

Nationwide House Energy Rating Scheme

# Protocol for Assessor Accrediting Organisations

June 2008

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## Foreword

The Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Ministerial Council on Energy (MCE), a body which includes representatives of the Australian Government and the State and Territory energy authorities. NatHERS is administered by the Energy Efficiency Working Group, on behalf of MCE, which has appointed the Australian Government, Department of the Environment, Water, Heritage and the Arts as National Administrator of the scheme

NatHERS was initiated to provide a standardised approach to rating the thermal performance of houses throughout Australia. NatHERS forms part of the Australian Government's strategy to fulfil its Kyoto and longer-term greenhouse gas emissions targets.

NatHERS accredited software has been developed to calculate the theoretical heating and cooling energy load on a house. It does this by modelling the effects of heat flow, through the building fabric, and air movement on internal comfort conditions. The software attributes a star rating to the house based on the resultant total energy load and the location of the house. NatHERS accredited software may be used to comply with certain building regulations including the thermal performance provisions in the Building Code of Australia (BCA) and thermal performance requirements of BASIX.

The BCA is recognised in all States and Territories as the minimum technical standard for the construction of buildings. On 1 January 2003, energy efficiency provisions for houses were introduced into Volume Two of the BCA. The provisions include Verification Methods that allow suitable NatHERS software to be used to demonstrate that the building fabric achieves the required level of thermal performance.

Subsequently energy efficiency provisions for all other types of residential buildings were introduced into Volume One of the BCA. These provisions include a Verification Method that allows suitable NatHERS software to be used to demonstrate that the fabric of Class 2 and 4 buildings (units and apartments) achieve the required level of thermal performance.

BASIX was introduced in NSW in 2004 to set water, energy and thermal performance targets for all new residential development. The thermal performance Assessment provides a simulation option to demonstrate the performance of the dwelling. Simulations must be carried out using NatHERS accredited software.

The success of the NatHERS scheme for regulatory purposes is contingent upon consistent and reliable outcomes being achieved through the correct use of NatHERS software. Given the level of complexity of NatHERS software, it is important that those that use the software to assess the thermal performance of buildings are adequately trained in the use of the software. They also need to have a minimum level of understanding of building construction, building thermal performance and the applicable building regulations.

The purpose of this protocol is to provide a national framework for the approval and operation of organisations that accredit users of NatHERS software for regulatory purposes. The protocol enables there to be a number of such Accrediting Organisations operating across State and Territory jurisdictions.

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# 1. Scope

This Protocol describes the processes that are required to be implemented by organisations that accredit NatHERS software Assessors for regulatory purposes.

# 2. Regulatory context

NatHERS accredited software may be used to:

- a. rate units and apartments in accordance with Verification Method JV1 of Volume One of the BCA;
- b. rate houses in accordance with Verification Method V2.6.2.1 of Volume Two of the BCA;
- c. determine the theoretical total energy load of houses in accordance with Verification Method V2.6.2.2 of Volume Two of the BCA;
- d. determine the theoretical heating and cooling loads of buildings for use in BASIX Assessments; and
- e. rate residential buildings in accordance with mandatory disclosure legislation, as applicable in each State and Territory.

# 3. Definitions

Where used within this Protocol:

**ABCB** means the Australian Building Codes Board.

**Accrediting Organisation** means an organisation that accredits Assessors in accordance with this Protocol.

**Assessment** means a thermal performance simulation of a residential building (as defined by regulations) conducted by an Assessor for regulatory purposes.

**Assessment Procedures** means the procedures detailed in the NatHERS Assessment Procedures document published on [www.nathers.gov.au](http://www.nathers.gov.au) for inputting a building's characteristics into NatHERS software.

**Assessor** means a person qualified and accredited to use NatHERS software to determine the thermal performance of residential buildings.

**Assessment Certificate** means a certificate provided by an Assessor detailing key data from the assessment and relevant specifications for the residential building or dwelling. This Certificate may be automatically generated by NatHERS software.

**BASIX** means Building Sustainability Index, the web-based planning tool designed to assess the potential performance of buildings that contain a dwelling, against thermal comfort, water and energy criteria.

**BCA** means the current version of the Building Code of Australia.

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**DEWHA** means the Department of Environment, Water, Heritage and the Arts. On 20 December 2007, the use of the term 'Australian Greenhouse Office' (AGO) to describe an organisational structure within the Australian Government officially ceased. The work of the former AGO on residential building energy efficiency & sustainability, continues in the Residential Building Sustainability section of DEWHA

**Jurisdiction** means the relevant State or Territory Government department or regulatory authority responsible for residential building energy performance standards or disclosure.

**NatHERS** means the Nationwide House Energy Rating Scheme.

**NatHERS software** means a thermal calculation method that is recognised by the scheme as complying with the NatHERS Software Accreditation Protocol and/or by the ABCB as complying with the current version of ABCB Protocol for House Energy Rating Software.

**National Administrator** means the NatHERS scheme manager appointed by the Ministerial Council on Energy, currently the Residential Building Sustainability section of the Industry Communities and Energy Division of the Australian Government Department of the Environment, Water, Heritage and the Arts.

**RTO** means Registered Training Organisation as defined by the Australian Qualifications Framework.

## 4. Assessor qualification

Prior to seeking accreditation, Assessors must achieve a qualification in accordance with the requirements outlined below.

### 4.1 Overarching competencies

Assessors must be confirmed as being competent in each of the following areas:

- a. Understanding of residential building design, documentation and construction practices.
- b. Understanding of residential building thermal performance, including the principles of -
  - i. climate zones;
  - ii. thermal resistance and thermal mass of building elements (roof, walls and floor);
  - iii. solar absorptivity of exterior surfaces;
  - iv. building orientation;
  - v. shading of walls and glazing;
  - vi. solar heat gain and conductance of glazing (glass and frame);
  - vii. building sealing; and
  - viii. internal air movement.
- c. Understanding and use of the NatHERS software for which accreditation is being sought.
- d. Interpretation of the applicable building regulations for which accreditation is being sought.
- e. Interpretation of the relevant NatHERS Assessment Procedures as published on [www.nathers.gov.au](http://www.nathers.gov.au)

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#### **4.1.1 Recognition of prior accreditation (BCA only)**

Assessors accredited prior to the commencement of this Protocol, under systems approved by Jurisdictions for BCA compliance, may be considered to have met competency 4.1b.

### **4.2 Statement of Attainment in Building Thermal Performance Assessment (Residential)**

Assessors must be trained in relation to the overarching competencies in 4.1.

Having completed a Statement of Attainment in Building Thermal Performance Assessment (Residential) in accordance with the Australian Qualifications Framework is considered to satisfy the competencies required in 4.1.

The '*Course in Building Thermal Performance Assessment (Residential)*' NTIS code 91318NSW' has been developed for the purposes of this section. Other courses may be developed and approved.

#### **4.2.1 Recognition of prior learning**

RTOs delivering the Statement of Attainment in Building Thermal Performance Assessment (Residential) may award the qualification based on recognised prior learning (RPL) in accordance with the Australian Qualifications Framework. Assessor Accrediting Organisations must include a statement of their current RPL policy and practice in their application and annual reports, satisfactory to the National Administrator. The National Administrator can require changes or revoke the accrediting organisations status if its RPL policy or practices are deemed unsatisfactory.

Assessor Accrediting Organisations must also include a statement of their current *trainer qualification* policy and practice in their application and annual reports. The National Administrator can require changes or revoke the Accrediting Organisation's status if its *trainer qualification* policy or practices are deemed unsatisfactory.

## **5. Assessor accreditation**

Following the attainment of the required qualification, Assessors may seek accreditation from an Accrediting Organisation.

### **5.1 Basis of accreditation**

Accreditation must be based on:

- a. Confirmation of the required qualification; and
- b. Agreement to abide by this Protocol including:
  - i. a code of professional practice; and
  - ii. an ongoing quality assurance system that includes monitoring of assessments, training and support.

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## **5.2 Confirmation of qualification**

Accrediting Organisations must recognise a minimum qualification attained in accordance with section 4.

Accrediting Organisations may have additional membership requirements which must be consistent with this Protocol.

## **5.3 Notice of accreditation**

Upon satisfying the accreditation criteria in 5.1 and 5.2, the Accrediting Organisation must notify the Assessor in writing of their accreditation, specifying-

- a. the Assessor's unique accreditation number; and
- b. the version of NatHERS software that they are accredited to use; and
- c. the building regulations that they are accredited to use their NatHERS software to comply with, which may include one or more of the following:
  - i. JV1 of Volume One of the BCA.
  - ii. V2.6.2.1 of Volume Two of the BCA.
  - iii. V2.6.2.2 of Volume Two of the BCA.
  - iv. BASIX Thermal Comfort Index.
  - v. Mandatory disclosure legislation (name of legislation to be described in full).

## **6. Quality assurance of assessor services**

An Accrediting Organisation must have a quality assurance system in place for ensuring Assessors conduct Assessments in a satisfactory and repeatable manner.

### **6.1 General requirements**

The quality assurance system must be consistent with this Protocol and cover-

- a. use of the NatHERS Assessment Procedures;
- b. a code of professional practice;
- c. ongoing technical support;
- d. ongoing professional development opportunities to maintain competencies; and
- e. assessment monitoring procedures.

Details of the quality assurance system must be lodged with the National Administrator as part of the application to become an Accrediting Organisation, and maintained for currency.

### **6.2 Code of professional practice**

Assessors must act with due diligence and professionalism in carrying out Assessments.

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Assessor Accrediting Organisations must make this and adherence to their code of professional practice, a requirement for continuing accreditation.

Accrediting Organisations are required to implement a code of professional practice, which outlines-

- a. the level of diligence and professionalisms required by Assessors, including the accuracy of Assessments and the level of documentation to be maintained;
- b. requirements to ensure that Assessors maintain the competencies in 4.1;
- c. the level of professional indemnity insurance to be maintained by Assessors (refer 6.2.1); and
- d. a process for dealing with complaints made to the Accrediting Organisation about Assessors.

Assessor Accrediting Organisations must accept and ensure that all related third party service providers accept the requirements of the Protocol.

### **6.2.1 Insurance**

Accrediting Organisations must require that Assessors maintain professional indemnity insurance commensurate with the volume and scope of the work that they undertake.

## **6.3 Assessor support**

Accrediting Organisations must provide the Assessors that they have accredited with ongoing support, including advice in relation to the competencies in 4.1. (Note: This service is not expected to extend to advice on the operation of software which would reasonably be expected to be provided by the software developers and/or distributors.)

Assessors must be able to access support services from the Accrediting Organisation via no less than e-mail and telephone. Upon receipt of a request for support from an Assessor, Accrediting Organisations must provide advice within three working days.

## **6.4 Continuing professional development (CPD)**

Accrediting Organisations must offer professional development activities to Assessors that they have accredited. This should include:

- a. the distribution of regular electronic updates at appropriate intervals; and
- b. co-ordination of a professional development program for Assessors. (Note: This may include workshops and seminars on topics of interest and/or advanced training in specific areas of relevance to Assessors.)

Professional development opportunities must be provided as requested by the National Administrator and at least once a year. Formal training must be provided in accordance with the Australian Qualifications Framework.

Assessor Accrediting Organisations must include in their annual report to the National Administrator, a statement of their CPD policy. The National Administrator may withdraw

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recognition of an Assessor Accrediting Organisation whose CPD policy and practice is deemed unsatisfactory.

## **6.5 Quality Assurance Processes for Assessments**

Accrediting Organisations must recognise Government required and/or managed auditing systems, but are responsible for quality assurance processes for assessments lodged through the Accrediting Organisation to ensure:

- a. accuracy of inputs;
- b. that Assessors are correctly applying the relevant building regulations, including any State or Territory specific requirements; and
- c. that assessors are complying with the Accrediting Organisation's code of professional practice; and
- d. that Assessors are conducting assessments in line with the published NatHERS Assessment Procedures.

Three levels of Accrediting Organisation Quality Assurance is required, each with a different frequency and scope as outlined in Table 1. (*Separate from Government required auditing of Assessments*)\*

Quality Assurance is to be carried out by persons with a high degree of competency and experience. Quality Assurer(s) may be Assessors provided they do not have a conflict of interest with the Assessors that they are assuring the quality of.

Quality Assurance reports must be included with the annual report to the National Administrator and include details of actions taken and a risk analysis of their quality assurance system. The National Administrator may withdraw recognition of an Assessor Accrediting Organisation whose quality assurance policy, practice, reports or risk analysis are deemed unsatisfactory. The National Administrator, on behalf of the Australian Government, will retain the right to *revoke the status* of an Accrediting Organisation if disciplinary actions are deemed by the Australian Government to be insufficient.

**Table 1 Quality Assurance requirements**

Description of required Quality Assurance requirement	Amount of annual Quality Assurance required	Action arising from Quality Assurance process
<b>Level 1: Review of information on Assessment Certificates.*</b>		
a. Check information on Assessment Certificates for consistency with standard practice for nominated construction or climate. b. Check information on Assessment Certificates for errors.	Accrediting Organisations to propose method and amount of data analysis when applying to become an Accrediting Organisation.	a. Provide feedback as appropriate to Assessors individually and generally. b. Escalate individual cases with serious concerns to Level 2.
<b>Level 2: Quality Assurance of key aspects of Assessments</b>		
a. Further investigate serious errors revealed in Level 1 – check software file or documentation as necessary. b. Randomly quality checks of software data entry against Assessment Certificate and/or house specification documentation. c. Conduct quality assurance checks focusing on different aspects of the assessments such as construction, insulation, glazing, etc.	a. All cases escalated from Level 1. b. 10% of all Assessors with a new selection of Assessors to be quality checked in the following year.	a. Communication to the Assessor regarding the issue and the correct method. b. Disciplinary action as defined by Accrediting Organisation if serious breach occurs. c. Escalate serious breaches to Level 3.
<b>Level 3: Complete software file, Assessor Certificate &amp; documentation Quality Assurance</b>		
a. Further investigate serious errors revealed in Level 2 – check Certificates, software files and documentation. b. Compare software file, Assessment Certificate and house specification documentation. Check variation between correct results and original assessment. Compare to target variation. c. Collate results for annual report.	a. All cases escalated from Level 2. b. 5% of all Assessors, to be different assessors that those subject to level 2, with a new selection of Assessors to be quality checked in the following year.	a. Communication to the Assessor regarding the issue and the correct method. b. Disciplinary action as defined by Accrediting Organisation if serious breach occurs.

\* It is expected that the basic checks described for level 1 will be carried out automatically at the certificate generation stage for all assessments.

## 6.6 Auditing of Assessors

Auditing of Assessors and Assessments is the domain of governments and is not the responsibility of Assessor Accrediting Organisations.

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## **6.7 Process for dealing with complaints**

Accrediting Organisations must establish a system for responding to complaints about Assessors. This includes a process for-

- a. logging complaints; and
- b. responding to complaints in a timely manner.

Assessor Accrediting Organisations must formally log all complaints and the actions taken to resolve them, and include a summary of complaints, categorised by type, severity and resolution actions in their annual report to the National Administrator. Accrediting Organisations must notify the National Administrator in writing, within 14 days, of any complaints which relate to issues that significantly impact on scheme integrity, such as where the Accrediting Organisation becomes aware of systematic deficiencies, or a concentration of complaints associated with particular assessors, at a level which is sufficiently above the average to indicate that it is be reasonably likely to be due to other than random causes.

## **7 Buildings that cannot be accurately modelled by NatHERS Software**

Buildings that cannot be accurately or correctly modelled by NatHERS software must be processed in accordance with 7.1 or 7.2.

### **7.1 Expert Referral System (BASIX only)**

An Accrediting Organisation must have a system for referring dwellings, design strategies, construction systems and materials that are deemed by the Accrediting Organisation and/or the software provider to be beyond the capability of NatHERS software. These projects must be referred to an expert or experts appointed by the Accrediting Organisation.

The expert is to consider equivalence to the thermal performance required by BASIX and may not include any concessions other than those defined by BASIX.

The expert must clearly identify the circumstances in which referral will be required, and it must be mandatory for assessors to refer in these circumstances. The system must require a response to the applicant to be provided within 21 days of receipt of an application.

Accrediting Organisations must appoint persons to assess dwellings within the referral system. The credentials and expertise of persons to which developments are referred must be made available to the public, Assessors and the applicable Jurisdiction.

The referral system must consider the requirements of this Protocol, including and the aims and requirements of the BASIX Thermal Comfort Index when assessing the dwelling.

Where other software simulation results or calculations are submitted as evidence, the software must have appropriate credentials (eg meets the requirements of BESTEST) and settings used in those simulations or calculations must be equivalent to the settings used in NatHERS software unless evidence is provided to support an alternative setting.

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### **7.1.1 Expert reporting (BASIX only)**

The expert considering the development must provide a Referral Report to the Assessor for submission with the development application or application for a complying development certificate. The Accrediting Organisation must be provided with a copy for record keeping.

This Referral Report must outline:

- a. the reason for the referral;
- b. the features of the development which were assessed;
- c. the method of alternative assessment; and
- d. the features which ensure equivalent thermal performance to those required by BASIX.

The National Administrator will retain the right to revoke the status of an Accrediting Organisation which, for example, by the standard of the work of its appointed experts, shows that it is failing to maintain a sufficiently high standard for what it regards as expert status

### **7.2 Alternative Solutions (BCA only)**

Buildings that cannot be accurately or correctly modelled by NatHERS software must achieve compliance with the BCA as Alternative Solutions.

## **8. Annual reports**

Accrediting Organisations must submit an annual report to National Administrator by the end of April each year. The National Administrator will make available all annual reports to the applicable Jurisdictions for their review and comment. The National Administrator may take action in accordance with section 10 of this Protocol.

At any time the National Administrator may reasonably request that Accrediting Organisations provide summarised information, such as the number of accredited Assessors and the number of complaints.

### **8.1 Content of annual reports**

As a minimum, annual reports submitted by an Accrediting Organisation must include each of the following:

- a. An up-to-date list of all the Assessors accredited by the Accrediting Organisation including the following details about each Assessor:
  - i. Name.
  - ii. Accreditation number.
  - iii. Contact details.
  - iv. Date of accreditation.
  - v. The NatHERS software accredited to use.
  - vi. The building regulations accredited for and/or any specific accreditation restrictions.
  - vii. Date last a quality assurance process was conducted on the Assessor and any resultant actions taken.

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- viii. Any disciplinary action taken by the Accrediting Organisation against the Assessor during the last twelve months.
  - b. A summary of quality assurance processes undertaken, including the number and nature of errors encountered and disciplinary action taken.
  - c. A financial statement for the previous financial year audited according to the relevant Australian Accounting Standards.
  - d. Any changes to the accreditation processes undertaken by the Accrediting Organisation.
  - e. Any significant changes to the structure of the Accrediting Organisation.
  - f. A statement of compliance with this Protocol.

Where applicable, the information in annual reports may be categorised according to Jurisdiction.

## **8.2 Maintaining records of all Assessments (BASIX only)**

Accrediting Organisations must electronically collect the Assessment Certificate information as required in the NatHERS Assessment Protocol for all BASIX related Assessments and provide it in spreadsheet format to the applicable Jurisdiction when requested.

## **9. Application to become an Accrediting Organisation**

Only organisations can apply to become Accrediting Organisations. Applications must be submitted to National Administrator in writing and include each of the following details:

- a. The Jurisdiction in which it is proposed to offer accreditation services.
- b. Experience in relation to the building industry.
- c. Experience in providing member services to the building industry.
- d. Experience in relation to the overarching competencies in 4.1
- e. How the organisation will address each of the requirements outlined in this Protocol.

The National Administrator may consult with Jurisdictions before making a determination with respect to an application.

Applicants will be notified in writing of the National Administrator's decision within a period of three months. Approval to operate as an Accrediting Organisation may be granted with conditions governing the scope of accreditation services that can be provided by that Accrediting Organisation.

The National Administrator will notify Jurisdictions and relevant industry bodies of the status of Accrediting Organisations from time to time. Accrediting Organisations may promote their status to the extent of the Approval issued by the National Administrator.

## **10. Review of Accrediting Organisations**

At any time an Accrediting Organisation may be required to provide the National Administrator with reasonable evidence to demonstrate that the requirements of this Protocol are being

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adhered to. The National Administrator may consult with Jurisdictions as necessary on the review process.

The National Administrator reserves the right to take action to ensure that an Accrediting Organisation fully complies with this Protocol. This may include-

- a. applying conditions on the operations of the Accrediting Organisation; and
- b. the suspension or withdrawal of the Accrediting Organisations right to accredit Assessors to the NatHERS scheme.