

House star rating news – June 2010

This month: **A critical look at some aspects of BCA 2010 energy rating.**

From house-star-rating.com.au an energy efficiency assessment and approval service for South Australian clients

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House plan room layout versus an allotment's north point

To understand energy efficient floor plan layout we recommend you download the free Planning Guide, "How Best Practice Land Division can Contribute to Household Energy Efficiency" <http://dataserver.planning.sa.gov.au/publications/1386p.pdf> (choose the "Save" option). The guide has many conceptual house plan layouts and shows how they best relate to site orientation. The format is easy to understand, you could even use it with your clients!

The more a house plan conforms to this Planning Guide the higher its software calculated star rating is likely to be. The software requires a rooms or spaces be zoned, selecting from Bedroom, Living, Kitchen, Other (day condition), Other (night condition) or Garage zone descriptions. These separate thermal zones represent internal heat generation by people and appliances in a way that is appropriate to their occupation. Roof spaces and under floor spaces are not zoned but have their temperatures modeled during the calculation process.

Orientation of house windows in relation to north is now more prominent in the prescribed* method glazing calculations; it has always been significant in software calculated star ratings. A difference between the two methods is that the prescribed method does NOT promote north facing of daytime living spaces. It considers the window direction, NOT its associate room's usage. The prescribed method glazing efficiency is therefore, in our view, a poorer standard as it does not conform to the above Planning Guide. We recommend you use the star rating method and perhaps just use the prescribed method glazing calculator as a pre-planning design tool.

The cost involved in a few hours of laying out floor plans and windows for energy efficiency is insignificant compared with say thirty times that value in otherwise unnecessary energy efficiency solutions!

*prescribed - previously the "deemed to satisfy method" but now as the software calculated star rating method has been included in the deemed to satisfy requirements we need to differentiate them.

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The prescribed method's glazing calculator

As some of you couldn't readily access the Australian Building Codes Board (ABCB) BCA 2010 Glazing Energy Efficiency Calculator we have provided this hotlink to it:

www.abcb.gov.au/index.cfm?objectid=777C20F2-30BD-11DF-AD33001143D4D594

(Select form Excel 2003 or 2007 to suit your version of Microsoft Office)

For a house plan example using the calculator go to the BCA 2010 Handbook link:

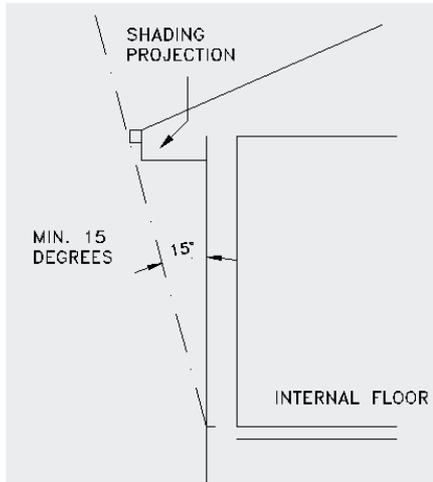
<https://www.abcb.gov.au/index.cfm?objectid=587C7AA9-692A-11DF-837D001143D4D594>

And click on the Chapter 7 Part 3-12-2, External Glazing pdf, and then look in the last half of the document.

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The prescribed method's wall insulation concession

The prescribed method allows a concession of R0.4 of wall insulation value where the wall is shaded by roof overhang etc (in Climate Zones 4 and 5).



- Questions to ask:
- Is the concession worth pursuing or do you insulate the external walls with the extra R0.4?
 - Are some of your houses in Climate Zone 6, where the concession does not apply?
 - Does my shade overhang comply with the 15 degree minimum?
 - Will there be walls of differing R-Value insulation in the same house?

If you are not pursuing the concession some bulk insulation products readily comply and are available from manufacturers including:

| Manufacturer | Product | R-Value advertised | Thickness | Comments |
|-------------------------|------------------------|--------------------|-----------|------------------------------|
| Bradford Insulation | Soundscreen (rockwool) | R2.5 | 88mm | Some sound proofing benefits |
| Fletcher Insulation | Sonobatts | R2.7 | 90mm | “ |
| Tontine | Thermal and Sound Batt | R2.5 | 90mm | “ |
| Add your results below: | | | | |
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To easily calculate eave/canopy compliance with the 15 degree shading angle you may download the calculator from our website at: www.house-star-rating.com.au/wallshade1.xls

In contrast, the software calculated method begins with your chosen wall insulation level and shading projections and reports whether a satisfactory result has been achieved. An unsatisfactory result is rare with today’s wall insulation specifications. It is often unnecessary to add more insulation when funds are needed to improve window energy efficiency. The prescriptive concession (above) is unlikely to be a cost advantage over the software star rating method as roof overhangs, eaves and shading devices are already required to be modeled in the software

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Have a plan assessed and compared with the six star rating requirements!

The best way to understand the effect of the regulatory changes is to have a design assessed by one or both of the methods. Your discerning clients will be asking more about six star rating as September 1st nears and your reputation will be enhanced if you are prepared with sensible and cost effective answers.

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Try our energy efficiency reporting and approval service and you will receive:

- excellent value and detailed reporting and approval of the energy efficiency requirements
- a thorough assessment of how the upcoming BCA 2010 energy efficiency and 6 star legislation will affect your projects or design style
- a written quotation on request (send us your pdf drawing files or AutoCAD dwg drawings)
- a turn-around time of typically one to two weeks
- trial computer runs of scenarios/options
- benefits and value for you and your clients all in one report
- multiple orientation reports (up to eight directions) for pre-designed homes
- a paperless, via email reporting and approval option
- access to our advanced reporting options to further assist you

If you missed out on last month's newsletter you may download it from www.house-star-rating.com.au/nl0510.pdf

About the Author

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