Energy Efficiency in Residential Buildings

Policy Background

- The introduction of minimum energy efficiency regulations in 2003, through the Building Code of Australia, was supported on the basis that a clear net benefit was shown to be delivered to the community and the home owner.
- In 2005, the Federal Government endorsed an increase to 5-stars for all class 1a residential buildings and in 2009 supported a move to 6-stars. The case for increasing to 5-stars, and now 6-stars, was not adequately substantiated prior to its introduction. Indeed, the Regulatory Impact Statement for 6-stars showed a negative cost benefit to the community and the home owner.
- The benefit that may be derived by the home owner from changes to the building thermal performance has reached the point where costs for an increase in energy rating far exceed estimated savings to the home owner through reduced energy bills.
- In 2015, the Council of Australian Governments (COAG) endorsed the National Energy Productivity Plan (NEPP) 2015 which provides a framework designed to accelerate action to deliver a 40 per cent improvement in Australia’s energy productivity by 2030.
- To support NEPP Measures relating to energy efficiency for buildings, COAG Energy Ministers adopted a trajectory towards zero energy (and carbon) ready buildings, which indicates the objective for energy efficiency regulation of new buildings is now focused on reducing greenhouse gas emissions and overall energy consumption.

Policy Issues

- The housing industry is making significant progress in the delivery of energy efficient housing by incorporating energy efficient designs and technology innovations into new homes.
- Current building and planning regulations deliver a significantly higher level of energy efficiency in new homes than the eight million existing homes constructed prior to 2004.
- Up until the 2019 decision by Federal and State Governments on the Trajectory, there was no national target for the reduction of emissions from the building sector. Even with the target being established in the Trajectory it is qualitative in nature, the ability to assess the benefits of current and future regulations for their effective delivery of the desired policy outcomes of government is limited.
- HIA promotes voluntary market-based solutions and HIA’s GreenSmart program encourages designers and builders to voluntarily implement design and construction methods to conserve natural resources.
- The benefit of energy efficiency regulations aimed at the building fabric vary greatly due to the local climate, the selected fittings and fixtures in a home and the practices of the home owners.
- The Federal Government has continued to adopt a strategy of increasing the requirements for new homes without completing any review of the success, benefits and costs associated with the introduction of 4, 5 and now 6-stars.
- The current regulation of energy efficiency standards has no correlation with the intended reduction in greenhouse gas emissions. It remains unclear how future standards and measures required for buildings will correlate with the intended goal of net zero ready buildings without this being a ‘whole of house’ approach.
- A single energy efficiency target for new homes is not necessarily the most sensible approach to the climatic conditions across Australia. The cost impacts across Australia are variable based on the climate zone and the common methods of construction in each state.
HIA’s Policy Position on Energy Efficiency in Residential Building

1. The residential building industry acknowledges the need to build environmentally responsible housing to the extent it does not negatively impact on housing affordability and housing supply.

2. The residential building industry is able to provide a range of sustainable housing solutions that meet consumer expectations and needs.

3. Current energy efficiency standards up to NCC 2016 for new residential buildings provide a thermally efficient building shell that minimises the use of energy and greenhouse gas emissions from key fixed appliances.

Objective of Energy Efficiency

4. The recent Federal Government decision to adopt a trajectory towards a zero energy (and carbon) ready building indicates that the objective for energy efficiency regulation of new buildings is now focused on reducing greenhouse gas emissions and overall energy consumption.

5. Based on the objective to reduce greenhouse gas emissions and energy consumption, a ‘whole of house’ approach to energy efficiency regulations for new housing should form the basis of achieving this goal, including the incorporation of renewable energy (photovoltaics, battery storage, etc.) as opposed to regulations that continually imposed higher standards solely on the building’s thermal shell.

Regulation of Energy Efficiency in Residential Buildings

6. Where regulation is required to improve the energy efficiency of new housing, HIA supports minimum necessary regulations being applied through the National Construction Code (NCC), developed in consultation with industry and which deliver a positive net benefit to both the community and in particular to the individual home owner.

7. The NCC must include a simple, deemed to satisfy (prescriptive) method for achieving minimum energy efficiency regulations, comparable to the outcomes achieved through computer simulation assessments.

8. Energy efficiency standards for residential buildings should be set at the minimum necessary level to generate benefits to society greater than their costs rather than at an aspirational or best practice level.

9. The inclusion of energy efficiency features for new homes that exceed current regulations should be done so at the choice of the consumer (home buyer) rather than being mandated by governments.

10. Any changes to energy efficiency standards that seek to raise stringency must be justified through a comprehensive Regulatory Impact Assessment that assesses all the impacts and costs that will be borne by the changes and demonstrates a positive cost benefit for the home owner.

11. HIA does not support state and territory governments seeking to raise energy efficiency standards beyond that set out in the NCC, or prior to national changes occurring.

12. Where a state or territory government proposes to adopt alternative energy efficiency standards it should be pursued through a variation to the NCC, and only occur where:
   a. it is justified through a comprehensive Regulatory Impact Assessment that demonstrates a positive cost benefit; and
   b. there is a proven difference due to geographical, geological or climatic conditions for such a variation.

13. Building standards for energy efficiency should not be incorporated into planning regulations or other regulatory instruments.

Future Standards

14. Future policy settings for energy efficiency in buildings should not be based on a ‘star rating’ approach and rather should incorporate a ‘whole of house’ approach with the inclusion of fixed appliances and renewable energy systems that offset overall energy usage.
15. Further increases in energy efficiency regulations for new homes or alterations and additions should be rejected until such time as:
   a. governments have taken actions to improve the performance of existing housing stock to achieve an energy rating equivalent to BCA 2003 (4-stars);
   b. a comprehensive post-construction review of the implementation of existing energy efficiency regulations (NCC 2019), including confirming the actual costs and benefits for new home owners and comparing this to the predicted costs and benefits, has been completed;
   c. an assessment framework which provides a direct correlation between energy efficiency and greenhouse gas emissions reductions and the incorporation of on-site renewables and the current NCC 2019 energy efficiency provisions in achieving the trajectory of zero energy (and carbon) ready buildings is developed; and
   d. the Federal and State governments establish a clear purpose and measurable ‘target’ that energy efficiency policies for residential buildings should deliver (e.g. greenhouse gas reduction, lower peak power usage).

16. Where changes to the NCC are to occur and will increase stringency, and are supported by a positive cost benefit analysis, these should not be done triennially and should be spaced at a minimum of six years, but preferably longer intervals to allow appropriate time for builders and building product manufacturers to revise designs, develop products, test, sell and eventually transition to meet the standards.

**NCC Compliance Tools**

17. The use of computer rating tools to assess the thermal performance of residential buildings provides an important alternative assessment pathway for the housing industry. These rating tools should be based on a nationally agreed set of transparent scientific principles and all programs should achieve a consistent outcome for the same building in the same location.

18. The framework for computer rating tools should maintain the option for the private market to compete and develop alternative software programs that meet minimum standards and agreed outcomes. This framework should continue to be managed by the Federal Government.

19. The NCC should maintain a number of compliance options for how the mandatory Performance Requirements are satisfied and not limited to a single compliance tool option.

20. Any changes to computer rating tools should be subject to the same level of regulatory analysis as changes to the NCC and should only occur in line with NCC amendment cycle.

21. Residential building energy assessors must be appropriately experienced in residential building design or construction and the use of energy rating software recognised by the NCC.

**Appliances and Fixtures**

22. HIA supports the use of Minimum Energy Performance Standards (MEPS) to manage the energy efficiency performance of fittings and fixtures, such as hot water services, air conditioners and lighting, to complement efficiencies gained through the improved building fabric in new homes and any regulations applying to existing homes.

23. Any changes in the stringency of MEPS should be subject to a cost benefit analysis, developed in consultation with building product manufacturers and suppliers, which delivers a positive net benefit to both the community and to the individual home owner.

**Incentives**

24. Federal and State Governments should support targeted rebate programs for energy efficiency measures to reduce the energy consumption in existing homes and to support new home owners who choose to exceed current regulation. Programs should be well targeted and implemented over a sufficient length of time to allow industry and consumers to take advantage of the rebates.

25. Governments should introduce incentive schemes which promote and reward the inclusion of measures that exceed existing building standards.
Government Promotion and Consumer Awareness

26. Governments should support consumer awareness campaigns which highlight the benefits of a more energy efficient home and how to operate a home more efficiently.

27. Voluntary, industry-led solutions (such as the HIA GreenSmart program) should be encouraged by all governments as an option to promote improvements in the energy efficiency of residential buildings and to facilitate innovation and new practices in energy efficient housing and land development;

28. An expansion of the HIA GreenSmart program, with an emphasis on consumer education and awareness, including at school level, should be supported by governments, to provide unified sources of information on sustainable housing and connect consumers with builders who can deliver relevant solutions.

29. Financial institutions and valuers should have regard to the energy efficiency of existing and new homes in providing valuations.