
BUILDING ADVISORY SERVICES BRANCH

BUILDING NOTE

Contact Officer: Peter Zagorski

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BCA Energy Efficiency Provisions

From 1 May 2010 new energy efficiency provisions applicable for the Northern Territory will be adopted into the Building Code of Australia (BCA 2010).

The Northern Territory has a variation in BCA 2010 that adopts some of the BCA 2009 energy provisions namely:

5 Star rating will apply to:

- Class 1 buildings (houses)
- Class 10 buildings (non habitable) with a *conditioned space*.

3.5 Star rating will apply to:

- Class 2 & 4 buildings

Northern Territory legislation is such that any new works, which require a building permit will need to comply with the new provisions. These provisions are not retrospective.

APPLICATION OF PROVISIONS TO PERMITS ISSUED AND DESIGNS COMMENCED PRIOR TO ADOPTION OF THE BCA ON 1 MAY 2010

Section 51 of the *NT Building Act* provides for application of new regulations. In summary the section states that new provisions of the BCA do not apply if-

- a permit is granted before the provision is adopted ; or
- a Building Certifier certifies in writing that substantial progress was made on the design before the provision was adopted.

Nevertheless, a Building Certifier and owner may agree that the new energy provisions of the BCA will apply.

In determining compliance a Building Certifier could simply require an owner to submit evidence that the design was substantially started or completed prior to 1 May 2010. This evidence could be in the form of a statement in writing and signed by the owner. In addition, so that future owners are aware of the issue, as part of the building permit a statement to acknowledge that the proposed building work does not include energy provisions as specified in the current BCA is required.

Substantial design of a building does not apply to a planning permit issued by the Development Consent Authority.

APPLICATION OF THE PROVISIONS

Class 1 and 10 Buildings

There are two methods for assessing applications for compliance with the energy efficiency provisions that meet the performance requirements of the BCA.

- Deemed to Satisfy - assessing compliance with the acceptable construction provisions under Part 3.12 (BCA Volume 2); or
- Alternative Solutions
 - the verification method using a stated value (V2.6.2.1) or
 - using a reference building (V2.6.2.2) or
 - expert judgement, assessing compliance of an alternative solution against the performance requirements.

Verification using stated value. (V2.6.2.1)

A building must have an energy rating of not less than 5 stars determined using a thermal calculation method that complies with the ABCB Protocol for house energy Rating software.

The Northern Territory at this stage will only accept AccuRate as the approved software. Upon advice from the Department of the Environment, Water, Heritage and the Arts that other software packages have achieved full approval from it, consideration will be given to the adoption in the Northern Territory of other packages.

Using a reference building (V2.6.2.2)

This method requires the evaluation of the proposed design compared against a reference house. The method involves doing two energy evaluations.

Expert Judgement

A peer review process is an alternative compliance method to assess new housing using expert judgement. The design criteria for a well ventilated building with no mechanical cooling other than ceiling fans (called a free running building) has been the subject of consideration as to how to best accommodate expert assessment.

Faced with similar issues, the Queensland Government has developed a peer review structure to support the Alternative Solution expert judgement method when used for architecturally designed free running buildings.

Following negotiations with the Queensland administration, the Northern Territory will be able to access the Queensland peer review system.

Accordingly, the Northern Territory gives recognition to experts on the Queensland Peer Review Panel. Experts listed on this panel are engaged through a normal contractual arrangement. The Queensland Government website has information on the process and panel experts <http://www.dip.qld.gov.au/guidelines/energy-efficiency.html>

The appointed expert will assess the plan and provide either a 'pass' or 'fail' report justifying any decision. The report would form part of the relevant building approval issued by the building certifier.

Class 2 and 4 Buildings

There are two methods for assessing applications for compliance with the energy efficiency provisions that meet the performance requirements of the BCA.

- Deemed to Satisfy - assessing compliance with the acceptable construction provisions under Part J (BCA Volume 1); or
- Alternative Solutions
 - the verification method using a stated value (JV1) using a thermal calculation method.

Verification using stated value. (JV1)

For a class 2 building or class 4 part of building

- each sole occupancy unit has an energy rating of not less than 3 stars; and
- the average energy rating of all sole occupancy units is not less than 3.5 stars.

The Northern Territory at this stage will only accept AccuRate as the approved software. Upon advice from the Department of the Environment, Water, Heritage and the Arts that other software packages have achieved full approval from it, then consideration will be given to the adoption in the Northern Territory of other packages.

Accreditation of AccuRate Assessors

The Northern Territory administration sees AccuRate assessors as another of many unregulated professions operating under good practice guidelines in the marketplace.

In June 2008, a Protocol for Assessor Accrediting Organisations was issued and the Northern Territory encourages good practice in accordance with the protocol for accreditation without regulating for registration.

APPLICATION OF PROVISIONS TO ALTERATIONS, ADDITIONS AND EXTENSIONS TO EXISTING BUILDINGS

Building Certifiers commonly deal with permit applications that are for parts of a building (additions and extensions) and interpreting compliance of that part of the building with the BCA. This process should be no different when considering additions and extensions in relation to compliance with the energy efficiency provisions.

The Building Certifier in determining the degree of compliance needs to consider the appropriateness of each criteria to the particular case. Any decision made under this context can extend to not requiring a particular level of performance to be achieved, if that is the appropriate action to be taken.

There will be instances when it is not practicable or appropriate for the energy efficiency

provisions to be applied to other alterations that are not additions or extensions (for example the replacing or changing of a window).

It is not possible to include all situations that might have to be considered by Building Certifiers in the future. Nevertheless, the following situations are provided as a general guide. The ultimate decision on all situations, however, rests with the relevant Building Certifier in determining compliance.

New habitable room addition to an existing Class 1 dwelling

Compliance of new work with all measures.

Extension to an existing habitable room in existing Class 1

Compliance of new work with all measures.

Conversion of a Class 10 to a Class 1

Compliance with all measures

Non habitable room addition and extensions

Services, if provided, to comply

Replacement Works

Replacement of roof cladding would not be expected to invoke energy efficiency measures for the roof although, if original approval required light coloured roofing, then this must be maintained.

Replacement of windows is not generally expected to require consideration of shading or ventilation. A new window increasing/decreasing the size of an existing opening should require consideration of solar heat gain, conductance and shading.

DOCUMENTATION

Building permits must include full details showing how the building will comply with the energy efficiency provisions. The energy efficiency details will need to be shown on or specified in the documents submitted to the Building Certifier.

Approved Plans will need to specify actual details of the various components. Generic reference is not acceptable.

A schedule should be used for evidencing such things as glazing ratio, ventilation ratios and shading protection.

A table should be used for evidencing requirements dealing with the building fabric supplemented with drawing references (eg. ventilation opening areas on table should reference plan showing location/distribution).



Fabio Finocchiaro
Director Building Control
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