

Submission by the Housing Industry Association - August, 2003 - for:

Legislative Assembly – Standing Committee on Public Works
Inquiry into Energy Consumption in Residential Buildings

Purpose of the Inquiry

The objective of the Committee's Inquiry is unclear. The accompanying letter expresses an awareness of pressure on energy producing infrastructure as a consequence of consumption in residential areas, yet the dominant concern of regulators and industry in this field, in recent times, has been "environmental gain" i.e. the reduction in greenhouse gases that are attributable to the burning of fossil fuels.

Despite mention of concern for infrastructure capacity, the terms of reference do not question the manner in which energy is produced or distributed. Instead, they concentrate solely on how energy is used in the residential sector and the current variety of strategies and measures designed to address increasing consumption (that, incidentally, emerged primarily in response to the need to reduce greenhouse gas emissions). Also, surprisingly, the terms of reference do not raise issues of concern with levels of energy use in the commercial or industrial sectors.

Whilst there are obvious correlations between environmental gain and infrastructure capacity, it is necessary for policy to clearly enunciate its purpose – are we saving energy to reduce greenhouse emissions or are we being asked to save energy to defer the commissioning of further coal-fired power stations, without addressing our reliance on heavily centralised, carbon-based generation and distribution networks?

Residential Consumption

The Australian Greenhouse Office (AGO) and CSIRO have estimated that the degree of energy use in residential buildings will increase from a 1990 base of 270 PJ/annum to 379 PJ/annum by 2010 (i.e. an increase of 40%) and that energy use in non-residential buildings will increase from 151 PJ/annum to 289 PJ/annum over the same period (i.e. an increase of 91%).

Comparative increases in projected greenhouse gas emissions are from 48.6 Mt/annum in 1990 to 56.7 Mt/annum in 2010 for residential buildings (an increase of 17%), and from 32.2 Mt/annum in 1990 to 62.8 Mt/annum in 2010 for non-residential buildings (an increase of 94%).

Thus the rate of increase in energy use and the potential for greenhouse gas emissions is far greater in non-residential buildings than in residential buildings.

This comparison does not excuse the residential sector from its obligation to reduce greenhouse gas emissions, as this is an obligation that falls on all business sectors and the whole of community. It merely demonstrates the need to put government policy and greenhouse strategies into perspective.

A closer look at residential use and emissions reveals that an average dwelling's contribution to greenhouse gases (which approximates 8 tonnes of CO₂ per year) is made up from:

- Cooking 9%
 - Space Cooling 2%
 - Space Heating 11%
 - Water Heating 29%
 - Electrical Appliances & Equipment 49%
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The contribution of appliances and equipment may be further broken down as follows:

- Refrigeration 37% (or 18% overall)
- Lighting 16% (“ 8% “)
- TV, Video 10% (“ 5% “)
- Major appliances 21% (“ 10% “)
- Miscellaneous 16% (“ 8% “)

Quite clearly, despite a recent concentrated policy effort to address the thermal performance of the residential building fabric, some far more substantial gains in greenhouse gas abatement might be achieved if policy was directed at the major contributory sources. Measures that address the use of energy inefficient hot water systems and refrigerators would obviously be appropriate.

A National Policy Framework

Whilst the efforts of the NSW government in seeking to address energy consumption might be admirable, it is HIA's view that the various state-based strategies would be far more effective if harmonised nationally and related to a **national energy policy**. Such a policy should:

- Encourage “distributed energy solutions” that include demand management, load management and distributed generation measures;
- Develop a comprehensive emissions trading model;
- Aim to incorporate the cost of carbon into the cost of energy;
- Continue the roll-out and expansion of the MEPS (Minimum Energy Performance Standards) and MRET (Mandatory Renewable Energy Target) programs;
- Establish a series of fiscal incentives (eg tax credits, R&D grants and concessions) to reward industry endeavours that embrace sustainable development and production. The Building Products Innovation Council is a new forum which should be consulted in regard to scope and potential for product research;
- Reinforce the role of the Building Code of Australia as the pre-eminent regulatory mechanism for residential construction in Australia;
- Support the extension of the BCA to address other sustainability criteria by applying required resources and setting realistic timeframes; and
- Develop appropriate strategies and incentives that encourage the voluntary energy-efficient retrofit of existing residential buildings.

HIA's GreenSmart Initiative

GreenSmart is an example of how an industry can develop programs that encourage the uptake of environmentally sustainable practices in a manner that makes commercial sense.

GreenSmart is a practical approach to building that focuses on educating builders, designers, product manufacturers and consumers about the benefits of environmentally responsible housing.

GreenSmart is an industry-driven initiative that aims to encourage a mainstream application of its principles to today's housing. As a voluntary initiative, it provides appropriate market recognition for environmental endeavours in the residential construction industry.

The HIA GreenSmart initiative entails:

- GreenSmart training and accreditation for the industry;
- Promotion of GreenSmart via the world wide web – www.greensmart.com.au;
- Recognition of the environmental efforts of the industry through the GreenSmart Awards;
- The demonstration of GreenSmart to consumers through GreenSmart Villages and the GreenSmart consumer magazine; and
- The highly successful GreenSmart Corridor at the HIA Home & Building Expo.

Energy Efficiency & the BCA

AGO undertook research to develop data upon which the Building Code of Australia introduced energy efficiency provisions. The Building Code of Australia (BCA) currently regulates energy efficiency in Class 1 buildings, ie housing, predominantly through the application of design and construction criteria to the building fabric of a house, ie roof, floor, walls and glazed external openings. The BCA will also be extending its current requirements to other classes of residential building from May 2005.

Some States and Territories have extended regulatory provisions to other components of a house, such as building services including hot water systems.

There needs to be consideration of the practical and affordable limits that should be applied to energy efficient housing, particularly in consideration of the comparative energy use of commercial and industrial buildings. Housing should not be considered to be an easier target for government to tackle than commercial and industrial users.

HIA supports national uniformity in the regulation of the industry. Where national uniformity cannot be facilitated, HIA would support a State variation to the BCA for any building related regulations rather than having building related matters included within local council LEPs or DCPs.

NSW Department of Infrastructure Planning and Natural Resources (DIPNR) are developing a software package that will assess a house design with regard to a number of sustainable characteristics and will provide a comprehensive rating of the predicted

performance of the house. This tool is in the final stages of development. There will need to be a significant validation program of this product.

Other Recommendations

In addition to those matters suggested above as part of a **national energy policy**, it would be appropriate for the NSW Government to:

- Consider the broad costs and advantages of a 'vendor disclosure' system that requires property owners to rate the energy performance of their premises at the time of sale of their premises;
- Provide fiscal incentives that strengthen the role of electricity retailers in implementing energy savings and demand management programs;
- Continue to support the SEDA rebate program for energy-efficient hot water systems;
- Develop a range of incentives for the provision of solar street lighting in new residential estates and consider the broader application of solar power in new rail infrastructure and associated transport centre development;
- Undertake a Regulatory Impact Assessment of the Committee's final recommendations to determine the impact of any new policy change on the affordability of housing; and
- Trial any policy recommendations that arise from the Committee's work on government buildings and projects prior to broader application.