Queensland Government
Building Codes Queensland
Department of Local Government, Planning, Sport and Recreation

Building Newsflash

BUILDING ENERGY EFFICIENCY – DEMONSTRATING COMPLIANCE WITH ENERGY RATING SOFTWARE

Purpose

To advise building certifiers, energy raters and other building practitioners of the current thermal calculation methods (energy rating software) that can be used to analyse the energy rating of buildings in accordance with the Building Code of Australia (BCA).

Background

Compliance with the energy efficiency performance requirements of the BCA may be demonstrated using the following assessment methods -

- The verification methods, including calculation of a building's annual thermal energy performance using a thermal calculation method;
- Documentary evidence described in Part A2 of Volume 1 of the BCA or Part 1.2 of Volume 2; or
- Expert judgement.

If a verification method under JV1 or V2. 6.2.1 is used, thermal energy calculations must be made using energy rating software that complies with the appropriate Australian Building Codes Board (ABCB) protocol.

However, certifiers may approve compliance with the performance requirements when an assessment is undertaken using other energy rating software that does not satisfy the protocol. This can be done using expert judgement or by documentary evidence.

Legislation

The BCA lists ABCB protocol for Housing Energy Rating Software as follows –

- BCA 2006 Volume 1, Specification A1.3 – Protocol for Building Energy Analysis Software Version 2006.1; and
- BCA 2005 Volume 2, Part 1.4 - Protocol for House Energy Rating Software, Version 2005.1.

Class 1, 2, 4 parts and 10a Buildings

For Class 1, 2, 4 parts and 10a buildings, the suppliers of the following software packages have advised the ABCB that the software meets the ABCB Protocol for House Energy Rating Software Version 2005.1 -

- BERS (v.3.2); and
- NatHERS (v.2.32).

This list may not be exhaustive. There may be other suppliers of House Energy Rating Software that meet the protocol who have not advised the ABCB of their validation process.

The products listed above are first generation software and are to be phased out in favour of second generation software, which has been designed to provide improved assessments for warm climates such as Queensland. AccuRate and BERSPro are second generation software products suitable for providing house thermal energy ratings. The Department recommends second generation software products be used in preference to first generation software products.

The ABCB Protocol for House Energy Rating Software Version 2006.1 is suitable for assessing second generation software. The supplier of the BERS software has advised the ABCB that BERS Pro 4.1 meets this Protocol.

Classes 3, 5, 6, 7, 8 and 9 buildings

For Class 3, 5, 6, 7, 8 and 9 buildings, the following software suppliers have informed the ABCB their software meets the ABCB Protocol for Building Energy Analysis Software Version 2006.1 -

- Beaver / ESP from ACADS-BSG;
- IES Apache from Bassett Applied Research;
- TAS from Lincoln Scott Australia Pty Ltd;
- DOE Suite including eQUEST, VisualDOE and Energy Plus from US Department of Energy through Team Catalyst in Australia;
- ICE from Umow Lai & Associates Pty Ltd;
- TRACE 700 from Trane; and
- Carrier E20-II from Carrier.

Additional information

Software providers are responsible for validating their product and advising the ABCB accordingly. Providers are also responsible for upgrading the software and validating the upgrade to correct any deficiencies or faults.

For software to comply with the protocol, software providers must produce evidence of suitability. This will include -

- Compliance with the BCA's Performance Requirement;
- Proof of appropriate testing and quality assurance; and
- Provision of a training program for users.

The ABCB protocols can be accessed at - http://www.abcb.gov.au/index.cfm?fuseaction=Publications.

Certifiers assessing applications should be satisfied that the software being used is suitable for application on the building type and classification being assessed. The software being adopted should be suitable for the climatic zone and building type.

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