

# ABSA response to BCA 2010 provisions



Association of  
Building  
Sustainability  
Assessors (ABSA)

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## Summary

ABSA welcomes the proposed amendments to the 2010 edition of the Building Code of Australia Housing Provisions..

### ABSA supports:

- The move to 6 stars as the minimum requirement in the BCA 2010 amendments for the energy efficiency of the building fabric;
- The tightening of Deemed to Satisfy (DtS) through:
  - the use of higher insulation standards,
  - tightened glazing heat loss and summer heat gain requirements,
  - and the introduction of a 6 star DtS standard providing parity with simulation requirements;
- The extension of regulation beyond building fabric with the addition of hot water, lighting, space heating, pool pumps and heating to the regulation;
- The COAG communiqué asking the ABCB to consider integrating other approaches of sustainability assessment and regulation, such as the NSW Building Sustainability Index (BASIX) into the BCA in the future.
  - ABSA would support national adoption of similar standards as applied to the regulation of Energy and Water aspects of buildings as provided in BASIX.
  - However ABSA would strongly **not** support the use of the DIY component of BASIX, used to assess the energy efficiency performance of the building fabric.

In addition to the response we would also like raise some important issues in relation to:

- Industry capacity to meet the requirements of the new regulations; and
- The importance of standards of assessor accreditation practice and promote a suitable national standard.

The following sections details information about ABSA, and provides further details of our response items.

## 2 Who is ABSA

The Association of Building Sustainability Assessors (ABSA) Limited is a not-for-profit members based Association. ABSA has 440 building thermal performance assessors across Australia who carry out assessments as required under the energy efficiency provisions of the BCA and BASIX. In addition, in 2007, ABSA was contracted by the New Zealand Government to set up their Home Energy Rating Scheme and has administered this since inception.

ABSA is formally recognised as an accrediting body, for assessors that nationally carry out assessments as required under the energy efficiency provisions of the BCA, as defined by the NatHERS Protocol for Assessor Accrediting Organisations Protocol administered by DEWHA. For BCA related energy efficiency assessments, ABSA accreditation is mandatory in NSW, nominated as a recognised accreditation pathway in Victoria and South Australia, and recommended as meeting the definition of 'suitably qualified' in Queensland and Western Australia. In this role ABSA ensures that its accredited assessors have the appropriate qualifications, comply with a Code of Conduct, undergo quality assurance checks, and hold professional indemnity insurance, as well as receiving ongoing technical support and CPD opportunities.

ABSA has recently become recognised as an accrediting body for Household Sustainability Assessors for the federal Green Loans Initiative, as defined by the Home Sustainability Assessor Scheme Protocol. Since May 2009 ABSA has gained an additional 650 members as certified home sustainability assessors under this scheme.

ABSA is governed by a Board of Directors comprised of representatives of many of the significant design and building related industry organisations, as well as Assessors elected by its members.

### 3 Support for 6 stars

ABSA fully supports the move to 6 stars in the BCA 2010 amendments for the following reasons:

- A higher 6 star standard will require more considered design for energy efficiency (as well as the potential for lower operational energy costs and related GHG emissions). Houses that are more carefully designed to perform well for their climate will always have lower additional construction costs to meet a given rating. There are already 4 volume builders in Victoria offering 6 stars.
- A change from 5 to 6 stars isn't that expensive. While a detailed Regulatory Impact Statement will investigate this issue in detail, research presented at the ABSA conference (September 2008) demonstrated how increasing standards from 5 stars to 7 stars was modelled at increasing building costs by less than \$3,000.<sup>1</sup> The research also concluded that moving from 5 to 6 stars can increase costs by as little as \$500.<sup>2</sup>
- 2<sup>nd</sup> generation tools additionally offer a multitude of new techniques and tools to improve energy efficiency not previously available in 1<sup>st</sup> generation tools. These include the ability to analyse the performance of each room independently, the accurate assessment of air movement in hot humid climates, greater benefits for northern orientation of living areas, and better modelling of insulation of internal and subfloor walls. Obtaining 5 and 6 star rated houses in 2<sup>nd</sup> generation tools is therefore easier to achieve and will result in cheaper options than in 1<sup>st</sup> generation tools. It is the experience of ABSA that the jump to 6 stars will not be as difficult for industry as it would have been using the previous tools.
- Studies of international building energy efficiency regulations have shown that in equivalent climates in America and Europe, with similar energy prices, the application of their energy efficiency regulations would produce a 6 to 7 star result. The step to 6 stars simply brings our regulations into line with overseas standards.<sup>3</sup>

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<sup>1</sup> Research methodology used industry standard houses types, located in Melbourne, modelled facing all principal orientations

<sup>2</sup> Interestingly this was achieved mainly through the use of high insulation levels – which supports the increases in R values used in the new DtS.

<sup>3</sup> In more severe climates in Australia such as Canberra and Darwin it may even be that 7 stars is economic.

## 4 Support for tightening of Deemed to Satisfy (DtS)

ABSA fully supports the tightening of Deemed to Satisfy (DtS) provisions in the proposed BCA 2010 amendments through:

- the requirement of a uniform 6 star equivalent DtS standard,
- the use of higher insulation standards,
- and tightened glazing heat loss and summer heat gain requirements.

In relation to the current BCA DtS provisions ABSA has found that they do not always apply a uniform 5 star minimum standard.<sup>4</sup> It is although noted by ABSA that the current DtS provisions were developed prior to the completion of 2<sup>nd</sup> generation rating tool star band settings making this parity difficult to determine.

In addition, in NSW the BASIX DIY pathway<sup>5</sup> has been observed and documented in many hundreds of cases<sup>6</sup> as providing rating outcomes much lower than 5 stars, and as low as 3 stars in some cases.

It has been the experience of the impact of a DtS which does not match the stringency of the simulation performance requirement is grave:

- In NSW only 50% of new houses are actually rated using a simulation tool, due to the lower cost of the DIY pathway of BASIX (based on the DtS). This is partly due to the lower stringency possible, as well as reduced rating costs. However houses meeting the DIY have lower than 5 star stringency, and often have a higher energy use than a 5 star house. In this way the effectiveness of the regulations in reducing energy use is diminished.
- In addition ABSA have lost a significant number of members in NSW as a result of the DIY, through the reduction the number of simulation ratings required. This has deskilled the industry. Now faced with 6 stars, the building industry in NSW is not as well prepared as in those states like Victoria, where simulation ratings remained the dominant method of compliance and have maintained a larger assessor profession.

ABSA welcomes the approach to develop a uniform standard between DtS and Simulation ratings, and the proposal of a nationally consistent rating process being pursued through the COAG process.

The classification of a NatHERS rating as a DtS solution is not anticipated to cause any significant problems for the industry.

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<sup>4</sup> As researched by ABSA staff and as reported by ABSA Assessors.

<sup>5</sup> Reported by the Department to be based on modified 2005 DtS provisions.

<sup>6</sup> by ABSA Assessors and ABSA staff

## 5 Support for increased levels of insulation in the proposed DtS

ABSA supports the increased levels of insulation in the proposed DtS.

ABSA members have found through the experience of several years of ratings that the additional performance delivered by higher insulation levels is often the cheapest way to help gain the higher performance levels of 5 and 6 stars.

Allowance for the degradation of ceiling R value caused by downlights is also a welcome improvement as this may halve the effective R value.

## 6 Support for extension of regulation beyond building fabric

ABSA supports the extension of building regulation in the BCA 2010 towards sustainability (beyond the energy efficiency performance of the building fabric), with the addition of hot water, lighting, space heating, pool pumps and heating to the regulations.

Hot water is responsible for the largest single proportion of Australia's GHG emissions – particularly electric HWS with no solar boost. The effective banning of these systems except in limited circumstances is most welcome.

Lighting, while usually a small proportion of energy or GHG emissions, can be very significant. In Victoria a report on the impact of the 5 star regulations showed that the use of energy intensive downlight lighting design had cancelled out the savings in heating and cooling energy use. The 5 W/m<sup>2</sup> target provides flexibility in lighting design without allowing the excessive overdesign of downlight only residential lighting systems which can easily cost over \$200 per year to run.

The COAG communiqué asks the ABCB to consider integrating other approaches such as the NSW Building Sustainability Index (BASIX) into the BCA in the future. The Energy and Water sections of BASIX address all the issues covered by the proposed energy provisions and ABSA would support national adoption of similar standards for the regulation of Energy and Water aspects of buildings.

However ABSA would strongly **not** support the use of the DIY component of BASIX, used to assess the energy efficiency performance of the building fabric.

ABSA would also recommend to the ABCB the appraisal of the removal of the DtS in the future.

It is noted that ABSA believes that BASIX approach of using separate heating and cooling targets provide for a more effectively targeted regulation, and is worth consideration by the ABCB.

## 7 Industry Capacity to meet the requirements of the new regulations

ABSA welcomes the increase in stringency of the DtS. This will potentially mean that, due to complexity or costs associated with meeting increased DtS standards, a simulation pathway may offer more cost effective building solutions.

ABSA anticipates that there will be a substantial increase in the number of building permits supported by a rating rather than use DtS. Given the 1800 assessors trained in 2<sup>nd</sup> generation software, the industry would be able to meet a demand of 140,000 ratings each year, with assessors on average completing just one or two ratings per week.

However ABSA foresees that the industry may face some challenges:

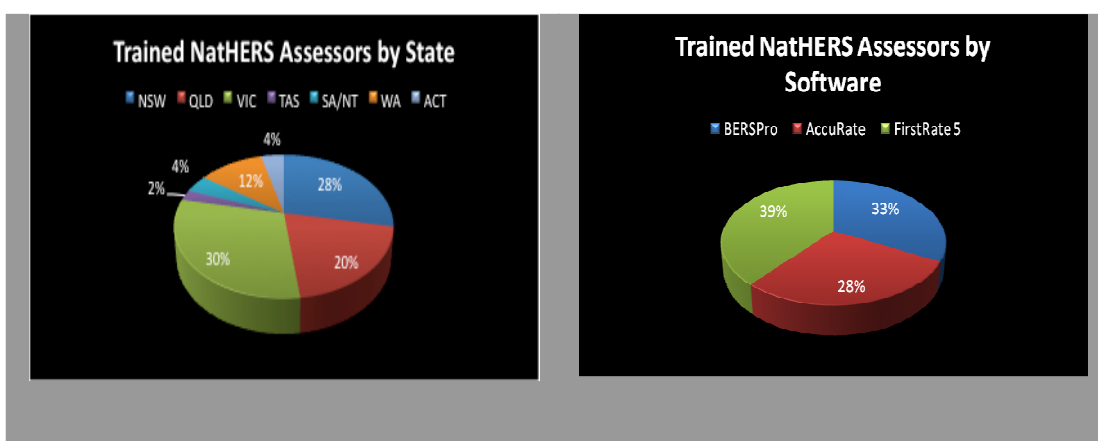
- o Developing and maintaining adequate capacity for delivering 2<sup>nd</sup> generation software ratings ;
- o Ensuring Energy Assessor Industry capacity and readiness; and
- o Inconsistent standards for maintaining Assessor practice and quality control across Australia.

### 7.1 Number of people trained in the use of 2<sup>nd</sup> generation tools

There are substantial numbers of people who can use 2<sup>nd</sup> generation tools, and there is capacity for ABSA and others to train more

ABSA has been working hard to help industry develop expertise in 2<sup>nd</sup> generation rating tools. ABSA, on behalf of the federal government, developed the national NatHERS assessor qualification for training in 2<sup>nd</sup> generation tools.<sup>7</sup>

At last count the number of people who have been trained in 2<sup>nd</sup> generation tools is around 1800 and these are distributed as follows:



<sup>7</sup> Note that since March 2009 all BERS Pro training can only be delivered through the software developer

ABSA is willing to continue training assessors, and also to assist other training organisations throughout Australia to deliver RBTPA training to help build capacity as quickly as possible.

It should be noted that there is a turnover of assessors joining and leaving the industry, and the training will need to be offered in a suitable range of locations.

## **7.2 Ensuring Energy Assessor Industry Capacity and Readiness**

The majority of assessors trained in 2<sup>nd</sup> Generation software in Australia have been trained by ABSA, but the majority are not covered by a nationally recognised accreditation system. ABSA currently has 440 accredited assessors nationally (approximately 25% of assessors trained and potentially practicing in Australia).

Without devoting significant resources to assessor professional development prior to the introduction of the regulations ABSA is concerned that those in the NatHERS assessor industry outside its membership may not have the capacity to provide the quality and volume of ratings which the new regulations would require.

While ABSA will be working hard over the coming months to develop and deliver information to our members on how to meet the new 6 star standard there is no guarantee that other assessors will receive such preparation.

ABSA can only represent its members so it cannot be assumed that all trained assessors can be communicated with about the changes through the only national accrediting body.

In an environment where the number of ratings performed each year around Australia may double or triple, this lack of preparation may cause a significant bottleneck in the system: delays in obtaining permits, higher construction costs than predicted through Regulatory Impact Statements. This may lead to frustration with the new requirements at the very time when assessors and builders need to be working cooperatively to come to grips with the new requirements.

## **7.3 Universal Accreditation**

DEWHA, under the auspices of NFEE which includes representatives of all jurisdictions, has established a national system for the quality control of NatHERS ratings. ABSA supports the idea that all assessments should be done by accredited assessors, as defined under this Framework, to ensure quality outcomes and provide an open market for accrediting bodies.

ABSA believes that the best way to improve the capacity of the industry is for accreditation of assessors to be made mandatory throughout Australia. In addition ABSA believes that the provision of accreditation is best provided by industry organisations rather than by government. There are a number of advantages to this approach:

- It would ensure that costs to government in preparing the large number of assessors for changes to the regulations, with abilities in providing ratings at increased stringencies, and in a regulated professional manner are minimised. Costs are provided for by ongoing membership fees.

- It would help to ensure that the information provided best meets assessors needs. Accreditation organisations are in daily contact with their members and have the infrastructure in place to coordinate assessor support and feedback, and to help focus training and professional development needs in the right areas.
- Representative organisations make it much easier for government to communicate with the industry.
- Accreditation requires professional indemnity (PI) insurance and ensures insurance is in place. This is important requirement that protects industry and the public from negligent and fraudulent activity. Most assessors in Australia are currently not required to carry PI insurance. Industry organisations have the ability to set up insurance schemes for their members, and through pooled insurance can realise significant reductions in premiums.
- Industry organisations often require, administer, and deliver appropriate professional development as a requirement of accreditation. Without accreditation the majority of the assessor industry has not had ongoing professional development.
- In addition national accreditation would increase the resources available to accreditation bodies. The economies of scale this would allow would see a dramatic improvement in the extent and quality of accreditation services that could be provided. The increased volume of membership would also encourage other organisations to apply to become accrediting bodies, providing ABSA with some welcome competition.

ABSA understands that because the decision to require accreditation is made by individual jurisdictions this issue may be beyond the ABCB's direct control. However, it would be of great value if the ABCB was seen to support universal national accreditation.

DEWHA has developed a system to govern a suitable consistent standard of accreditation through the development of a National Assessor Accrediting Organisations Protocol. This protocol requires any approved Accreditation Body to ensure that its members have suitable assessor training and qualifications, have access assessor support and continuing professional development, and requires the adherence to an assessor code of practice with PI insurance requirements, as well as requiring ongoing quality assurance (auditing) of its assessors.

To date only NSW and WA require accreditation under these protocols. While Victoria requires accreditation, this is not consistent with the national requirements. The ACT is considering licensing of assessors (in part because they also do Mandatory Disclosure assessments). National consistency is always favoured by the building industry and DEWHA's protocols provide a ready made solution.

Given the benefits outlined above and the greater demands on assessors due to the new regulations, ABSA supports the adoption by all jurisdictions of accreditation standards as defined under this national protocol framework.

## 7.4 Other factors affecting industry capacity

ABSA, local building authorities, building surveyors, builders, designers, software providers and governments at all levels are frequently presented with new building products which make claims regarding performance that are difficult for individuals to assess, for example:

- a roofing paint which claims to add a substantial R value, or
- a high mass wall product which claims a higher thermal resistance based on the effect of its thermal mass.

The NatHERS scheme and regulations need technical support to help assessors interpret these product claims and understand how to properly represent these products in simulation tools to ensure that buildings houses properly meet the new performance requirements.

Even in areas where product performance is well known as in the window industry, it is important that changes in these schemes are rapidly implemented in software. At present the performance specifications of windows do not always match manufacturers descriptions due to the change to NFRC calculated U and SHGC making it difficult to source windows with the performance characteristics required to achieve the rating.

It is also essential that accreditation of 2<sup>nd</sup> generation rating tools be finalised so that assessors have confidence that their tool of choice will show them the correct way to achieve 6 stars. While interim accreditation continues some of our members have been reluctant to develop 6 star solutions for their clients due to uncertainties over whether the final accreditation will change the rating given to a house. The sooner this is cleared up, the sooner assessors will be able to help the building industry adjust to the new stringency.

These issues are again beyond the direct influence of the ABCB. They are nevertheless important components of regulatory assessment that need to function effectively in order for the NatHERS assessor industry to meet the challenge of the proposed regulations.

ABSA welcomes the opportunity to provide a response to the proposed amendments to the BCA 2010, and would be able to provide any further detail to any points contained in this submission as required.