

20 September 2007

Committee Secretary
Senate Economics Committee
Department of the Senate
PO Box 6100
Parliament House
CANBERRA ACT 2600

Submission to the Inquiry into the *National Market Driven Energy Efficiency Target Bill 2007*.

This submission is made on behalf of members of the Green Building Council of Australia (“GBCA”) in response to the tabling of the Bill and its referral to the Senate Economics Committee.

Who we are

The Green Building Council of Australia was created in 2002.

- It is a national not for profit organisation.
- Its Mission is to develop a sustainable property industry for Australia and to drive the adoption of green building practices through market-based solutions.
- Its Objective is to promote sustainable development and the transition of the property industry to implementing green building programs, technologies, design practice and operations.
- It has developed a national suite of green building rating tools called 'Green Star', and
- It is a member of the World Green Building Council (www.gbcaus.org).

Over 400 organisations are members, including federal, state and local governments.

Energy Efficiency and the Built Environment

Australia’s built environment is a significant emitter of greenhouse gas emissions and represents an industry sector with an equally significant potential for sustainable emission reductions.¹

Australians invest around \$13 billion each year in new commercial and industrial buildings and renovations, and around \$4.3 billion each year is spent on energy to operate buildings and the equipment in them².

Energy intensive sectors such as the built environment have an ongoing commitment to recognise and reduce industry related emissions and their contribution to the global climate change.

¹ Intergovernmental Panel of Climate Change (IPCC) “Working Group III contribution to the IPCC Fourth Assessment Report” (2007)

² Reducing greenhouse emissions from commercial and industrial buildings : what local government can do (AGO, February 2002)

Buildings are significant users of energy. Emissions resulting from buildings include those associated with their construction, operation, maintenance and demolition of buildings. Embodied energy is an additional consideration as a proportion of whole-of-life energy consumption. There is considerable scope for emissions reduction or abatement resulting from energy efficiency improvements in the built environment.

Buildings, as diffuse emitters, already contribute to significant reductions in greenhouse gas emissions via energy efficiency and demand side abatement initiatives. There are a number of measures already being integrated by the property sector into the built environment. These include:

- Building fabric improvements
- Lighting systems (& greater use of natural light)
- Heating and cooling systems and control improvements
- Energy efficient motors
- Energy efficiency equipment (copiers, computers, appliances etc.)
- Passive design
- Onsite generation

Built Environment – abatement opportunity?

A report released by the Australian Sustainable Built Environment Council (ASBEC) (of which GBCA is a member) *Capitalising on the building sector's potential to lessen the costs of a broad based GHG emissions cut* has illustrated how important the role of the built environment is in achieving Greenhouse Gas abatement.

The Centre for International Economics was commissioned by ASBEC to investigate the potential for the building sector to reduce greenhouse gas emissions. This research is the first detailed estimate of the energy efficiency potential across the built environment in Australia.

Key Research Findings:

- The building sector is responsible for 23 per cent of Australia's total greenhouse gas emissions, and energy use in buildings is rapidly growing.
- Electricity demand in residential and commercial buildings can be halved by 2030, and reduced by more than 70 per cent by 2050 through energy efficiency.
- Energy efficiency alone could deliver savings of 30-35 per cent across the whole building sector including the growth in the overall number of buildings out to 2050.
- Energy savings in the building sector (which accounts for 60 per cent of GDP and 23 per cent of greenhouse gas emissions) could reduce the costs of greenhouse gas abatement across the whole economy by \$30 per tonne, or 14 per cent, by 2050.
- By 2050, GDP could be improved by around \$38 billion per year if building sector energy efficiency is adopted, compared to previous economy-wide estimates of the 60 % deep cuts scenario.

- Australia's ability to achieve at least 60 per cent deep cuts in greenhouse gas emissions by 2050 will be significantly enhanced by transforming buildings to deliver energy savings.

Please note - ASBEC is a coalition of industry and community leaders representing a cross section of the built environment, contributors to the report include ASBEC members the Green Building Council of Australia, ACF, Clean Energy Council, CISBE, Property Council of Australia, PIA and RAIA.

Barriers to Greater Energy Efficiency

Most recently, the number of buildings that have or are seeking to be Green Star accredited has grown rapidly to nearly 400. This high level of growth shows no signs of slowing and reflects the very strong demand for environmentally sound commercial accommodation.

Evidence suggests that the property industry had initially been slow to take up greenhouse gas abatement measures despite a range of existing incentives.³ Indeed, existing buildings, which represent 99% of the national building stock are not achieving Australian Building Greenhouse Ratings (ABGR) over 2 Stars.

One of the reasons for this is that energy costs are typically 1% of a firm's overall operating costs which invariably focuses cost reduction efforts away from energy efficiency. A second reason is that in new building design, those who pay the upfront costs are different to those who pay the ongoing costs. Therefore the benefits of improved building systems will not be enjoyed by those who bear the costs of installing the improved systems.

While barriers do exist, there is still a strong desire amongst industry and tenants for energy efficiency in new and existing building stock, however further incentives are clearly needed. The Green Building Council's *The Dollars and Sense of Green Buildings 2006* (attached), provides a thorough examination of the growth and further potential of the commercial effort towards environmentally friendly buildings.

Existing Tools for Energy Efficiency

Within the built environment sector, the Green Star (see Appendix A for more details) suite of rating tools provides an industry recognised, effective method for turning building owners and tenants' desire for environmentally sound practice into real and sustainable results.

Green Star allows projects to be rated at differing stages in their development and covers Office Design, Office Interiors, Shopping Centre Design as well as Healthcare and Education buildings. Industrial, Multi-Unit Residential and public building Green Star tools are in development.

The energy module of Green Star provides a clear and consistent method of reporting greenhouse gas emissions. Further, it has been developed by stakeholders using recorded data from the property industry.

This module could provide a useful component in the generation of certificates for the built environment within an Energy Trading Scheme.

³ Property Council (2004), *Energy Efficiency and Demand Management, Letter from the Property Council to the Office of Sustainable Development*

International Experience

Both Italy and the UK have a scheme with parallels to what is proposed. The United Kingdom's Emissions Trading Scheme, for example, is a voluntary scheme which involves organisations accepting legally binding annual targets for a five year period 2002-06.

The Government provides financial incentives through an 80% discount to participating organisations from the Climate Change Levy, which is a tax on the use of energy by non-domestic users (the transport sector is also exempt). Forecast to cut emissions by 2.5 million tonnes by 2010, the levy is generally regarded as a successful component of the UK's overall Climate Change Program.

Conclusion

The benefits of energy efficiency are demonstrable and are without doubt, preferable to the massive cost of infrastructure required to meet the increasing demand for energy in Australia.

While market drivers for energy efficiency do exist in the built environment sector, they will be enhanced through initiatives such as the Emissions Trading Scheme and any effective proposal to commoditize energy efficiency as suggested by the *National Market Driven Energy Efficiency Target Bill 2007*.

The Green Building Council of Australia, recognising the significant contribution the built environment makes to greenhouse gas emissions and the potential for significant reductions to be achieved through energy efficiency, congratulates the Australian Democrats and their efforts to encourage greater energy efficiency in this country.

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Appendix A – What is Green Star?

- Green Star is Australia's leading holistic environmental rating tool for buildings.
- Green Star recognises and rewards environmental leadership in the top 25% of the market.
- Green Star was created for the property industry to:
 - Establish a common language;
 - Set a standard of measurement for green buildings;
 - Promote integrated, whole-building design;
 - Recognise environmental leadership;
 - Identify building life-cycle impacts; and
 - Raise awareness of green building benefits.

What kinds of things does Green Star reward credits for?

- **Management**
Improves the adoption of sustainable development principles from project conception through to design, construction, commissioning, tuning and operation.
- **Indoor Environment Quality**
Concerned with occupant wellbeing and performance by addressing the HVAC system, lighting, occupant comfort and pollutants.
- **Energy**
Credits target reduction of greenhouse emissions from building operation by addressing energy demand reduction, use efficiency, and generation from alternative sources eg solar, wind, cogeneration etc
- **Transport**
Credits reward the reduction of demand for individual cars by both discouraging car commuting and encouraging use of alternative transportation.
- **Water**
Credits address reduction of potable water through efficient design of building services, water reuse and substitution with other water sources (specifically rainwater).
- **Materials**
Credits targets resource consumption through material selection, reuse initiatives and efficient management practices.
- **Land Use & Ecology**
Credits address a project's impact on its immediate ecosystem, by discouraging degradation and encouraging restoration of flora and fauna.
- **Emissions**
Credits address point source pollution from buildings & building services to the atmosphere, watercourse, and local ecosystems.
- **Innovation**
Green Star seeks to reward marketplace innovation that fosters the industry's transition to sustainable building.