion from version 5.6a to version 5.7a

As outlined in this document there are multiple differences in the software between iSBEMie Version 5.6a and iSBEM Version 5.7a. It is essential that BER assessors review **all** of the tabs and sub tabs to check that the data has been converted successfully.

iSBEMie file conversion from version 3.5b or 5.5h to Version 5.7a

As outlined in this document there are many differences in the software between iSBEMie Version 5.7a and previous versions of the software. It is essential that BER assessors review **all** of the tabs and sub tabs to provide input for parameters that did not exist in previous versions.

In the event of difficulty converting in one step from 3.5b or 5.5h version to 5.7a, you should try to convert as far as 5.6a first and then from 5.6a to 5.7a.

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