



Newsflash number 481 (revised version)

NatHERS approved software tools

Purpose

To update building industry practitioners on approved Nationwide House Energy Rating Scheme (NatHERS) software tools.

Background

This newsflash updates and replaces the version issued on 27 September 2011.

The National Construction Code (NCC) and the [Queensland Development Code MP 4.1—Sustainable buildings](#) (QDC) require residential buildings to achieve a minimum energy equivalence for:

- houses and townhouses (class 1 buildings) = 6 stars
- multi-unit residential buildings (class 2) = 5 star average for all sole-occupancy units in the building, with no individual unit to achieve less than 4 stars.

There are four compliance methods available to assess the energy efficiency of housing designs:

- i. elemental (formerly deemed-to-satisfy (DTS)) provisions of the NCC
- ii. verification against a reference building
- iii. expert judgement (peer review)
- iv. software simulation.

Software that meets the [Australian Building Codes Board's Protocol for House Energy Rating Software \(2006.1\)](#) can be used to demonstrate compliance with the energy efficiency (thermal performance) of housing design requirements of the NCC and QDC.

NatHERS software tools are available for use by energy assessors to rate the thermal performance of a house's design, from which a house energy rating certificate can then be accepted by a building certifier. AccuRate was developed by the CSIRO and is accredited for use under NatHERS (as it is the national benchmark software tool). The two other software tools are BERS Pro (developed by Solar Logic) and FirstRate5 (developed by Sustainability Victoria).

All three software providers use the same underlying thermal simulation engine called 'Chenath' as designed by the CSIRO. Each software tool differs by their user-interface (or 'front end').

NatHERS software accreditation results

The NatHERS National Administrator granted BERS Pro and FirstRate5 provisional accreditation for use until 30 September 2011. Both BERS Pro version 4.1 and FirstRate5 version 5.0, Build 215 have now ceased to be accredited.

The NatHERS National Administrator has advised that BERS Pro version 4.2, release number 110811 has been fully accredited and replaces version 4.1. FirstRate5 version 5.1.7 has also been fully accredited and replaces version 5.0, Build 215.



Approved NatHERS software tools

The following four accredited software tools and versions are now approved for use by the NatHERS National Administrator:

- i. [AccuRate](#) (Version 1.1.4.1) – accredited May 2006
- ii. [AccuRate Sustainability](#) (Version 2.0.2.13) – accredited March 2011
- iii. [BERS Pro](#) (Version 4.2, release 110811) – accredited 26 August 2011
- iv. [FirstRate5](#) (Version 5.1.7) – accredited 30 September 2011

NatHERS accredited functionality produces NatHERS certificates identified by the following features:

- NatHERS logo in the top right corner with 10 stars
- software product name and version/release number e.g. BERS Pro V4.2, release 110811
- Chenath engine version V2.13.

FirstRate5 V.5.1.7 cannot be used under NatHERS for modelling house plans that include ‘edge slab insulation’. BERS Pro version 4.2, release 110811 cannot be used under NatHERS for modelling house plans that include ‘tilted roof windows with blinds’. House designs that include either of these features should use another software tool (or another compliance method).

Accreditation and software transitional arrangements until 31 December 2011

To allow industry to transition to the approved NatHERS software tools in Queensland, building certifiers are advised that they can continue to accept house energy rating certificates produced by BERS Pro version 4.1 and FirstRate5 version 5.0, Build 215 until 31 December 2011. After this time, it will be appropriate for building certifiers to require house energy assessments from the fully accredited NatHERS tools (as listed above) to demonstrate compliance with the NCC and QDC.

Chenath and technical considerations

The NatHERS National Administrator acknowledges that the existing Chenath engine marginally affects the assessment of open plan houses (i.e. where there is a large opening between the kitchen and dining/living area). This issue is currently being addressed as part of an updated version of Chenath that is expected to be released by the NatHERS National Administrator in early 2012.

This updated version of the Chenath engine will become the new simulation engine underlying all approved NatHERS software tools, and will result in an updated version of each tool (through a simple download from the software provider).

As an interim measure, it is recommended that assessors using BERS Pro version 4.2 select ‘BERS simulation’ to achieve appropriate ventilation modelling when assessing open plan houses. This will produce a BERS Pro Certificate instead of a NatHERS certificate, and building certifiers are advised that they may accept a BERS Pro Certificate for open plan house designs. Assessors using the accredited versions of AccuRate (Version 1.1.4.1 or Version 2.0.2.13) or FirstRate5 (Version 5.1.7) can appropriately model open plan houses following standard modelling procedures and produce a NatHERS Certificate.

House energy assessments from 1 January 2012

From 1 January 2012, it is appropriate for building certifiers to only accept house energy rating certificates from assessors using fully accredited versions of BERS Pro, AccuRate or FirstRate5.

For open plan houses, the interim assessment measure outlined above will be acceptable until the

updated Chenath engine is approved for use by the NatHERS National Administrator. The release of the updated version of Chenath will then become available to NatHERS software providers, and house energy assessors will be able to update their software via a simple download from their software provider.

Future changes associated with NatHERS will be advised in a newsflash.

Contact for further information

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