HOUSING INDUSTRY ASSOCIATION LIMITED

International comparison of Australian energy rating requirements for new homes
February 2009

AGO Report

- The Report was published in September 2005 before the BCA introduced mandatory 5 star energy ratings.
- The AGO commissioned a report by RMIT in support of the proposal to move to 5 star in BCA 2006.
- The Report found that the proposed 5-star standard is 1.8 – 2.5 stars below comparable average international levels of performance.
- The Report relies upon:
  - Outdated energy rating software – AGO delivered new software in 2007 which is more sophisticated and accurate. In many locations we know that homes are receiving a 0.5 -1 star higher rating than under the 'old' software with no change to the design.
  - a comparison to typical Australian home designs that predate 5 star and most likely 4 star regulations (2003-4), so it is unreasonable to use this as a basis for now arguing beyond 5 star without further research.
  - The criteria for selecting overseas homes was to "check that it does not significantly exceed the minimum code requirements in the country of origin". There are no plans/details included in the report of these homes, and without intimate knowledge of the international standard, there is no way of knowing if this 'check' was made.
  - The US does not have a national building code – it is still a state-based approach and the states used in the case study had minimum energy regulations.
- The Report should be redone using AccuRate and including actual Australian 5 star home designs before any further reference is made to international ratings or the findings.

Other issues

Australian Government Response to the Productivity Commission Inquiry into Energy Efficiency
Recommendation 10.1
The Australian Building Codes Board should, as a matter of urgency, commission an independent ex post evaluation of building energy efficiency standards to determine:

- how effective the standards have been in reducing actual (not simulated) energy consumption; and
- whether the financial benefits to individual producers and consumers have outweighed the associated costs.

This evaluation should include the standards for residential buildings in New South Wales (BASIX), Victoria (5 star) and the ACT (ACTHERS), as well as the national standards in the Building Code of Australia.

The Government agrees with this recommendation in principle. The Government notes that building standards only address thermal performance of the building shell and not the total energy consumption of the household. The Government will consult with stakeholders to determine the most meaningful methodology, at a reasonable cost, to test the effectiveness of the standards in reducing thermal comfort related energy consumption. The Government will commission an appropriate ex post evaluation following the development of an appropriate methodology and when a sufficient number of building case studies and data are available for evaluation.

- The Department of Environment, Water, Heritage and the Arts has yet to complete the ex post evaluation. The AGO commenced work on the study in 2006, liaising with HIA on the scope and location of homes to be used. No further contact has been made with HIA regarding the study.
- Current star ratings consider the construction of the home, making no reference to actual heating and cooling use and making no reference to 'total' energy use in the home.
- Usage of a range of appliances makes up around 2/3 thirds of the energy used in a home. Of this, there are some large permanent fixtures which are major contributors – hot water (25-30%) and lights along with a combination of unfixed appliances such as fridges and TVs.
- Energy efficiency needs to be addressed using a suite of solutions – construction, appliance standards, education and retrofit of existing homes.