green building council australia

27 February 2009

Commercial Building Energy Efficiency Team
Department of the Environment, Water, Heritage and the Arts
GPO Box 787
CANBERRA ACT 2601

Mandatory Disclosure

This submission is made on behalf of members of the Green Building Council of Australia ("GBCA").

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' (see Appendix A for more details), and
- It is a member of the World Green Building Council (www.worldgbc.org).

Over 700 organisations are members, representing a diverse cross section of the property industry from developers and owners to sub contractors and manufacturers. The Federal Government is an active member as are several state and local governments.

The GBCA takes its leadership role seriously and hosts regular seminars, forums and conferences such as Green Cities, which provide an invaluable opportunity for the property industry to learn and share experiences and ideas.

Over 130 buildings in Australia are already Green Star certified and there are over 500 other projects registered to be certified.

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

[1] *Intergovernmental Panel of Climate Change (IPCC) "Working Group III contribution to the IPCC Fourth Assessment Report" (2007)*

around $4.3 billion each year is spent on energy to operate buildings and the equipment in them[2].

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

Buildings are significant users of energy. Globally, the built environment is responsible for 40% of total energy use. Emissions resulting from buildings include those associated with their construction, operation, maintenance and demolition. 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.

Buildings and Climate Change

Conventional buildings have a very significant impact on the environment. Residential and commercial buildings are responsible for 23% of Australia's total greenhouse gas emissions annually.

This represents 130 megatonnes of greenhouse gas put into the atmosphere each year.

The vast majority of the greenhouse gas attributable to buildings is as a result of the effects of energy generation to meet demand in the built environment.

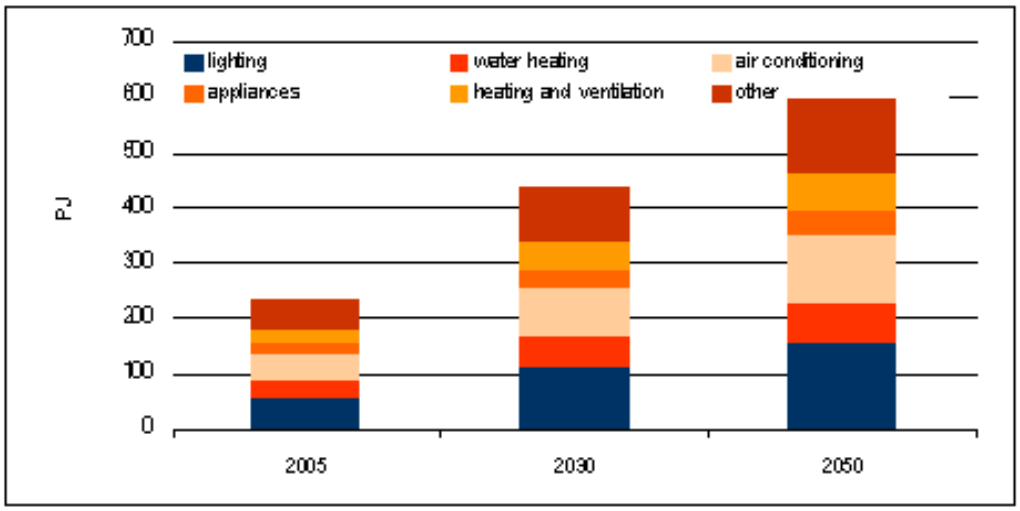
Around 40% of the amount of waste that goes into Australia's landfills is as a result of the construction and destruction of buildings.

Buildings also consume 40% of the national energy output and 12% of the fresh water resources in OECD countries.

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

One of the major concerns with respect to buildings and their impact on the environment is that without appropriate action, energy use in the commercial sector for example, is forecast to treble by 2050.[3]

2.9 **Commercial sector projected energy use by activity – no action**



Data source: Pears (2007) and CIE analysis

The figures are similar internationally. In the United States for example, buildings account for:

- 65% of electricity consumption;
- 36% of energy use;
- 30% of greenhouse gas emissions;
- 30% of raw materials use;
- 30% of waste output (136 million tonnes annually); and
- 12% of potable water consumption[4]

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:

[3] *Centre for International Economics, Capitalising on the Building Sector's Potential to Lessen the Costs of a Broad Based GHG Emissions Cut, p.16.*
[4] *USGBC*

- The commercial and residential 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.

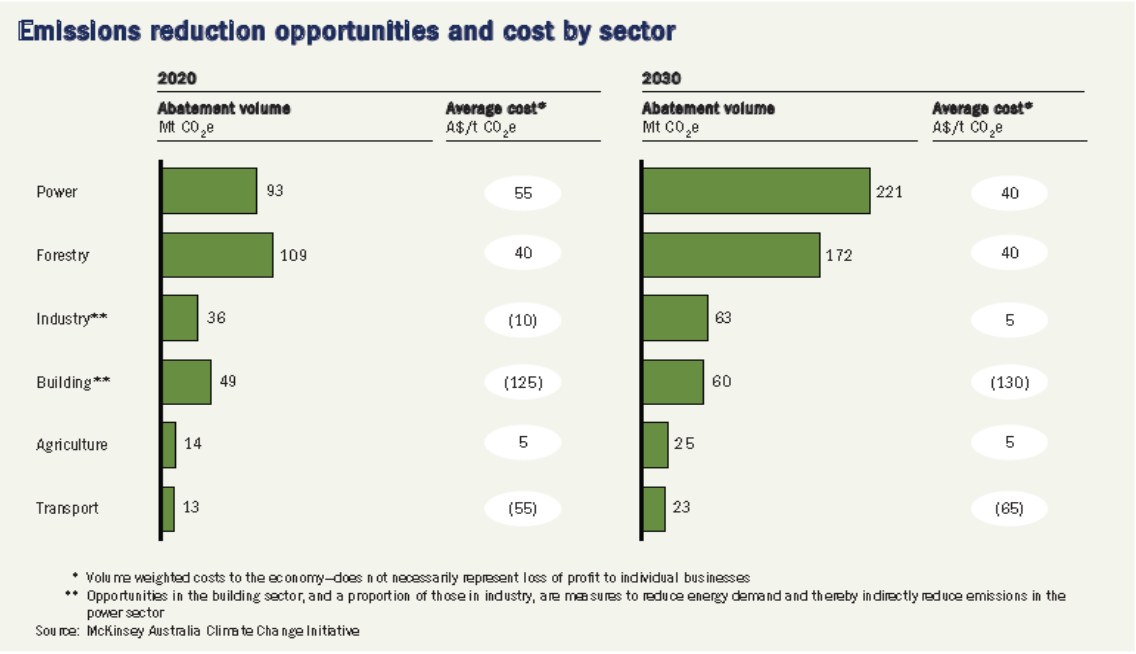
Please note - ASBEC is a coalition of industry and community leaders representing a cross section of the built environment, contributors to the report include ASBEC members the Green Building Council of Australia, Australian Conservation Foundation, Clean Energy Council, Chartered Institution of Building Services and Engineers, Property Council of Australia, Planning Institute of Australia and Royal Australian Institute of Architects.

There is a considerable body of evidence which all point to the very significant role buildings can play in global efforts to reduce greenhouse gas emissions and other impacts on the environment.

McKinsey and Company released a report in February 2008, *An Australian Cost Curve for Greenhouse Gas Reduction* which demonstrated:

- A significant reduction in Australian GHG emissions is achievable – 30% below 1990 levels by 2020 and 60% by 2030 without major technological breakthroughs or lifestyle changes;
- By 2030, a minimum of 60 mega tones of carbon-reduction opportunities can be found in the building sector, all at low or negative cost with most of the opportunities (50 Mt) being available by 2020;

- Australia can reduce emissions in 2020 by 20% below 1990 levels at **no net cost to the economy**.[5]



[6]

The report also highlights the fact that buildings offer a cheap form of abatement when compared to other industry sectors such as agriculture and power generation.

This information is supported by the work of the 4th Intergovernmental Panel on Climate Change (IPCC) which shows buildings offer the greatest potential for abatement, outstripping the energy, transport and industry sectors combined.

[5] *McKinsey and Company, An Australian Cost Curve for Greenhouse Gas Reduction, 2008.*
[6] *McKinsey and Company, An Australian Cost Curve for Greenhouse Gas Reduction, 2008.*

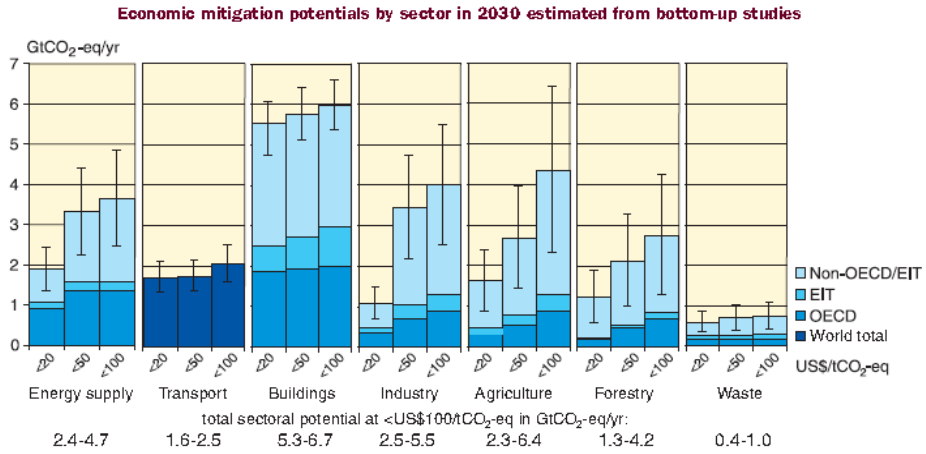


Figure 4.2. Estimated economic mitigation potential by sector and region using technologies and practices expected to be available in 2030. The potentials do not include non-technical options such as lifestyle changes. {WGIII Figure SPM.6}

Notes:

a) The ranges for global economic potentials as assessed in each sector are shown by vertical lines. The ranges are based on end-use allocations of emissions, meaning that emissions of electricity use are counted towards the end-use sectors and not to the energy supply sector.
b) The estimated potentials have been constrained by the availability of studies particularly at high carbon price levels.
c) Sectors used different baselines. For industry the SRES B2 baseline was taken, for energy supply and transport the World Energy Outlook (WEO) 2004 baseline was used; the building sector is based on a baseline in between SRES B2 and A1B; for waste, SRES A1B driving forces were used to construct a waste-specific baseline; agriculture and forestry used baselines that mostly used B2 driving forces.
d) Only global totals for transport are shown because international aviation is included.
e) Categories excluded are non-CO_2 emissions in buildings and transport, part of material efficiency options, heat production and cogeneration in energy supply, heavy duty vehicles, shipping and high-occupancy passenger transport, most high-cost options for buildings, wastewater treatment, emission reduction from coal mines and gas pipelines, and fluorinated gases from energy supply and transport. The underestimation of the total economic potential from these emissions is of the order of 10 to 15%. [7]

The debate has clearly moved beyond the question of whether the built environment has a role to play in climate change. The focus of contemporary debate is how to unlock the potential of the built environment to have a very positive effect on climate change.

Energy Efficiency in the Built Environment and the Carbon Pollution Reduction Scheme (CPRS)

The Federal Government's CPRS is the cornerstone of Australia's effort to reduce greenhouse gas emissions. The commitment to a unilateral reduction of 5 percent below 2000 levels by 2020 and 15 percent if a global agreement is reached represents a starting point for the government.

However, the CPRS does not include the one sector that offers the single largest , cost -effective opportunity for greenhouse gas abatement - Australia's buildings. The CPRS is clearly targeted towards the high-end emitters as opposed to the users of energy such as the electricity consumed in the operation of buildings.

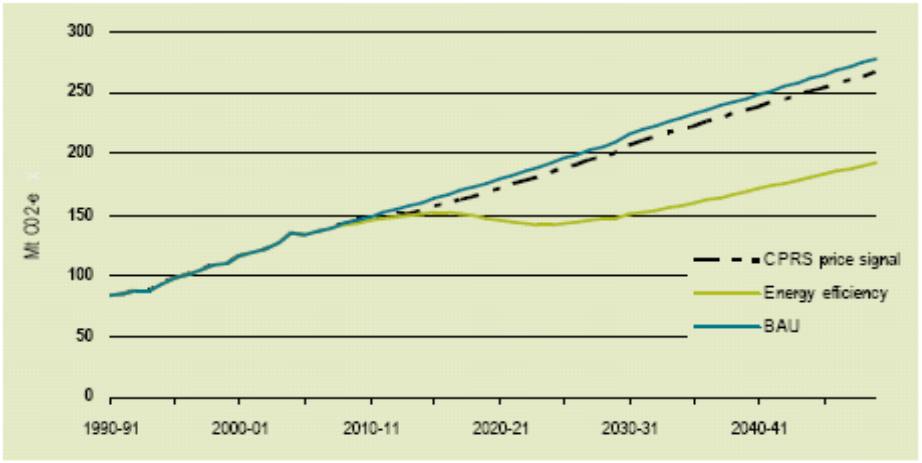
Given the above, it is clear that all levels of government in Australia must support a range of complimentary measures, which are required in order to unlock the abatement potential within buildings.

To demonstrate the value of energy efficiency measures, the following chart demonstrates the relative decreases in GHG

[7] *4th International Panel on Climate Change, Synthesis Report, 2007.*

emissions from the building sector given particular policy approaches.

1.4 GHG emissions by the building sector



Note: The series 'CPRS price signal' plots only expected effect of the CPRS price signal on electricity demand. It has not attempted to account for other influences on the price of electricity (such as other policy measures), nor the supply side response to the CPRS. This series reports the impact on GHG emissions that results from an increase in electricity prices.

Data source: CIE (2007) and ASBEC CCTG estimates.

[8]

In number terms, if the CPRS was the only policy measure applied, greenhouse gas emissions in the building sector (which represents 23% of all Australian emissions) would be reduced by only 8 Mt per year.

If a range of complementary measures are also introduced, the abatement from the sector rises to 60 Mt per year over the longer term which represents a very significant, cost-effective abatement.

Energy efficiency offers the most significant opportunity for abatement and it is important to note that the modelling used to produce this chart is the same as that currently being used by the Federal Government.

Mandatory Disclosure

General Comments

The Green Building Council broadly supports the introduction of a mandatory disclosure regime that:

* tangibly improves the energy efficiency of Australia's buildings;
* does not impose significant additional transaction costs for building owners;
* is consistent across all states and territories.

The GBCA recognises that the release of the Consultation Regulation Impact Statement (RIS) represents one of the first steps in a long process concluding in the introduction of legislation.

[8] *ASBEC, The Second Plank - Building a Low Carbon Economy with Energy Efficient Buildings, 2008.*

It needs to be recognised that the property industry has performed a strong leadership role in terms of sustainability within the built environment and achieved a great deal through voluntary mechanisms.

Regulation should not generally be pursued unless there is a demonstrated and significant market failure which acts as an obstacle to a particular outcome being achieved.

Mandatory disclosure proposes to address two market failures, split incentives and information asymmetry. While disclosing the energy efficiency of a building or tenancy certainly improves the level and type of information in the market place, which theoretically leads to greater market demand for more energy efficient buildings, the financial benefits of capital improvements by an owner to a building largely flow to the tenant and disclosure does not directly address this market failure.

However, an appropriate mandatory disclosure regime will be a positive measure that improves the quality and amount of information in the marketplace which will in turn allow prospective tenants to make more informed decisions regarding buildings they choose to occupy which will improve competition and lead to an overall improvement of the energy efficiency of Australia's commercial stock.

It is on this basis that the GBCA supports the introduction of an appropriate mandatory disclosure regime.

Specific Comments

Based on the material contained in the RIS and in the context of the GBCA's overiding position of support for a mandatory disclosure regime, the following specific comments are offered.

(1) Portion of the building to be rated

The recommended approach contained in the RIS is to require energy efficiency assessments for both base building and tenancies. The justification offered for this approach is "...the cost of a base building *and* tenancy assessment does not differ significantly from the cost of a base building only or a tenancy assessment only".[9] The RIS goes on to state that this recommendation is contingent upon the owner being able to lawfully obtain information required for tenancy assessments.

The GBCA does not support this recommendation for the following reasons.

- As the RIS alludes to, it is highly unlikely that owners will be legally able to obtain the required information from tenants in order to conduct an assessment. Further, even if there is a legal avenue for owners to obtain such information from tenants, the legal obligation to provide tenancy energy efficiency information to prospective

[9] *Allen Consulting Group, Mandatory Disclosure of Energy Efficiency for Commercial Office Buildings, 2008, p vii.*

tenants under the proposed regime, would presumably rest with the owner.

It is however unclear as to the powers that the owner can rely upon in order to ensure the tenant provides such information or the sanctions that would be applied if such information was not forthcoming in order for the owner to meet their legal obligation under the disclosure regime.

In other words, the regime places a legal obligation upon the owner to disclose energy efficiency information regarding tenancies which necessarily involves the cooperation of the tenant, where the tenant, under the regime, does not appear to have a legal obligation to provide such information. To impose a legal obligation on owners which relies upon the cooperation of others not directly subject to the powers and sanctions of the legislation is not an approach supported by the GBCA.

- Notwithstanding the aforementioned legal issues, tenancy ratings are of little value in a mandatory disclosure regime. NABERS Energy Tenancy ratings fundamentally considers the operations of the tenant in the rating. This means that the type of the tenancy (eg high energy using tenant as opposed to a standard office tenant) and the behaviour of the tenant significantly impacts on the rating achieved by that tenant.

The recommended approach as contained in the RIS is for the owner to disclose the rating of the current/previous tenancy to the potential new tenant. Given the above, any information regarding the rating of a previous tenant will be almost totally irrelevant to a future tenant because the new tenant may be of a completely different type to the previous tenant and operate their space in a very different way.

The risk of future tenants to be confused by the disclosure of a previous tenants energy rating is high and would undermine the value of the regime.

The proposal for annual tenancy assessments is also not supported.

Recommendation:

As a result of the points above, tenancy ratings are not supported by the Green Building Council. The GBCA recommends that the scheme commence with a requirement for base building rating disclosure only.

(2) Scheme threshold

The GBCA supports the proposed threshold of 2000 sqm.

(3) Cost to industry

The report bases many of its conclusions in terms of cost to industry on the information provided regarding the cost of NABERS assessments. The report used a mean point from 48 separate quotes for a NABERS assessment to determine potential cost to industry of the scheme. The figure arrived at was in

the order of $3100 for the 2,000 sqm option and $3400 under the 5,000 sqm option.

Anecdotal evidence suggests that the RIS has potentially underestimated the cost of such assessments. Assessment costs directly impact the overall cost-benefit analysis and conclusions for the entire scheme and hence are directly relevant to industry so it is vital that further consideration of the scheme be informed by accurate figures that reflect industry practice.

Recommendation:

The Green Building Council would recommend that the costs which underpin the analysis are reviewed and independently verified.

(4) Monitoring and reporting

It is essential that the impact of the scheme is monitored and reported. Given the scheme is proposed to be implemented to achieve a specific goal and to address at least one market failure - information asymmetry - it's success or otherwise needs to be assessed against that goal.

A robust assessment and reporting framework needs to be implemented as part of the initiative to ensure the Commonwealth can propose amendments to the scheme over time should the operation of the scheme demonstrate a need for changes to be considered.

Enforcement mechanisms also need to examined more thoroughly. The RIS makes reference to a potential role for state and territory based consumer affairs or fair trading agencies in enforcement. These agencies may not be best placed to manage enforcement and the Commonwealth should examine other options including establishing a dedicated federal body to ensure compliance with the scheme.

(5) Allowance for other rating tools

According to the RIS, it is the Federal Government's intention to allow for the use of other rating tools that are deemed appropriate for the purposes of the regime. The Green Building Council strongly supports this and recommends that the mechanism used to determine the eligibility of a tool to meet the requirements of the legislation be as simple and swift as possible to ensure open access to the scheme by other tools.

(6) Minimum energy efficiency standards

The RIS examined the possibility of introducing a more stringent regulatory requirement involving setting minimum standards for energy efficiency performance as an alternative to Mandatory Disclosure. The cost to the sector associated

with this measure is $667m for properties larger than 2000 sqm and $552m for properties larger than 5000 sqm.[10]

While the GBCA does support the proper and effective use of regulation to achieve environmental outcomes, introducing more stringent standards as an alternative to Mandatory Disclosure is not supported by the GBCA at this time. More stringent regulatory regimes would more appropriately be considered following an assessment of the impact of the proposed mandatory disclosure regime once it has been in operation for a number of years and only as one element of a broader, integrated package of measures.

(7) Jurisdictional consistency

There exists already a plethora of national and state based schemes which impose a range of reporting obligations on the property sector. Notwithstanding the relative value of these individual programs, the need for any further measures to be seen in the context of the existing regulatory and reporting obligations is pressing.

Further, any proposed national approach to a mandatory disclosure regime will only be effective if the state and territories support the measure such that individual jurisdictions do not introduce their own disclosure regimes.

If there is to be a mandatory disclosure regime, there should only be one scheme which has genuine national coverage.

The GBCA would not support the Commonwealth proceeding with legislation to establish the mandatory disclosure regime where the measure does not enjoy the support of every state and territory.

(8) Integrated approach

Mandatory disclosure should be introduced as part of a larger framework of measures that improve the energy efficiency of buildings and reduce the greenhouse gas emissions from the built environment.

The Federal Government has a number of reviews currently underway which are examining which measures can be applied that would be complementary to the Carbon Pollution Reduction Scheme. The outcome of those reviews should be known by the time legislation introducing mandatory disclosure is prepared. The Commonwealth should take the opportunity to bundle a range of measures into one integrated package addressing energy efficiency and greenhouse gas reductions in the built environment.

Sporadic and separate introduction of initiatives all aimed at achieving the same broader objective will limit their ultimate effectiveness.

(9) Market education and awareness

It is incumbent upon the Federal Government to work with the states and territories to undertake a widespread and effective

[10] Ibid, p viii

education campaign to ensure the market is aware of their obligations under the legislation well before it is in place.

While the market will support the intent and purpose of the scheme, if there is confusion or a lack of knowledge in industry about the operation of the scheme and the obligations it places on owners, then that support will evaporate. The Commonwealth must ensure owners understand their obligations, particularly given the fact that these obligations are legal ones and involve penalties if they are not followed.

Recommendation:

The Green Building Council recommends that the Federal Government work with the states and territories to undertake an information campaign prior to the scheme's introduction to ensure the market is aware of their obligations under the scheme prior to its commencement.

Conclusion

A well constructed, properly monitored mandatory disclosure regime will be a positive initiative that informs and educates the property market as well as providing an environmental and economic dividend to Australia.

The scheme builds on a range of industry led efforts which have all contributed to drastically transform the property sector in a relatively short space of time. It is also consistent with Federal Government policy to identify and where possible, address the market failures which to varying degrees, obstruct the nation's ability to meet its broader environmental objectives such as reducing greenhouse gas emissions.

It is on this basis that the Green Building Council supports the scheme in principle. Several issues have been identified in this submission that concern the Council and should be addressed before the proposed scheme moves to the next stage of consideration.

If you require any further information please contact the Green Building Council of Australia:

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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 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.

What Green Star tools have or are being developed?

- Office Design

- Office As Built
- Office Interiors
- Office Existing
- Retail
- Healthcare
- Education
- Multi Unit Residential
- Mixed Use
- Industrial
- Public Buildings
- Precincts

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